Financial Assistance
Notice of Funding Opportunity
Part 2

U.S. DEPARTMENT *of* ENERGY

The NOFO Part 2 is a companion document to the NOFO Part 1. The NOFO Part 1 describes DOE's program goals and evaluation criteria, eligibility, and other components specific to each funding opportunity.

Part 2 includes fixed DOE requirements that generally do not change from NOFO to NOFO. This document includes standard information for the application phase and describes expectations for award negotiations and post-award requirements for selected applications. You should review both the NOFO Part 1 and the NOFO Part 2 before applying.

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I. Basic Information

Refer to the NOFO Part 1, *Basic Information*, for Key Facts, Executive Summary, and Agency Contact Information.

II. Eligibility

NOFO Part 1, *Eligibility*, provides the eligibility criteria specific to your application. This section includes additional information to help you understand the standard eligibility requirements across all DOE NOFOs.

A. Cost Sharing

This section contains additional information to help you understand Federal cost sharing requirements. NOFO Part 1, *Eligibility—Cost Sharing*, provides the cost-sharing criteria specific to your application.

1. Legal Responsibility

Although the cost-share requirement applies to the entire project, including work performed by members of the project team other than the recipient, the recipient is legally responsible for paying the entire cost share. The recipient's cost share obligation is expressed in the Assistance Agreement as a static amount in U.S. dollars (cost share amount) and as a percentage of the total project cost (cost share percentage). If the funding agreement is terminated before the end of the project period, the recipient must contribute at least the cost share percentage of total expenditures incurred through the date of termination.

The recipient is solely responsible for managing cost share contributions by the project team and enforcing cost share obligations assumed by project team members in subawards or related agreements.

2. Cost-Share Allocation

Each project team is free to determine how best to allocate the cost share requirement among the team members. The amount contributed by individual project team members may vary as long as the cost share requirement for the entire project is met.

3. Cost Share Types and Allowability

Cost share must meet requirements set forth in 2 C.F.R. §§ 200.306 and 910.130 and the cost principles set forth in 2 C.F.R. §§ 200.400-476 and 2 C.F.R. §§ 910.352. In addition, cost share must:

- Be verifiable when the application is submitted
- Be cash, cash equivalents, or in-kind contributions

- Come from nonfederal sources (unless otherwise allowed by law), such as project participants, state or local governments, or other third-party financing

Cost share may be provided by the recipient, subrecipients, or third parties (entities that do not have a role in performing the scope of work). Contractors may not provide cost share. Any partial donation of goods or services is considered a discount and is not allowable.

Cash contributions include, but are not limited to, personnel costs, fringe costs, supply and equipment costs, indirect costs, and other direct costs.

In-kind contributions are those where the value of the contribution can be readily determined, verified, and justified but no actual cash is transacted to secure the good or service that makes up the contribution. For allowable types of cost share, refer to 2 C.F.R. § 910.130 for for-profit entities or 2 C.F.R. § 200.306 for all other entity types.

Project teams may use funding or property received from state or local governments to meet the cost share requirement as long as the Federal Government did not provide the funding to the state or local government. Cost share contributions must be:

- Specified in the project budget
- Verifiable from the recipient's records
- Necessary and reasonable for proper and efficient accomplishment of the project

Because all sources of cost share are part of total project cost, DOE will review the cost share dollars according to the same Federal regulations as Federal dollars to the project. The DOE Grants Officer must review and approve every cost share contribution and incorporate them into the project budget before the expenditures are incurred.

4. Cost Share Contributions by FFRDCs

Because federally funded research and development centers (FFRDCs) are funded by the Federal Government, costs incurred by FFRDCs generally may not be used to meet the cost share requirement. FFRDCs may contribute cost share only if the contributions are paid directly from the contractor's management fee or another nonfederal source.

5. Cost Share Verification

You must provide written assurance of your proposed cost share contribution in your application. If selected for award negotiations, you must provide additional information and documentation on your cost share contributions. NOFO Part 1, *Eligibility—Cost Sharing*, provides specific requirements.

6. Cost Share Calculation Examples

Cost sharing is calculated as a percentage of the *total project cost*. If applicable, FFRDC costs must be included in total project costs. Cost share calculation should not go beyond 2 decimals (e.g., 79.25 - not 79.24875).

Example 1. Standard Cost Share Calculation

A project with $1 million in federal funds with a minimum 20% nonfederal cost sharing requirement:

- Formula: Federal share ($) divided by Federal share (%) = total project cost
- Example: $1,000,000 divided by 80% = $1,250,000
- Formula: total project cost ($) minus Federal share ($) = nonfederal share ($)
- Example: $1,250,000 minus $1,000,000 = $250,000
- Formula: nonfederal share ($) divided by total project cost ($) = nonfederal share (%)
- Example: $250,000 divided by $1,250,000 = 20%

Example 2. Blended Cost Share Calculation

A project with $2 million in Federal funds with four tasks requiring different nonfederal cost share percentages:

Task	Proposed Federal Share	Federal Share %	Recipient Share %
Task 1 (R&D)	$1,000,000	80%	20%
Task 2 (R&D)	$500,000	80%	20%
Task 3 (Demonstration)	$400,000	50%	50%
Task 4 (Outreach)	$100,000	100%	0%

Federal share ($) divided by Federal share (%) = task cost

Each task must be calculated individually:

Task 1

- $1,000,000 divided by 80% = $1,250,000 (Task 1 Cost)
- Task 1 cost minus Federal share = nonfederal share
- $1,250,000 - $1,000,000 = $250,000 (nonfederal share)

Task 2

- $500,000 divided by 80% = $625,000 (Task 2 cost)
- Task 2 cost minus Federal share = nonfederal share
- $625,000 - $500,000 = $125,000 (nonfederal share)

Task 3

- $400,000 divided by 50% = $800,000 (Task 3 cost)
- Task 3 cost minus Federal share = nonfederal share
- $800,000 - $400,000 = $400,000 (nonfederal share)

Task 4

- Federal share = $100,000
- Nonfederal cost share is not required for outreach = $0 (nonfederal share)

Complete the calculation as follows.

Tasks	$ Federal Share	% Federal Share	$ Nonfederal Share	% Nonfederal Share	Total Project Cost
Task 1	$1,000,000	80%	$250,000	20%	$1,250,000
Task 2	$500,000	80%	$125,000	20%	$625,000
Task 3	$400,000	50%	$400,000	50%	$800,000
Task 4	$100,000	100%	$0	0%	$100,000
Totals	$2,000,000		$775,000		$2,775,000

Blended cost-share percentage

- Nonfederal share ($775,000) divided by total project cost ($2,775,000) = 27.9% (nonfederal)
- Federal share ($2,000,000) divided by total project cost ($2,775,000) = 72.1% (Federal)

B. Other Eligibility Information

NOFO Part 1, *Eligibility—Eligible Applicants*, provides NOFO-specific eligibility information. The following information is standard for all DOE NOFOs.

1. Questions Regarding Eligibility

We will not determine eligibility before the application due date in NOFO Part 1, *Key Facts*.

2. Entity of Concern Prohibition

Prohibition

No Entity of Concern (as defined in section 10114 of Public Law 117-167 [42 U.S.C 18912]) may receive any grant, contract, cooperative agreement, or loan of $10 million or more in Department of Energy funds, including funds made available by the Consolidated Appropriations Act, 2024 (Public Law 118-42).

In addition, for all awards involving Department activities authorized under Public Law 117-167, no Entity of Concern (including an individual that owns or controls, is owned or controlled by, or is under common ownership or control with an Entity of Concern) may receive DOE funds or perform work under any award, subject to certain penalties. (section 10114 of Public Law 117-167 [42 U.S.C 18912]) and Division D, Title III, section 310 of Division D of the Consolidated Appropriations Act of 2024 [Pub. L. No. 118-42]). By applying to this NOFO, you certify that neither the applicant nor any of the project participants qualify as Entities of Concern.

Definitions

Entity of Concern is (section 10114 of Public Law 117-167 [42 U.S.C. 18912], also known as the CHIPS and Science Act) "any entity, including a national, that is—

- (A) identified under section 1237(b) of the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (50 U.S.C. 1701 note; Public Law 105–261);
- (B) identified under section 1260H of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (10 U.S.C. 113 note; Public Law 116–283);
- (C) on the Entity List maintained by the Bureau of Industry and Security of the Department of Commerce and set forth in Supplement No. 4 to part 744 of title 15, Code of Federal Regulations;
- (D) included in the list required by section 9(b)(3) of the Uyghur Human Rights Policy Act of 2020 (Public Law 116–145; 134 Stat. 656); or
- (E) identified by the Secretary, in coordination with the Director of the Office of Intelligence

- and Counterintelligence and the applicable office that would provide, or is providing, covered support, as posing an unmanageable threat—
- (i) to the national security of the United States; or
- (ii) of theft or loss of United States intellectual property."

3. Notice Regarding Eligible/Ineligible Activities

Eligible activities include those that describe and promote the understanding of scientific and technical aspects of specific energy technologies and exclude those that encourage or support political activities, such as collecting and disseminating information related to potential, planned, or pending legislation.

III. Program Description

NOFO Part 1, *Program Description*, provides all information (goals, objectives, and topic areas) related to the NOFO you are applying to.

A. Informational Webinar

NOFO Part 1, *Basic Information—Key Dates*, includes information on whether we will conduct an informational webinar while the NOFO is open.

For some NOFOs, we conduct an informational webinar during the NOFO process. We typically hold it after the initial NOFO release but before the due date for preliminary submissions or the application, if concept papers are not required.

Attendance is not mandatory and will not positively or negatively impact the overall review of any submissions. The webinar is open to all potential applicants who wish to participate. Please refrain from asking questions or communicating information that would reveal confidential or proprietary information about your project.

B. Statement of Substantial Involvement

If cooperative agreements will be made under this NOFO as indicated in Key Facts in NOFO Part 1. DOE will include a statement of DOE's *substantial involvement* in the work performed under the resulting awards. For cooperative agreements, we do not limit our involvement to the administrative requirements of the award. Instead, we have substantial involvement in directing and redirecting the technical aspects of the project. Our substantial involvement in resulting awards may include the statements below and additional program-specific statements:

- Sharing responsibility with the recipient for the management, control, direction, and project performance
- Intervening in the conduct or performance of work under this award for programmatic reasons, which includes interrupting or modifying the conduct or performance of project activities
- Redirecting or stopping funding based on our evaluation at the Go/No-Go decision points

- Participating in major project decision-making processes

IV. Application Content and Form

This section contains supplemental information to help you understand the application content and form requirements outlined in the NOFO, including detailed information on the content and naming conventions of the application content. NOFO Part 1, *Application Content and Form*, provides the application contents and form specific to the NOFO you are applying to.

Some of the required application elements below have separate requirements for Research and Development (R&D) versus non-R&D NOFOs. NOFO Part 1, *Application Content Requirements*, provides specific instructions.

A. Use and Disclosure of Application Information

Applicants should not include trade secrets or business-sensitive, proprietary, or otherwise confidential information (Proprietary Information) in their application unless you need that information to explain the proposed project or to comply with a requirement in the NOFO.

All application information is subject to public release under the Freedom of Information Act (FOIA) except information that qualifies under a FOIA exemption. One of the exemptions is trade secrets or commercial or financial information that is confidential or privileged. Accordingly, if you include Proprietary Information with your application, you must mark it with the Notice below and follow the marking requirements below to protect it from disclosure under FOIA or otherwise. Note that the protective markings alone do not automatically make the information exempt under FOIA but help the DOE's designated FOIA Officer determine if the information qualifies for a FOIA exemption. You can find more information on how DOE process FOIA requests at 10 C.F.R. Part 1004.

Notice of Restriction on Use and Disclosure of Information:

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

In addition:

- The header and footer of every page that contains Proprietary Information must say: "CONTAINS TRADE SECRETS, BUSINESS-SENSITIVE, PROPRIETARY, OR OTHERWISE CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE"
- Every line or paragraph containing Proprietary Information must be clearly marked with double brackets or highlighting

Properly marked Proprietary Information will be used or disclosed only for evaluation purposes. For example, DOE may disclose such information to determine whether to select the project for funding under this NOFO or other Government programs, or as otherwise authorized

by law. This restriction does not limit the Federal Government's right to use the information if it is obtained from another source.

The Federal Government is not liable for disclosing or using unmarked information, and it may use or disclose unmarked information for any purpose.

B. Application Format Summary

All submissions must conform to the form and content requirements described below. NOFO Part 1, *Application Content and Form*, provides the page limits.

Format Requirements	
Parameter	**Requirement**
File Format	Portable Document Format (PDF) unless stated otherwise
Language	English
Paper Size	8.5" x 11"
Margins	Not less than 1" (>= 1") on every side
Font	• Black font color • Size 11-point or larger (except in figures or tables, which may be 10-point font). • You can use a symbol font to insert Greek letters or special characters, but the font size requirement still applies.
References	References within the project narrative: • Must be footnotes or endnotes • Must be font size of 10 or larger. • Are counted toward the maximum page requirement
Page Count Limitations	If you exceed the maximum page limit, we will review only the authorized number of pages and disregard any additional pages. The specified maximum page limit includes the cover page, charts, graphs, maps, and photographs when printed using the formatting requirements set forth above and single spaced.

C. Application Content Requirements

NOFO Part 1, *Application Content Requirements*, identifies which of the following application documents are required, including the program-specific requirements, such as the technical volume and page limits. Each application must be limited to a single concept and must not exceed the stated page limits. DOE reserves the right not to proceed with merit reviews of incomplete applications.

1. How to Distinguish Between a New and Renewal Application

New Application: An application must be submitted as "new" in the following circumstances:

- When applying for funding to create a new research award that has not previously received DOE funding, including any funding for the current year,
- When applying for funding to support continued research from the same applicant institution as the current grant but with a significant change in fundamental nature of the research, or
- When applying for funding to support continued research supported by an existing DOE award but at a new applicant institution.

Renewal Application: A renewal application is appropriate when funds are requested for an award from the same recipient/applicant institution that has no significant changes in the following items:

- The award's senior leadership, and
- The fundamental nature of the award.

A change in an award's PI does not necessarily require submission as a new application: The change in personnel must be considered in light of other changes.

Renewal applications compete for funds with all other peer-reviewed applications and must be developed as fully as though the applicant were applying for the first time. Renewal applications must be submitted by the same sponsoring institution as that holding the current award for which renewal funding is requested, and the proposed research topic must be logical scientific extensions of the research that has been performed in the current award.

2. How Federally Affiliated Organizations May Participate and Be Funded

Value/Funding for DOE/NNSA National Laboratories and Non-DOE/NNSA FFRDCs

For grant awards, the value of, and funding for, a DOE/NNSA National Laboratory contractor, a non-DOE/NNSA Federally Funded Research and Development Center (FFRDC) contractor, or another Federal agency's portion of the work will not be included in the award to the successful applicant. DOE will fund a DOE/NNSA National Laboratory contractor through the DOE field work authorization system or other appropriate process and may fund non-DOE/NNSA FFRDC contractors and other Federal agencies through an interagency agreement in accordance with the Economy Act, 31 U.S.C. § 1535, or other statutory authority.

Responsibility

The successful prime applicant/recipient (lead organization) will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues, including but not limited to, disputes and claims arising out of any agreement between the applicant and any team member, and/or subrecipient.

If an award is made to a DOE/NNSA National Laboratory, all Disputes and Claims will be resolved in accordance with the terms and conditions of the DOE/NNSA National Laboratory's management and operating (M&O) contract, as applicable, in consultation between DOE and the prime recipient.

If an award is made to another Federal agency or its FFRDC contractor, all Disputes and Claims will be resolved in accordance with the terms and conditions of the interagency agreement in consultation between DOE and the prime recipient.

3. How Federally Affiliated Organizations May Apply

DOE SC National Laboratories

DOE Office of Science (SC) National Laboratories (Ames National Laboratory, Argonne National Laboratory, Brookhaven National Laboratory, Fermi National Accelerator Laboratory, Lawrence Berkeley National Laboratory, Oak Ridge National Laboratory, Pacific Northwest National Laboratory, Princeton Plasma Physics Laboratory, SLAC National Accelerator Laboratory, Thomas Jefferson National Accelerator Facility)

DOE SC National Laboratories, if eligible either as a prime applicant or a proposed team member on another entity's application, should ensure that their cognizant DOE Contracting Officer provides written authorization. This authorization does not need to be submitted with the application as part of the Budget Justification for DOE SC National Laboratory Contractor File. However, this authorization must be provided prior to any award being made. [This is not required for the National Energy Technology Laboratory because it is a Government Owned/Government Operated (GOGO) Laboratory.] If a DOE SC National Laboratory Contractor is selected for award, or proposed as a team member, the proposed work will be authorized under the DOE field work authorization system or other appropriate process and performed under the laboratory Contractor's M&O contract, as applicable. The authorization may be addressed "To Whom It May Concern:". The following wording is acceptable for the authorization:

> "Authorization is granted for the _____ Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or complementary to the missions of the laboratory and will not adversely impact execution of the DOE/NNSA assigned programs at the laboratory."
>
> (End of acceptable authorization)

If a DOE/NNSA FFRDC is selected for award negotiation, the proposed work will be authorized under the DOE work authorization process and performed under the laboratory's Management and Operating (M&O) contract.

DOE Non-SC/NNSA National Laboratories

DOE Non-SC/NNSA National Laboratories (Idaho National Laboratory, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, National Laboratory of the Rockies, Sandia National Laboratories, and Savannah River National Laboratory)

DOE Non-SC/NNSA National Laboratories, if eligible either as a prime applicant or a proposed team member on another entity's application, should consult with their site office or cognizant contracting officer about the preferred timing to submit written authorization. This authorization may be submitted with the application as part of the Budget Justification for DOE/NNSA National Laboratory Contractor File. [This is not required for the National Energy Technology Laboratory because it is a Government Owned/Government Operated (GOGO) Laboratory.] **Please note that failure to provide this authorization may result in rejection of an application prior to merit review.** If a DOE/NNSA National Laboratory Contractor is selected for award, or proposed as a team member, the proposed work will be authorized under the DOE field work authorization system or other appropriate process and performed under the laboratory Contractor's M&O contract, as applicable. The authorization may be addressed "To Whom It May Concern:". The following wording is acceptable for the authorization:

> "Authorization is granted for the _____ Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or complementary to the missions of the laboratory and will not adversely impact execution of the DOE/NNSA assigned programs at the laboratory."
>
> (End of acceptable authorization)

If a DOE/NNSA FFRDC is selected for award negotiation, the proposed work will be authorized under the DOE work authorization process and performed under the laboratory's Management and Operating (M&O) contract.

Non-DOE/NNSA FFRDCs

Non-DOE/NNSA FFRDCs, if eligible either as a prime applicant or a proposed team member on another entity's application, should follow the following guidelines:

The prime applicant must obtain written authorization for non-DOE/NNSA FFRDC participation. The cognizant Contracting Officer for the Federal agency sponsoring the FFRDC contractor must authorize in writing the participation of the FFRDC contractor on the proposed project and this authorization should be submitted with the application. The written authorization must also contain a determination that the use of a FFRDC contractor is consistent with the contractor's authority under its award and does not place the FFRDC contractor in direct competition with the private sector, in accordance with FAR Part 17.5. **Please note that failure to provide this authorization may result in rejection of an application prior to merit review.** The authorization may be addressed "To Whom It May Concern:". The following wording is acceptable for the authorization:

> "Authorization is granted for the _____ Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or

complementary to the missions of the laboratory and will not adversely impact execution of the (insert agency) assigned programs at the laboratory. This laboratory is authorized to perform the work proposed in the application submitted under DOE Funding Opportunity Announcement <<Include the NOFO number on the cover page>> by the following statutory authority (insert statute name, citation, and section)."

(End of acceptable authorization)

Other Federal Agencies

Other Federal Agencies, if eligible either as a prime applicant or a proposed team member on another entity's application, must include in their budget justifications any specific statutory authorization (other than the Economy Act) that permits their receipt of an interagency agreement or that authorizes the payment of certain costs.

4. How Consortia May be Used

Incorporated Consortia

Incorporated consortia are eligible to apply for funding as a prime recipient (lead organization) or subrecipient (team member).

Each incorporated consortium must have an internal governance structure and a written set of internal rules. Upon request, the consortium must provide a written description of its internal governance structure and its internal rules to the DOE Contracting Officer. There is no requirement that subawards be formalized into incorporated consortia.

Unincorporated Consortia

Unincorporated consortia (team arrangements) must designate one member of the consortium to serve as the prime recipient/consortium representative (lead organization). There is no requirement that subawards be formalized into unincorporated consortia.

Upon request, unincorporated consortia must provide the DOE Contracting Officer with a collaboration agreement, commonly referred to as the articles of collaboration, which sets out the rights and responsibilities of each consortium member. This agreement binds the individual consortium members together and should discuss, among other things, the consortium's:

- Management structure;
- Method of making payments to consortium members;
- Means of ensuring and overseeing members' efforts on the project;
- Provisions for members' cost sharing contributions (though neither required nor considered); and
- Provisions for ownership and rights in intellectual property developed previously or under the agreement.

Note that a consortium is applied for in one application and results in one award with subawards to consortia members. Multi-institutional teams may, if permitted under this NOFO, submit collaborative applications with each institution submitting its own application with an identical Project Narrative, resulting in multiple awards to the collaborating institutions.

5. How to Submit Letters of Intent

Do not submit an LOI unless a NOFO requires or allows their submission.

It is important that the LOI be a single file with extension .pdf, .docx, or .doc. The filename must not exceed 50 characters. The PI and anyone submitting on behalf of the PI must register for an account in PAMS before it will be possible to submit a LOI. **All PIs and those submitting LOIs on behalf of PIs are encouraged to establish PAMS accounts as soon as possible to avoid submission delays.**

Submit Your Letter of Intent:

- Create your LOI outside the system and save it as a file with extension .docx, .doc, or .pdf. Make a note of the location of the file on your computer so you can browse for it later from within PAMS.
- Log into PAMS and click the Proposals tab. Click the "View / Respond to Funding Opportunity Announcements" link and find the current announcement in the list. Click the "Actions/Views" link in the Options column next to this announcement to obtain a dropdown menu. Select "Submit Letter of Intent" from the dropdown.
- On the Submit Letter of Intent page, select the institution from which you are submitting this LOI from the Institution dropdown. If you are associated with only one institution in the system, there will only be one institution in the dropdown.
- Note that you must select one and only one PI per LOI; to do so, click the "Select PI" button on the far-right side of the screen. Find the appropriate PI from the list of all registered users from your institution returned by PAMS. (Hint: You may have to sort, filter, or search through the list if it has multiple pages.) Click the "Actions" link in the Options column next to the appropriate PI to obtain a dropdown menu. From the dropdown, choose "Select PI."
- If the PI for whom you are submitting does not appear on the list, it means he or she has not yet registered in PAMS. For your convenience, you may have PAMS send an email invitation to the PI to register in PAMS. To do so, click the "Invite PI" link at the top left of the "Select PI" screen. You can enter an optional personal message to the PI in the "Comments" box, and it will be included in the email sent by PAMS to the PI. You must wait until the PI registers before you can submit the LOI. Save the LOI for later work by clicking the "Save" button at the bottom of the screen. It will be stored in "My Letters of Intent" for later editing.
- Enter a title for your LOI.
- Select the appropriate technical contact from the Program Manager dropdown.
- To upload the LOI file into PAMS, click the "Attach File" button at the far-right side of the screen. Click the "Browse" (or "Choose File" depending on your browser) button to search for your file. You may enter an optional description of the file you are attaching. Click the "Upload" button to upload the file.

- At the bottom of the screen, click the "Submit to DOE" button to save and submit the LOI to DOE.
- Upon submission, the PI will receive an email from the PAMS system <PAMS.Autoreply@science.doe.gov> acknowledging receipt of the LOI.
- If this NOFO requires that LOIs be submitted only by an authorized institutional official, the PI (or the PI's delegate) will only be able to send the LOI to a user at the PI's institution with the institutional "submit to DOE" privilege. That user will then apply an institutional countersignature to the LOI when it is sent to DOE.

You are encouraged to register for an account in PAMS at least a week in advance of the LOI submission deadline so that there will be no delays with your submission.

> **WARNING**: The PAMS website at https://pamspublic.science.energy.gov/ will permit you to revise a previously submitted LOI in the time between your submission and the deadline. Doing so will remove your previously submitted version from consideration. If you have not submitted the revision at the time of the deadline, you will not have a valid submission. Please pay attention to the deadline.

Do not attach pre-applications to Field 20 of the SF-424(R&R) form or letters of intent to Field 21 of the SF-424(R&R) form. Doing so will render your application unreadable.

6. How to Submit a Pre-Application

Do not submit a pre-application unless a NOFO requires or permits their submission.

It is important that the pre-application be a single file with extension .pdf, .docx, or .doc. The filename must not exceed 50 characters. The PI and anyone submitting on behalf of the PI must register for an account in PAMS before it will be possible to submit a pre-application. All PIs and those submitting pre-applications on behalf of PIs are encouraged to establish PAMS accounts as soon as possible to avoid submission delays.

Submit Your Pre-Application:

- Create your pre-application (called a preproposal in PAMS) outside the system and save it as a file with extension .docx, .doc, or .pdf. Make a note of the location of the file on your computer so you can browse for it later from within PAMS.
- Log into PAMS and click the Proposals tab. Click the "View / Respond to Funding Opportunity Announcements" link and find the current announcement in the list. Click the "Actions/Views" link in the Options column next to this announcement to obtain a dropdown menu. Select "Submit Preproposal" from the dropdown.
- On the Submit Preproposal page, select the institution from which you are submitting this preproposal from the Institution dropdown. If you are associated with only one institution in the system, there will only be one institution in the dropdown.
- Note that you must select one and only one PI per preproposal; to do so, click the "Select PI" button on the far-right side of the screen. Find the appropriate PI from the list of all registered users from your institution returned by PAMS. (Hint: You may have to sort, filter, or search through the list if it has multiple pages.) Click the "Actions" link in the Options

column next to the appropriate PI to obtain a dropdown menu. From the dropdown, choose "Select PI."

- If the PI for whom you are submitting does not appear on the list, it means he or she has not yet registered in PAMS. For your convenience, you may have PAMS send an email invitation to the PI to register in PAMS. To do so, click the "Invite PI" link at the top left of the "Select PI" screen. You can enter an optional personal message to the PI in the "Comments" box, and it will be included in the email sent by PAMS to the PI. You must wait until the PI registers before you can submit the preproposal. Save the preproposal for later work by clicking the "Save" button at the bottom of the screen. It will be stored in "My Preproposals" for later editing.
- Enter a title for your preproposal.
- Select the appropriate technical contact from the Program Manager dropdown.
- To upload the preproposal file into PAMS, click the "Attach File" button at the far-right side of the screen. Click the "Browse" (or "Choose File" depending on your browser) button to search for your file. You may enter an optional description of the file you are attaching. Click the "Upload" button to upload the file.
- At the bottom of the screen, click the "Submit to DOE" button to save and submit the preproposal to DOE.
- Upon submission, the PI will receive an email from the PAMS system <PAMS.Autoreply@science.doe.gov> acknowledging receipt of the preproposal.
- If this NOFO requires that pre-applications be submitted only by an authorized institutional official, the PI (or the PI's delegate) will only be able to send the pre-application to a user at the PI's institution with the institutional "submit to DOE" privilege. That user will then apply an institutional countersignature to the pre-application when it is sent to DOE.

You are encouraged to register for an account in PAMS at least a week in advance of the preproposal submission deadline so that there will be no delays with your submission.

> **WARNING**: The PAMS website at https://pamspublic.science.energy.gov will permit you to revise a previously submitted pre-application in the time between your submission and the deadline. Doing so will remove your previously submitted version from consideration. If you have not submitted the revision at the time of the deadline, you will not have a valid submission. Please pay attention to the deadline.

Do not attach pre-applications to Field 20 of the SF-424(R&R) form or letters of intent to Field 21 of the SF-424(R&R) form. Doing so will render your application unreadable.

7. How to Register and Submit an Application in Grants.gov

This section provides the application submission and receipt instructions for applications to SC. Please read the following instructions carefully and completely.

Electronic Delivery

SC is participating in the Grants.gov initiative to provide the grant community with a single site to find and apply for grant funding opportunities. SC requires applicants to submit their applications online through Grants.gov.

How to Register to Apply through Grants.gov

a. Instructions: Read the instructions below about registering to apply for SC 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 an active System for Award Management (SAM) registration which provides a Unique Entity Identifier (UEI), and Grants.gov account to apply for grants. If individual applicants (those submitting on their own behalf) are eligible to apply for this funding opportunity, they need only refer to steps 2 and 3 below.

Creating a Grants.gov account can be completed online in minutes, but SAM registration 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.

1) *Register with SAM*: All organizations applying online through Grants.gov must register with SAM at https://www.sam.gov. Failure to register with SAM will prevent your organization from applying through Grants.gov. SAM registration must be renewed annually. For more detailed instructions for registering with SAM, refer to: https://www.grants.gov/applicants/applicant-registration/

2) *Create a Grants.gov Account*: The next step is to register an account with Grants.gov. Follow the on-screen instructions provided on the registration page.

3) *Add a Profile to a Grants.gov Account*: A profile in Grants.gov corresponds to a single applicant organization the user represents (i.e., an applicant) or an individual applicant. If you work for or consult with multiple organizations and have a profile for each, you may log in to one Grants.gov account to access all of your grant applications. To add an organizational profile to your Grants.gov account, enter the UEI (Unique Entity Identifier) for the organization in the UEI field. If you are an individual applicant submitting on your own behalf, you do not need a UEI to add the profile. For more detailed instructions about creating a profile on Grants.gov, refer to: https://www.grants.gov/applicants/applicant-registration/add-profile

4) *EBiz POC Authorized Profile Roles*: After you register with Grants.gov and create an Organization Applicant Profile, the organization applicant's request for Grants.gov roles and access is sent to the Electronic Business Point of Contact (EBiz

POC)[1]. The EBiz POC will then log in to Grants.gov and authorize the appropriate roles, which may include the Authorized Organization Representative (AOR) role, thereby giving you permission to complete and submit applications on behalf of the organization. You will be able to submit your application online any time after you have been assigned the AOR role. For more detailed instructions about creating a profile on Grants.gov, refer to:
https://www.grants.gov/applicants/applicant-registration/ebiz-poc-authorizes-profile-roles

5) *Track Role Status*: To track your role request, refer to:
https://www.grants.gov/applicants/applicant-registration/track-profile-role-status

b. Electronic Signature: When applications are submitted through Grants.gov, the name of the organization applicant with the AOR role that submitted the application is inserted into the signature line of the application, serving as the electronic signature. The 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.**

How to apply to SC via Grants.gov

Grants.gov applicants can apply online using Workspace. Workspace is a shared, online environment where members of a grant team may simultaneously access and edit different webforms within an application. For each NOFO, you can create individual instances of a workspace.

For an overview of applying on Grants.gov using Workspaces, refer to:
https://www.grants.gov/applicants/workspace-overview/

1) Create a Workspace: Creating a workspace allows you to complete it online and route it through your organization for review before submitting.

2) Complete a Workspace: Add participants to the workspace to work on the application together, complete all the required forms online or by downloading PDF versions, and check for errors before submission. The Workspace progress bar will display the state of your application process as you apply. As you apply using Workspace, you may click the blue question mark icon near the upper-right corner of each page to access context-sensitive help.

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

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1 Individuals with the EBiz POC role are commonly found in an Office of Sponsored Research or similar institutional business office. Other than small businesses, a PI would usually not have the EBiz POC role.

NOTE: Visit the Adobe Software Compatibility page on Grants.gov to download the appropriate version of the software at: https://www.grants.gov/applicants/adobe-software-compatibility

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

c. Complete SF-424 Fields First: These forms are designed to fill in common required fields across other forms, such as the applicant's name, address, and SAM UEI. Once it is completed, the information will transfer to the other forms.

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

4) Track a Workspace: After successfully submitting a workspace package, a Grants.gov Tracking Number (GRANTXXXXXXXX) is automatically assigned to the package. The number will be listed on the Confirmation page that is generated after submission.

For additional training resources, including video tutorials, refer to: https://www.grants.gov/applicants/applicant-training

Applicant Support: Grants.gov provides applicants 24/7 support via the toll-free number 1-800-518-4726 and email at support@Grants.gov. For questions related to the specific grant opportunity, contact the number listed in the application package of the grant you are applying for funding.

If you are experiencing difficulties with your submission, it is best to call the Grants.gov Support Center and get a ticket number. The Support Center ticket number will assist SC with tracking your issue and understanding background information on the issue.

Timely Receipt Requirements and Proof of Timely 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 AOR will receive an acknowledgement of receipt and a tracking number (GRANTXXXXXXXX) from Grants.gov with the successful transmission of their application. Applicant AORs will also receive the official date/time stamp and Grants.gov Tracking number in an email serving as proof of their timely submission.

When SC 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. 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 may not be considered for funding by SC.

Applicants using unreliable internet connections should be aware that the process of completing the Workspace can take some time. Therefore, applicants should allow enough time to prepare and submit the application before the package closing date.

Grants.gov will provide either an error or a successfully received submission message in the form of an email sent to the applicant with the AOR role attempting to submit the application.

If you do not promptly receive an email from Grants.gov with an agency tracking number, indicating receipt of the application by SC, please contact the Grants.gov Helpdesk at 800-518-4726 (toll-free) or support@Grants.gov immediately. SC will have no records of your attempted submission without the second email from Grants.gov.

8. How to Prepare an Application

Application Preparation

You must submit the application through Grants.gov at https://www.Grants.gov/, using either the online webforms or your institution's system-to-system service. (Additional instructions are provided above.)

You are required to use the compatible version of Adobe Reader software to complete a Grants.gov Adobe application package. To ensure you have the Grants.gov compatible version of Adobe Reader, visit the software compatibility page at https://www.Grants.gov/web/grants/applicants/adobe-software-compatibility.html.

You must complete the mandatory forms and any applicable optional forms (e.g., Disclosure of Lobbying Activities (SF-LLL)) in accordance with the instructions on the forms and the additional instructions below.

Files that are attached to the forms must be PDF files unless otherwise specified in this NOFO. Attached PDF files must be plain files consisting of text, numbers, and images without editable fields, signatures, passwords, redactions, or other advanced features available in some PDF-compatible software. Do not use PDF portfolios or binders.

Please note the following restrictions that apply to the names of all files attached to your application:

- Please limit file names to 50 or fewer characters
- Do not attach any documents with the same name. All attachments must have a unique name.
- Please use only the following characters when naming your attachments: A-Z, a-z, 0-9, underscore, hyphen, space, period, parenthesis, curly braces, square brackets, ampersand,

tilde, exclamation point, comma, semi colon, apostrophe, at sign, number sign, dollar sign, percent sign, plus sign, and equal sign. Attachments that do not follow this rule may cause the entire application to be rejected or cause issues during processing.

Renewal Applications

For renewal applications only, the PI is required to submit a Renewal Proposal Products section through the PAMS website at https://pamspublic.science.energy.gov. The PI must enter into PAMS each product created during the course of the previous project period. Types of products include publications, intellectual property, technologies or techniques, and other products such as databases or software. As soon as the renewal application is assigned to a DOE Program Manager, the PI will receive an automated email from PAMS (<PAMS.Autoreply@science.doe.gov>) instructing him or her to navigate to the PAMS Task tab to complete and submit the Renewal Proposal Products. The submitted product list will be sent for merit review as part of the application. The application will not be considered complete and cannot be sent for review until the product list has been submitted.

Resubmission of Applications

Applications submitted under this NOFO may be withdrawn from consideration by using the PAMS website at https://pamspublic.science.energy.gov. Applications may be withdrawn at any time between when the applicant submits the application and when DOE makes the application available to merit reviewers. Such withdrawals take effect immediately and cannot be reversed. Please exercise due caution. After the application is made available to merit reviewers, the applicant may contact the DOE program office identified in this NOFO to request that it be withdrawn.

After an application is withdrawn, it may be resubmitted, if this NOFO is still open for the submission of applications. Such resubmissions will only count as one submission if this NOFO restricts the number of applications from an applicant.

Note that there may be a delay between the application's submission in Grants.gov and when it is available to be withdrawn in PAMS. SC will usually consider the last submission, according to its Grants.gov timestamp, to be the intended version. Please consult with your program manager to resolve any confusion about which version of an application should be considered.

Improper Contents of Applications

Applications submitted under this NOFO will be stored in controlled-access systems, but they may be made publicly available if an award is made. As such, it is critical that applicants follow these guidelines:

- Do not include information that a non-Federal entity may not openly distribute, whether classified, export control, or unclassified controlled nuclear information. Non-Federal entities are not subject to any restrictions on distributing controlled unclassified information (CUI).

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

Change of Recipient Institution

If a recipient chooses to relinquish an award made under this NOFO to permit the transfer of the award to a new institution, the new institution must apply under the then-available SC "annual" or "open" NOFO.

9. How to Prepare a Biographical Sketch

As part of the application, each covered individual at the applicant and subrecipient level must submit a biographical sketch ("*Biosketch*"). Use SciENcv (Science Experts Network Curriculum Vitae) to produce a DOE/NNSA compliant PDF version of the *Biosketch*. Note that there is no page limitation for the *Biosketch*, though some fields in SciENcv have character limitations for consistency.

Consistent with the instructions in NSPM-33 Implementation Guidance Pre- and Post-award Disclosures Relating to the Biographical Sketch and Current and Pending (Other) Support[2] and the DOE/NNSA NOFO-Specific Biosketch Instructions below, the *Biosketch* and *CPS Common Form* must together include a list of all sponsored activities, awards, and appointments, whether paid or unpaid; provided as a gift with terms or conditions or provided as a gift without terms or conditions; full-time, part-time, or voluntary; faculty, visiting, adjunct, or honorary; cash or in-kind; foreign or domestic; governmental or private-sector; directly supporting the individual's research or indirectly supporting the individual by supporting students, research staff, space, equipment, or other research expenses. All connections with malign foreign talent recruitment programs must be identified.

Please note the following:

- With the exception of "covered individual", which is defined here, all other definitions of terms used in the *Biosketch* are available at: NSPM-33 Definitions.
- If there is any conflict between NSPM-33 Implementation Guidance Pre- and Post-award Disclosures Relating to the Biographical Sketch and Current and Pending (Other) Support and the DOE/NNSA NOFO-Specific Biosketch Instructions below, **follow the DOE/NNSA NOFO-Specific Biosketch Instructions**.

DOE/NNSA NOFO-Specific Biosketch Instructions

2 This table supersedes in its entirety, Table 2a and Paragraph 7 of the Disclosure Requirements and Standardization Section of the NSPM-33 Implementation Guidance.

Persistent Identifier (PID) of the Covered Individual	The PID field is required for all applications sent to SC.
Appointments and Positions Reporting Timeframe	Identify all domestic and foreign professional appointments and positions outside of the primary organization for a period up to three years from the date the applicant submits the application.
Products: Limitation on number provided	List up to 10 products 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.

Biographical sketches must be attached to the Research and Related Senior/Key Person Profile (Expanded) form in an application.

Personally Identifiable Information: Do not include sensitive and protected personally identifiable information including social security numbers, birthdates, citizenship, marital status, or home addresses. Do not include information that a merit reviewer should not make use of.

10. How to Prepare a List of Individuals Who Should Not Serve as Reviewers

To assist in identifying individuals who should not serve as merit reviews, provide the following information for each senior/key person who is planned to be or is identified in Section A of the R&R Budget for the applicant and any proposed subrecipients:

- Advisees (graduate students or postdocs) of the senior/key person
- Advisors of the senior/key person while a graduate student or a postdoc
- Close associates of the senior/key person over the past 48 months
- Co-authors of the senior/key person over the past 48 months
- Co-editors of the senior/key person over the past 48 months
- Co-investigators of the senior/key person over the past 48 months
- Collaborators of the senior/key person over the past 48 months

Do not identify any personnel at the applicant institution or any proposed subrecipient or team institution: Those personnel are prohibited from serving as merit reviewers.

Large collaborations of 10 or more researchers do not require that all collaborators be identified: rather, only list the researchers with whom the senior/key person collaborated.

For all identified individuals, provide the following information:

- The senior/key person to whom the individual was an advisee, advisor, close associate, co-author, co-editor, co-investigator, or collaborator, identified by first name and last name
- The individual's first (given) name
- The individual's last (family) name
- The individual's Open Researcher and Contributor ID (ORCiD), if known
- The individual's institutional affiliation spelling out acronyms (For joint appointments, separate each institution with a slash ("/"). Do not list departmental affiliations.)
- The reason for listing the individual (advisee, advisor, close associate, co-author, co-editor, co-investigator, collaborator)
- The year when the individual last was a close associate, co-author, co-editor, co-investigator, or collaborator

You may also provide a list of all senior/key personnel who are planned to be or are identified in Section A of the R&R Budget for the applicant and any proposed subrecipients.

The lists do not need to be sorted in any method.

The lists must be submitted in tabular format, preferably as Microsoft Excel (.xls or .xlsx) files.

For your convenience, a Collaborator Template is available at https://science.osti.gov/grants/Policy-and-Guidance/Agreement-Forms. The template may also be posted with this NOFO in Grants.gov. If using the template:

- Do not add tabs to the spreadsheet
- Do not merge the existing tabs
- Do not remove headers
- Fill out the requested headers on both tabs with the same information
- Ensure that given and family names are presented in the correct columns

11. How to Prepare Current and Pending Support

Current and pending (other) support ("*CPS Common Form*") is used to identify potential duplication, overcommitment, potential conflicts of interest or commitment, and all other sources of support.

As part of the application, each covered individual at the prime applicant and subrecipient level must submit a *CPS Common Form*. Use SciENcv (Science Experts Network Curriculum Vitae) to produce a DOE/NNSA compliant PDF version of the *CPS Comon Form*. Note that there is no page limitation for the *CPS Common Form*, though some fields in SciENcv have character limitations for consistency.

Consistent with the instructions in NSPM-33 Implementation Guidance Pre- and Post-award Disclosures Relating to the Biographical Sketch and Current and Pending (Other)

Support[3] and the DOE/NNSA NOFO-Specific CPS Instructions below, the *CPS Common Form* and *Biosketch Common Form* must together include a list of all sponsored activities, awards, and appointments, whether paid or unpaid; provided as a gift with terms or conditions or provided as a gift without terms or conditions; full-time, part-time, or voluntary; faculty, visiting, adjunct, or honorary; cash or in-kind; foreign or domestic; governmental or private-sector; directly supporting the individual's research or indirectly supporting the individual by supporting students, research staff, space, equipment, or other research expenses. All connections with malign foreign talent recruitment programs must be identified in current and pending support.

Please note the following:

- With the exception of "covered individual", which is defined here, all other definitions of terms used in the *CPS Common Form* are available at: NSPM-33 Definitions.
- If there is any conflict between NSPM-33 Implementation Guidance Pre- and Post-award Disclosures Relating to the Biographical Sketch and Current and Pending (Other) Support and the DOE/NNSA NOFO-Specific CPS Instructions below, **follow the DOE/NNSA NOFO-Specific CPS Instructions**.

DOE/NNSA NOFO-Specific CPS Instructions	
Persistent Identifier (PID) of the Covered Individual	The PID field is required.
Reporting Timeframe for Proposals, Projects, and In-Kind Contributions	Disclose only **current** and **pending** support, as defined in the "Status of Support" field of the SciENcv Common Form.
Types of Proposals and Active Projects to Disclose	In addition to the guidance listed above, consulting activities must be disclosed under the proposals and active projects section of the form when any of the following scenarios apply: • The consulting activity will require the covered individual to perform research as part of the consulting activity; • The consulting activity does not involve performing research, but is related to the covered individual's research portfolio and may have the ability to impact funding, alter time or effort commitments, or otherwise impact scientific integrity; or • The consulting entity has provided a contract that requires the covered individual to conceal or withhold confidential financial or other ties between the covered individual and the entity, irrespective of the duration of the engagement.

3 This table supersedes in its entirety, Table 2a and Paragraph 7 of the Disclosure Requirements and Standardization Section of the NSPM-33 Implementation Guidance.

Disclosure Instructions for In-Kind Travel	Follow the disclosure instructions for travel in NSPM-33 Implementation Guidance Pre- and Post-award Disclosures Relating to the Biographical Sketch and Current and Pending (Other) Support.
Current and Pending (Other) Support Addendum	The Current and Pending (Other) Support Addendum is **not** required for this NOFO.

Throughout the life of the award, the recipient has an ongoing responsibility to submit: 1) current and pending support disclosure statements and resumes/biosketches for any new covered individuals, and 2) updated disclosures if there are changes to the current and pending support or resume/biosketch previously submitted to DOE.

Submission of current and pending support constitutes the individual's certification that they have complied with the Research Security Training requirement.

12. How to Prepare a Data Management and Sharing Plan

Data Management and Sharing Plans (DMSPs) must be provided for the proposed research following DOE and DOE sponsoring office guidelines. If needed, updates to the DMSP, through the course of the R&D, must be provided to DOE for review and approval. In general, a DMSP should address the following requirements:

1. Validation and replication of results

The DMSP should describe how scientific data generated in the course of the research project will be publicly shared and preserved in a timely and fair manner that enables validation and replication of results. If data will not be publicly shared and preserved (see "Data sharing limitations"), the DMSP should describe how results could be validated and replicated.

2. Timely and fair access

The DMSP should provide a plan for making all scientific data displayed in peer-reviewed scholarly publications resulting from the proposed research open, machine-readable, and digitally accessible to the public at the time of publication. This includes data that are displayed in charts, figures, images, etc. In addition, the underlying digital scientific data used to generate peer-reviewed scholarly publications should be made freely available and publicly accessible at the time of publication, in accordance with the principles stated above. The published article should indicate how these data can be accessed. The DMSP should also provide a timeline for sharing digital scientific data produced under the DOE funded R&D effort not associated with peer-reviewed scholarly publications.

3. Data repository selection

The DMSP should specify the use of digital repositories that align, to the extent practicable, with the National Science and Technology Council document entitled "Desirable Characteristics of Data Repositories for Federally Funded Research," by the Subcommittee on Open Science of the National Science and Technology Council, May 2022.[4] In general, DOE does not endorse or require sharing in any specific repository and encourages researchers to select the repository that is most appropriate for their data type and discipline, though individual sponsoring research offices may provide specific guidance or designate a specific repository.

4. Data management and sharing resources

The DMSP should describe the data management and sharing resources that may be available and used in the course of the proposed research. In particular, a DMSP that explicitly or implicitly commit data management and sharing resources at a facility beyond what is conventionally made available to approved users should be accompanied by written approval from that facility. In determining the resources available for data management and sharing at DOE scientific user facilities, researchers should consult the published description of data management resources and practices at that facility and reference it in the DMSP.

5. Data sharing limitations

The DMSP must address any limitations of scientific data sharing to facilitate the protection of confidentiality, privacy, business confidential information, and/or security; avoid negative impact on intellectual property rights, innovation, program and operational improvements, and U.S. competitiveness; consider maximizing appropriate sharing through risk-mitigated limited access; preserve the balance between the relative value of long-term preservation and access and the associated cost and administrative burden; and otherwise be consistent with all applicable laws, regulations, and DOE orders and policies. Depending on the DOE funding agreement, a contractor or financial award recipient may have the right to assert copyright to or protect from public release for certain scientific data products. When contractors or award recipients assert copyright of scientific data, the DMSP should address licensing requirements and any limitations for sharing the copyrighted data. When contractors or award recipients assert data protection, the scientific data will not be shared with the public during the data protection period.

To improve the discoverability of and attribution for datasets created and used in the course of research, DOE encourages the citation of publicly available datasets within the reference section of publications, including using the persistent identifiers associated with the dataset, such as a Digital Object Identifier (DOI).

In addition, scientific data made publicly available through the implementation of a DMSP are required to be reported under any applicable reporting requirements to DOE's Office of Scientific and Technical Information (OSTI). A DOI is a type of persistent identifier that may

4 NSTC Subcommittee on Open Science. Desirable Characteristics of Data Repositories for Federally Funded Research. (2022) DOI: https://doi.org/10.5479/10088/113528

be assigned to a dataset prior to reporting to OSTI, e.g., by the repository hosting the data or by a publisher. When there is a DOI is assigned to a dataset, it must be provided within the metadata record submitted to OSTI. In cases where a data record does not already have an associated DOI, OSTI will assign a DOI for the data record.

DMSPs will be reviewed as part of the overall SC research application merit review process. Applicants are encouraged to consult the SC website for further information and suggestions for how to structure a DMSP: https://science.osti.gov/funding-opportunities/digital-data-management.

13. How to Prepare a Research and Related Budget and Justification

The following advice will improve the accuracy of your budget request:

- Funds requested for personnel (senior, key, and other) must be justified as the product of their effort on the project and their institutional base salary.
- Funds requested for fringe benefits must be calculated as the product of the requested salary and, if present, the negotiated fringe benefit rate contained in an institution's negotiated indirect cost rate agreement.
- Funds requested for indirect costs must be calculated using the correct indirect cost base and the negotiated indirect cost rate.
- If a field is required (indicated with either an asterisk or a differently-colored background) and no funds are being requested, enter a zero "0."
- You are encouraged to include the rate agreement used in preparing a budget as a part of the budget justification.
- Do not prepare a budget justification using the expired DOE form F4260.1.

If you are proposing indirect costs and do not already have an Indirect Cost Rate Agreement with your Cognizant Federal Agency or documentation of rates accepted for estimating purposes by DOE or another Federal agency, it is recommended that you begin preparing an Indirect Cost Rate Proposal to be submitted, upon request, to the DOE contract specialist/grants management specialist who will evaluate your application if you are selected for award.

Institutions of higher education must either include their negotiated Indirect Cost Rate Agreement or a Uniform Resource Locator (URL, commonly referred to as a web link) where their agreement can be found in their budget justifications.

Budget Fields

Section A Senior/KeyPerson	For each Senior/Key Person, enter the requested information. List personnel, base salary, the number of months that person will be allocated to the project, requested salary, fringe benefits, and the total funds requested for each person. The requested salary must be the product of the base salary and the effort.

	Include a written narrative in the budget justification that justifies the need for requested personnel. Within the justification, explain the fringe benefit rate used if it is not the standard faculty rate.
Section B Other Personnel	List personnel, the number of months that person will be allocated to the project, requested salary fringe benefits, and the total funds requested for each person. Include a written narrative in the budget justification that fully justifies the need for requested personnel. Within the justification, provide the number of positions being filled in each category of other personnel.
Section C Equipment	For the purpose of this budget, equipment is designated as an item of property that has an acquisition cost of $10,000 or more and an expected service life of more than one year, unless a different threshold is specified in a negotiated Facilities and Administrative Cost Rate. (Note that this designation applies for proposal budgeting only and differs from the DOE definition of capital equipment.) List **each** item of equipment separately and justify each in the budget justification section. Do not aggregate items of equipment. Allowable items ordinarily will be limited to research equipment and apparatus not already available for the conduct of the work. General-purpose office equipment is not eligible for support unless primarily or exclusively used in the actual conduct of scientific research.
Section D Travel	For purposes of this section only, travel to Canada or to Mexico is considered domestic travel. In the budget justification, list each trip's destination, dates, estimated costs including transportation and subsistence, number of staff traveling, the purpose of the travel, and how it relates to the project. Indicate the basis for the cost estimate (quotes from vendors or suppliers, past experience of similar items, or some other basis). To qualify for support, attendance at meetings or conferences must enhance the investigator's capability to perform the research, plan extensions of it, or disseminate its results. Domestic travel is to be justified separately from foreign travel. Within the budget justification, detail the number of personnel planning to travel and the estimated per-traveler cost for each trip.
Section E Participant/Trainee Support Costs	If applicable, submit training support costs. Educational projects that intend to support trainees (precollege, college, graduate and postgraduate) must list each trainee cost that includes stipend levels and amounts, cost of tuition for each trainee, cost of any travel (provide the same information as needed under the regular travel category), and costs for any related training expenses. Participant costs are those costs associated with conferences, workshops, symposia or institutes and breakout items should indicate the number of participants, cost for each participant, purpose of the conference, dates and places of meetings and any related administrative expenses. Indicate the basis for the cost estimate (quotes from vendors or suppliers, past experience of similar items, or some other basis).

Section F Other Direct Costs	• **Materials and Supplies:** Enter total funds requested for materials and supplies in the appropriate fields. In the budget justification, indicate general categories such as glassware, and chemicals, including an amount for each category (items not identified under "Equipment"). Categories less than $1,000 are not required to be itemized. Indicate the basis for the cost estimate (quotes from vendors or suppliers, past experience of similar items, or some other basis). • **Publication Costs:** Enter the total publication funds requested. The proposal budget may request funds for the costs of documenting, preparing, publishing or otherwise making available to others the findings and products of the work conducted under the award. In the budget justification, include supporting information. Indicate the basis for the cost estimate (quotes from vendors or suppliers, past experience of similar items, or some other basis). • **Consultant Services:** Enter total funds requested for all consultant services. In the budget justification, identify each consultant, the services he/she will perform, total number of days, travel costs, and total estimated costs. Indicate the basis for the cost estimate (quotes from vendors or suppliers, past experience of similar items, or some other basis). • **ADP/Computer Services:** Enter total funds requested for ADP/Computer Services. Cloud computing costs must be included under this item. The cost of computer services, including computer-based retrieval of scientific, technical and education information may be requested. In the budget justification, include the established computer service rates at the proposing organization if applicable. Indicate the basis for the cost estimate (quotes from vendors or suppliers, past experience of similar items, or some other basis). • **Subawards/Consortium/Contractual Costs:** Enter total costs for all subawards/consortium organizations and other contractual costs proposed for the project. In the budget justification, justify the details. • **Equipment or Facility Rental/User Fees:** Enter total funds requested for Equipment or Facility Rental/User Fees. In the budget justification, identify each rental/user fee and justify. Indicate the basis for the cost estimate (quotes from vendors or suppliers, past experience of similar items, or some other basis). • **Alterations and Renovations:** Enter total funds requested for Alterations and Renovations. In the budget justification, itemize by category and justify the costs of alterations and renovations, including repairs, painting, removal or installation of partitions, shielding, or air conditioning. Where applicable, provide the square footage and costs.

	• **Other:** Add text to describe any other Direct Costs not requested above. Enter costs associated with "Other" item(s). Use the budget justification to further itemize and justify.
Section G Direct Costs	This represents Total Direct Costs(Sections A through F).
Section H Other Indirect Costs	Enter the Indirect Cost information, including the rates and bases being used, for each field. Only four general categories of indirect costs are allowed/requested on this form, so please consolidate if needed. Include the cognizant Federal agency and contact information if using a negotiated rate agreement. Within the budget justification, explain the use of multiple rates, if multiple rates are used.
Section I Total Direct and Indirect Costs	This is the total of Sections G and H.

Guidance for Application Budgets and Costs

All costs requested in a budget must adhere to standard requirements for all Federal awards:

- Costs must be reasonable, using a prudent-person standard. (2 C.F.R. § 200.404),
- Costs must be allocable, related to the particular Federal award. (2 C.F.R. § 200.405),
- Costs must be allowable under the relevant Federal cost principles. (See 2 C.F.R. § 200.420 and following),
- Costs must be consistently treated, whether they are paid for with Federal funds or institutional funds. (2 C.F.R. § 200.403(c))

Allowable costs may include, but are not limited to, the following, subject to the applicable cost principles:

- "Buying out" faculty time dedicated to teaching or administrative responsibilities,
- Support for administrative personnel dedicated to the proposed activity,
- Support for professional development, training, mentoring of students and junior researchers,
- Travel to meet with collaborators at other institutions and relevant DOE/NNSA national laboratories, including costs for internships at the national laboratories; or to attend one or more science team, user facility, scientific conference, workshop, or professional society meetings relevant to the proposed research; or for the conduct of off-site research,
- Fringe benefits, which must be paid in accordance with an institution's negotiated rates agreement, institutional policies, and the individual's appointment,
- Temporary dependent-care costs incurred during travel,
- Membership costs in relevant professional societies, including both scientific societies and those dedicated to research administration,
- Instrumentation required to conduct proposed research,
- Equipment (items with a useful life of more than 12 months and a per-item acquisition cost of more than $10,000) required to conduct proposed research,

- Purchase of equipment, modification of equipment, or provision of services necessary to enable work to be carried out by project personnel with a disability,
- Stipends and benefits for students and post-doctoral researchers, recognizing their dual nature as both trainees and employees,
- Participation in standards development relevant to the proposed research, including travel and membership costs,
- Salary support to cover time to participate in outreach for recruitment, internships, and training events, science team meetings, partnership development, or information gathering, and
- Other direct costs, e.g., materials and supplies such as office supplies, desktop or laptop computer, and/or software licenses that are directly necessary to enable the proposed activities.

D. Additional Requirements

1. Allowable Costs

All expenditures must be allowable, allocable, and reasonable under the applicable Federal cost principles. According to 2 C.F.R. § 910.352, the cost principles in the Federal Acquisition Regulations (48 C.F.R. § 31.2) apply to for-profit entities. The cost principles in 2 C.F.R. Part 200, Subpart E, apply to all entities other than for-profits.

2. Pre-Award Costs

If selected for award negotiations (selectees), you must request prior written approval to charge pre-award costs. Pre-award costs are those incurred before the effective date of the negotiated Federal award where such costs are necessary for efficient and timely performance of the scope of work.

These costs are allowable only to the extent that they would have been allowable if you incurred after the effective date of the Federal award and only with the written approval of the Federal awarding agency through the Grants Officer.

You cannot incur pre-award costs before the Selection Official signs the Selection Statement and Analysis.

Pre-award expenditures are made at your own risk. DOE is not obligated to reimburse costs:

- In the absence of appropriations
- If an award is not made
- If an award is made for a less than you anticipated

National Environmental Policy Act (NEPA) Requirements Related to Pre-Award Costs

DOE's decision if and how to distribute Federal funds under this NOFO is subject to NEPA. Carefully consider and seek legal counsel or other expert advice before taking any action related to the proposed project that would have an adverse effect on the environment or limit the choice of reasonable alternatives before we complete the NEPA review.

We do not guarantee or assume any obligation to reimburse pre-award costs you incur before receiving written authorization from the Grants Officer. If you elect to engage in

activities that DOE determines may have an adverse effect on the environment or limit the choice of reasonable alternatives before receiving authorization, you do so at risk of not receiving Federal funding for your project and such costs may not be recognized as allowable cost share.

Nothing in the pre-award cost reimbursement regulations or any pre-award costs approval letter from the Grants Officer overrides the requirement to obtain the written authorization from the Grants Officer before taking any action that may have an adverse effect on the environment or limit the choice of reasonable alternatives.

3. Equipment and Supplies

All equipment and products purchased with funds made available under this NOFO should be American made to the greatest extent practicable. This requirement does not apply to used or leased equipment. This requirement does not supersede any other statutory requirement in the NOFO.

4. Prohibition on Using Funds for Activities Related to Federal Acquisition Security Council (FASC)-Prohibited Unmanned Aircraft Systems

Both the recipient and subrecipients are prohibited from using Federal funds provided through this award, on or after December 22, 2025, to purchase or operate a FASC-prohibited unmanned aircraft system (section 1825 of the American Security Drone Act of 2023 [Public Law 118-31]). The terms "FASC-prohibited unmanned aircraft system" and "unmanned aircraft system" are defined in 48 C.F.R. § 40.201 or successor regulation.

5. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment

As set forth in 2 C.F.R. § 200.216, recipients and subrecipients are prohibited from obligating or expending project funds (federal funds and recipient cost share) to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, § 889, 132 Stat. 1636, 1917 (2018), covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

See section 889 of Pub. L. No. 115-232, 2 C.F.R. § 200.216, and 2 C.F.R. § 200.471 for additional information.

6. Prohibition on Discrimination and Harassment

All people conducting, supporting, or participating in scientific research under this award must be able to do so on the basis of their abilities and without any unnecessary barriers. Recipients of awards resulting from this RFA are prohibited from engaging in discrimination on any basis prohibited by law, including harassment (sexual or non-sexual) as contained in 10 C.F.R. §§ 1040, 1041, and 1042.

Recipients may contact the DOE's Office of Civil Rights for technical assistance in meeting their institutional requirements under these regulations, including assistance in addressing complaints of discrimination or harassment. DOE is committed to meeting its obligations under Title IV of the Civil Rights Act. The United States Equal Employment Opportunity Commission also makes a number of resources available at https://www.eeoc.gov/eeoc/publications/index.cfm to ensure that employees may perform their work without hindrance. Graduate students and post-doctoral researchers are understood to have a dual role as both trainees and employees, in accordance with 2 C.F.R. § 200.400 (f).

7. Prohibition on Lobbying Activity

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

V. Submission Requirements and Deadlines

A. Required Registrations

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

You must have an active account with SAM.gov which includes having a Unique Entity Identifier (UEI). SAM.gov registration can take several weeks. The Entity Registration Checklist provides all the information you need to register.

Every applicant for an award must:

- Be registered in SAM.gov before submitting an application
- Provide a valid Unique Entity Identifier in the NOFO application
- Maintain an active, up-to-date registration in SAM.gov while you have an active Federal award or an application or plan under consideration by a Federal agency

DOE cannot award Federal funding to you until you comply with all applicable UEI and SAM requirements. If you have not fully complied by the time we are ready to make a Federal award, you will be disqualified to receive a Federal award, and we will select another applicant.

2. How to Register in PAMS

After you submit your application through Grants.gov, the application will automatically transfer into the Portfolio Analysis and Management System (PAMS) for processing by the DOE SC. Many functions for grants and cooperative agreements can be done in PAMS, which is available at https://pamspublic.science.energy.gov.

You will want to "register to" your application: a process of linking yourself to the application after it has been submitted through Grants.gov and processed by DOE.

You must register in PAMS to submit a pre-application or a LOI.

Notifications sent from the PAMS system will come from the PAMS email address <PAMS.Autoreply@science.doe.gov>. Please make sure your email server/software allows delivery of emails from the PAMS email address to yours.

Registering to PAMS is a two-step process; once you create an individual account, you must associate yourself with ("register to") your institution. Detailed steps are listed below.

Create PAMS Account:

To register, click the "Create New PAMS Account" link on the website https://pamspublic.science.energy.gov/.

- Click the "No, I have never had an account" link and then the "Create Account" button.
- You will be prompted to enter your name and email address, create a username and password, and select a security question and answer. Once you have done this, click the "Save and Continue" button.
- On the next page, enter the required information (at least one phone number and your mailing address) and any optional information you wish to provide (e.g., FAX number, website, mailstop code, additional email addresses or phone numbers, Division/Department). Click the "Create Account" button.
- Read the user agreement and click the "Accept" button to indicate that you understand your responsibilities and agree to comply with the rules of behavior for PAMS.
- PAMS will take you to the "Having Trouble Logging In?" page. (If you have been an SC merit reviewer or if you have previously submitted an application, you may already be linked to an institution in PAMS. If this happens, you will be taken to the PAMS home page.)

Register to Your Institution:

- Click the link labeled "Option 2: I know my institution and I am here to register to the institution." (Note: If you previously created a PAMS account but did not register to an institution at that time, you must click the Institutions tab and click the "Register to Institution" link.)
- PAMS will take you to the "Register to Institution" page.
- Type a word or phrase from your institution name in the field labeled, "Institution Name like," choose the radio button next to the item that best describes your role in the system and click the "Search" button. A "like" search in PAMS returns results that contain the word or phrase you enter; you do not need to enter the exact name of the institution, but you should

enter a word or phrase contained within the institution name. (If your institution has a frequently used acronym, such as ANL for Argonne National Laboratory or UCLA for the Regents of the University of California, Los Angeles, you may find it easiest to search for the acronym under "Institution Name like." Many institutions with acronyms are listed in PAMS with their acronyms in parentheses after their names.)

- Find your institution in the list that is returned by the search and click the "Actions" link in the Options column next to the institution name to obtain a dropdown list. Select "Add me to this institution" from the dropdown. PAMS will take you to the "Institutions – List" page.
- If you do not see your institution in the initial search results, you can search again by clicking the "Cancel" button, clicking the Option 2 link, and repeating the search.
- If, after searching, you think your institution is not currently in the database, click the "Cannot Find My Institution" button and enter the requested institution information into PAMS. Click the "Create Institution" button. PAMS will add the institution to the system, associate your profile with the new institution, and return you to the "Institutions – List" page when you are finished.

For help with PAMS, click the "PAMS Help" link on the PAMS website, https://pamspublic.science.energy.gov/. You may also contact the PAMS Help Desk, which can be reached Monday through Friday, 9AM – 5:30 PM Eastern Time. Telephone: (855) 818-1846 (toll free) or (301) 903-9610, email: sc.pams-helpdesk@science.doe.gov. All submission and inquiries about this NOFO should reference the NOFO number printed on the cover page.

3. How to View Applications in PAMS

Each Grants.gov application submitted to the DOE SC automatically transfers into PAMS and is subsequently assigned to a program manager. At the time of program manager assignment, the three people listed on the SF-424 (R&R) cover page will receive an email with the subject line, "Receipt of Proposal 0000xxxxxx by the DOE Office of Science." These three people are the PI (Block 14), Authorized Representative (Block 19), and Point of Contact (Block 5). In PAMS notation, applications are known as proposals, the PI is known as the PI, the Authorized Representative is known as the Sponsored Research Officer/Business Officer/Administrative Officer (SRO/BO/AO), and the Point of Contact is known as the POC.

There will be a period of time between the application's receipt at Grants.gov and its assignment to a DOE SC program manager. Program managers are typically assigned two weeks after applications are due at Grants.gov: please refrain from attempting to view the proposal in PAMS until you receive an email providing the assignment of a program manager.

Once the email is sent, the PI, SRO/BO/PO, and POC will each be able to view the submitted proposal in PAMS. Viewing the proposal is optional.

Following are two sets of instructions for viewing the submitted proposal, one for individuals who already have PAMS accounts and one for those who do not.

If you already have a PAMS account, follow these instructions:

1. Log in to PAMS at https://pamspublic.science.energy.gov/.

2. Click the "Proposals" tab and click "Access Previously Submitted Grants.gov Proposal."
3. Enter the following information:
   - Proposal ID: Enter the ten-digit PAMS proposal ID, including the leading zeros (e.g., 00002xxxxx). Do not use the Grants.gov proposal number. Use the PAMS number previously sent to you in the email with subject line, "Receipt of Proposal …".
   - Email (as entered in Grants.gov application): Enter your email address as it appears on the SF424(R&R) Cover Page.
   - Choose Role: Select the radio button in front of the role corresponding to the SF-424 (R&R) cover page. If your name appears in block 19 of the SF-424 (R&R) cover page as the authorizing representative, select "SRO/BO/AO (Sponsored Research Officer/Business Officer/Administrative Officer)." If your name appears in block 14 of the SF424 R&R cover page as the PI, select "Principal Investigator (PI)." If your name appears in block 5 of the SF424 R&R as the point of contact, select "Other (POC)."
4. Click the "Save and Continue" button. You will be taken to your "My Proposals" page. The Grants.gov proposal will now appear in your list of proposals. Click the "Actions/Views" link in the options column next to this proposal to obtain a dropdown list. Select "Proposal" from the dropdown to see the proposal. Note that the steps above will work only for proposals submitted to the DOE SC since May 2012.

If you do not already have a PAMS account, follow these instructions:

1. To register, click the "Create New PAMS Account" link on the website https://pamspublic.science.energy.gov/.
2. Click the "No, I have never had an account" link and then the "Create Account" button.
3. You will be prompted to enter your name and email address, create a username and password, and select a security question and answer. Once you have done this, click the "Save and Continue" button.
4. On the next page, enter the required information (at least one phone number and your mailing address) and any optional information you wish to provide (e.g., FAX number, website, mailstop code, additional email addresses or phone numbers, Division/Department). Click the "Create Account" button.
5. Read the user agreement and click the "Accept" button to indicate that you understand your responsibilities and agree to comply with the rules of behavior for PAMS.
6. You will be taken to the Register to Institution page. Select the link labeled, "Option 1: My institution has submitted a proposal in Grants.gov. I am here to register as an SRO, PI, or POC (Sponsored Research Officer, Principal Investigator, or Point of Contact)."
7. Enter the following information:
   - Proposal ID: Enter the ten-digit PAMS proposal ID, including the leading zeros (e.g., 00002xxxxx). Do not use the Grants.gov proposal number. Use the PAMS number previously sent to you in the email with subject line, "Receipt of Proposal …".
   - Email (as entered in Grants.gov proposal): Enter your email address as it appears on the SF424(R&R) Cover Page.
   - Choose Role: Select the radio button in front of the role corresponding to the SF-424 (R&R) cover page. If your name appears in block 19 of the SF-424 (R&R) cover page as the authorizing representative, select "SRO/BO/AO (Sponsored Research Officer/Business Officer/Administrative Officer)." If your name appears in block 14

of the SF424 R&R cover page as the PI, select "Principal Investigator (PI)." If your name appears in block 5 of the SF424 R&R as the point of contact, select "Other (POC)."

8. Click the "Save and Continue" button. You will be taken to your "My Proposals" page. The Grants.gov proposal will now appear in your list of proposals. Click the "Actions/Views" link in the options column next to this proposal to obtain a dropdown list. Select "Proposal" from the dropdown to see the proposal.

If you were listed as the PI on a prior submission but you have not previously created an account, you may already be listed in PAMS. If this is the case, you will be taken to the PAMS home page after agreeing to the Rules of Behavior. If that happens, follow the instructions listed above under "If you already have a PAMS account…" to access your Grants.gov proposal.

4. How to Register in Other Systems Before Submitting an Application

Systems to Register In

Applicants must register with FedConnect at www.FedConnect.net. The full, binding version of assistance agreements will be posted to FedConnect. To create an organization account, your organization's SAM MPIN is required. For more information about the SAM MPIN or other registration requirements, review the FedConnect Ready, Set, Go! Guide at https://www.fedconnect.net/FedConnect/Marketing/Documents/FedConnect_Ready_Set_Go.pdf

Recipients must register with the Federal Funding Accountability and Transparency Act Subaward Reporting System in SAM. This registration must be completed before an award may be made: you are advised to register while preparing your application.

Registering in Grants.gov

Applicants must register with Grants.gov, following the instructions at https://www.grants.gov/applicants/applicant-registration and described above.

Where to Submit an Application

You must submit the application through Grants.gov at www.Grants.gov, using either the online webforms or downloaded forms, or a system-to-system service.

Submit electronic applications through the "Apply for Grants" function at www.Grants.gov. If you have problems completing the registration process or submitting your application, call Grants.gov at 1-800-518-4726 or send an email to support@Grants.gov.

Please ensure that you have read the applicable instructions, guides, help notices, frequently asked questions, and other forms of technical support on Grants.gov.

DOE SC Portfolio Analysis and Management System (PAMS)

Applicants must register in the Portfolio Analysis and Management System (PAMS) to submit letters of intent and pre-applications, to view merit reviewer comments, or to take a number of post-award actions.

VI. Application Review Information

Refer to NOFO Part 1, *Application Review Information—Review Criteria*, for specific compliance and technical criteria. The following describes the DOE evaluation and selection process for all NOFOs.

A. Standard Evaluation and Selection Processes

1. Overview

The evaluation process is several phases; each phase includes an initial eligibility review and a thorough technical review. Subject matter experts conduct rigorous technical reviews of eligible submissions. Ultimately, the Selection Official considers the reviewers' recommendations, along with other considerations, such as program policy factors and risk reviews, to determine which applications to select.

2. Recipient Responsibility and Qualifications

Before making a Federal award with a total amount of Federal share greater than the simplified acquisition threshold, DOE is required to review and consider any responsibility and qualification information about the applicant in the entity information domain in SAM.gov (see 41 U.S.C. § 2313).

You have the option to review information in the entity information domain in SAM.gov and comment on any of current your information that a Federal awarding agency entered.

We will consider your written comments, in addition to the other information in the entity information domain in SAM.gov, when we consider your integrity, business ethics, and record of performance under Federal awards. These considerations are part of the *Review of Risk Posed by Applicants*, as described in 2 C.F.R. § 200.206.

3. Due Diligence Review for Research, Technology, and Economic Security

All applications submitted to DOE are subject to a due diligence review. As DOE invests in critical infrastructure and in critical and emerging technology areas,[5] DOE considers possible threats to United States research, technology, and economic security from undue foreign government influence when evaluating risk. As part of the *Research, Technology, and Economic Security* (RTES) risk review, we may contact you or the proposed project team members for additional information. This risk review is separate from the technical merit review.

5 See Critical and Emerging Technologies List Update (whitehouse.gov).

All project participants are subject to RTES due diligence reviews. The due diligence review of covered individuals includes, but is not limited to, reviewing resumes and biosketches, disclosures, and certifications. DOE reserves the right to require resumes or biosketches, disclosures, and certifications for project participants not defined as covered individuals. You do not need to submit any additional information on non-covered individuals unless we request it. The volume and type of information we collect depends on various factors associated with the award.

This review is separate and distinct from DOE Order 142.3B "Unclassified Foreign National Access Program."

If we identify an RTES risk, we may require risk mitigation measures, including but not limited to requiring that an individual or entity not participate in the award. If we identify significant risks that cannot be sufficiently mitigated, we may decide not to fund the project.

We may share information about the risks identified as part of the RTES due diligence review process or monitoring with other Federal agencies (section 4(e) of the Presidential Memorandum on United States Government-Supported Research and Development National Security Policy-33 [NSPM-33]).

You cannot appeal DOE's decision on a due diligence review.

4. Evaluation and Administration by Non-Federal Personnel

In evaluating applications and subsequent awards, the Government may ask the advice of qualified nonfederal personnel as reviewers. The Government may also use nonfederal personnel, including DOE contractors, to conduct routine, nondiscretionary administrative activities. By submitting your application, you consent to nonfederal reviewers or administrators. Nonfederal reviewers must sign conflict of interest (COI) and non-disclosure acknowledgements (NDA) prior to reviewing an application. Nonfederal personnel conducting administrative activities must also sign an NDA.

5. Selection

The Selection Official may consider the technical merit, the merit reviewer's recommendations, program policy factors, risk reviews, and the amount of funds available in arriving at selections for this NOFO.

VII. Selection and Award Notices

We anticipate notifying applicants selected for award negotiation by the dates provided on the NOFO Part 1, *Basic Information—Key Dates*.

A. Selection Notices

1. Ineligible Submissions

Ineligible applications will not be further reviewed or considered for award.

2. Applicants Selected for Award Negotiations

We may stagger our selection determinations. So, some applicants may receive a notification letter before others. If you are selected for award negotiations, your written notification will include estimated award negotiation dates. A notification letter selecting an application for award negotiations does not authorize you to begin performance of the project. A selection for award negotiations is not a commitment by DOE to issue an award, nor is it a guarantee of Federal Government funding. You will not receive an award until award negotiations are complete and the Grants Officer executes the financial assistance award, which the recipient can access in FedConnect.

The award negotiation process takes at least 60 days, and may be longer, depending on the complexity of the project and your responsiveness, among other factors.

You must be responsive during award negotiations by responding timely to requests for documentation, including post-selection documentation, and meeting negotiation deadlines. If you fail to do so or if award negotiations are otherwise unsuccessful, we will cancel the award negotiations and rescind the selection. DOE reserves the right to terminate award negotiations at any time for any reason.

You can find guidance on pre-award costs in the Pre-Award Costs section.

3. Alternate Selections

In some cases, DOE will select alternates. As an alternate, DOE may consider the application for Federal funding in the future. A notification letter stating you are an alternate does not authorize you to begin performance of the project. We may ultimately determine to select or not select the application for award negotiations.

4. Applicants Not Selected for Award Negotiations

DOE must promptly notify in writing each applicant who was not selected for award negotiation or whose application cannot be funded because appropriated funds are not available.

B. Post-Selection Information Requests

To reduce burden in the application process, DOE instituted Post-Selection Information Requests and Submissions procedures. These procedures allow you to submit certain elements of an application once the application is under consideration for funding.

We will notify you (primarily by email) if we need post-selection information. This notification is not a Notice of Award. You should only submit this information when requested. We will explain what documents and materials to submit, the format required, and where and when to submit.

1. Example Information Requests

Some examples of information we may require to complete award negotiations include:

- Participants and collaborating organizations

- Current and pending support
- Other budget information
- Indirect cost information
- Letters of commitment from subrecipients and third parties contributing to cost share
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 C.F.R. § 1040.5)
- Information for the DOE Office of Civil Rights for assurance reviews under 10 C.F.R. § 1040
- Representation of Limited Rights Data and Restricted Software

2. Entity Risk Assessment

In addition to the other reviews outlined in the NOFO, we may also conduct a review of the risk posed by applications, according to 2 C.F.R. § 200.206. This risk assessment may consider:

- Financial stability
- Quality of management systems and ability to meet the management standards in
- 2 C.F.R. § 200 as adopted and supplemented by 2 C.F.R. § 910
- History of performance
- Audit reports and findings
- Your ability to effectively implement statutory, regulatory, or other requirements imposed on recipients or subrecipients

We may use other publicly available information and the history of your performance under DOE or other Federal agency awards. Depending on the severity of the findings and whether the findings were resolved, we may elect not to fund you.

In addition to this review, DOE must comply with provisions that 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 (2 C.F.R. § 180). These restrictions apply to both recipients and subrecipients.

3. Environmental Review Under the National Environmental Policy Act (NEPA)

Our decision on if 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. You can find additional background on NEPA at https://www.energy.gov/nepa.

Although NEPA compliance is a Federal agency responsibility and the ultimate decisions remain with the Federal agency, all applicants selected for award negotiations and recipients of an award must assist in the timely and effective completion of the NEPA process. If we determine certain documents must be prepared to complete the NEPA review process, you

may be required to prepare the documents, and the costs to prepare the necessary documents may be included as part of the project costs. We will independently evaluate the environmental document and will take responsibility for the contents, including ensuring the professional integrity of the discussion and analysis, as required by NEPA.

National Historic Preservation Act (NHPA)

DOE must comply with the requirements of section 106 of the National Historic Preservation Act (NHPA) before deciding if or how to distribute Federal funds. Section 106 requires DOE to identify and consider adverse effects to historic properties listed in or eligible for listing in the National Register of Historic Places. We may perform an NHPA review under the umbrella of our NEPA review and will require you to assist in this review and consider impacts to historic, Tribal, and cultural resources.

4. Trafficking in Persons

Awards under this NOFO are subject to the requirements at 2 C.F.R. Part 175, Award Term for Trafficking in Persons, including the compliance plan and certification requirements if the estimated value of services required to be performed under the grant or cooperative agreement outside the United States exceeds $500,000.

5. Interim Conflict of Interest Policy for Financial Assistance

The DOE interim Conflict of Interest Policy for Financial Assistance (COI Policy)[6] applies to:

- All recipients or subrecipients applying for or that receive DOE funding as a financial assistance award (e.g., a grant or cooperative agreement)
- Each Investigator who is planning to participate in or is participating in the project funded wholly or in part under the DOE financial assistance award.
    - *Investigator* includes means the PI and any other person, regardless of title or position, who is responsible for the purpose, design, conduct, or reporting of a project funded by DOE or proposed for funding by DOE
    - Recipients must flow down the requirements of the interim COI Policy to any subrecipient

For DOE funded projects, you must include all financial conflicts of interest (FCOI) (i.e., managed and unmanaged/unmanageable) in its initial and ongoing FCOI reports.

We understand that recipients or subrecipients receiving DOE financial assistance awards will need time to fully comply with DOE's interim COI Policy. To provide some flexibility, we have a staggered implementation. Specifically, before the award, applicants selected for award negotiations must:

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6 You can find DOE's interim COI Policy at https://www.energy.gov/management/department-energy-interim-conflict-interest-policy-requirements-financial-assistance.

- Ensure all Investigators complete their significant financial disclosures
- Review the disclosures
- Determine whether a FCOI exists
- Develop and implement a management plan for FCOIs
- Provide DOE with an initial FCOI report that includes all FCOIs (i.e., managed and unmanaged/unmanageable)

You will have 180 days from the date of the award to fully comply with the other requirements in DOE's interim COI Policy. Before the award, you must certify that you are, or will be within 180 days of the award, compliant with all requirements in the COI Policy.

SC only requires that unmanaged or unmanageable financial conflicts of interest be included in the financial conflict of interest (FCOI) report.

6. Prohibition Related to Malign Foreign Talent Recruitment Programs

Prohibition

Individuals participating in a Malign Foreign Talent Recruitment Program are prohibited from participating in projects selected for Federal funding under this NOFO.

Should an award result from this NOFO, you must exercise ongoing due diligence to reasonably ensure that no individuals participating on the DOE-funded project are participating in a Malign Foreign Talent Recruitment Program. Consequences for violating this prohibition will be determined according to applicable law, regulations, and policy.

Further, you must notify DOE within five business days upon learning that an individual on the project team is or is believed to be participating in a Malign Foreign Talent Recruitment Program. DOE may modify and add requirements related to this prohibition to the extent required by law.

Required Certifications

- Each covered individual must certify that they are not party to a Malign Foreign Talent Recruitment Program.
- The applicant and the subrecipients must certify that the covered individuals in their respective employment have been made aware of the Malign Foreign Talent Recruitment Program prohibition and have complied with the certification responsibilities stated above.

Non-Discrimination

We will ensure the Malign Foreign Talent Recruitment Program Prohibition does not target, stigmatize, or discriminate against individuals on the basis of race, ethnicity, or national origin, consistent with title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq.).

Definitions

Malign Foreign Talent Recruitment Program. as defined in P.L. 117-167, section 10638(4):

any program, position, or activity that includes compensation in the form of cash, in-kind compensation, including research funding, promised future compensation, complimentary foreign travel, things of non de minimis value, honorific titles, career advancement opportunities, or other types of remuneration or consideration directly provided by a foreign country at any level (national, provincial, or local) or their designee, or an entity based in, funded by, or affiliated with a foreign country, whether or not directly sponsored by the foreign country, to the targeted individual, whether directly or indirectly stated in the arrangement, contract, or other documentation at issue, in exchange for the individual—

engaging in the unauthorized transfer of intellectual property, materials, data products, or other nonpublic information owned by a United States entity or developed with a federal research and development award to the government of a foreign country or an entity based in, funded by, or affiliated with a foreign country regardless of whether that government or entity provided support for the development of the intellectual property, materials, or data products;

being required to recruit trainees or researchers to enroll in such program, position, or activity;

establishing a laboratory or company, accepting a faculty position, or undertaking any other employment or appointment in a foreign country or with an entity based in, funded by, or affiliated with a foreign country if such activities are in violation of the standard terms and conditions of a federal research and development award;

being unable to terminate the foreign talent recruitment program contract or agreement except in extraordinary circumstances;

through funding or effort related to the foreign talent recruitment program, being limited in the capacity to carry out a research and development award or required to engage in work that would result in substantial overlap or duplication with a federal research and development award;

being required to apply for and successfully receive funding from the sponsoring foreign government's funding agencies with the sponsoring foreign organization as the recipient;

being required to omit acknowledgment of the recipient institution with which the individual is affiliated, or the federal research agency sponsoring the research and development award, contrary to the institutional policies or standard terms and conditions of the federal research and development award;

being required to not disclose to the federal research agency or employing institution the participation of such individual in such program, position, or activity; or

having a conflict of interest or conflict of commitment contrary to the standard terms and conditions of the federal research and development award; and

a program that is sponsored by—

a foreign country of concern or an entity based in a foreign country of concern, whether or not directly sponsored by the foreign country of concern;

an academic institution on the list developed under section 1286(c)(8) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (10 U.S.C. § 2358 note; Public Law 115–232); or

a foreign talent recruitment program on the list developed under section 1286(c)(9) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (10 U.S.C. § 2358 note; Public Law 115–232).

Consistent with applicable law (42 U.S.C. § 19232), this provision does not prohibit, unless such activities are funded, organized, or managed by an academic institution or a foreign

talent recruitment program on the lists developed under paragraphs (8) and (9) of section 1286(c) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (10 U.S.C. § 4001 note; Public Law 115–232)—

making scholarly presentations and publishing written materials regarding scientific information not otherwise controlled under current law;

participation in international conferences or other international exchanges, research projects or programs that involve open and reciprocal exchange of scientific information, and which are aimed at advancing international scientific understanding and not otherwise controlled under current law;

advising a foreign student enrolled at an institution of higher education or writing a recommendation for such a student, at such student's request; and

other international activities determined appropriate by the federal research agency head or designee.

C. Award Notices

Once award negotiations are successfully completed, the Grants Officer will approve the financial assistance award, and you will receive notification of the award in the FedConnect system. You must be registered in FedConnect to receive the final award package.

1. Register with FedConnect

FedConnect® is how recipients receive their legally executed award package. To create a company account, you must be a designated point of contact in SAM.gov, and you must have a SAM Unique Entity Identifier Number (UEI).

Before you get started, review the FedConnect Ready, Set, Go! Guide. The registration process can take up to three days to complete. If you have questions on completing your registration, you can contact FedConnect Support.

VIII. Award Administration Information

A. Post-Award Requirements and Administration

DOE requires all award recipients to follow and accept requirements governed by laws and policies—both Federal Government-wide and DOE or program specific. These post-award requirements include:

- All national and administrative policy requirements
- Financial assistance general certifications and representations
- Build America, Buy America requirements
- Risk-Based Review of Project Participants
- Fraud, waste, and abuse requirements
- Safety, security, and regulatory requirements
- Environmental review under National Environmental Policy Act requirements

- Recipients of an award made under DOE NOFOs must comply with all applicable:
- Federal, state, and local laws and regulations
- DOE policy and guidance
- Instructions in Part 1 and Part 2 of this NOFO
- The award terms and conditions

You must require your subrecipients to comply with all applicable requirements. Reporting requirements are identified on the Federal Assistance Reporting Checklist attached to the award agreement.

Please review the Standard Award Terms and Conditions, the sample Federal Assistance Reporting Checklist, and standard Intellectual Property (IP) Provisions to better understand post-award requirements and administration.

1. Real Property and Equipment Continued Use

Real property and equipment purchased with project funds (federal share and recipient cost share) are subject to the requirements at 2 C.F.R. 200.310, 200.311, 200.313, and 200.316 (non-federal entities, except for-profit entities) and 2 C.F.R. 910.360 (for-profit entities).

For resulting awards under this NOFO, the recipients may (1) take disposition action on the real property and equipment; or (2) continue to use the real property and equipment after the conclusion of the award period of performance with Grants Officer approval. The recipient's written request for Continued Use must identify the property and include: a summary of how the property will be used (must align with the authorized project purposes); a proposed use period, (e.g., perpetuity, until fully depreciated, or a calendar date when the recipient expects to submit disposition instructions); acknowledgement that the recipient shall not sell or encumber the property or permit any encumbrance without prior written DOE approval; current fair market value of the property. An estimated useful life or depreciation schedule for equipment; and an estimated useful life or depreciation schedule for equipment.

When the property is no longer needed for authorized project purposes, the recipient must request disposition instructions from DOE. For-profit entity disposition requirements are set forth in 2 C.F.R. 910.360. Property disposition requirements for other non-federal entities are set forth in 2 C.F.R. 200.310 – 200.316. In addition, pursuant to the FY23 Consolidated Appropriations Act (Pub. L. No. 117-328), Division D, Title III, Section 309, at the end of the award period the Secretary or a designee of the Secretary, at their discretion, may vest unconditional title or other property interests acquired under this project regardless of the fair market value of the property.

2. Cost Share Payment

We require recipients to contribute the cost share amount incrementally over the life of the award. The terms and conditions of the award will specify your cost share interval, such as by invoice period or by budget period. Your cost share for each interval must always reflect the overall cost share ratio negotiated by the parties (e.g., the total amount of cost sharing on each invoice when considered cumulatively with previous invoices must reflect, at a minimum, the cost sharing percentage negotiated). When DOE provides FFRDC funding directly to the FFRDCs, you must provide project cost share at a percentage equal to the FFRDC costs, on a

budget period basis, resulting in a higher interim invoicing cost share ratio than the total award ratio.

In limited circumstances, and where it is in the Government's interest, the DOE Grants Officer may approve a request to meet your cost share requirements on a less frequent basis than required by the terms and conditions of the award. Regardless of the interval you request, you must be up to date on cost share at each interval. You must send these requests to the Grants Officer during award negotiations and include:

- A detailed justification for the request
- A proposed schedule of payments, including amounts and dates
- A written commitment to meet that schedule
- Evidence that you complied with your cost share obligations to date

The Grants Officer must approve all such requests before they go into effect.

IX. Other Information

A. Government Right to Reject or Negotiate

DOE 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 or award.

B. Commitment of Public Funds

The Grants 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 Officer, either expressed or implied, is invalid.

C. Notice of Right to Conduct a Review of Financial Capability

DOE reserves the right to conduct an independent third-party review of financial capability for applicants that are selected for award negotiation (including personal credit information of principals of a small business if we do not have enough information to determine the financial capability of the organization).

D. Requirement for Full and Complete Disclosure

You must fully and completely disclose all information requested. If you fail to do so, we may:

- Cancel award negotiations
- Modify, suspend, or cancel the funding agreement
- Initiate debarment proceedings or debarment
- Declare you ineligible to receive federal contracts, subcontracts, or financial assistance and benefits

- Apply civil or criminal penalties

E. Retention of Submissions

DOE retains copies of all applications and other submissions. By applying to DOE for funding, you consent to DOE retaining your submissions.

F. Intellectual Property (IP) Provisions

The standard DOE financial assistance intellectual property provisions that apply to the various recipient types discussed in the Title to Subject Inventions section below are located at http://energy.gov/gc/standard-intellectual-property-ip-provisions-financial-assistance-awards.

G. Title to Subject Inventions

A *subject invention* is any invention conceived or first actually reduced to practice in performance of work under a Federal award. An invention is any invention or discovery that is or may be patentable. Ownership of subject inventions is governed according 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 nonprofit organizations[7] may elect to retain title to their subject inventions and will be subject to certain IP provisions.
- **Domestic Large Businesses**: DOE has issued a class patent waiver that applies to this NOFO. Under this class patent waiver, domestic large businesses may elect title to their subject inventions similar to the right provided to the domestic small businesses, educational institutions, and nonprofits. To be eligible for the class patent waiver, a domestic large business must agree to class patent waiver IP provisions, including that any products embodying or produced through the use of a subject invention will be substantially manufactured in the United States (See the U.S. Manufacturing Commitments section).
- **All other parties**: The U.S. Government obtains title to subject inventions unless a patent waiver is granted. Applicants not covered under (a) or (b) above may request in advance a patent waiver either before or within 30 days after the effective date of the award that will cover subject inventions made under the award (Federal Non-Nuclear Energy Act of 1974, 42. U.S.C. § 5908). Even if you do not request an advance waiver or the request is denied, you will have a continuing right under the award to request a patent waiver for identified inventions, i.e., individual subject inventions disclosed to DOE within the timeframes set forth in the award's intellectual property terms and conditions. Any patent waiver that may be granted is subject to certain IP provisions

7 See 35 U.S.C. § 201 for definitions.

H. Government Rights in Subject Inventions

Where recipients, subrecipients, and contractors 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 Government contractors.

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 recipient or subrecipient who has elected to retain title to a subject invention (or their assignees or exclusive licensees) to grant a license to use the invention to a third party in certain circumstances. In addition, the Government may grant licenses to use the subject invention when a recipient, subrecipient, or their assignees and exclusive licensees refuse to do so.

To date, DOE has never exercised its march-in rights.

I. U.S. Manufacturing Commitments

One primary objective of DOE's multi-billion-dollar research, development, and demonstration investments is to cultivate new research and development ecosystems, manufacturing capabilities, and supply chains for and by United States industry and labor. In exchange for receiving taxpayer dollars to support a project, any products embodying any subject invention or produced through the use of any subject invention must be manufactured substantially in the United States unless the impacted entity can show to the satisfaction of DOE that it is not commercially feasible. Award terms, including the specific U.S. Competitiveness Provision that applies to the various types of recipients and projects, are available at https://www.energy.gov/gc/standard-intellectual-property-ip-provisions-financial-assistance-awards.

If you cannot meet the requirements of the U.S. Competitiveness Provision, you can request a modification or waiver.

More information and guidance on the U.S. Manufacturing Commitments and the waiver and modification request process, including the right to appeal, can be found in the DOE Financial Assistance Letter on this topic, available at https://www.energy.gov/management/pf-2022-09-fal-2022-01-implementation-doe-determination-exceptional-circumstances-under. Additional information on DOE's Commitment to Domestic Manufacturing for DOE-funded R&D is available at https://www.energy.gov/gc/us-manufacturing.

The U.S. Competitiveness Provision is implemented by DOE according to a Determination of Exceptional Circumstances (DEC) under the Bayh-Dole Act and DOE Patent Waivers.

J. Subject Invention Utilization Reporting

To ensure recipients, subrecipients, and contractors holding title to subject inventions are taking the appropriate steps to commercialize subject inventions, DOE requires each recipient,

subrecipient, and contractor holding title to a subject invention to submit annual reports on the use of the subject invention and efforts made by the recipient or its licensees or assignees to stimulate such use. The reports must include information on the:

- Status of development
- Date of first commercial sale or use
- Gross royalties received by the recipient
- Such other data and information as DOE may specify

K. Copyright

The recipient, subrecipients, and contractors may assert copyright in copyrightable works, such as software, first produced under the award without DOE approval. When copyright is asserted, the Government retains a paid-up nonexclusive, irrevocable worldwide license to:

- Reproduce the work
- Prepare derivative works
- Distribute copies to the public
- Perform publicly and display publicly the copyrighted work

This license extends to contractors and others doing work on behalf of the Government.

L. Personally Identifiable Information (PII)

All information you provide must, to the greatest extent possible, exclude personally identifiable information (PII). PII is information someone can use to distinguish or trace an individual's identity, such as the name, Social Security number, or biometric records alone or combined with other personal or identifying information linked to a specific individual, such as date and place of birth or mother's maiden name.

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

M. Annual Independent Audits

If a for-profit entity is a recipient and expends $1,000,000 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, refer to 2 C.F.R. § 910.501 and Subpart F.

If an educational institution, nonprofit organization, or state or local government is a recipient or subrecipient and expends $1,000,000 or more of Federal awards during the nonfederal entity's fiscal year, a Single or Program-Specific Audit is required. For additional information, refer to 2 C.F.R. § 200.501 and Subpart F.

Applicants and subrecipients should propose sufficient costs in the project budget to cover the costs associated with the audit. DOE will share in the cost of the audit at its cost-share ratio.

N. Buy America Preference for Infrastructure Projects

1. Overview

Made law via the passage of the Infrastructure Investment and Jobs Act (Pub. L. No. 117-58, 135 Stat. 429 (2021)), the Build America, Buy America Act ("BABA") mandates that all iron, steel, manufactured products, and construction materials used in Federally-funded projects meets certain domestic assembly and domestic content requirements. **Applicants are strongly encouraged to read this section carefully, as this requirement may impact project budget and/or timeline; it is crucial that applicants properly understand the requirements of BABA as they scope out their projects.**

As is detailed more thoroughly below, BABA applies to any project that is receiving Federal financial assistance where the prime recipient is a State, local, or tribal government, nonprofit organization, or institution of higher education. It does not apply to projects that have a for-profit organization serving as the prime recipient.

2. Definitions

There are several terms of art that are given specific definitions with respect to the application and execution of BABA. **Full definitions of these terms can be found by following this hyperlink to the relevant section (2 C.F.R. § 184.3) of the Code of Federal Regulations**. Any additional context not present in the Code of Federal Regulations definition for a given term is provided below.

a. *Buy America Preference* (Sometimes also referred to as the **Buy America Requirement** or **Domestic Content Procurement Preference**). Note that, despite the use of the word "Preference," this is very much a mandatory compliance requirement. The statute, implementing regulations, and OMB guidance characterize this requirement as the "Buy America Preference," and so that terminology is reflected here to ensure consistency with the statute and existing guidance.

b. *Component*

c. *Construction Materials*

d. *Infrastructure Project*

e. *Iron or steel products*

f. *Manufactured Products*

g. *Manufacturer*

h. *Predominantly of iron or steel or a combination of both*

i. *Produced in the United States* (Sometimes also referred to as the "Domestic Production requirement")

j. Section 70917(c) *Materials* (i.e., certain materials used in construction that are specifically excluded from being categorized as "construction materials"; as such, the Buy America Preference is not applied to these materials.

Additionally, the following terms are not defined in 2 C.F.R. § 184.3, but are important for a proper understanding of BABA and its application:

k. *Project* – means the construction, alteration, maintenance, or repair of public infrastructure in the United States.

l. *Infrastructure* – Infrastructure includes, at a minimum: the structures, facilities, and equipment for roads, highways, and bridges; public transportation; dams, ports, harbors, and other maritime facilities; intercity passenger and freight railroads; freight and intermodal facilities; airports; water systems, including drinking water and wastewater systems; electrical transmission facilities and systems; utilities; broadband infrastructure; buildings and real property; and structures, facilities, and equipment that generate, transport, and distribute energy, including electric vehicle (EV) charging.

m. *Public infrastructure* – The Buy America Preference does not apply to non-public (private) infrastructure. For purposes of compliance with BABA, infrastructure should be considered "public" if it is:

(1) publicly owned (owned, operated, funded and managed, in whole or in part, by any unit or authority of a Federal, State, or Local government-including U.S. Territories and Indian Tribes); or

(2) privately owned but utilized primarily for a public purpose. Infrastructure should be considered to be "utilized primarily for a public purpose", and therefore "public", if it is privately owned but operated on behalf of the public or is a place of public accommodation.

3. Buy America Preference

A. The Buy America Preference

Absent an approved waiver, none of the funds provided under a federal award (i.e., whether paid for with federal share or recipient cost-share) may be used for a project for infrastructure unless all iron, steel, manufactured products, and/or construction materials are "produced in the United States."

In general, applicants should ask the following questions to determine BABA applicability to their award:

1. Is the recipient a State, local, or tribal government; nonprofit organization, or institution of higher education? (If the prime is a for-profit organization, BABA does not apply. Otherwise, move on to question 2);

2. Does the project include the construction, alteration, maintenance, and/or repair of infrastructure in the United States? ("Infrastructure" is defined in the BABA statute and regulations, and is quite broad; although the definition provides several specific items that are considered infrastructure, it also includes broad categories such as "buildings and real property," which casts a wide net. If the project does not include work on infrastructure, then BABA does not apply. Otherwise, move to question 3);

3. Is the infrastructure in question publicly-owned or privately-owned but utilized primarily for a public purpose? (Anything owned by a public entity is publicly-owned, by definition. "privately owned but utilized primarily for a public purpose" generally means privately-owned infrastructure that is operated on behalf of the public, or that serves as a place of public accommodation. DOE has the final say on this determination, so

applicants who do not think their infrastructure is "privately-owned but utilized primarily for a public purpose" should have justifications prepared supporting their determination).

If the answer to the above questions is "yes," then BABA applies to your project.

If a determination is made that BABA will apply to a project, recipients must then ensure that all iron, steel, manufactured products, and construction materials used in the project are "produced in the United States." Standards to satisfy this requirement differ based on the category a given material falls under**:**

a. 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;

b. 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. (**Note:** 2 C.F.R. § 184.5 provides specific guidance for determining the cost of components for manufactured products); and

c. All construction materials are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States. (**Note:** 2 C.F.R. § 184.6 provides additional standards that must be satisfied for some specified construction materials in order for those materials to be considered "produced in the United States").

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

B. Specific Application of the Preference

The Domestic Production requirement only applies to the iron or steel products, manufactured products, and construction materials used for the construction, alteration, maintenance, or repair of public infrastructure in the United States. Only items that are consumed in, incorporated into, or permanently affixed to the infrastructure in the project are required to meet the "produced in the United States" requirements. As such, this requirement 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 infrastructure project. This is likewise applicable to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project.

C. Section 70917(c) Materials

The BABA Statute at Section 70917(c) provides a list of materials which are specifically excluded from categorization as "construction materials," and therefore may be used without meeting the relevant "produced in the United States" standard.

Generally referred to as "Section 70917(c) Materials," these are:
- cement and cementitious materials;
- aggregates such as stone, sand, or gravel; or
- aggregate binding agents or additives as provided in Section 70917(c) of BABA.

Asphalt concrete pavement mixes are typically composed of asphalt cement (a binding agent) and aggregates such as stone, sand, and gravel. Accordingly, asphalt is also excluded from the definition of Construction materials.

Section 70917(c) materials, on their own, are not manufactured products. Further, Section 70917(c) materials should not be considered manufactured products when they are used at or combined proximate to the work site—such as is the case with wet concrete or hot mix asphalt brought to the work site for incorporation. However, certain Section 70917(c) materials (such as stone, sand, and gravel) may be used to produce a manufactured product, such as is precast concrete. Precast concrete is made of components, is processed into a specific shape or form, and is in such state when brought to the work site. Furthermore, wet concrete should not be considered a manufactured product if not dried or set prior to reaching the work site.

Further clarification is provided in 2 C.F.R. § 184 on the circumstances under which a determination is made that Section 70917(c) materials should be treated as components of a manufactured product. That determination is based on consideration of: (i) the revised definition of the "manufactured products" at 2 C.F.R. § 184.3; (ii) a new definition of "Section 70917(c) materials" at 2 C.F.R. § 184.3; (iii) new instructions at 2 C.F.R. § 184.4(e) on how and when to categorize articles, materials, and supplies; and (iv) new instructions at 2 C.F.R. § 184.4(f) on how to apply the Buy America preference by category.

4. Certification of Compliance

Recipients must request a certification from a product manufacturer that the iron, steel, manufactured product or construction material they are acquiring from the manufacturer were "produced in the United States" (i.e., that they meet the requisite standards outlined at the beginning of Section 3, above). DOE will not provide any sort of "certification template" for this purpose; recipients are responsible for ensuring that a certification contains enough information that it properly validates the BABA compliance of the item(s) listed within the certification.

Although DOE does not require a specific format for the certification, the following elements must be present:

• A listing of all products covered by the certification, including their category (e.g., iron, steel, manufactured product, or construction material);
• A recitation of the relevant "produced in the United States" standard for any categories (iron, steel, manufactured product, or construction material) provided in the above list, to ensure the manufacturer properly understands the standards to be met;
• A clear statement that the products listed meet the relevant "produced in the United States" standard(s);
• A signature from an authorized representative of the manufacturer certifying the contents of the compliance statement; and
• Any other information the recipient deems necessary for the certification to demonstrate compliance with the BABA requirements.

Recipients 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 infrastructure 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. Recipients 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.

5. Waivers

When necessary, recipients may apply for, and DOE may grant, a waiver from the Buy America Preference. In general, DOE will not review or consider waiver requests from applicants. 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:

a. Public Interest- Applying the Buy America Preference would be inconsistent with the public interest;
b. 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
c. 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.

Additional information on the submission and processing of a waiver request will be provided to applicants whose applications are selected for award negotiations. Alternatively, applicants can find more information about the process on DOE's Build America, Buy America home page.

O. Conference Spending (February 2015)

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.

P. Corporate Felony Conviction and Federal Tax Liability Representations (March 2014)

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

- It is **not** a corporation that has been convicted of a felony criminal violation under any Federal law within the preceding 24 months,
- 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.

Q. Covered Individual Definition, Designation, and Responsibility

For the purposes of this NOFO, a Covered Individual means an individual who (a) contributes in a substantive, meaningful way to the development or execution of the scope of work of a project proposed for funding by DOE, and (b) is designated as a covered individual by DOE.

DOE designates as covered individuals any principal investigator (PI); project director (PD); co-principal investigator (Co-PI); co-project director (Co-PD); project manager; and any individual regardless of title that is functionally performing as a PI, PD, Co-PI, Co-PD, or project manager. Status as a consultant, graduate (master's or PhD) student, or postdoctoral associate does not automatically disqualify a person from being designated as a "covered individual" if they meet the definition in (a) above.

The prime applicant is responsible for assessing the applicability of (a) against each person listed on the application. Further, the prime applicant is responsible for identifying any such individual to DOE for designation as a covered individual, if not already designated by DOE as described above.

Individuals committing no measurable effort or "as-needed" effort are not automatically exempt from being designated as a covered individual. The prime applicant's listing of an individual in the "Senior/Key Person" section of an SF-424(R&R) budget serves as an acknowledgement that DOE designates that person as a covered individual.

DOE may further designate covered individuals during award negotiations or the award period of performance.

R. Digital Persistent Identifier (PID)

Individuals that are required to submit Biographical Sketch and/or Current and Pending (Other) Support disclosures must provide a digital persistent identifier (PID) in such disclosures as part of the application. Included PIDs must meet the common/core standards specified in an ORCID iD).

Include this information for each covered individual with the Current and Pending (Other) Support submission as described above.

S. Environmental, Safety and Health (ES&H) Performance of Work at DOE Facilities

With respect to the performance of any portion of the work under this award which is performed at a DOE-owned or controlled site, the recipient agrees to comply with all state and Federal ES&H regulations, and with all other ES&H requirements of the operator of such site.

Prior to the performance on any work at a DOE-owned or controlled site, the recipient shall contact the site facility manager for information on DOE and site-specific ES&H requirements.

The recipient shall apply this provision to all subrecipients at any tier.

T. Federal, State, and Local Requirements

With respect to the performance of any portion of the work under this award, the recipient agrees to comply with all applicable local, state, and Federal ES&H regulations. The recipient shall apply this provision to all subrecipients at any tier.

U. Foreign Travel

If international travel is proposed for your project, please note that your organization must comply with the International Air Transportation Fair Competitive Practices Act of 1974, 49 U.S.C. § 40118 (2018), commonly referred to as the "Fly America Act," and implementing regulations at 41 C.F.R. §§ 301-10.131 through 301-10.143. (2025) The law and regulations require air transport of people or property to, from, between, or within a country other than the

United States, the cost of which is supported under this award, to be performed by or under a cost-sharing arrangement with a United States flag carrier, if service is available.

V. Framework for Nucleic Acid Synthesis Screening Requirement

Entities conducting life sciences R&D activities, or technical assistance to support life sciences R&D activities awards issued after October 2024 with synthetic nucleic acids – including but not limited to Deoxyribonucleic acid (DNA) and ribonucleic acid (RNA), whether single- or double- stranded, as well as whole organism genomes (e.g., viruses, bacteria), or the use of any benchtop equipment capable of synthesizing nucleic acids are required to obtain synthetic nucleic acids or devices capable of synthesizing them – from Providers or Manufacturers that attest to implementing 2024 OSTP Framework for Nucleic Acid Synthesis Screening.

The attestation may be provided through: (1) a publicly posted statement (e.g., public website) or (2) directly to the Grants Officer and the prime recipient/subrecipient for subawards by the Provider or Manufacturer. The Provider or Manufacturer must ensure that the attestation is signed by an individual with authority to respond on behalf of the organization.

Flowdown of requirements to subrecipients. The prime recipient shall incorporate the substance of this term in its terms and conditions, including this paragraph, in all subawards in support of the award that may involve the procurement of synthetic nucleic acids and benchtop nucleic acid synthesis equipment.

W. Logos and Wordmarks

DOE created a logo that recipients may use. The logos and best practices may be found at https://www.energy.gov/management/pf-2023-19-department-energy-awardee-usage-branding-and-logo-guide. Information about the DOE logo, seal, and wordmark may be found at https://www.energy.gov/department-energy-logo-and-branding-guidelines. Information about the SC logo may be found at https://www.energy.gov/science/logos.

X. Modifications

Notices of any modifications to this NOFO will be posted on Grants.gov and the FedConnect portal. You can receive an email when a modification or a NOFO message is posted by registering with FedConnect as an interested party for this NOFO. It is recommended that you register as soon after release of the NOFO as possible to ensure you receive timely notice of any modifications or other NOFOs. More information is available at www.FedConnect.net.

Y. Nondisclosure and Confidentiality Agreements Representations (June 2015)

By submitting an application in response to this NOFO, the Applicant represents that:

(1) It **does not and will not** require its employees or contractors to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting its employees or contactors from lawfully reporting waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.

(2) It **does not and will not** use any Federal funds to implement or enforce any nondisclosure and/or confidentiality policy, form, or agreement it uses unless it contains the following provisions:

a. *''These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by existing statute or Executive order relating to (1) classified information, (2) communications to Congress, (3) the reporting to an Inspector General of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, or (4) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive orders and statutory provisions are incorporated into this agreement and are controlling.''*

b. The limitation above shall not contravene requirements applicable to Standard Form 312, Form 4414, or any other form issued by a Federal department or agency governing the nondisclosure of classified information.

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

Z. Publications

The recipient is expected to publish scientific results in peer-reviewed journals or otherwise make publicly available the results of the work conducted under any award resulting from this NOFO. Publications and other methods of public communication describing any work based on or developed under an award resulting from this NOFO must contain an acknowledgment of SC support. The format for such acknowledgments is provided at https://science.osti.gov/funding-opportunities/acknowledgements/. The author's copy of any peer-reviewed manuscript accepted for publication must be announced to DOE's Office of Scientific and Technical Information (OSTI) and made publicly available in accordance with the instructions contained in the Reporting Requirements Checklist incorporated in all Assistance Agreements. Awards made under this NOFO are subject to DOE's Public Access Plan. Full-text versions of scientific publications must be made publicly accessible at no charge to readers.

AA. Research Misconduct

Scientific discoveries can only take place when scientific research is conducted in a fair, transparent, and honestly reported manner. Any form of dishonesty—whether plagiarism, falsifying results, or misrepresenting conditions—makes it impossible to advance our understanding of the physical universe.

Recipients are "responsible for maintaining the integrity of research of any kind under an award from DOE including the prevention, detection, and remediation of research misconduct, and the conduct of inquiries, investigations, and adjudication of allegations of research misconduct," and conducting appropriate administrative processes in response to allegations of research misconduct in accordance with 2 C.F.R. § 910.132. Allegations of any misconduct under an award resulting from this RFA must be reported to the appropriate institutional officials in accordance with institutional policies against misconduct. Additional information on DOE research misconduct policies can be found at: https://science.osti.gov/grants/Policy-and-Guidance/Research-Misconduct.

BB. Research Security Training Requirement

Covered individuals listed on applications are required to certify that they have taken research security training consistent with Section 10634 of the CHIPS and Science Act of 2022. In addition, an applicant who receives an award must maintain sufficient records (records must be retained for the time period noted in 2 C.F.R. § 200.334 and made available to DOE upon request) of its compliance with this requirement for covered individuals at the applicant/recipient organization and it must extend this requirement to any and all subrecipients.

Include this information for each covered individual with the Current and Pending Support submission as described above.

CC. Statement of Federal Stewardship

DOE will exercise normal federal stewardship in overseeing the project activities performed under DOE 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.

DD. 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 C.F.R. § 170. (See: www.ecfr.gov). Prime recipients must register with the new Federal Funding and Transparency Act Subaward Reporting System (FSRS) in SAM and report the required data on their first tier subrecipients. Prime recipients may be required to report the

total compensation for their five most highly compensated executives as part of their registration profile in SAM.gov and for first-tier subrecipients' five most highly compensated executives as in SAM.gov.

EE. Acronyms

Acronym	Spelled Out	Acronym	Spelled Out
ANC	Alaska Native Corporation	**NHPA**	National Historic Preservation Act
BABA	Build America, Buy America Act	**NOFO**	Notice of Funding Opportunity
CESER	Office of Cybersecurity, Energy Security, and Emergency Response	**NSF**	National Science Foundation
C.F.R.	Code of Federal Regulations	**NSPM**	National Security Policy Memorandum
COI	Conflict of Interest	**OFCCP**	Office of Federal Contractor Compliance Programs
CRADA	Cooperative Research and Development Agreement	**OIG**	Office of Inspector General
DBA	Davis-Bacon Act	**OMB**	Office of Management and Budget
DEC	Determination of Exceptional Circumstances	**OTA**	Other Transactions Authority
DMSP	Data Management and Sharing Plan	**PII**	Personally Identifiable Information
DOE	United States Department of Energy	**PID**	Digital Persistent Identifier
DOI	Digital Object Identifier	**PDF**	Portable Document Format
DOL	United States Department of Labor	**PRL**	Physical Review Letters
EO	Executive Order	**R&D**	Research and Development
EIV	Environmental Impact Volume	**RD&D**	Research, Development, and Demonstration
FCOI	Financial Conflicts of Interest	**RTES**	Research, Technology, and Economic Security
FEMP	Federal Energy Management Program	**SAM**	System for Award Management
FFATA	Federal Funding and Transparency Act of 2006	**SCEP**	Office of State and Community Energy Programs
FFRDC	Federally Funded Research and Development Center	**SciENcv**	Science Experts Network Curriculum Vita

IIJA	Infrastructure Investment and Jobs Act	**SI**	Super Intelligence
IP	Intellectual Property	**SMART**	Specific, Measurable, Achievable, Relevant, and Timely
IRA	Inflation Reduction Act	**SOPO**	Statement of Project Objectives
LOW	Locations of Work	**SSN**	Social Security Number
M&O	Management and Operations	**STEM**	Science, Technology, Engineering, and Mathematics
NDA	Non-Disclosure Acknowledgement	**UCC**	Uniform Commercial Code
NEPA	National Environmental Policy Act	**UEI**	Unique Entity Identifier
NETL	National Energy Technology Laboratory	**WP**	Work Proposal

FF. Checklist for Avoiding Common Errors

Note that not all items in this checklist will apply to every submission under every NOFO.

Item	Issue
Applications	Submitted in Grants.gov. Do not submit applications in PAMS or FedConnect.
Grants.gov Submission	Ensure that applications are submitted under the correct Opportunity Number. Standard Form (SF)-424 Research and Related (R&R): - Attach nothing to Field 20 - Attach nothing to Field 21 SF-424 Research and Related Other Project Information form: - Attach the abstract to Field 7 - Attach the Project Narrative, with all appendices, to Field 8 - Attach nothing to Field 9 - Attach nothing to Field 10 - Attach nothing to Field 11

Item	Issue
	- Attach the list of individuals who should not serve as merit reviewers (Collaborator Template) to Field 12 - Do not attach other files to Field 12 - NOTE: Files attached to Field 12 will not be shared with merit reviewers.
Letters of Intent (LOIs)	- Submit your LOI in PAMS. - Do not submit your LOI in Grants.gov. - Do not attach your LOI to the SF-424 Research and Related (R&R) form. - Follow the instructions in Section IV for the preparation of an LOI. for the preparation of an LOI.
Pre-Applications	- Submit your pre-application in PAMS. - Do not submit your pre-application in Grants.gov. - Do not attach your pre-application to the SF-424 Research and Related (R&R) form. - Follow the instructions in Section IV for the preparation of a pre-application. for the preparation of a pre-application.
Page Limits	Strictly followed throughout application, including particular attention to: - Project Narrative and appendices - Biographical sketches - Data Management and Sharing Plans (DMSPs) - Letter(s) of Collaboration or Access, if any
Personally Identifiable Information	None present in the application
Project Narrative	Composed of one PDF file including all appendices (bibliography, facilities, equipment, DMSP)
Project Summary / Abstract	Name of PI, PI's institutional affiliation(s), Co-Investigator(s), Co-Investigator's institutional affiliation(s)
DOE Title Page	Follow instructions closely
Budget	Use current negotiated indirect cost and fringe benefit rates
Budget Justification (attached to budget)	Justify all requested costs

Item	Issue
Biographical Sketches	Follow page limits strictly and do not include list of collaborators. Attach the biographical sketch to the Senior/Key Person Profile (Expanded) Form.
Current and Pending Support	Ensure complete listing of all activities, regardless of source of funding. Attach the current and pending support to the Senior/Key Person Profile (Expanded) Form.
List of Individuals who Should not Serve as Merit Reviews	Attach to Field 12 of the SF-424 Research and Related Other Project Information form.
Data Management and Sharing Plans (DMSP)	- If referring to an experiment's DMSP, describe the relationship to the proposed research. - Include a DMSP even if no experimental data is expected.
Institutions capable of being funded through the DOE Field Work System	If National Laboratories and/or DOE sites are permitted to submit under this NOFO: - Do not create new institutions in the PAMS website. - Submit applications in Grants.gov using the name of the laboratory or site in Field 5 of the SF-424(R&R) application form, not the contractor operating the laboratory or site. Submissions under this NOFO will be evaluated for technical merit, but any resulting funding, work, or awards will be made under the laboratory or site's contract with DOE. No separate financial assistance awards will be made. No administrative provisions of this NOFO will apply to the laboratory or any laboratory subcontractor.