
**Department of Energy (DOE)
Office of Environmental Management (EM)**

Minority Serving Institutions Partnership Program (MSIPP)

**Notice of Funding Opportunity (NOFO) Number: DE-FOA-0003422
NOFO Type: Initial
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NOFO Issue Date: September 12, 2024	
Informational Webinar: September 19, 2024	11:00 AM ET
Submission Deadline for Expression of Interest E-Mail: October 4, 2024	5:00 PM ET
Submission Deadline for Concept Papers: October 15, 2024	5:00 PM ET
Submission Deadline for Full Applications: January 15, 2024*	5:00 PM ET

- Applicants must submit an Expression of Interest E-mail by the due date listed above to MSIPP-FOA@emcbc.doe.gov. In order to be eligible to submit a Full Application, a Concept Paper must be submitted by 5:00 pm ET on the due date listed above.
*The due date listed for Full Application submission is tentative and may be revised.

NOTICE OF FUNDING OPPORTUNITY OVERVIEW

Informational Webinar

DOE-EM will conduct one informational webinar during the NOFO process.

Attendance is not mandatory and will not positively or negatively impact the overall review of any applicant submissions. As the webinar will be open to all applicants who wish to participate, applicants should refrain from asking questions or communicating information that would reveal confidential and/or proprietary information specific to their project. An informational webinar will be held September 19, 2024 at 11:00 AM ET.

Join on your computer, mobile app or room device

**Click here: [Join the meeting now](#)
(or use below link)**

https://teams.microsoft.com/l/meetup-join/19%3ameeting_N2RiZDZmZDYtZTdjNi00YjNkLTgzMjQtMjMzZTc4MGJkMjJk%40thre ad.v2/0?context=%7b%22Tid%22%3a%2242610bbc-5b07-459c-9fe7-b40cbaa91cf4%22%2c%22Oid%22%3a%225d03b8bc-a18d-447a-b814-6b85bc306f59%22%7d

Meeting ID: 271 367 777 272

Passcode: SvXX7N

Or call in (audio only)

[+1 323-433-2200](tel:+13234332200), [189957276#](tel:+189957276) United States, Los Angeles

[Find a local number](#)

Phone conference ID: 189 957 276#

Questions

Questions regarding the **content of the notice of funding opportunity** must be submitted to the following e-mail address: MSIPP-FOA@emcbc.doe.gov. DOE-EM will try to respond to a question within 3 business days unless a similar question and answer have already been posted on [Grants.gov](#). All questions submitted after September 10, 2024, may not be answered before the submission deadline for Concept Papers.

Questions relating to the **Grants.gov registration process, system requirements, or how an application form works** must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov.

Grants.gov Application Submission and Receipt Procedures

This section provides the application submission and receipt instructions for U.S. Department of Energy program applications. Please read the following instructions carefully and completely.

1. Electronic Delivery

DOE-EM is participating in the Grants.gov initiative to provide the grant community with a single site to find and apply for grant funding opportunities. All full applications (second step) must be submitted through Grants.gov.

2. How to Register to Apply through Grants.gov

- a. *Instructions:* Read the instructions below about registering to apply for DOE funds. Applicants should read the registration instructions carefully and prepare the information requested before beginning the registration process. Reviewing and assembling the required information before beginning the registration process will alleviate last-minute searches for required information.

Organizations must have a Unique Entity Identifier (UEI), active System for Award Management (SAM) registration, and Grants.gov account to apply for grants. If individual applicants are eligible to apply for this funding opportunity, then you may begin with step 3, Create a Grants.gov Account, listed below.

Creating a Grants.gov account can be completed online in minutes, but UEI and SAM registrations may take several weeks. Therefore, an organization's registration should be done in sufficient time to ensure it does not impact the entity's ability to meet required application submission deadlines. Complete organization instructions can be found on Grants.gov here:

<https://www.grants.gov/web/grants/applicants/organization-registration.html>

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- b. *Electronic Signature:* 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 Electronic Business Point of Contact (EBiz POC) **must** authorize people who are able to make legally binding commitments on behalf of the organization as a user with the AOR role; **this step is often missed, and it is crucial for valid and timely submissions.**

3. Timely Receipt Requirements and Proof of Timely Submission

- a. *Online Submission.* 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 with the AOR role who submitted the application will receive an acknowledgement of receipt and a tracking number (GRANTXXXXXXXX) from Grants.gov with the successful transmission of their application. This applicant with the AOR role 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 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 who submitted the application. Again, 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 will not be considered for funding by DOE.

Applicants using slow internet, such as dial-up connections, should be aware that transmission can take some time before Grants.gov receives your 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 attempting to submit the application. The Grants.gov Support Center reports that some applicants end the transmission because they think that nothing is occurring during the transmission process. Please be patient and give the system time to process the application.

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I. Funding Opportunity Description

A. Background and Context

i. Background and Purpose

The Department of Energy Office of Environmental Management (DOE-EM) is enhancing and fostering a sustainable and diverse DOE-EM workforce STEM pipeline. Through technology curriculum and professional development and shared interest research, DOE-EM will promote the development of a nationally engaged scientific and engineering workforce to conduct basic research that will lead to future career pathways in the DOE-EM complex for underrepresented groups.

The technology curriculum and professional development objectives are focused on strengthening and promoting theoretical and experimental knowledge, skills, and dispositions Minority Serving Institution (MSI) collegiate students need to acquire to prepare and retain them as leading scientific and technical innovators in the Department of Energy complex. Curriculum and professional development will provide the MSI research community with support for resources, including purchases of specialized equipment and instrumentation for field and laboratory-based studies. It will also support MSI academic teams that cultivate and integrate R&D learning activities that incorporate the use of state-of-the-art capabilities that align and support current and future missions of DOE-EM.

The newly designed practicums will supplement college and university theoretical programs by exposing collegiate students to cutting edge research capabilities and development activities at the early onset of their career, maximizing the growth of students in applied STEM fields.

Through shared interest research, research collaborations between EM, DOE National Laboratories and MSI institutions will be established to enhance relationships, promote EM mission areas, and expand educational and research capacity. Shared interest research supports collaborative projects addressing the research needs of DOE-EM's clean mission. Areas of research may include science and health, engineering, environmental science, and technology development. Applications are specifically sought to leverage the research capabilities of one collaborating organization to build capabilities at one or more MSIs. Faculty and student participation at the collaborating National Laboratory will be strongly encouraged.

B. Topic Areas

The Areas of Interest of this Announcement are offered to provide more in-depth information on STEM areas of interest to the Office of Environmental Management. Specific areas of interest are identified in each Sub-Program Priority Areas (PA), Research Needs (RN), and Conditions (C). Research and technology development (R&TD) activities must complement and enhance classroom and laboratory learning as well as off-campus experiential learning.

i. Deactivation & Decommissioning

Deactivation and Decommissioning (D&D) is the process of taking an active/excess/abandoned facility to a final disposition end state. Because of residual radioactivity, other hazardous constituents, and the physical condition of EM's facilities, D&D presents unique hazards that must be addressed from a safety, programmatic, environmental, and technological standpoint. The general D&D process applies to all facilities across the EM complex. The D&D function within the Office of Infrastructure and D&D focuses on innovative applications and timely insertion of existing commercially available technologies, to address D&D risks and challenges. In cases where appropriate technologies do not exist or are not at the required level of maturity, the Office supports R&D to increase technology maturation. The program supports the development of an informed facility D&D strategy such as In-Situ Decommissioning (entombment), enhanced verifiability of the efficacy of D&D operations, increased productivity, personnel safety of D&D operation, facilitation of acceptable facility end-states, and independent verification.

Sub-Program Priority Areas (PA):

PA1: Unique sensor (i.e. physical (temperature, pressure, volume density), chemical, radiological, etc.) networks for remote monitoring of entombed facilities and tanks.

RN1: R&TD activities leading to a better understanding of the application and utility of these networks and potentially contributing to the advancement of the state-of-the-art of technical needs and applications.

C1: Related R&TD should extend techniques already developed at DOE laboratories.

PA2: Interactions between radiological and chemical contaminants of concern to DOE (e.g., plutonium, cesium, mercury, beryllium, etc.) and facility materials (e.g., concrete, steel, nickel, etc.).

RN2: R&TD activities leading to a better scientific understanding of these interactions and their ability to reduce the concentration or eliminate the presence of contaminants (i.e., decontamination).

C2: Scientific understanding should support the development of cost-effective methods to decontaminate materials of construction.

PA3: Incombustible fixatives and decontamination agents.

RN3: R&TD activities that potentially contribute to advancement of the state-of-the-art of these fixatives and agents for a nuclear facility. Also, the development of

testing and evaluation protocols to demonstrate their acceptance. Additional RN would be the re-assessment of relevant handbooks/directives/regulations to consider the application of new technologies and the strategic integration of consensus-based standards to facilitate complex-wide technologies.

C3: Meets ASTM standard from E10.03. Protocols should be applicable to various DOE facilities.

PA4: Enhanced Characterization and Real-Time Monitoring Technologies

RN4: R&TD activities that potentially contribute to advancement of the state-of-the-art of field deployable instrumentation such as, but not limited to, improved detection limits as well as enhanced precision and accuracy for both radiological and chemical contaminants (i.e. asbestos, etc.).

C4: Research could include development of a real-time field-deployable characterization/quantification instrument and fixed radiation monitors with automatic shift in the direction of prevailing and changing winds.

PA5: Models for facility decommissioning.

RN5: R&TD activities that potentially contribute to advancement of the state-of-the-art of in computer modeling and simulation for facility integrity, decommissioning strategy, and environmental impact of nuclear decommissioning and demolition.

C5: R&TD activities could include modeling of degradation and its effects on decommissioning scope and costs.

ii. Digital Technologies

The sub-program priority area is focused on anticipating and leveraging the opportunities offered by the emergence of leading-edge and future-of-the-art technologies including, but not limited to, rapidly advancing artificial intelligence along with its subset of machine learning; specialized sensor technologies; alternative realities; and wearable technologies and smart devices.

Sub-Program Priority Areas (PA):

PA1: Alternative Reality and Digital Twinning.

RN1: The research and technology area covers the use of alternative reality technologies, including non-immersive, fully immersive, semi-immersive, and collaborative virtual realities; augmented reality; mixed reality; extended reality; and hybrid reality. Developers and researchers should consider use applications such as engineering design; work quality improvements; work process simulations; troubleshooting, post-event, and forensic simulations; investigation worker efficiency and productivity; and worker training and proficiency.

PA2: Connected Worker - Integrating Workers and Technology in the Workspace

RN2: This research and technology area covers connective technologies and smart technologies that are used to “connect” the worker with assistive data-exchange devices in the workspace to enhance real-time situational awareness; enable continual

real-time self-awareness; provide immediate and on-demand access to real-time information; enhance collaboration among workers who are not co-located; enable more informed decision-making when responding to off-normal events; and other use scenarios that allow workers to perform tasks safer, more efficiently and produce quality results by becoming integrated with technology in the immediate work space and work environment.

PA3: Advanced and Alternative Sensor Technology.

RN3: Radioactive Materials, Naturally Occurring Radioactive Materials (Terrestrial and Cosmogenic), Technologically Enhanced Naturally Occurring Radioactive Materials.

PA4: Cutting-Edge Airborne Methane Detection Technology.

RN4: The objective is to explore the concept for development of an airborne, autonomous (but human pilot monitored), real-time leak detection technology that applies machine learning to passive optical sensor data to mitigate methane leak emissions through early detection.

C4: Smart Methane Emission Detection System Development (SLED/M): Consider the development of technologies which allow SLED/M to operate from an aerial platform or drone. Such technologies should allow for testing performance, data collection, and development of machine-learning-based detection algorithms that may detect leaks from a drone using the existing SLED/M components.

PA5: Artificial Intelligence (AI) Applied to Environmental Contexts

RN5: Artificial Intelligence. This research and technology area covers the use of artificial intelligence to support structured decision making, perform sensitivity and uncertainty analysis, support the analysis of big data, and perform high-computing modeling and simulations.

C5: Researchers and developers should consider AI applications that could be applied to optimizing remediation strategies, reducing long-term monitoring costs, optimizing sensor networks, integrating data from multiple sources (e.g., in situ sensors, drone/satellite-based remote sensing, reactive transport modeling, etc.), scaling data/models for different purposes, and providing actionable information from vast datasets to support decision making.

iii. Robotics

Many of the risks and challenges faced by the EM cleanup mission can be mitigated using advanced technology. Providing better tools to the workforce can allow work to be completed in a safer and more efficient manner. Robotics and remote systems are particularly compelling tools because they can provide advanced capabilities while removing workforce personnel from direct proximity of hazards.

Sub-Program Priority Areas (PA):

PA1: Robotics and Remote Systems.

RN1: This research and technology area covers use of robotics, remote systems, and related technologies to support EM's broad mission areas of: (1) nuclear and industrial facility operations, including surveillance, monitoring, and inspection; (2) environmental (soil and water) cleanup and post-closure stewardship; (3) radioactive solid waste treatment, storage, and disposal facilities; (4) radioactive waste liquid treatment and stabilization, including the maintenance, operation, and final closure of critical infrastructure and tanks/vessels; (5) nuclear materials and spent nuclear fuel stewardship and disposition; and (6) emergency preparedness and response.

- Unmanned Ground Vehicle (UGV): Solutions in tracked, wheeled, legged, and marsupial UGVs.
- Unmanned Aerial System (UAS): Solutions in fixed wing, rotary wing, and counter-/anti-UAS.
- Wearable Systems: Solutions in exoskeletons, exosuits and other wearable robotic devices designed to: (1) enhance worker safety and health by preventing bodily injuries; (2) enhance worker safety and health by reducing or mitigating occupational exposure to chemical, biological, radiological, nuclear, explosive, or otherwise hazardous materials; and (3) improve worker performance and efficiency by augmenting human capabilities and abilities.
- Industrial and Specialty Robot: Solutions in industrial robots, including articulated robots, Cartesian robots, delta robots, polar robots, collaborative robots, and selective compliance assembly robot arm (SCARA) robots; aquatic and submersible robots; marsupial and hybrid robots; and other specialty robotic devices, remote systems, and stand-off systems used for accomplishing tasks.

C1: Research should support component concepts development with potential application to DOE nuclear and radiological facilities and high-hazard industrial facilities. Concepts developed for DOE nuclear facilities should be rugged and possess the ability to operate in radioactive environments ranging from low to high radioactivity. Developers and researchers should consider the facilities to be an industrial setting with the objective to execute tasks that are dirty (contaminated), dull (routine, repetitive), dangerous (occupational hazards), and difficult (requires engineered measures).

C. Applications Specifically Not of Interest

The following types of applications will be deemed nonresponsive and will not be reviewed or considered:

Applications that fall outside the goals, objectives and parameters specified in Sections I.A. and I.B. of the NOFO.

II. Award Information

Award Overview

i. Estimated Funding

EM expects to make a total of approximately \$15,500,000 of federal funding available for new awards under this NOFO, subject to the availability of appropriated funds. These estimates are not a promise for funding, as all funding is subject to change due to Government discretion and availability. EM anticipates making approximately 5-10 awards under this NOFO. EM may issue one, multiple, or no awards. Individual awards may vary between \$1,000,000 and \$3,000,000.

EM may issue awards in one, multiple, or none of the topic areas listed in Section B. above. EM may establish more than one budget period for each award and fund only the initial budget period(s). Funding for all budget periods, including the initial budget period, is not guaranteed. Before the expiration of the initial budget period(s), EM may perform a down-select among different recipients and provide additional funding only to a subset of recipients.

ii. Project Period

EM anticipates making awards that will run from 12 months up to 36 months in length comprised of one to three budget periods/years. Project continuation will be contingent upon several elements, including satisfactory performance and availability of funding.

iii. New Applications Only

EM will accept only new applications under this NOFO. EM will not consider applications for renewals of existing EM-funded awards through this NOFO.

iv. EM Funding Agreements

Through grants and cooperative agreements, EM provides financial and other support to projects that have the potential to realize the NOFO objectives. EM does not use such agreements to acquire property or services for the direct benefit or use of the United States government.

v. Grants & Cooperative Agreements

EM generally uses grants and cooperative agreements to provide financial and other support to prime recipients. Through these grants and cooperative agreements, EM provides financial or other support to accomplish a public purpose of support or stimulation authorized by federal statute. EM will select the appropriate type of financial assistance based on the nature of the award. Any cooperative agreement

award will require EM to have substantial involvement. See Section VI. of the NOFO for more information on what substantial involvement may involve.

III. Eligibility Information

To be considered for an award under this NOFO, an applicant's submission must meet the criteria set forth below. If the application does not meet these eligibility requirements, it will be considered ineligible and removed from further evaluation.

Eligible Applicants

i. Minority Serving Institutions (MSIs)

The Consolidated Appropriations Act of 2024 restricts this funding to MSIs, including Historically Black Colleges and Universities and Other Minority Institutions (HBCUs/OMIs) as educational entities recognized by the Office of Civil Rights (OCR), U.S. Department of Education, and identified on the OCR's Department of Education U.S. accredited postsecondary minorities' institution list. See <https://www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html>. **In order to enhance opportunities for underrepresented MSIs, this NOFO further restricts eligibility to MSIs with a student population less than or equal to 5,000.** For implementation of this limitation, an MSI whose student population numbers are less than or equal to 5,000 in the National Center for Education Statistics (NCES) College Navigator <https://nces.ed.gov/collegenavigator/> shall be determined eligible to apply under this NOFO.

****Please note that only accredited MSIs may submit concept papers and applications under this NOFO. Also, non-MSI subawards are unallowable and subawards to MSI's with more than a 5,000 student population cannot exceed 20% of the total grant or cooperative agreement award value.****

ii. Cost Sharing

Cost sharing is not required but can be considered under this NOFO.

iii. Compliance Criteria

Concept Papers, Full Applications, and Replies to Reviewer Comments must meet all compliance criteria listed below or they will be considered noncompliant. EM will not review or consider noncompliant submissions, including Concept Papers, Full Applications, and Replies to Reviewer Comments that were: submitted after the applicable deadline; and/or submitted incomplete. EM will

not extend the submission deadline for applicants that fail to submit required information by the applicable deadline due to server/connection congestion.

iv. Compliance Criteria

1. Concept Papers

Concept Papers are deemed compliant if:

- The Concept Paper complies with the content and form requirements in Section IV. of the NOFO; and
- The applicant successfully uploaded all required documents and submitted to MSIPP-FOA@emcbc.doe.gov, by the deadline stated in this NOFO.

2. Full Applications

Full Applications are deemed compliant if:

- The applicant submitted a compliant Concept Paper;
- The Full Application complies with the content and form requirements in Section IV. of the NOFO; and
- The applicant successfully uploaded all required documents and submitted through the Grants.gov, by the deadline stated in the NOFO.

3. Replies to Reviewer Comments

Replies to Reviewer Comments are deemed compliant if:

- The Reply to Reviewer Comments complies with the content and form requirements in Section IV. of the NOFO; and
- The applicant successfully uploaded all required documents and submitted to MSIPP-FOA@emcbc.doe.gov, by the deadline stated in the NOFO.

v. Responsiveness Criteria

All “Applications Specifically Not of Interest,” as described in Section I.C. of the NOFO, are deemed nonresponsive and will not be reviewed or considered.

vi. Other Eligibility Requirements

Limitation on Number of Concept Papers and Full Applications Eligible for Review

An entity may only submit one Concept Paper and one Full Application for each topic area of this NOFO. If an entity submits more than one Concept Paper and one Full Application to the same topic area, EM will request a determination from the applicant’s authorizing representative as to which application should be reviewed. Any other submissions received listing the same entity as the applicant for the same topic area will not be eligible for further consideration. This limitation does not

prohibit an applicant from collaborating on other applications (e.g., as a potential subrecipient or partner) so long as the entity is only listed as the applicant on one Concept Paper and one Full Application for each topic area of this NOFO.

vii. Questions Regarding Eligibility

EM will not make eligibility determinations for potential applicants prior to the date on which applications to this NOFO must be submitted. The decision whether to submit an application in response to this NOFO lies solely with the applicant.

IV. Application and Submission Information

Application Process

The application process will include two phases: a Concept Paper phase, and a Full Application phase. **Only applicants who have submitted an eligible Concept Paper will be eligible to submit a Full Application.**

At each phase, EM performs an initial eligibility review of the applicant submissions to determine whether they meet the eligibility requirements of Section III. of the NOFO. EM will not review or consider submissions that do not meet the eligibility requirements of Section III. All submissions must conform to the following form and content requirements, including maximum page lengths (described below) and must be submitted via e-mail to MSIPP-FOA@emcbc.doe.gov (Concept Paper) and via Grants.gov (Full Application), unless specifically stated otherwise.

EM will not review or consider submissions submitted through means other than the e-mail address (Concept Paper) and Grants.gov (Full Application), submissions submitted after the applicable deadline, or incomplete submissions.

EM will not extend deadlines for applicants who fail to submit required information and documents due to server/connection congestion.

The Concept Paper, Full Application, and Reply to Reviewer Comments must conform to the following requirements:

- Each must be submitted in Adobe Portable Document Format (PDF) format unless stated otherwise;
- Each must be written in English;
- All pages must be formatted to fit on 8.5 x 11 inch paper with margins not less than one inch on every side. Use Times New Roman typeface, a black font color, and a font size of 12 point or larger (except in figures or tables, which may be 10-point font). A symbol font may be used to insert Greek letters or special characters, but the font size requirement still applies. References must be included as footnotes or endnotes in a font size of 10 or larger. Footnotes and endnotes are counted toward the maximum page requirement; and

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- Each submission must not exceed the specified maximum page limit, including cover page, charts, graphs, maps, and photographs when printed using the formatting requirements set forth above and single spaced. If applicants exceed the maximum page length indicated below, EM will review only the authorized number of pages and disregard any additional pages.

Applicants are responsible for meeting each submission deadline. **Applicants are strongly encouraged to submit their Concept Papers, Full Applications, and Replies to Reviewer Comments at least 48 hours in advance of the submission deadline.** Under normal conditions (i.e., at least 48 hours in advance of the submission deadline), applicants should allow at least 1 hour to submit a Concept Paper, Full Application, or Reply to Reviewer Comments. Once the Concept Paper, Full Application, or Reply to Reviewer Comments are submitted, applicants may revise or update that submission until the expiration of the applicable deadline. If changes are made to any of these documents, the applicant must resubmit the Concept Paper, Full Application, or Reply to Reviewer Comments before the applicable deadline.

EM urges applicants to carefully review their Concept Papers, Full Applications, and Replies to Reviewer Comments to allow sufficient time for the submission of required information and documents. All Full Applications that pass the initial eligibility review will undergo comprehensive technical merit review according to the criteria identified in Section V. of the NOFO.

Content and Form of the Expression of Interest E-mail

Applicants must submit an Expression of Interest E-mail by the specified due date and time to the following e-mail address: MSIPP-FOA@emcbc.doe.gov. Expression of Interest E-mails will be used by EM to plan for the merit review process. The e-mails should not contain any proprietary or sensitive business information. The e-mails will not be used for down-selection purposes, and do not commit an applicant to submit an application.

Each applicant must provide the following information as part of the Expression of Interest E-mail:

- Project Title;
- Lead Organization/Entity;
- Organization type and size (i.e., number of employees and students enrolled);
- The Project Team, including:
 - The Principal Investigator (PI) for the prime recipient;
 - Team Members (i.e., subrecipients);
 - Senior/Key Personnel (i.e., individuals who contribute in a substantive, measurable way to the execution of the proposed project); and
- Technical Topic or Area

Content and Form of the Concept Paper

To be eligible to submit a Full Application, applicants must submit a Concept Paper by the specified due date and time.

i. Concept Paper Content Requirements

EM will not review or consider ineligible Concept Papers (see Section III. of the NOFO).

Each Concept Paper must clearly link to one or more of the Topic Areas listed in section I.B. above.

The Concept Paper must conform to the following content requirements:

Section	Page Limit	Description
Cover Page	1 page maximum	The cover page shall include the project title, lead organization/entity, organization type and size (i.e., number of employees and students enrolled), the specific announcement Topic Area(s) being addressed, both the technical and business points of contact, names of all collaborating institutions, and any statements regarding confidentiality.
Project Description	4 pages maximum	Applicants are required to describe succinctly: <ul style="list-style-type: none">• The proposed program, including its basic operating principles and how it is unique and innovative;• The proposed program's target level of performance (applicants should provide program metrics and goals or other support to show how the proposed target could be met);• The relevance and application to DOE-EM field sites, including key shortcomings, limitations, and challenges;• How the proposed program will overcome the shortcomings, limitations, and challenges in the relevant field and application; and the potential impact that the proposed program would have on the relevant field and application;• The key risks/issues associated with the proposed program;• The impact that EM funding would have on the proposed program; and• Cost Rough Order of Magnitude (ROM) for the program and length of award

Section	Page Limit	Description
Addendum	1 page maximum	<p>Applicants are required to describe succinctly the qualifications, experience, and capabilities of the proposed Project Team, including:</p> <ul style="list-style-type: none"> • Whether the Principal Investigator (PI) and Project Team have the skill and expertise needed to successfully execute the program plan; • Whether the applicant has prior experience which demonstrates an ability to perform tasks of similar risk and complexity; • Whether the applicant has worked together with its teaming partners on prior projects or programs; and • Whether the applicant has adequate access to equipment and facilities necessary to accomplish the effort and/or clearly explain how it intends to obtain access to the necessary equipment and facilities; and • Applicants may provide graphs, charts, or other data to supplement their Program Description.

If applicants exceed the maximum page lengths as indicated above, EM will review only the authorized number of pages and disregard any additional pages. EM makes an independent assessment of each Concept Paper based on the criteria in Section V. of the NOFO. EM will select a subset of applicants to submit Full Applications. Other non-select applicants will be discouraged from submitting a Full Application. An applicant who receives a non-select notification may still submit a Full Application. EM will review all eligible Full Applications. However, by discouraging the submission of a Full Application, EM intends to convey its lack of programmatic interest in the proposed project to save the applicant the time and expense of preparing an application that is unlikely to be selected for award negotiations.

EM may include general comments provided from reviewers on an applicant’s Concept Paper in the select/non-select notification.

Content and Form of the Full Application

Applicants must submit a Full Application by the specified due date and time to be considered for funding under this NOFO. Applicants must submit the following completed application forms:

- 1) **Technical Volume and Statement of Project Objectives**: This shall outline all goals, objectives, and associated resources necessary for the project period.
- 2) **Resumes**
- 3) **Completed Application for Federal Assistance SF-424**

4) Completed SF-424A, Budget Information Form for Non-Construction Programs

5) Budget Narrative/Justification: This shall include all cost support information including: salary support, quotations and/or basis of estimates for supplies/equipment, subaward quotations, and Indirect Cost Rate Agreements etc.

7) Budget Justification Workbook in Excel Format

Applicants will have approximately 30 days from receipt of the Concept Paper notification from EM to prepare and submit a Full Application. Regardless of the date the applicant receives the notification, the submission deadline for the Full Application remains the date and time stated on the NOFO cover page.

i. Full Application Content Requirements

EM will not review or consider ineligible Full Applications (see Section III. of the NOFO).

Full Applications must conform to the following requirements:

Component	File Format	Page Limit	File Name
Technical Volume and Statement of Project Objectives	PDF	30	RecipientNameTechnicalVolume
Resumes	PDF	2 pages each	Resumes
SF-424	PDF	n/a	App424
SF-424 A or C	PDF	n/a	App424A or C
Budget Narrative	PDF	n/a	Budget_Narrative
Budget Justification Workbook	MS Excel	n/a	Budget Justification
Subrecipient Budget Justification	MS Excel	n/a	Subrecipient_Budget_Justification

ii. Technical Volume and Statement of Project Objectives

The Technical Volume and Statement of Project Objectives must be submitted in PDF format and must conform to the following content and form requirements, including maximum page lengths. If applicants exceed the maximum page lengths indicated below, EM will review only the authorized number of pages and disregard any additional pages. This volume must address the Merit Review Criteria as

discussed in Section V. of the NOFO. Save the Technical Volume in a single PDF file using the following convention for the title “Technical Volume”.

The Technical Volume and Statement of Project Objectives to the Full Application may not be more than 50 pages, including the cover page, table of contents, and all citations, charts, graphs, maps, photos, or other graphics, and must include all of the information in the table below. The applicant should consider the weighting of each of the evaluation criteria (see Section V. of the NOFO) when preparing the Technical Volume.

The Technical Volume should clearly describe and expand upon information provided in the Concept Paper. The Technical Volume must conform to the following content requirements:

Section/ Page Limit	Description
Cover Page	The cover page should include the project title, the specific NOFO and both the technical and business points of contact, names of all team member organizations, names of the senior/key personnel and their organizations, and any statements regarding confidentiality.
Program Overview (Approximately 10% of the Technical Volume)	<p>The Program Overview should contain the following information:</p> <ul style="list-style-type: none"> • Background: The applicant should discuss the background of their organization, including the history, successes, and current status of STEM programs relevant to the topic being addressed in the Full Application. • Major Goal: The applicant should explicitly identify the targeted improvements to the baseline STEM programs and the critical success factors in achieving that goal. • DOE-EM Impact: The applicant should discuss the impact that DOE funding would have on the proposed project. Applicants should specifically explain how DOE funding, relative to prior, current, or anticipated funding from other public and private sources, is necessary to achieve the project objectives.
Program Description, Innovation, and Impact (Approximately 40% of the Technical Volume)	<p>The Program Description should contain the following information:</p> <ul style="list-style-type: none"> • Relevance and Outcomes: The applicant should provide a detailed description of the STEM programs that will be implemented or enhanced during the course of the project. This section should describe the relevance of the proposed programs to the goals and objectives of the NOFO, including the potential to meet specific DOE workforce development goals or other relevant performance targets. The applicant should clearly specify the expected outcomes of the project.

Section/ Page Limit	Description
	<ul style="list-style-type: none"> • Feasibility: The applicant should demonstrate the feasibility of the proposed programs and capability of achieving the anticipated performance targets, including a description of previous work done and prior results. • Metrics and Performance: The applicant should describe the current state-of-the-art program in the applicable field, the specific innovation of the proposed program, and the overall impact on advancing the program if the project is successful.
<p>Statement of Project Objectives (Approximately 30% of the Technical Volume)</p>	<p>The Statement of Project Objectives should include a summary of the objectives, technical scope, milestones, and project schedule. The Workplan should contain the following information:</p> <ul style="list-style-type: none"> • Project Objectives: The applicant should provide a clear and concise (high-level) statement of the goals and objectives of the project as well as the expected outcomes. • Technical Scope Summary: The applicant should provide a summary description of the overall work scope and approach to achieve the objective(s). The overall work scope is to be divided by performance periods that are separated by discrete, approximately annual decision points. The applicant should describe the specific expected result of each performance period. • Task Description Summary: The Statement of Project Objectives should describe the work to be accomplished and how the applicant will achieve the milestones, will accomplish the final project goal(s), and will produce all deliverables. The Statement of Project Objectives shall contain a concise description of the specific activities to be conducted over the life of the project. The description shall be a full explanation and disclosure of the project being proposed. It is the applicant’s responsibility to prepare an adequately detailed task plan to describe the proposed project and the plan for addressing the objectives of this NOFO. • Milestone Summary: The applicant should provide a summary of appropriate milestones throughout the project to demonstrate success. A milestone may be either a progress measure (which can be activity based) or a SMART technical milestone. SMART milestones should be Specific, Measurable, Achievable, Relevant, and Timely, and must demonstrate a technical achievement rather than simply completing a task. Unless otherwise specified in the NOFO, the minimum requirement is that each project must have at

Section/ Page Limit	Description
	<p>least one milestone per quarter for the duration of the project with at least one SMART technical milestone per year (depending on the project, more milestones may be necessary to comprehensively demonstrate progress). The applicant should also provide the means by which the milestone will be verified.</p> <ul style="list-style-type: none"> • End of Project Goal: The applicant should provide a summary of the end of project goal(s). At a minimum, each project must have one SMART end of project goal. • Project Schedule (Gantt Chart or similar): The applicant should provide a schedule for the entire project, including task and subtask durations, and milestones. • Project Management: The applicant should discuss the team’s proposed management plan, including the following: <ul style="list-style-type: none"> ○ The overall approach to and organization for managing the work. ○ The roles of each project team member. ○ Any critical handoffs/interdependencies among project team members. ○ The technical and management aspects of the management plan, including systems and practices, such as financial and project management practices. ○ The approach to project risk management and mitigation of challenges. ○ A description of how project changes will be handled. ○ If applicable, the approach to Quality Assurance/Control. ○ How communications will be maintained among project team members.
<p>Technical Qualifications and Resources (Approximately 20% of the Technical Volume)</p>	<p>The Technical Qualifications and Resources should contain the following information:</p> <ul style="list-style-type: none"> • Describe the project team’s unique qualifications and expertise, including those of key subrecipients. • Describe the project team’s existing equipment and facilities that will facilitate the successful completion of the proposed project; include a justification of any new equipment or facilities requested as part of the project. • This section should also include relevant, previous work efforts, demonstrated innovations, and how these enable the applicant to achieve the project objectives.

Section/ Page Limit	Description
	<ul style="list-style-type: none"> • Describe the time commitment of the key team members to support the project. • For teaming or subawards to other MSI's describe succinctly: <ul style="list-style-type: none"> ○ The roles and the work to be performed by each PI and senior/key personnel; ○ Business agreements between the applicant and each PI and senior/key personnel; ○ How the various efforts will be integrated and managed; ○ Process for making decisions on scientific/technical direction; ○ Publication arrangements; ○ Intellectual Property issues; and ○ Communication plans

iii. Resumes

A resume provides information that can be used by reviewers to evaluate the individual's skills, experience, and potential for leadership within the scientific community. Applicants are required to submit two-page resumes for the Principal Investigator and all Senior/Key Personnel that include the following:

1. Contact Information;
2. Education and training: Provide institution, major/area, degree, and year for undergraduate, graduate, and postdoctoral training;
3. Research and Professional Experience: Beginning with the current position, list professional/academic positions in chronological order with a brief description. List all current academic, professional, or institutional appointments, foreign or domestic, at the applicant institution or elsewhere, whether or not remuneration is received, and, whether full-time, part-time, or voluntary;
4. Awards and honors;
5. A list of up to 10 publications most closely related to the proposed project. For each publication, identify the names of all authors (in the same sequence in which they appear in the publication), the article title, book or journal title, volume number, page numbers, year of publication, and website address if available electronically. Patents, copyrights, and software systems developed may be provided in addition to or substituted for publications. An abbreviated style such as the Physical Review Letters (PRL) convention for citations (list only the first author) may be used for publications with more than 10 authors; and

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6. Synergistic Activities: List up to five professional and scholarly activities related to the proposed effort.

Save the resumes in a single PDF file using the following convention for the title “LeadOrganization_Resumes”.

iv. SF-424: Application for Federal Assistance

Applicants are required to complete the SF-424 Application for Federal Assistance. This form is available on [Grants.gov](https://www.grants.gov). Complete all required fields in accordance with the instructions on the form.

v. SF-424A: Budget Information -Non-Construction Programs

Applicants are required to complete the appropriate SF-424A Budget Information Form. These forms are available on [Grants.gov](https://www.grants.gov).

vi. Budget Narrative/ Justification

Applicants are required to complete a Budget Narrative/Justification document that discusses all proposed costs and how they link to the scope of work. Please include proposed travel for yearly Waste Management Conferences, EM MSIPP Workshops, DOE EM sites and laboratories for collaborations, and visits to other MSI’s as needed. Costs that may be incurred by collaborating DOE sites and laboratories through the course of the grant are not allowable costs to be reimbursed with grant funding. Funding may be provided to those entities by DOE-EM separate from the grant.

vii. Budget Justification Workbook

Applicants are required to complete a Budget Justification Workbook in Microsoft Excel format. Prime recipients must complete the Budget Justification Workbook for the project as a whole, including all work to be performed by the prime recipient and its subrecipients and contractors. The Budget Justification Workbook shall include a tab for each year of the project broken out by quarter, plus a summary tab that includes all years.

viii. Additional Requirements

Post Selection Information Requests

If selected for award, EM reserves the right to request additional or clarifying information regarding the following (non-exhaustive list):

- Personnel proposed to work on the project and collaborating organizations;

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- Current and Pending Support;
 - Indirect cost information;
 - Other budget information;
 - Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5);
 - Environmental Questionnaire.

Unique Entity Identifier (UEI) and System for Award Management (SAM)

Each applicant (unless the applicant is an individual or federal awarding agency that is excepted from those requirements under 2 CFR 25.110(b) or (c), or has an exception approved by the federal awarding agency under 2 CFR 25.110(d)) is required to: (1) Be registered in the SAM at <https://www.sam.gov> before submitting its application; (2) provide a valid UEI in its application; and (3) continue to maintain an active SAM registration with current information at all times during which it has an active federal award or an application or plan under consideration by a federal awarding agency. DOE may not make a federal award to an applicant until the applicant has complied with all applicable UEI and SAM requirements and, if an applicant has not fully complied with the requirements by the time DOE is ready to make a federal award, the DOE will determine that the applicant is not qualified to receive a federal award and use that determination as a basis for making a federal award to another applicant.

Submission Dates and Times

All required submissions must be submitted via e-mail to MSIPP-FOA@emcbc.doe.gov (Concept Paper) or via [Grants.gov](https://www.grants.gov) (full application), no later than 5:00 p.m. Eastern Time on the dates provided on the cover page of this NOFO.

Funding Restrictions

i. Allowable Costs

All expenditures must be allowable, allocable, and reasonable in accordance with the applicable federal cost principles.

Refer to the following applicable federal cost principles for more information:

- 2 CFR Part 200 Subpart E - Cost Principles for all non-federal entities.

ii. Pre-Award Costs

Selectees must request prior written approval to charge pre-award costs. Pre-award costs are those incurred prior to the effective date of the federal award

directly pursuant to the negotiation and in anticipation of the federal award where such costs are necessary for efficient and timely performance of the scope of work. Such costs are allowable only to the extent that they would have been allowable if incurred after the date of the federal award and **only** with the written approval of the federal awarding agency, through the Grants/Agreements Officer assigned to the award.

Pre-award costs cannot be incurred prior to the Selection Official signing the Selection Statement and Analysis.

Pre-award expenditures are made at the selectee's risk. EM is not obligated to reimburse costs: (1) in the absence of appropriations; (2) if an award is not made; or (3) if an award is made for a lesser amount than the selectee anticipated.

iii. Performance of Work in the United States

1. Requirement

All work performed under EM awards must be performed in the United States. This requirement does not apply to the purchase of supplies and equipment; however, the prime recipient should make every effort to purchase supplies and equipment within the United States. The prime recipient must flow down this requirement to its subrecipients.

2. Failure to Comply

If the prime recipient fails to comply with the Performance of Work in the United States requirement, EM may deny reimbursement for the work conducted outside the United States and such costs may not be recognized as allowable recipient cost share. The prime recipient is responsible should any work under this award be performed outside the United States, absent a waiver, regardless of whether the work is performed by the prime recipient, subrecipients, contractors or other project partners.

iv. Construction

Recipients are required to obtain written authorization from the Grants/Agreements Officer before incurring any major construction costs. Any construction costs should be incidental to the overall scope of the project.

v. Foreign Travel

Foreign travel costs are not allowable under this NOFO.

vi. Equipment and Supplies

To the greatest extent practicable, all equipment and products purchased with funds made available under this NOFO should be American made. This requirement does not apply to used or leased equipment.

Property disposition will be required at the end of a project if the current fair market value of property exceeds \$5,000. For-profit entity disposition requirements are set forth at 2 CFR 910.360. Property disposition requirements for other non-federal entities are set forth in 2 CFR 200.310-200.316.

vii. Davis-Bacon Requirements

Projects awarded under this NOFO may involve construction and therefore, all laborers and mechanics employed by the recipient, subrecipients, contractors or subcontractors in the performance of construction, alteration, or repair work in excess of \$2000 funded in whole or in part under this NOFO shall be paid wages at rates not less than those prevailing on similar projects in the locality, as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code commonly referred to as the “Davis-Bacon Act” (DBA).

Recipients shall provide written assurance acknowledging the DBA requirements above, and confirming that the laborers and mechanics performing construction, alteration, or repair work on projects funded in whole or in part by awards made as a result of this NOFO are paid or will be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by subchapter IV of Chapter 31 of Title 40, United States Code (Davis-Bacon Act).

The Recipient must comply with all of the Davis-Bacon Act requirements, including but not limited to:

- (1) ensuring that the wage determination(s) and appropriate Davis-Bacon clauses and requirements are flowed down to and incorporated into any applicable subcontracts or subrecipient awards.
- (2) being responsible for compliance by any subcontractor or subrecipient with the Davis-Bacon labor standards.
- (3) receiving and reviewing certified weekly payrolls submitted by all subcontractors and subrecipients for accuracy and to identify potential compliance issues.
- (4) maintaining original certified weekly payrolls for 3 years after the completion of the project and must make those payrolls available to the DOE or the Department of Labor upon request, as required by 29 CFR 5.6(a)(2).
- (5) conducting payroll and job-site reviews for construction work, including interviews with employees, with such frequency as may be necessary to assure compliance by its subcontractors and subrecipients and as requested or directed by the DOE.
- (6) cooperating with any authorized representative of the Department of Labor in their inspection of records, interviews with employees, and other actions undertaken as part of a Department of Labor investigation.

(7) posting in a prominent and accessible place the wage determination(s) and Department of Labor Publication: WH-1321, Notice to Employees Working on Federal or Federally Assisted Construction Projects.

(8) notifying the Contracting Officer of all labor standards issues, including all complaints regarding incorrect payment of prevailing wages and/or fringe benefits, received from the recipient, subrecipient, contractor, or subcontractor employees; significant labor standards violations, as defined in 29 CFR 5.7; disputes concerning labor standards pursuant to 29 CFR parts 4, 6, and 8 and as defined in FAR 52.222-14; disputed labor standards determinations; Department of Labor investigations; or legal or judicial proceedings related to the labor standards under this Contract, a subcontract, or subrecipient award.

(9) preparing and submitting to the Contracting Officer, the Office of Management and Budget Control Number 1910-5165, Davis Bacon Semi-Annual Labor Compliance Report, by April 21 and October 21 of each year. Form submittal will be administered through the iBenefits system (<https://doeibenefits2.energy.gov>) or its successor system.

The Recipient must undergo Davis-Bacon Act compliance training and must maintain competency in Davis-Bacon Act compliance. The Contracting Officer will notify the Recipient of any DOE sponsored Davis-Bacon Act compliance trainings. The Department of Labor offers free Prevailing Wage Seminars several times a year that meet this requirement, at <https://www.dol.gov/agencies/whd/government-contracts/construction/seminars/events>.

The Department of Energy has contracted with, a third-party DBA electronic payroll compliance software application. The Recipient must ensure the timely electronic submission of weekly certified payrolls as part of its compliance with the Davis-Bacon Act unless a waiver is granted to a particular contractor or subcontractor because they are unable or limited in their ability to use or access the software.

Davis Bacon Act Electronic Certified Payroll Submission Waiver

A waiver must be granted before the award starts. The applicant does not have the right to appeal EERE's decision concerning a waiver request.

For additional guidance on how to comply with the Davis-Bacon provisions and clauses, see <https://www.dol.gov/agencies/whd/government-contracts/construction> and <https://www.dol.gov/agencies/whd/government-contracts/protections-for-workers-in-construction>.

viii. Domestic Preference

As appropriate and to the extent consistent with law, Applicants shall ensure that, to the greatest extent practicable, iron and aluminum as well as steel, cement, and other manufactured products (items and construction materials composed in whole or in

part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber) used in the proposed project shall be produced in the United States. This requirement shall flow down to all sub-awards including all contracts, subcontracts and purchase orders for work performed under the proposed project.

ix. Buy American Requirements

A. Definitions

Components are defined as the articles, materials, or supplies incorporated directly into the end manufactured product(s).

Construction Materials are an article, material, or supply—other than an item primarily of iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives—that is used in a construction project and is or consists primarily of non-ferrous metals, plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables), glass (including optic glass), lumber, drywall, coatings (paints and stains), optical fiber, clay brick; composite building materials; or engineered wood products.

Domestic Content Procurement Preference Requirement- means a requirement that no amounts made available through a program for federal financial assistance may be obligated for a construction project unless—

(A) all iron and steel used in the project are produced in the United States;

(B) the manufactured products used in the project are produced in the United States; or

(C) the construction materials used in the project are produced in the United States.

Also referred to as the **Buy America Requirement**.

Manufactured Products are items used for a construction project made up of components that are not primarily of iron or steel; construction materials; cement and cementitious materials' aggregates such as stone, sand, or gravel; or aggregate binding agents or additives.

Primarily of iron or steel means greater than 50% iron or steel, measured by cost.

Project- means the construction, alteration, maintenance, or repair of a structure in the United States.

Public- The Buy America Requirement does not apply to non-public construction. For purposes of this guidance, construction should be considered “public” if it is: (1) publicly owned or (2) privately owned but utilized primarily for a public purpose. Construction should be considered to be “utilized primarily for a public purpose” if it is privately operated on behalf of the public or is a place of public accommodation.

B. Buy America Requirement

None of the funds provided under this award (federal share or recipient cost-share) may be used for construction unless:

1. All iron and steel used in the project is produced in the United States—this means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States;
2. All manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation; and
3. All construction materials are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States.

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

project but are not an integral part of the structure or permanently affixed to the construction project.

Recipients are responsible for administering their award in accordance with the terms and conditions, including the Buy America Requirement. The recipient must ensure that the Buy America Requirement flows down to all subawards and that the subawardees and subrecipients comply with the Buy America Requirement. The Buy America Requirement term and condition must be included all sub-awards, contracts, subcontracts, and purchase orders for work performed under the construction project.

C. Certification of Compliance

The Recipient must certify or provide equivalent documentation for proof of compliance that a good faith effort was made to solicit bids for domestic products used in the construction project under this Award.

The Recipient must also maintain certifications or equivalent documentation for proof of compliance that those articles, materials, and supplies that are consumed in, incorporated into, affixed to, or otherwise used in the construction project, not covered by a waiver or exemption, are produced in the United States. The certification or proof of compliance must be provided by the suppliers or manufacturers of the iron, steel, manufactured products and construction materials and flow up from all subawardees, contractors and vendors to the Recipient. The Recipient must keep these certifications with the award/project files and be able to produce them upon request from DOE, auditors or Office of Inspector General.

D. Waivers

When necessary, the Recipient may apply for, and DOE may grant, a waiver from the Buy America Requirement. Requests to waive the application of the Buy America Requirement must be in writing to the Contracting Officer. Waiver requests are subject to review by DOE and the Office of Management and Budget, as well as a public comment period of no less than 15 calendar days.

Waivers must be based on one of the following justifications:

1. Public Interest- Applying the Buy America Requirement would be inconsistent with the public interest;

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2. Non-Availability- The types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or
 3. Unreasonable Cost- The inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent.

Requests to waive the Buy America Requirement must include the following:

- Waiver type (Public Interest, Non-Availability, or Unreasonable Cost);
- Recipient name and Unique Entity Identifier (UEI);
- Award information (Federal Award Identification Number, Assistance Listing number);
- A brief description of the project, its location, and the specific construction involved;
- Total estimated project cost, with estimated federal share and recipient cost share breakdowns;
- Total estimated construction costs, with estimated federal share and recipient cost share breakdowns;
- List and description of iron or steel item(s), manufactured goods, and/or construction material(s) the recipient seeks to waive from the Buy America Preference, including name, cost, quantity(ies), country(ies) of origin, and relevant Product Service Codes (PSC) and North American Industry Classification System (NAICS) codes for each;
- A detailed justification as to how the non-domestic item(s) is/are essential the project;
- A certification that the recipient made a good faith effort to solicit bids for domestic products supported by terms included in requests for proposals, contracts, and non-proprietary communications with potential suppliers;
- A justification statement—based on one of the applicable justifications outlined above—as to why the listed items cannot be procured domestically, including the due diligence performed (e.g., market research, industry outreach, cost analysis, cost-benefit analysis) by the recipient to attempt to avoid the need for a waiver. This justification may cite, if applicable, the absence of any Buy America-compliant bids received for domestic products in response to a solicitation; and
- Anticipated impact to the project if no waiver is issued.

The Recipient should consider using the following principles as minimum requirements contained in their waiver request:

- **Time-limited:** Consider a waiver constrained principally by a length of time, rather than by the specific project/award to which it applies. Waivers of this type may be appropriate, for example, when an item that is “non-available” is widely used in the project. When requesting such a waiver, the Recipient should identify a reasonable, definite time frame (e.g., no more than one to two years) designed so that the waiver is reviewed to ensure the condition for the waiver (“non-availability”) has not changed (e.g., domestic supplies have become more available).
- **Targeted:** Waiver requests should apply only to the item(s), product(s), or material(s) or category(ies) of item(s), product(s), or material(s) as necessary and justified. Waivers should not be overly broad as this will undermine domestic preference policies.
- **Conditional:** The Recipient may request a waiver with specific conditions that support the policies of IIJA/BABA and Executive Order 14017.

DOE may request, and the Recipient must provide, additional information for consideration of this waiver. DOE may reject or grant waivers in whole or in part depending on its review, analysis, and/or feedback from OMB or the public. DOE's final determination regarding approval or rejection of the waiver request may not be appealed. Waiver requests may take up to 90 calendar days to process.

x. Lobbying

Recipients and subrecipients may not use any federal funds to influence or attempt to influence, directly or indirectly, congressional action on any legislative or appropriation matters.

Recipients and subrecipients are required to complete and submit SF-LLL, “Disclosure of Lobbying Activities” (<https://www.grants.gov/web/grants/forms/sf-424-individual-family.html>) to ensure that non-federal funds have not been paid and will not be paid to any person for influencing or attempting to influence any of the following in connection with the application:

- An officer or employee of any federal agency;
- A Member of Congress;

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- An officer or employee of Congress; or
 - An employee of a Member of Congress.

xi. Risk Assessment

Prior to making a federal award, the DOE is required by 31 U.S.C. 3321 and 41 U.S.C. 2313 to review information available through any Office of Management and Budget (OMB)-designated repositories of government-wide eligibility qualification or financial integrity information, such as SAM Exclusions and “Do Not Pay.”

In addition, DOE evaluates the risk(s) posed by applicants before they receive federal awards. This evaluation may consider results of the evaluation of the applicant's eligibility; the quality of the application; financial stability; quality of management systems and ability to meet the management standards prescribed in this part; history of performance; reports and findings from audits; and the applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on non-federal entities.

In addition to this review, DOE must comply with the guidelines on government-wide suspension and debarment in 2 CFR 180 and must require non-federal entities to comply with these provisions. These provisions restrict federal awards, subawards and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in federal programs or activities.

V. Application Review Information

Technical Review Criteria

i. Concept Papers

Concept Papers are evaluated based on consideration of the following factors. All sub-criteria are of equal weight.

Concept Paper Criterion: Overall NOFO Responsiveness and Viability of the Project (Weight: 100%)

This criterion involves consideration of the following factors:

- The applicant clearly describes the proposed program objectives and link to EM priorities;
- The applicant has identified risks and challenges, including possible mitigation strategies, and has shown the impact that EM funding and the proposed project would have on the relevant field and application;
- The applicant has the qualifications, experience, capabilities and other resources necessary to complete the proposed program;

-
- The applicant references whether partnering with other MSI's, including 2-year institutions, is an approach used in application;
 - The applicant references partnering with other EM sites and/or National Laboratories; and
 - The proposed work, if successfully accomplished, would clearly meet the objectives as stated in the NOFO.

ii. Full Applications

Applications will be evaluated against the merit review criteria shown below, which are separated into two categories, technical and cost/price. The weighting of each criterion is listed below and in descending order of importance. The Reasonableness and appropriateness of the proposed budget (cost/price) will be evaluated but is ranked as second order of priority.

Technical Criteria

Criteria 1: Technical merit and the educational benefits of the proposed work related to the DOE-EM mission (50%)

- What is the innovation of proposed work?
- What is the likelihood of achieving valuable results?
- How might the results of the proposed work impact the direction, progress, and thinking in relevant STEM fields of research?
- How does it benefit EM goals and objectives?
- How logical and feasible are curriculum development approaches?
- Does curriculum exploration, development, and improvement lead to substantive and purposeful integration of theoretical and experimental learning activities of collegiate students?
- Are proposed courses embedded in majors and minors aligned with the EM missions?
- To what extent is faculty professional development supported?
- Does instrumentation/specialized equipment contribute to curriculum enhancements?
- Will the student, faculty, and the institution enhance recruitment of future staff in STEM to EM?

Criteria 2: Competency of Offerors Personnel and Adequacy of Proposed Resources (25%)

- What are the past performance and potential of the Principal Investigator (PI)?
- How well qualified is the team to carry out the proposed work?

-
- Are the research environment and facilities adequate for performing the work?
 - Does the proposed work take advantage of unique facilities and capabilities?
 - Do the participating institutions have the resources to track and report on scientific progress and budget status in a timely manner?

Criteria 3: Degree to which there is collaboration with other MSI's and with a DOE National Laboratory and/or DOE-EM Field Site (25%)

- Does the primary MSI have planned teaming/collaboration/partnering with other MSI's?
- Does the MSI identify opportunities for students to participate in research in collaboration with a DOE National Laboratory and/or EM field site?
- Does the collaboration introduce faculty to national laboratories and/EM field sites, offer students beneficial educational experiences, and offer the best in facilities and infrastructure to the MSI collaborators?

Cost/Price Criteria

Reasonableness and Appropriateness of the Proposed Budget

- Are the proposed budget and staffing levels adequate to carry out the proposed research?
- Is the budget reasonable and appropriate for the scope?
- Is the budget for materials, supplies, and equipment reasonable?

iii. Criteria for Replies to Reviewer Comments

EM has not established separate criteria to evaluate Replies to Reviewer Comments. Instead, Replies to Reviewer Comments are attached to the original applications and evaluated as an extension of the Full Application.

Standards for Application Evaluation

Applications that are determined to be eligible will be evaluated in accordance with this NOFO, by the standards set forth in the guidance provided in the “DOE Merit Review Guide for Financial Assistance,” effective September 2020, which is available at: <https://energy.gov/management/downloads/merit-review-guide-financial-assistance-and-unsolicited-proposals-current>.

Evaluation and Selection Process

i. Overview

The evaluation process consists of multiple phases; each includes an initial eligibility review and a thorough technical review. Rigorous technical reviews of eligible submissions are conducted by reviewers that are experts in the subject matter of the NOFO. Ultimately, the Selection Official considers the recommendations of the reviewers, along with other considerations such as program policy factors, in determining which applications to select.

ii. Pre-Selection Clarification

EM may determine that pre-selection clarifications are necessary from one or more applicants. These pre-selection clarifications will solely be for the purposes of clarifying the application and will be limited to information already provided in the application documentation. The pre-selection clarifications may occur before, during or after the merit review evaluation process. Information provided by an applicant that is not necessary to address the pre-selection clarification question will not be reviewed or considered. Typically, a pre-selection clarification will be carried out through either written response to EM, written clarification questions or video or conference calls with EM representatives.

The information provided by applicants to EM through pre-selection clarifications is incorporated in their applications and contributes to the merit review evaluation and EM's selection decisions. If EM contacts an applicant for pre-selection clarification purposes, it does not signify that the applicant has been selected for negotiation of award or that the applicant is among the top ranked applications.

EM will not reimburse applicants for expenses relating to the pre-selection clarifications, nor will these costs be eligible for reimbursement as pre-award costs.

iii. Recipient Integrity and Performance Matters

DOE, prior to making a federal award with a total amount of federal share greater than the simplified acquisition threshold, is required to review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (currently FAPIIS) (see 41 U.S.C. 2313).

The applicant, at its option, 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.

DOE 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.

iv. Selection

In addition to the above criteria, the Selection Official may consider the following program policy factors in determining which Full Applications to select for award negotiations:

- It is desirable to select for award a group of projects which represent a diversity of approaches, methods, applications and/or market segments;
- It is desirable to support complementary and/or duplicative efforts or projects, which, when taken together, will best achieve the program goals and objectives;
- It is desirable that different categories and sizes (based on number of employees and students enrolled) of MSI organizations be selected for Award in order to provide a balanced programmatic effort and a variety of different approaches.
- It is desirable, because of the nature of or location of the DOE-EM cleanup site, the type of projects envisioned, or limitations of past efforts, to select for award a group of projects with a broad or specific geographic distribution.
- The degree to which the proposed project exhibits technological diversity when compared to the existing DOE project portfolio and other projects selected from the subject NOFO;
- The degree to which the proposed project optimizes the use of available DOE funding to achieve programmatic objectives;
- The degree to which the proposed project incorporates applicant or team members from other MSI's, EM sites and National Laboratories.

VI. Award Administration Information

Award Notices

i. Ineligible Submissions

Ineligible Concept Papers and Full Applications (see Section III. of the NOFO) will not be further reviewed or considered for award. The Grants/Agreements Officer will send a notification letter by email to the technical and administrative points of contact designated by in the applicant submissions. The notification letter will state the basis upon which the Concept Paper or the Full Application is ineligible and not considered for further review.

ii. Concept Paper Notifications

EM will notify applicants of its determination to select or not select the submission of a Full Application via e-mail.

Applicants may submit a Full Application even if they receive a notification discouraging them from doing so. By discouraging the submission of a Full Application, EM intends to convey its lack of programmatic interest in the proposed project. Such assessments do not necessarily reflect judgments on the merits of the proposed project. The purpose of the Concept Paper phase is to save applicants the considerable time and expense of preparing a Full Application that is unlikely to be selected for award negotiations.

A notification encouraging the submission of a Full Application does not authorize the applicant to commence performance of the project. Please refer to Section IV. of the NOFO for guidance on pre-award costs.

iii. Full Application Notifications

EM will notify applicants via email of its determination of whether their Full Applications were selected for award negotiations. The notification will be emailed to the technical and administrative points of contact designated by the applicant in the prior submissions. Alternatively, EM may notify one or more applicants that a final selection determination on particular Full Applications will be made at a later date, subject to the availability of funds or other factors.

iv. Successful Applicants

Receipt of a notification letter selecting a Full Application for award negotiations does not authorize the applicant to commence performance of the project. If an application is selected for award negotiations, it is not a commitment by EM to issue an award. Applicants do not receive an award until award negotiations are complete and the Grants/Agreements Officer fully executes the funding agreement.

The award negotiation process will take approximately 60 days. Applicants must designate a primary and a backup point-of-contact in the application with whom EM will communicate to conduct award negotiations. The applicant must be responsive during award negotiations (i.e., provide requested documentation) and meet the negotiation deadlines. If the applicant fails to do so or if award negotiations are otherwise unsuccessful, EM will cancel the award negotiations and rescind the Selection. EM reserves the right to terminate award negotiations at any time for any reason.

Please refer to Section IV. of the NOFO for guidance on pre-award costs.

v. Alternate Selection Determinations

In some instances, an applicant may receive a notification that its application was not selected for award, but EM may consider the Full Application for federal funding in the future. Subject to the availability of funds or other factors EM may ultimately determine whether to select or not select the Full Application for award negotiations.

vi. Unsuccessful Applicants

EM shall promptly notify in writing via e-mail, each applicant whose application has not been selected for award or whose application cannot be funded because of the unavailability of appropriated funds.

Administrative and National Policy Requirements

i. Registration Requirements

There are several one-time actions before submitting an application in response to this NOFO, and it is vital that applicants address these items as soon as possible. Some may take several weeks, and failure to complete them could interfere with an applicant's ability to apply to this NOFO, or to meet the negotiation deadlines and receive an award if the application is selected. These requirements are as follows:

1. System for Award Management

Register with the SAM at <https://www.sam.gov>. Designating an EBiz POC and obtaining a special password called a Marketing Partner ID Number (MPIN) are important steps in SAM registration. Please update your SAM registration annually.

2. Grants.gov

Register in Grants.gov (<http://www.grants.gov>) to receive automatic updates when Amendments to this NOFO are posted.

ii. Award Administrative Requirements

The administrative requirements for DOE grants and cooperative agreements are contained in 2 CFR Part 200 as amended by 2 CFR Part 910.

iii. Foreign National Access

All applicants selected for an award under this NOFO may be required to provide information to DOE in order to satisfy requirements for foreign nationals' access to DOE sites, information, technologies, equipment, programs or personnel. A foreign national is defined as any person who is not a U.S. citizen by birth or naturalization. If a selected applicant (including any of its subrecipients, contractors or vendors) anticipates involving foreign nationals in the performance of its award, the selected applicant may be required to provide DOE with specific information about each foreign national to ensure compliance with the requirements for access approval. National laboratory personnel already cleared for site access may be excluded.

iv. Subaward and Executive Reporting

Additional administrative requirements necessary for DOE grants and cooperative agreements to comply with the Federal Funding and Transparency Act of 2006 (FFATA) are contained in 2 CFR Part 170. Prime recipients must register with the

new FFATA Subaward Reporting System database and report the required data on their first tier subrecipients. Prime recipients must report the executive compensation for their own executives as part of their registration profile in SAM.

v. Environmental Review in Accordance with National Environmental Policy Act (NEPA)

EM's decision whether and how to distribute federal funds under this NOFO is subject to NEPA (42 U.S.C. 4321, *et seq.*). NEPA requires federal agencies to integrate environmental values into their decision-making processes by considering the potential environmental impacts of their proposed actions. For additional background on NEPA, please see DOE's NEPA website, at <https://www.energy.gov/nepa>.

While NEPA compliance is a federal agency responsibility and the ultimate decisions remain with the federal agency, all recipients selected for an award will be required to assist in the timely and effective completion of the NEPA process in the manner most pertinent to their proposed project. If DOE determines certain records must be prepared to complete the NEPA review process (e.g., biological evaluations or environmental assessments), the recipient may be required to prepare the records and the costs to prepare the necessary records may be included as part of the project costs.

vi. Applicant Representations and Certifications

1. Lobbying Restrictions

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

2. Corporate Felony Conviction and Federal Tax Liability Representations

In submitting an application in response to this NOFO, the applicant represents that:

- a.** It is **not** a corporation that has been convicted of a felony criminal violation under any federal law within the preceding 24 months; and
- b.** It is **not** a corporation that has any unpaid federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

For purposes of these representations the following definitions apply:

A Corporation includes any entity that has filed articles of incorporation in any of the 50 states, the District of Columbia, or the various territories of the United States [but not foreign corporations]. It includes both for-profit and non-profit organizations.

3. Nondisclosure and Confidentiality Agreements Representations

In submitting an application in response to this NOFO the applicant represents that:

- a.** It **does not and will not** require its employees or contractors to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting its employees or contractors from lawfully reporting waste, fraud, or abuse to a designated investigative or law enforcement representative of a federal department or agency authorized to receive such information.
- b.** It **does not and will not** use any federal funds to implement or enforce any nondisclosure and/or confidentiality policy, form, or agreement it uses unless it contains the following provisions:
 - (1)** “These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by existing statute or Executive order relating to (1) classified information, (2) communications to Congress, (3) the reporting to an Inspector General of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, or (4) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive orders and statutory provisions are incorporated into this agreement and are controlling.”
 - (2)** The limitation above shall not contravene requirements applicable to Standard Form 312 Classified Information Nondisclosure Agreement (<https://fas.org/sgp/othergov/sf312.pdf>), Form 4414 Sensitive Compartmented Information Disclosure Agreement (<https://fas.org/sgp/othergov/intel/sf4414.pdf>), or any other form issued by a federal department or agency governing the nondisclosure of classified information.
 - (3)** Notwithstanding the provision listed in paragraph (a), a nondisclosure or confidentiality policy form or agreement that is to be executed by a person connected with the conduct of an intelligence or intelligence-related activity, other than an employee or officer of the United States government, may contain provisions appropriate to the particular activity for which such document is to be used. Such form or agreement shall, at a minimum, require that the person will not disclose any classified information received in the course of such activity unless specifically authorized to do so

by the United States government. Such nondisclosure or confidentiality forms shall also make it clear that they do not bar disclosures to Congress, or to an authorized official of an executive agency or the Department of Justice, that are essential to reporting a substantial violation of law.

vii. Statement of Federal Stewardship

EM will exercise normal federal stewardship in overseeing the project activities performed under EM awards. Stewardship Activities include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing assistance and/or temporary intervention in unusual circumstances to correct deficiencies that develop during the project; assuring compliance with terms and conditions; and reviewing technical performance after project completion to ensure that the project objectives have been accomplished.

viii. Statement of Substantial Involvement

EM has substantial involvement in work performed under any Cooperative Agreement awards made as a result of this NOFO. EM does not limit its involvement to the administrative requirements of the award. Instead, EM has substantial involvement in the direction and redirection of the technical aspects of the project as a whole. Substantial involvement includes, but is not limited to, the following:

1. EM shares responsibility with the recipient for the management, control, direction, and performance of the project.
2. EM may intervene in the conduct or performance of work under this award for programmatic reasons. Intervention includes the interruption or modification of the conduct or performance of project activities.
3. EM may redirect or discontinue funding the project based on the overall performance of the award and funding availability.
4. EM participates in major project decision-making processes.

ix. Subject Invention Utilization Reporting

In order to ensure that prime recipients and subrecipients holding title to subject inventions are taking the appropriate steps to commercialize subject inventions, EM may require that each prime recipient holding title to a subject invention submit annual reports for ten (10) years from the date the subject invention was disclosed to EM on the utilization of the subject invention and efforts made by prime recipient or their licensees or assignees to stimulate such utilization. The reports must include information regarding the status of development, date of first commercial sale or use, gross royalties received by the prime recipient, and such other data and information as EM may specify.

x. Intellectual Property Provisions

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

xi. Reporting

Reporting requirements are identified on the Federal Assistance Reporting Checklist, attached to the award agreement. In most cases a resulting award will require quarterly and final status and financial reports along with quarterly status briefings.

xii. Conference Spending

The recipient shall not expend any funds on a conference not directly and programmatically related to the purpose for which the grant or cooperative agreement was awarded that would defray the cost to the United States government of a conference held by any Executive branch department, agency, board, commission, or office for which the cost to the United States government would otherwise exceed \$20,000, thereby circumventing the required notification by the head of any such Executive Branch department, agency, board, commission, or office to the Inspector General (or senior ethics official for any entity without an Inspector General), of the date, location, and number of employees attending such conference.

xiii. Uniform Commercial Code (UCC) Financing Statements

Per 2 CFR 910.360 (Real Property and Equipment) when a piece of equipment is purchased by a for-profit recipient or subrecipient with federal funds, and when the federal share of the financial assistance agreement is more than \$1,000,000, the recipient or subrecipient must:

Properly record, and consent to the Department's ability to properly record if the recipient fails to do so, UCC financing statement(s) for all equipment in excess of \$5,000 purchased with project funds. These financing statement(s) must be approved in writing by the Grants/Agreements Officer prior to the recording, and they shall provide notice that the recipient's title to all equipment (not real property) purchased with federal funds under the financial assistance agreement is conditional pursuant to the terms of this section, and that the government retains an undivided reversionary interest in the equipment. The UCC financing statement(s) must be filed before the Grants/Agreements Officer may reimburse the recipient for the federal share of the equipment unless otherwise provided for in the relevant financial assistance agreement. The recipient shall further make any amendments to the financing statements or additional recordings, including appropriate continuation statements, as necessary or as the Grants/Agreements Officer may direct.

xiv. Implementation of Executive Order 13798, Promoting Free Speech and Religious Liberty

States, local governments, or other public entities may not condition sub-awards in a manner that would discriminate, or disadvantage sub-recipients based on their religious character.

xv. Participants and Collaborating Organizations

If selected for award negotiations, the selected applicant must submit a list of personnel who are proposed to work on the project, both at the recipient and subrecipient level and a list of collaborating organizations within 30 days after the applicant is notified of the selection. Recipients will have an ongoing responsibility to notify DOE of changes to the personnel and collaborating organizations and submit updated information during the life of the award.

xvi. Current and Pending Support

If selected for award negotiations, within 30 days of the selection notice, the selectee must submit 1) current and pending support disclosures and resumes for any new PIs or senior/key personnel and 2) updated disclosures if there have been any changes to the current and pending support submitted with the application. Throughout the life of the award, the Recipient has an ongoing responsibility to submit 1) current and pending support disclosure statements and resumes for any new PI and senior/key personnel and 2) updated disclosures if there are changes to the current and pending support previously submitted to DOE. Also See. Section IV.

VII. Questions/Agency Contacts

Upon the issuance of a NOFO, EM personnel are prohibited from communicating (in writing or otherwise) with applicants regarding the NOFO except through the established question and answer process as described below. Specifically, questions regarding the content of this NOFO must be submitted via e-mail to MSIPP-FOA@emcbc.doe.gov. Questions must be submitted not later than 10 calendar days prior to the submission deadlines for Concept Papers and Full Applications stated on the NOFO cover page. Please note, feedback on individual concepts will not be provided through Q&A.

All questions and answers related to this NOFO will be posted on [Grants.gov](https://www.grants.gov).

VIII. Other Information

NOFO Amendments

Amendments to this NOFO will be posted on Grants.gov. However, you will only receive an email when an amendment to this NOFO is posted if you register for email notifications for this NOFO in Grants.gov. EM recommends that you register as soon after the release of the NOFO as possible to ensure you receive timely notice of any amendments to this NOFO.

Government Right to Reject or Negotiate

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

Commitment of Public Funds

The Grants/Agreements Officer is the only individual who can make awards or commit the government to the expenditure of public funds. A commitment by anyone other than the Grants/Agreements Officer, either express or implied, is invalid.

Treatment of Application Information

Applicants should not include trade secrets or commercial or financial information that is privileged or confidential in their application unless such information is necessary to convey an understanding of the proposed project or to comply with a requirement in the NOFO. Applicants are advised to not include any critically sensitive proprietary detail.

If an application includes trade secrets or information that is commercial or financial, or information that is confidential or privileged, it is furnished to the Government in confidence with the understanding that the information shall be used or disclosed only for evaluation of the application. Such information will be withheld from public disclosure to the extent permitted by law, including the Freedom of Information Act. Without assuming any liability for inadvertent disclosure, EM will seek to limit disclosure of such information to its employees and to outside reviewers when necessary for merit review of the application or as otherwise authorized by law. This restriction does not limit the Government's right to use the information if it is obtained from another source.

Full Applications, and other submissions containing confidential, proprietary, or privileged information must be marked as described below. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under the Freedom of Information Act or otherwise. The U.S. Government is not liable for the disclosure or use of unmarked information and may use or disclose such information for any purpose.

The cover sheet of the Full Application, and other submission must be marked as follows and identify the specific pages containing trade secrets, confidential, proprietary, or privileged information:

Notice of Restriction on Disclosure and Use of Data:

Pages [list applicable pages] of this document may contain trade secrets, confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance or loan agreement between the submitter and the Government. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source. [End of Notice]

The header and footer of every page that contains confidential, proprietary, or privileged information must be marked as follows: “Contains Trade Secrets, Confidential, Proprietary, or Privileged Information Exempt from Public Disclosure.” In addition, each line or paragraph containing proprietary, privileged, or trade secret information must be clearly marked with double brackets or highlighting.

Evaluation and Administration by Non-Federal Personnel

In conducting the merit review evaluation, the government may seek the advice of qualified non-federal personnel as reviewers. The government may also use non-federal personnel to conduct routine, nondiscretionary administrative activities, including EM contractors. The applicant, by submitting its application, consents to the use of non-federal reviewers/administrators. Non-federal reviewers must sign Conflict of Interest (COI) and Non-disclosure Acknowledgements (NDA) prior to reviewing an application. Non-federal personnel conducting administrative activities must sign an NDA.

Notice Regarding Eligible/Ineligible Activities

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

Notice of Right to Conduct a Review of Financial Capability

EM reserves the right to conduct an independent third-party review of financial capability for applicants that are selected for negotiation of award (including personal credit information of principal(s) of a small business if there is insufficient information to determine financial capability of the organization).

Requirement for Full and Complete Disclosure

Applicants are required to make a full and complete disclosure of all information requested. Any failure to make a full and complete disclosure of the requested information may result in:

- The termination of award negotiations;
- The modification, suspension, and/or termination of a funding agreement;
- The initiation of debarment proceedings, debarment, and/or a declaration of ineligibility for receipt of federal contracts, subcontracts, and financial assistance and benefits; and
- Civil and/or criminal penalties.

Retention of Submissions

EM expects to retain copies of all Full Applications and other submissions. No submissions will be returned. By applying to EM for funding, applicants consent to EM's retention of their submissions.

Title to Subject Inventions

Ownership of subject inventions is governed pursuant to the authorities listed below:

- Domestic Small Businesses, Educational Institutions, and Nonprofits: Under the Bayh-Dole Act (35 U.S.C. § 200 et seq.), domestic small businesses, educational institutions, and nonprofits may elect to retain title to their subject inventions;

Government Rights in Subject Inventions

Where prime recipients and subrecipients retain title to subject inventions, the U.S. government retains certain rights.

Government Use License

The U.S. government retains a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States any subject invention throughout the world. This license extends to contractors doing work on behalf of the government.

March-In Rights

The U.S. government retains march-in rights with respect to all subject inventions. Through "march-in rights," the government may require a prime recipient or subrecipient who has elected to retain title to a subject invention (or their assignees or exclusive licensees), to grant a license for use of the invention to a third party. In addition, the government may grant licenses for use of the subject invention when a prime recipient, subrecipient, or their assignees and exclusive licensees refuse to do so.

DOE may exercise its march-in rights only if it determines that such action is necessary under any of the four following conditions:

- The owner or licensee has not taken or is not expected to take effective steps to achieve practical application of the invention within a reasonable time;
- The owner or licensee has not taken action to alleviate health or safety needs in a reasonably satisfied manner;
- The owner has not met public use requirements specified by federal statutes in a reasonably satisfied manner; or
- The U.S. manufacturing requirement has not been met.

Any determination that march-in rights are warranted must follow a fact-finding process in which the recipient has certain rights to present evidence and witnesses, confront witnesses and appear with counsel and appeal any adverse decision. To date, DOE has never exercised its march-in rights to any subject inventions.

Rights in Technical Data

Data rights differ based on whether data is first produced under an award or instead was developed at private expense outside the award.

“Limited Rights Data”: The U.S. government will not normally require delivery of confidential or trade secret-type technical data developed solely at private expense prior to issuance of an award, except as necessary to monitor technical progress and evaluate the potential of proposed technologies to reach specific technical and cost metrics.

Copyright

The prime recipient and subrecipients may assert copyright in copyrightable works, such as software, first produced under the award without EM approval. When copyright is asserted, the government retains a paid-up nonexclusive, irrevocable worldwide license to reproduce, prepare derivative works, distribute copies to the public, and to perform publicly and display publicly the copyrighted work. This license extends to contractors and others doing work on behalf of the government.

Export Control

The U.S. government regulates the transfer of information, commodities, technology, and software considered to be strategically important to the U.S. to protect national security, foreign policy, and economic interests without imposing undue regulatory burdens on legitimate international trade. There is a network of federal agencies and regulations that govern exports that are collectively referred to as “Export Controls”. To ensure compliance with Export Controls, it is the prime recipient’s responsibility to determine when its project activities trigger Export Controls and to ensure compliance.

Export Controls may apply to individual projects, depending on the nature of the tasks. When Export Controls apply, the recipient must take the appropriate steps to obtain any required governmental licenses, monitor and control access to restricted information, and safeguard all controlled materials. Under no circumstances may foreign entities (organizations, companies or persons) receive access to export controlled information unless proper export procedures have been satisfied and such access is authorized pursuant to law or regulation.

Personally Identifiable Information (PII)

All information provided by the applicant must to the greatest extent possible exclude PII. The term “PII” refers to information which can be used to distinguish or trace an individual's identity, such as their name, social security number, biometric records, alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as date and place of birth, mother’s maiden name. (See OMB Memorandum M-17-12 dated January 3, 2017)

By way of example, applicants must screen resumes to ensure that they do not contain PII such as personal addresses, personal landline/cell phone numbers, and personal emails. **Under no circumstances should Social Security Numbers (SSNs) be included in the application.** Federal agencies are prohibited from the collecting, using, and displaying unnecessary SSNs. (See, the Federal Information Security Modernization Act of 2014 (Pub. L. No. 113-283, Dec 18, 2014; 44 U.S.C. § 3551).

Annual Independent Audits

If a for-profit entity is a prime recipient and has expended \$750,000 or more of DOE awards during the entity's fiscal year, an annual compliance audit performed by an independent auditor is required. For additional information, please refer to 2 CFR 910.501 and Subpart F.

If an educational institution, non-profit organization, or state/local government is a prime recipient or subrecipient and has expended \$750,000 or more of federal awards during the non-federal entity's fiscal year, then a Single or Program-Specific Audit is required. For additional information, please refer to 2 CFR 200.501 and Subpart F.

Applicants and subrecipients (if applicable) should propose sufficient costs in the project budget to cover the costs associated with the audit. EM will share in the cost of the audit at its applicable cost share ratio.

Informational Webinar

EM will conduct one informational webinar during the NOFO process. It will be held after the initial NOFO release but before the due date for Concept Papers.

Attendance is not mandatory and will not positively or negatively impact the overall review of any applicant submissions. As the webinar will be open to all applicants who wish to participate, applicants should refrain from asking questions or communicating information that would reveal confidential and/or proprietary

information specific to their project. An informational webinar will be held on September 19, 2024, at 11:00 AM ET.

APPENDIX A – GLOSSARY

Applicant – The lead organization submitting an application under the NOFO.

Continuation application – A non-competitive application for an additional budget period within a previously approved project period. At least ninety (90) days before the end of each budget period, the Recipient must submit to EM its continuation application, which includes the following information:

- i. A report on the Recipient’s progress towards meeting the objectives of the project, including any significant findings, conclusions, or developments, and an estimate of any unobligated balances remaining at the end of the budget period. If the remaining unobligated balance is estimated to exceed 20 percent of the funds available for the budget period, explain why the excess funds have not been obligated and how they will be used in the next budget period.
- ii. A detailed budget and supporting justification if there are changes to the negotiated budget, or a budget for the upcoming budget period was not approved at the time of award.
- iii. A description of any planned changes from the negotiated Statement of Project Objectives and/or Milestone Summary Table.

Federally Funded Research and Development Centers (FFRDC) - FFRDCs are public-private partnerships which conduct research for the United States government. A listing of FFRDCs can be found at <http://www.nsf.gov/statistics/ffrdelist/>.

Project/Program – The entire scope of the grant or cooperative agreement which is contained in the recipient’s Technical Volume and Statement of Project Objectives.

Recipient or “Prime Recipient” – A non-federal entity that receives a federal award directly from a federal awarding agency to carry out an activity under a federal program. The term recipient does not include subrecipients.

Subrecipient/Subawardee – A non-federal entity that receives a subaward from a pass-through entity to carry out part of a federal program; but does not include an individual that is a beneficiary of such program. A subrecipient may also be a recipient of other federal awards directly from a federal awarding agency.

APPENDIX B – LIST OF ACRONYMS

AOR	Authorized Organization Representative
C	Conditions
COI	Conflict of Interest
DOE	Department of Energy
EBiz POC	Electronic Business Point of Contact
EM	Environmental Management
FAR	Federal Acquisition Regulation
FFATA	Federal Funding and Transparency Act of 2006
FOA	Funding Opportunity Announcement
FFRDC	Federally Funded Research and Development Center
HBCU	Historically Black College and University
MPIN	Marketing Partner ID Number
MSI	Minority-Serving institution
NDA	Non-Disclosure Acknowledgement
NEPA	National Environmental Policy Act
NOFO	Notice of Funding Opportunity
OCR	Office of Civil Rights
OMI	Other Minority Institution
OMB	Office of Management and Budget
PII	Personal Identifiable Information
PDF	Portable Document Format
PA	Priority Areas
R&D	Research and Development
RN	Research Needs
SAM	System for Award Management
STEM	Science, Technology, Engineering, and Mathematics
UCC	Uniform Commercial Code
UEI	Unique Entity Identifier