Department of Energy (DOE)

Office of Energy Efficiency and Renewable Energy (EERE)

Advanced Manufacturing Graduate-Level Traineeships

**Funding Opportunity Announcement (FOA) Number: DE-FOA-**0001790

**FOA Type: Modification 0002**

**CFDA Number:** 81.086

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| --- | --- |
| **FOA Issue Date:** | 07/17/2017 |
| **Submission Deadline for Concept Papers:** | 08/08/2017 5:00pm ET |
| **Submission Deadline for Full Applications:** | 09/19/2017 5:00pm ET |
| **Expected Date for EERE Selection Notifications:** | October 2017 |
| **Expected Timeframe for Award Negotiations** | October-December 2017 |

* Applicants must submit a Concept Paper by 5:00pm ET the due date listed above to be eligible to submit a Full Application.
* To apply to this FOA, applicants must register with and submit application materials through EERE Exchange at <https://eere-Exchange.energy.gov>, EERE’s online application portal.
* Applicants must designate primary and backup points-of-contact in EERE Exchange with whom EERE will communicate to conduct award negotiations. If an application is selected for award negotiations, it is not a commitment to issue an award. It is imperative that the applicant/selectee be responsive during award negotiations and meet negotiation deadlines. Failure to do so may result in cancelation of further award negotiations and rescission of the Selection.

**Modifications**

All modifications to the Funding Opportunity Announcement are [HIGHLIGHTED] in the body of the FOA.

|  |  |  |
| --- | --- | --- |
| **Mod. No.** | **Date** | **Description of Modification** |
| 0001 | 8/16/2017 | The purpose of this modification is to: (1) extend the submission deadline for Full Applications to 9/15/2017; and (2) to require a list of the proposed private sector industry partners in the cover page of the Technical Volume within the Full Application, to confirm Applicant eligibility in line with the requirements of Section III.A.i Statement of Applicant EligibilitySee Section III.A.i Statement of Applicant Eligibility and Section IV.D.ii Technical Volume.  |
| 0002 | 9/12/2017 | The purpose of this modification is to (1) extend the submission deadline for Full Applications to 9/19/2017; and (2) clarify the funding limit regarding support for staff time for new curriculum development under Section I.A.1.e. Specifically, Section I.A.1.e. is revised to clarify that the 10% limit applies only to the *Federal share* of award funding; if the applicant has determined additional costs are necessary beyond the 10% limit, these costs may be covered by Recipient cost share. |

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Funding Opportunity Description

* 1. Description/Background

Through this Funding Opportunity Announcement (FOA), DOE intends to fund university-led Traineeship Programs that address workforce training needs in the early-stage technology area of advanced materials and process technologies of high importance to manufacturing. The following objectives guide the Office of Energy Efficiency and Renewable Energy (EERE) Advanced Manufacturing Office’s (AMO) traineeship efforts:

* Advance the DOE mission – Traineeship programs are designed and implemented to advance specific Science, Technology, Engineering and Math (STEM) workforce competencies required for the DOE’s unique mission to ensure America’s security and prosperity by addressing its science and energy challenges, particularly with regard to advanced manufacturing.
* Address priority STEM workforce needs and identified gaps in early-stage advanced manufacturing technology – Traineeship programs focus on advancing those critical STEM disciplines and competencies specifically relevant to the AMO missions where other U.S. Government or academic workforce development programs either do not exist or where DOE-relevant early-stage technology areas are not being leveraged to support specific DOE mission responsibilities.

The high priority topic identified in this traineeship program is advanced manufacturing (advanced materials and process technologies in manufacturing).

Technical expertise in advanced materials and process technologies in manufacturing is needed to enable the subsequent implementation of new and advanced high-efficiency materials and process technologies.[[1]](#footnote-2) A comprehensive analysis of the types of advanced materials and process technologies relevant to advanced manufacturing for energy were developed through a series of workshops and RFIs and are articulated in the Advanced Manufacturing Office Multiyear Program Plan (draft) for Fiscal Years 2017-2021. Through knowledge and skills transfer in these technical areas to graduate students, this traineeship program will also further new technology research and development that can lead to meaningful impacts across the energy and manufacturing sectors. This traineeship program has the potential to address workforce needs across multiple advanced manufacturing and energy related industries. A new generation of advanced manufacturing technical experts will need to be trained if the private sector is going to translate early-stage research and development research to U.S. leadership in energy and advanced manufacturing. Translation of early-stage research and development to leadership in manufacturing and energy is the foundation for economic growth and private sector job creation in the near to medium term.

A number of third parties have identified this growing need for more scientists and engineers trained in advanced materials and process technologies in the manufacturing and energy sectors. The National Academies have found that to be competitive in the global technology-dominated marketplace of the 21st century requires a highly qualified workforce.[[2]](#footnote-3),[[3]](#footnote-4) In both its 2007 report, “Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future” and 2010 report, “Rising Above the Gathering Storm, Revisited: Rapidly Approaching Category 5”, the Academies specifically identified mathematics, science, and engineering as critical to supporting U.S. national competitiveness and critical industry workforce needs. The DOE AMO will openly and competitively select U.S. institutions of higher education to implement master’s-level training programs designed to train a new generation of engineers and scientists in the area of advanced materials and process technologies to fill U.S. workforce needs across industry, national labs and universities. A relevant engineering or equivalent curriculum such as mechanical, materials, electrical, industrial, manufacturing, or chemical engineering with accredited programs such as by the Accreditation Board for Engineering and Technology (ABET) or equivalent will be required for all successful applicant institutions. Hands-on, laboratory-based, and industry-relevant experience with advanced materials and process technologies for advanced manufacturing is expected to be central to the traineeship program, as well as, cross-cutting skills development in areas including data analysis, information systems, modeling and simulation, and process design. Recipient institutions will subsequently use a competitive application process to award traineeship funding to individual graduate students of high merit who are entering the first two years of a graduate program and are U.S. Citizens, U.S. nationals (residents of American Samoa and Swains Island), or U.S. permanent residents. While leveraging and complementing existing capabilities in advanced manufacturing research and development, the proposed advanced materials and process technologies in manufacturing engineering traineeship will be an open solicitation to any U.S. based accredited institution of higher education with advanced manufacturing or relevant curriculum.

**1.** **Required Traineeship Program Elements**

The DOE funded Traineeship Program providing funding for university-led traineeships in advanced manufacturing will support one or more applications (three-five years in duration) from universities proposing to train graduate students in specific disciplines or sub-disciplines aligned with advanced manufacturing workforce needs. These manufacturing workforce needs should be aligned with the scientific and technical areas identified in the Advanced Manufacturing Office Multiyear Program Plan (draft) for Fiscal Years 2017-2021.[[4]](#footnote-5)

Applications should target support for two years of a graduate student’s master’s-level training. Traineeship programs at a given academic institution should be focused, supporting 5-10 new students per year beginning in the fall of 2018, with a total of 10-20 students per year supported in the year(s) subsequent to the first year through both this support and complimentary external support.

The overall university-led graduate training program will include a combination of targeted, relevant and innovative course work in advanced materials and process technologies in advanced manufacturing, mentored graduate research including hands-on industry oriented technical practicum projects, and other required activities. Such activities designed to address essential knowledge and skills and to leverage DOE capabilities and assets could include focused workshops; seminars; research practicums at a DOE National Laboratory or other U.S. Government Laboratory or other DOE or U.S. Agency sponsored[[5]](#footnote-6) for-profit or non-profit organizations; internships with strategic partners (industry and non-profit laboratories, including universities); or participation in external courses and programs. The training program should specifically include research that is industry-relevant, laboratory-based, hands-on work in advanced materials and process technologies in advanced manufacturing.

The graduate training program should also include structured support for graduate student training in cross-cutting skills including data analysis, information systems, modeling and simulation, and process design, as well as, professional development in non-research skills, including but not limited to project management, oral and written science communication, developing and working within large collaborations (team science), and entrepreneurial skills.

Applications for graduate traineeships should clearly describe the planned curriculum for graduate training, and describe any proposed new curriculum development where new courses, workshops, etc. are needed as part of the traineeship program of study. Traineeship awards may provide limited support for staff time for new curriculum development (up to 10% of the *Federal share* of award funding). NOTE: If the applicant has determined additional costs are necessary beyond the 10% limit, these costs may be covered by Recipient cost share.

In order to ensure focus on advanced manufacturing related engineering disciplines and competencies specifically relevant to the Advanced Manufacturing Office’s missions, applications must include proposed partnerships with more than one private sector industry partner to ensure student opportunities for hands-on industry-relevant R&D training opportunities throughout the traineeship. DOE National Laboratory or other U.S. Government Laboratory and non-Federal for-profit or non-profit organizations currently sponsored by DOE or other U.S. agencies[[6]](#footnote-7) as described in Section I.A.2.g. of the FOA are also encouraged to participate as traineeship partners with applicant universities**.** If components of a traineeship are proposed to be completed at non-industry partners, the applicant must demonstrate how substantive and meaningful engagement with industry will guide that work**.**  The Applicant is expected to partner with multiple organizations as DOE is looking to leverage resources and research and development results.

**2.** **Content of University Applications**

University applications should include the following content:

* 1. Detailed information about planned curricula, including courses, workshops and seminars, industry-relevant research experiences, crosscutting skills and mentoring that will be incorporated into the proposed DOE funded advanced manufacturing traineeship program.
	2. Detailed description of partnership agreements with private sector industry partners and other partner organizations, as well as, how such partnerships will ensure student access to industry-relevant R&D training opportunities throughout the traineeship.
	3. Plans for new curriculum development to meet the scientific and technical training needs in advanced manufacturing.
	4. How the proposed training program will specifically address the advanced manufacturing workforce training needs.
	5. A detailed plan and schedule showing the development of the curricula and recruitment of students such that the traineeships begin in the fall semester of 2018. This plan needs to specifically address the approach for recruitment of women and minority students.
	6. A rigorous evaluation plan that explains how the Awardee will review and assess the quality of the trainee program and the overall impact of the trainee program on the workforce training goal.
	7. Acknowledgement of the requirements for eligible graduate students, mentors, and academic institutions as outlined below:
		1. Requirements for Graduate Student Trainees: To be eligible to participate in the university-led traineeship program, graduate student candidates must:
		+ Be a U.S. citizen, U.S. national (resident of American Samoa and Swains Island), or U.S. permanent resident.
		+ Be at least 18 years of age.
		+ Be enrolled full-time in a qualified graduate program at the Principal Investigator’s academic institution pursuing a master’s degree as their degree objective. The master’s degree-level traineeship program must require a thesis project to be eligible.
		+ Conduct an industry-relevant graduate research practicum aligned with advanced manufacturing.
		1. Requirements for Mentors: Eligible mentors from the host university and from partner institutions should be qualified researchers or related subject matter experts with a strong record of performance, including a record of publications, and a favorable record in training and mentoring students at the graduate level.
		2. Requirements for Academic Institutions: Applications must be submitted by eligible institutions of higher education who have established researchers with industry collaborations and experience, as well as demonstrated scientific and administrative leadership skills. Eligible institutions include U.S. based academic institutions of higher education with accredited graduate programs granting master’s-level degrees in a field for which an advanced manufacturing program would be appropriate and aligned with the mission of the Advanced Manufacturing Office. Successful proposals will be expected to publicly and widely share information regarding new curriculum that addresses the targeted science and/or engineering training needs developed under the DOE funded Traineeship award. Public curriculum promulgation may include using means such as collaboration with minority-serving institutions, with summer school programs, massive online open courses (MOOCs), and other means.
	8. Partnerships with Private Sector Industry Partners

Universities are **required** to partner with more than one private sector industry partner to ensure focus on advanced manufacturing engineering disciplines and competencies specifically relevant to the EERE and AMO mission. Applications that do not include the mandatory partnerships with private sector industry partners will not be considered for funding under this FOA. Additional Eligibility information can be found in Section III.A.1 of the FOA.

* 1. Other Partnerships

In addition to the mandatory partnerships described under h., above, inclusion of additional partnership options specified below is encouraged to leverage resources and research and development results.

Partnership with a DOE National Laboratory or other U.S. Government Laboratory

Universities may propose to partner with one or more DOE National Laboratories or other U.S. Government Laboratories to incorporate program elements that enhance the quality of the training program and specifically address the advanced manufacturing training. The required structured program elements for graduate trainees carried out in partnership with a DOE National Laboratory or other U.S. Government Laboratory can include:

* Long-term or short-term research internships at a DOE National Laboratory or other U.S. Government Laboratory in collaboration with laboratory scientists or engineers;
* Laboratory practicums that occur at a DOE National Laboratory or other U.S. Government Laboratory in collaboration with laboratory scientists or engineers;
* Scientific or technical workshops at a DOE National Laboratory or other U.S. Government Laboratory that hosts unique research capabilities or facilities relevant to advanced manufacturing;
* Focused long-term or short-term summer credit-bearing courses at a DOE National Laboratory or other U.S. Government Laboratory that offers unique research capabilities or facilities related to advanced manufacturing; or
* Workshops related to professional development skills critical to a broader range of career options, including research project management, construction project management, entrepreneurial skills, science communication, technology transfer, or related regulatory requirements.
	+ - 1. Partnerships with non-Federal for-profit or non-profit organizations currently sponsored by DOE or other U.S. agencies[[7]](#footnote-8)

Universities may propose to partner with one or more non-Federal for-profit or non-profit organizations currently sponsored by DOE or other U.S. agencies[[8]](#footnote-9). This would help incorporate elements that enhance the quality of the training program and specifically address the advanced manufacturing training sought by EERE. Required, structured program elements for graduate trainees carried in partnership with a non-Federal organization might include:

* Research internships at the organization;
* Scientific or technical workshops at a partner organization hosting unique research capabilities or facilities related to advanced manufacturing;
* Workshops related to professional development skills critical to a broader range of career options, including research project management, construction project management, entrepreneurial skills, science communication, technology transfer, or related regulatory requirements that can be uniquely provided by the organization.
1. Partnerships with Other Relevant Entities

Universities may propose to partner with other entities, such as other non-profits, professional organizations and other educational institutions or programs to accomplish program objectives.

**3. Budget Requirements for University Applications**

DOE funded Traineeship programs will support innovative proposals for graduate level training that leverage DOE assets and capabilities and strategic partnerships, and address emerging needs in graduate training to enable preparedness for advanced manufacturing careers beyond those in academia. The DOE award is intended to offset the costs of graduate student stipends, tuition, fees and training related expenses for the selected graduate student trainees.

The following guidelines should be used for proposed budgets.

* Generally, application budgets should provide for program support that is equivalent to no more than $55K per student per year. Funding should provide for monthly stipends, supplemental support for university tuition and fees, travel related to the scope of the training program, and other training related expenses. The per student amount should also cover associated costs to carry out the scope of the training program, including partnership costs, limited equipment, program evaluation efforts, and/or support for tuition and fees for the student.
* DOE funded Traineeship awards generally will not support institutional personnel salaries. DOE may consider allowing a limited amount of funding in the overall budget for staff time under circumstances where research or technical personnel is developing new training related curriculum, workshops, or courses. Allowable costs must comply with all Federal cost accounting standards and requirements (2 CFR 200 Subpart E - Cost Principles).
	1. Topic Areas/Technical Areas of Interest

Advanced Manufacturing (Advanced Materials and Process Technologies in Manufacturing) Traineeships. Cost sharing is encouraged, but not required for this FOA.

All work under EERE funding agreements must be performed in the United States. See Section IV.J.3 and Appendix C.

* 1. Applications Specifically Not of Interest

The following types of applications will be deemed nonresponsive and will not be reviewed or considered (See Section III.D of the FOA):

* Applications that fall outside the traineeship program academic areas specified in Section I.A of the FOA.
	1. Authorizing Statutes

The programmatic authorizing statute is 42 U.S.C. § 7381b (12).

The Secretary is authorized to:

. . .

(12) Support graduate students and, through university-based cooperative programs, undergraduate students for the purpose of encouraging more students to pursue scientific and technical careers, with a particular focus on the recruitment of women and minority students.

DIVISION D-ENERGY AND WATER DEVELOPMENT AND RELATED AGENCIES APPROPRIATIONS ACT, 2017

Awards made under this announcement will fall under the purview of 2 CFR Part 200 as amended by 2 CFR Part 910.

Award Information

* 1. Award Overview
1. Estimated Funding

EERE expects to make approximately $2,500,000 of Federal funding available for new awards under this FOA, subject to the availability of appropriated funds. EERE anticipates making approximately 1-2 awards under this FOA. EERE may issue one, multiple, or no awards. Individual awards may vary between $1,250,000 and $2,500,000.

EERE may establish more than one budget period for each award and fund only the initial budget period(s). Funding for all budget periods, including the initial budget period, is not guaranteed.

1. Period of Performance

EERE anticipates making awards that will run up to 36-60 months in length, comprised of one or more budget periods. Project continuation will be contingent upon satisfactory performance and go/no-go decision review. At the go/no-go decision points, EERE will evaluate project performance, project schedule adherence, meeting milestone objectives, compliance with reporting requirements, and overall contribution to the program goals and objectives. As a result of this evaluation, EERE will make a determination to continue the project, re-direct the project, or discontinue funding the project.

1. New Applications Only

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

* 1. EERE Funding Agreements

Through Grants, EERE provides financial and other support to projects that have the potential to realize the FOA objectives. EERE does not use such agreements to acquire property or services for the direct benefit or use of the United States Government.

1. Funding Agreements with FFRDCs

In most cases, Federally Funded Research and Development Centers (FFRDC) are funded independently of the remainder of the Project Team. The FFRDC then executes an agreement with any non-FFRDC Project Team members to arrange work structure, project execution, and any other matters. Regardless of these arrangements, the entity that applied as the Prime Recipient for the project will remain the Prime Recipient for the project.

1. Grants

Through Grants, EERE provides financial and other support to accomplish a public purpose of support or stimulation authorized by Federal Statute.

Eligibility Information

To be considered for substantive evaluation, an applicant‘s submission must meet the criteria set forth below. If the application does not meet these initial requirements, it will be considered non-responsive, removed from further evaluation, and ineligible for any award.

* 1. Eligible Applicants
1. Statement of Applicant Eligibility

Institutions of higher education are uniquely qualified to implement programs to meet the objectives of the FOA. EERE has further limited eligibility to accredited U.S. institutions of higher education with graduate programs in advanced materials and process technologies in manufacturing or equivalent curriculum to ensure that potential applicants have the necessary foundation (i.e., engineering curriculum, faculty and staff in place) to be able to successfully develop a graduate traineeship program in advanced materials and processes in manufacturing engineering and to establish a competitive application process to select qualified students by the fall of 2018. Accordingly, eligibility is restricted to following entities:

Only U.S.-based institutions of higher education that meet the following requirements are eligible to apply to this FOA. The Applicant must have a relevant engineering or equivalent curriculum such as mechanical, materials, electrical, industrial, manufacturing, or chemical engineering accredited by the Accreditation Board for Engineering and Technology (ABET) or equivalent that is an integral part of its institutional structure and have a graduate program granting master’s–level degrees in advanced materials and process technologies in manufacturing engineering or an equivalent curriculum in order to successfully implement a traineeship program in accordance with this FOA’s objectives. In addition, the Applicant’s project team must include more than one private sector industry partner to ensure student access to industry-relevant R&D training opportunities throughout the traineeship. To confirm the project team includes more than one private sector industry partner, the cover page of the Technical Volume, in the Full Application, must include a list of the private sector industry partners proposed. (See Section IV.D.ii Technical Volume for more information).

Partnerships with DOE National Laboratories or other U.S. Government Laboratories and non-Federal for-profit or non-profit organizations currently sponsored by DOE or other U.S. agencies[[9]](#footnote-10) as described in Section I.A.2.g. of the FOA are also encouraged. If components of a traineeship are proposed to be completed at non-industry partners, the applicant must demonstrate how substantive and meaningful engagement with industry will guide that work.  The Applicant is expected to partner with other types of organizations as DOE is looking to leverage resources and research and development results.

* 1. Cost Sharing

Cost sharing is encouraged, but not required under this FOA.

While cost share is not required by this FOA, if proposed, the following requirements apply:

1. Legal Responsibility

Although the cost share requirement applies to the project as a whole, including work performed by members of the project team other than the Prime Recipient, the Prime Recipient is legally responsible for paying the entire cost share. The Prime 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 prior to the end of the project period, the Prime Recipient is required to contribute at least the cost share percentage of total expenditures incurred through the date of termination.

The Prime Recipient is solely responsible for managing cost share contributions by the Project Team and enforcing cost share obligation assumed by Project Team members in subawards or related agreements.

1. 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 project as a whole is met.

1. Cost Share Types and Allowability

Every cost share contribution must be allowable under the applicable Federal cost principles, as described in Section IV.J.1 of the FOA. In addition, cost share must be verifiable upon submission of the Full Application.

Project Teams may provide cost share in the form of cash or in-kind contributions. Cash contributions may be provided by the Prime Recipient or Subrecipients. Allowable in-kind contributions include, but are not limited to: rental value of buildings or equipment, the value of a donated service or resource, or third party in-kind contribution.

Project teams may use funding or property received from state or local governments to meet the cost share requirement, so long as the funding was not provided to the state or local government by the Federal Government.

The Prime Recipient may not use the following sources to meet its cost share obligations including, but not limited to:

* Revenues or royalties from the prospective operation of an activity beyond the project period;
* Proceeds from the prospective sale of an asset of an activity;
* Federal funding or property (e.g., Federal grants, equipment owned by the Federal Government); or
* Expenditures that were reimbursed under a separate Federal Program.

Project Teams may not use the same cash or in-kind contributions to meet cost share requirements for more than one project or program.

Cost share contributions must be specified in the project budget, verifiable from the Prime Recipient’s records, and necessary and reasonable for proper and efficient accomplishment of the project. As all sources of cost share are considered part of total project cost, the cost share dollars will be scrutinized under the same Federal regulations as Federal dollars to the project. Every cost share contribution must be reviewed and approved in advance by the Contracting Officer and incorporated into the project budget before the expenditures are incurred.

Applicants are encouraged to refer to 2 CFR 200.306 as amended by 2 CFR 910.130 & 10 CFR 603.525-555 for additional guidance on cost sharing.

1. Cost Share Contributions by FFRDCs

Because 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 non-Federal source.

1. Cost Share Verification

Applicants are required to provide written assurance of their proposed cost share contributions in their Full Applications.

Upon selection for award negotiations, applicants are required to provide additional information and documentation regarding their cost share contributions. Please refer to Appendix A of the FOA.

1. Cost Share Payment

EERE requires Prime Recipients to contribute the cost share amount incrementally over the life of the award. Specifically, the Prime Recipient’s cost share for each billing period must always reflect the overall cost share ratio negotiated by the parties (i.e., 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).

In limited circumstances, and where it is in the government’s interest, the EERE Contracting Officer may approve a request by the Prime Recipient to meet its cost share requirements on a less frequent basis, such as monthly or quarterly. Regardless of the interval requested, the Prime Recipient must be up-to-date on cost share at each interval. Such requests must be sent to the Contracting Officer during award negotiations and include the following information: (1) a detailed justification for the request; (2) a proposed schedule of payments, including amounts and dates; (3) a written commitment to meet that schedule; and (4) such evidence as necessary to demonstrate that the Prime Recipient has complied with its cost share obligations to date. The Contracting Officer must approve all such requests before they go into effect.

* 1. Compliance Criteria

**Concept Papers and Full Applications must meet all Compliance criteria listed below or they will be considered noncompliant. EERE will not review or consider noncompliant submissions**, including Concept Papers and Full Applications that were: submitted through means other than EERE Exchange; submitted after the applicable deadline; and/or submitted incomplete. EERE will not extend the submission deadline for applicants that fail to submit required information due to server/connection congestion.

1. Compliance Criteria
	* + 1. **Concept Papers**

Concept Papers are deemed compliant if:

* The Concept Paper complies with the content and form requirements in Section IV.C of the FOA; and
* The applicant successfully uploaded all required documents and clicked the “Submit” button in EERE Exchange by the deadline stated in this FOA.
	+ - 1. **Full Applications**

Full Applications are deemed compliant if:

* The applicant submitted a compliant Concept Paper;
* The Full Application complies with the content and form requirements in Section IV.D of the FOA; and
* The applicant successfully uploaded all required documents and clicked the “Submit” button in EERE Exchange by the deadline stated in the FOA.
	1. Responsiveness Criteria

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

* 1. Other Eligibility Requirements
1. Requirements for DOE/NNSA and non-DOE/NNSA Federally Funded Research and Development Centers Included as a Subrecipient

DOE/NNSA and non-DOE/NNSA FFRDCs may be proposed as a Subrecipient on another entity’s application subject to the following guidelines:

* + - 1. **Authorization for non-DOE/NNSA FFRDCs**

The Federal agency sponsoring the FFRDC must authorize in writing the use of the FFRDC on the proposed project and this authorization must be submitted with the application. The use of a FFRDC must be consistent with its authority under its award.

* + - 1. **Authorization for DOE/NNSA FFRDCs**

The cognizant Contracting Officer for the FFRDC must authorize in writing the use of the FFRDC on the proposed project and this authorization must be submitted with the application. The following wording is acceptable for this authorization:

Authorization is granted for the [Enter Laboratory Name] 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 assigned programs at the laboratory.

* + - 1. **Value/Funding**

The value of and funding for the FFRDC portion of the work will not normally be included in the award to a successful applicant. Usually, DOE will fund a DOE/NNSA FFRDC contractor through the DOE field work proposal system and non-DOE/NNSA FFRDC through an interagency agreement with the sponsoring agency.

* + - 1. **Cost Share**

Although the FFRDC portion of the work is usually excluded from the award to a successful applicant, the applicant’s cost share requirement will be based on the total cost of the project, including the applicant’s and the FFRDC’s portions of the project.

* + - 1. **Responsibility**

The Prime Recipient 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 Prime Recipient and the FFRDC contractor.

* + - 1. **Limit on FFRDC Effort**

The scope of work to be performed by the FFRDC may not be more significant than the scope of work to be performed by the applicant.

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

Applicants may submit more than one Concept Paper and Full Application to this FOA, provided that each application describes a unique, academically distinct traineeship program.

* 1. Questions Regarding Eligibility

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

Application and Submission Information

* 1. Application Process

The application process will include two phases: a Concept Paper phase and a Full Application phase. **Only applicants who have submitted an eligible Concept Paper will be eligible to submit a Full Application**. At each phase, EERE performs an initial eligibility review of the applicant submissions to determine whether they meet the eligibility requirements of Section III of the FOA. EERE will not review or consider submissions that do not meet the eligibility requirements of Section III. All submissions must conform to the following form and content requirements, including maximum page lengths (described below) and must be submitted via EERE Exchange at <https://eere-exchange.energy.gov/>, unless specifically stated otherwise. **EERE will not review or consider submissions submitted through means other than EERE Exchange, submissions submitted after the applicable deadline, and incomplete submissions**. EERE will not extend deadlines for applicants who fail to submit required information and documents due to server/connection congestion. A control number will be issued when an applicant begins the Exchange application process. This control number must be included with all Application documents, as described below.

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

* Each must be submitted in Adobe PDF format unless stated otherwise.
* Each must be written in English.
* All pages must be formatted to fit on 8.5 x 11 inch paper with margins not less than one inch on every side. Use Times New Roman typeface, a black font color, and a font size of 12 point or larger (except in figures or tables, which may be 10 point font). A symbol font may be used to insert Greek letters or special characters, but the font size requirement still applies. References must be included as footnotes or endnotes in a font size of 10 or larger. Footnotes and endnotes are counted toward the maximum page requirement.
* The Control Number must be prominently displayed on the upper right corner of the header of every page. Page numbers must be included in the footer of every page.
* Each submission must not exceed the specified maximum page limit, including cover page, charts, graphs, maps, and photographs when printed using the formatting requirements set forth above and single spaced. If applicants exceed the maximum page lengths indicated below, EERE will review only the authorized number of pages and disregard any additional pages.

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

EERE urges applicants to carefully review their Concept Papers, and Full Applications and to allow sufficient time for the submission of required information and documents. All Full Applications that pass the initial eligibility review will undergo comprehensive technical merit review according to the criteria identified in Section V.A.2 of the FOA.

1. Additional Information on EERE Exchange

EERE Exchange is designed to enforce the deadlines specified in this FOA. The “Apply” and “Submit” buttons will automatically disable at the defined submission deadlines. Should applicants experience problems with Exchange, the following information may be helpful.

Applicants that experience issues with submission PRIOR to the FOA deadline: In the event that an applicant experiences technical difficulties with a submission, the Applicant should contact the Exchange helpdesk for assistance (EERE-ExchangeSupport@hq.doe.gov). The Exchange helpdesk and/or the EERE Exchange system administrators will assist Applicants in resolving issues.

Applicants that experience issues with submission that results in late submission: In the event that an applicant experiences technical difficulties so severe that they are unable to submit their application by the deadline, the applicant should contact the Exchange helpdesk for assistance (EERE-ExchangeSupport@hq.doe.gov). The Exchange helpdesk and/or the EERE Exchange system administrators will assist the applicant in resolving all issues (including finalizing submission on behalf of and with the applicant’s concurrence). PLEASE NOTE, however, those applicants who are unable to submit their application on time due to their waiting until the last minute when network traffic is at its heaviest to submit their materials will not be able to use this process.

* 1. Application Forms

The application forms and instructions are available on EERE Exchange. To access these materials, go to <https://eere-Exchange.energy.gov> and select the appropriate funding opportunity number.

Note: The maximum file size that can be uploaded to the EERE Exchange website is 10MB. Files in excess of 10MB cannot be uploaded, and hence cannot be submitted for review. If a file exceeds 10MB but is still within the maximum page limit specified in the FOA, it must be broken into parts and denoted to that effect. For example:

**ControlNumber\_LeadOrganization\_Project\_Part\_1**

**ControlNumber\_LeadOrganization\_Project\_Part\_2**, etc.

* 1. Content and Form of the Concept Paper

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

1. Concept Paper Content Requirements

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

Each Concept Paper must be limited to a single traineeship concept or project. Unrelated traineeship projects should not be consolidated into a single Concept Paper.

The Concept Paper must conform to the following content requirements:

|  |  |  |
| --- | --- | --- |
| **Section** | **Page Limit** | **Description** |
| **Cover Page** | 1 page maximum | The cover page should include the focus of the traineeship project, both the technical and business points of contact, names of all team member organizations, and any statements regarding confidentiality. |
| **Traineeship Description** | 2 pages maximum | Applicants are required to describe succinctly:* The proposed traineeship focus area including the rationale and industry need for the traineeship program;
* Capabilities of the proposing organization to accomplish the program;
* Partnerships planned to be included in the program;
* Student access to industry-relevant R&D training opportunities throughout traineeship;
* Estimated budget needed;
* Estimate of the number of students to be part of the program by academic year;
* Proposed revisions to existing curricula needed to implement the program; and
* Approach to recruit students, including women and minorities.
 |

EERE makes an independent assessment of each Concept Paper based on the criteria in Section V.A.i of the FOA. EERE will encourage a subset of applicants to submit Full Applications. Other applicants will be discouraged from submitting a Full Application. An applicant who receives a “discouraged” notification may still submit a Full Application. EERE will review all eligible Full Applications. However, by discouraging the submission of a Full Application, EERE intends to convey its lack of programmatic interest in the proposed project in an effort to save the applicant the time and expense of preparing an application that is unlikely to be selected for award negotiations.

EERE may include general comments provided from reviewers on an applicant’s Concept Paper in the encourage/discourage notification sent to applicants at the close of that phase.

* 1. Content and Form of the Full Application

Applicants must submit a Full Application by the specified due date and time to be considered for funding under this FOA. Applicants must complete the following application forms found on the EERE Exchange website at <https://eere-Exchange.energy.gov/>, in accordance with the instructions.

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

All Full Application documents must be marked with the Control Number issued to the applicant. Applicants will receive a control number upon submission of their Concept Paper, and should include that control number in the file name of their Full Application submission (i.e., Control number\_Applicant Name\_Full Application)."

1. Full Application Content Requirements

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

Each Full Application shall be limited to a single concept or technology. Unrelated concepts and technologies shall not be consolidated in a single Full Application.

Full Applications must conform to the following requirements:

|  |  |  |
| --- | --- | --- |
| **Submission** | **Components** | **File Name** |
| **Full Application (PDF, unless stated otherwise)** | Technical Volume (See Chart in Section IV.D.2)  | ControlNumber\_LeadOrganization\_TechnicalVolume |
| SF-424  | ControlNumber\_LeadOrganization\_App424 |
| Budget Justification (EERE 335) (Microsoft Excel format. Applicants must use the template available in EERE Exchange) | ControlNumber\_LeadOrganization\_Budget\_Justification |
| Summary for Public Release (1 page limit) | ControlNumber\_LeadOrganization\_Summary |
| Summary Slide (1 page limit, Microsoft PowerPoint format) | ControlNumber\_LeadOrganization\_Slide |
| Subaward Budget Justification, if applicable (EERE 335) (Microsoft Excel format. Applicants must use the template available in EERE Exchange) | ControlNumber\_LeadOrganization\_Subawardee\_Budget\_Justification |
| Budget for FFRDC, if applicable | ControlNumber\_LeadOrganization\_FWP |
| Authorization from cognizant Contracting Officer for FFRDC, if applicable | ControlNumber\_LeadOrganization\_FFRDCAuth |
| SF-LLL Disclosure of Lobbying Activities | ControlNumber\_LeadOrganization\_SF-LLL |
| Foreign Entity and Performance of Work in the United States waiver requests, if applicable | ControlNumber\_LeadOrganization\_Waiver |

**Note**: The maximum file size that can be uploaded to the EERE Exchange website is 10MB. Files in excess of 10MB cannot be uploaded, and hence cannot be submitted for review. If a file exceeds 10MB but is still within the maximum page limit specified in the FOA it must be broken into parts and denoted to that effect. For example:

**ControlNumber\_LeadOrganization\_TechnicalVolume\_Part\_1**

**ControlNumber\_LeadOrganization\_TechnicalVolume\_Part\_2**, etc.

**EERE will not accept late submissions that resulted from technical difficulties due to uploading files that exceed 10MB**.

EERE provides detailed guidance on the content and form of each component below.

1. Technical Volume

The Technical Volume must be submitted in Adobe PDF format. The Technical Volume must conform to the following content and form requirements, including maximum page lengths. If applicants exceed the maximum page lengths indicated below, EERE will review only the authorized number of pages and disregard any additional pages. This volume must address the Merit Review Criteria as discussed in Section V.A.2 of the FOA. Save the Technical Volume in a single PDF file using the following convention for the title: “ControlNumber\_LeadOrganization\_TechnicalVolume”.

Applicants must provide sufficient citations and references to the primary research literature to justify the claims and approaches made in the Technical Volume. However, EERE and reviewers are under no obligation to review cited sources.

The Technical Volume to the Full Application may not be more than 20 pages, including the cover page, table of contents, and all citations, charts, graphs, maps, photos, or other graphics, and must include all of the information in the table below. The applicant should consider the weighting of each of the evaluation criteria (see Section V.A.2 of the FOA) when preparing the Technical Volume.

|  |  |
| --- | --- |
| **SECTION/PAGE LIMIT** | **DESCRIPTION** |
| **Cover Page** | The cover page should include the project title, both the technical and business points of contact, names of all team member organizations, and any statements regarding confidentiality. The cover page MUST also include a list of the private sector industry partners proposed to meet the industry partnership requirement, as described in Section III.A.i. Statement of Applicant Eligibility.  |
| **Project Overview** (This section should constitute approximately 10% of the Technical Volume) | The Project Overview should contain the following information:* Background: The applicant should discuss the background of their organization, including the history, successes, and current graduate training program status in the area of advanced materials and process technologies in manufacturing (i.e., the technical baseline) relevant to the technical topic being addressed in the Full Application.
* Project Goal: The applicant should explicitly identify the targeted improvements to the baseline graduate training program and the critical success factors in achieving that goal.
* DOE Impact: The applicant should discuss the impact that DOE funding would have on the proposed project.  Applicants should specifically explain how DOE funding, relative to prior, current, or anticipated funding from other public and private sources, is necessary to achieve the project objectives.
* Partnership Organization: the applicant’s project team must include more than one private sector industry partner to ensure student opportunities for hands-on industry-relevant R&D training opportunities throughout the traineeship. In addition, partnerships with DOE National Laboratories or other U.S. Government Laboratories and non-Federal for-profit or non-profit organizations currently sponsored by DOE or other U.S. agencies[[10]](#footnote-11) as described in Section I.A.2.g. of the FOA are encouraged as traineeship partners with applicant universities. If components of a traineeship are proposed to be completed at non-industry partners, the applicant must demonstrate how substantive and meaningful engagement with industry will guide that work. Verification of the DOE or other agency sponsorship will need to include the award number, the title and short description of the project to confirm it is in a relevant technical area
 |
| **Program Description** (This section should constitute approximately 50% of the Technical Volume) | The Program Description should contain the following information:* Relevance and Outcomes: The applicant should provide a detailed description of the proposed graduate traineeship program, including the principles, objectives, and approach that will be pursued for the traineeships. This section should describe the relevance of the proposed program to the goals and objectives of the FOA, including the potential to meet specific DOE technical targets or other relevant performance targets. The applicant should clearly specify the expected outcomes of the traineeship program.
* Feasibility: The applicant should demonstrate the technical feasibility of the proposed graduate traineeship program and capability of achieving the anticipated performance targets, including a description of previous work done and prior results.
* Detailed information about planned curricula, including courses, workshops and seminars, research experiences, and mentoring that will be incorporated into the proposed DOE funded advanced materials and process technologies in manufacturing traineeship program.
* Detailed description of partnership agreements with private sector industry partners and other partner organizations, as well as, how such partnerships will ensure student access to industry-relevant R&D training opportunities throughout the traineeship.
* Plans for new curriculum development to meet the scientific and technical training needs in advanced materials and process technologies in manufacturing.
* How the proposed training program will specifically address the advanced materials and process technologies in manufacturing workforce training needs.
* A detailed plan and schedule showing the development of the curricula and recruitment of students such that the traineeships begin in the fall semester of 2018. This plan needs to specifically address the approach for recruitment of women and minority students.
* A rigorous evaluation plan that explains how the Awardee will review and assess the quality of the trainee program and the overall impact of the trainee program on the workforce training goal.
* Acknowledgement of the requirements for eligible graduate students, mentors, and academic institutions as outlined above in Section I.A.2.f.
 |
| **Workplan** (This section should constitute approximately 25% of the Technical Volume) | The Workplan should include a summary of the Traineeship Objectives, Program Scope, Work Breakdown Structure, Milestones, Go/No-Go Decision Points, and Project Schedule. The Workplan should contain the following information:* Project Objectives: The applicant should provide a clear and concise (high-level) statement of the goals and objectives of the project as well as the expected outcomes.
* Technical Scope Summary: The applicant should provide a summary description of the overall work scope and approach to achieve the objective(s). The overall work scope is to be divided by performance periods that are separated by discrete, approximately annual decision points (see below for more information on go/no-go decision points). The applicant should describe the specific expected end result of each performance period.
* Work Breakdown Structure (WBS) and Task Descriptions: The Workplan should describe the work to be accomplished and how the applicant will achieve the milestones, will accomplish the final project goal(s), and will produce all deliverables. The Workplan is to be structured with a hierarchy of performance period (approximately annual), task and subtasks, which is typical of a standard work breakdown structure (WBS) for any project. Appropriate milestones should be incorporated into the task and subtask structure. The Workplan shall contain a concise description of the specific activities to be conducted over the life of the project. The description shall be a full explanation and disclosure of the project being proposed (i.e., a statement such as “we will then complete a proprietary process” is unacceptable). It is the applicant’s responsibility to prepare an adequately detailed task plan to describe the proposed project and the plan for addressing the objectives of this FOA.
* Milestone Summary: The applicant should provide a summary of appropriate milestones throughout the project to demonstrate success. A milestone may be either a progress measure (which can be activity based) or a SMART technical milestone. SMART milestones should be **S**pecific, **M**easurable, **A**chievable, **R**elevant, and **T**imely, and must demonstrate a technical achievement rather than simply completing a task. The Applicant should propose relevant milestones for each semester for the duration of the project or other term as appropriate tied to the university’s annual calendar by which to measure traineeship program progress and results.
* Go/No-Go Decision Points: The applicant should provide a summary of project-wide go/no-go decision points at appropriate points in the Workplan. A go/no-go decision point is a risk management tool and a project management best practice to ensure that, for the current phase or period of performance, program success is definitively achieved and potential for success in future phases or periods of performance is evaluated, prior to actually beginning the execution of future phases. Unless otherwise specified in the FOA, the minimum requirement is that each project must have at least one project-wide go/no-go decision point for each budget period (12 to 18-month period) of the project. The Applicant should also provide the specific technical criteria to be used to make the go/no-go decision. Go/no‐go decision points are considered “SMART” and can fulfill the requirement for an annual SMART milestone.
* Project Schedule (Gantt Chart or similar): The applicant should provide a schedule for the entire project, including task and subtask durations, milestones, and go/no-go decision points.
* Project Management: The applicant should discuss the team’s proposed management plan, including the following:
	+ The overall approach to and organization for managing the work
	+ The approach for recruitment of women and minority students
	+ The roles of each Project Team member (note: the Project Team must include the partner organization as defined in Section I.A.2.g of the FOA)
	+ Any critical handoffs/interdependencies among Project Team members
	+ The technical and management aspects of the management plan, including systems and practices, such as financial and project management practices
	+ The approach to project risk management
	+ A description of how project changes will be handled
	+ If applicable, the approach to Quality Assurance/Control
	+ How communications will be maintained among Project Team members
 |
| **Qualifications and Resources** (Approximately 15% of the Technical Volume) | The Technical Qualifications and Resources should contain the following information:* Describe the Project Team’s unique qualifications and expertise, including those of mentors and key Subrecipients.
* Describe the Project Team’s existing equipment and facilities that will facilitate the successful completion of the proposed project; include a justification of any new equipment or facilities requested as part of the project.
* This section should also include relevant, previous work efforts, demonstrated innovations, and how these enable the applicant to achieve the project objectives.
* Describe the time commitment of the key team members to support the project.
* Attach one-page resumes for key participating team members as an appendix.  Resumes do not count towards the page limit.  Multi-page resumes are not allowed.
* Describe the technical services to be provided by DOE/NNSA FFRDCs, if applicable.
* Attach any letters of support from partners/end users as an appendix (1 page maximum per letter).  Letters of support do not count towards the page limit.
* For multi-organizational or multi-investigator projects, describe succinctly:
	+ The roles and the work to be performed by each PI and Key Participant;
	+ Business agreements between the applicant and each PI and Key Participant;
	+ How the various efforts will be integrated and managed;
	+ Process for making decisions on traineeship program direction;
	+ Publication arrangements;

and* + Communication plans
 |

1. SF-424: Application for Federal Assistance

Complete all required fields in accordance with the instructions on the form. The list of certifications and assurances in Field 21 can be found at <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms>, under Certifications and Assurances. Note: The dates and dollar amounts on the SF-424 are for the complete project period and not just the first project year, first phase or other subset of the project period. Save the SF-424 in a single PDF file using the following convention for the title “ControlNumber\_LeadOrganization\_App424”.

1. Budget Justification Workbook (EERE 335)

Applicants are required to complete the Budget Justification Workbook. This form is available on EERE Exchange at <https://eere-Exchange.energy.gov/>. Prime Recipients must complete each tab of the Budget Justification Workbook for the project as a whole, including all work to be performed by the Prime Recipient and its Subrecipients and Contractors, and provide all requested documentation (e.g., a Federally-approved rate agreement, vendor quotes). Applicants should include costs associated with required annual audits and incurred cost proposals in their proposed budget documents. The “Instructions and Summary” included with the Budget Justification Workbook will auto-populate as the applicant enters information into the Workbook. Applicants must carefully read the “Instructions and Summary” tab provided within the Budget Justification Workbook. Save the Budget Justification Workbook in a single Microsoft Excel file using the following convention for the title “ControlNumber\_LeadOrganization\_Budget\_Justification”.

1. Summary/Abstract for Public Release

Applicants are required to submit a one-page summary/abstract of their project. The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the public. It should be a self-contained document that identifies the name of the applicant, the project director/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (e.g., benefits, outcomes), and major participants (for collaborative projects). This document must not include any proprietary or sensitive business information as DOE may make it available to the public after selections are made. The project summary must not exceed 1 page when printed using standard 8.5 x 11 paper with 1” margins (top, bottom, left, and right) with font not smaller than 12 point. Save the Summary for Public Release in a single PDF file using the following convention for the title “ControlNumber\_LeadOrganization\_Summary”.

1. Summary Slide

Applicants are required to provide a single PowerPoint slide summarizing the proposed project. The slide must be submitted in Microsoft PowerPoint format. This slide is used during the evaluation process. Save the Summary Slide in a single file using the following convention for the title “ControlNumber\_LeadOrganization\_Slide”.

The Summary Slide template requires the following information:

* A technology Summary;
* A description of the technology’s impact;
* Proposed project goals;
* Any key graphics (illustrations, charts and/or tables);
* The project’s key idea/takeaway;
* Project title, Prime Recipient, Principal Investigator, and Key Participant information; and
* Requested EERE funds and proposed applicant cost share.
1. Subaward Budget Justification (EERE 335) (if applicable)

Applicants must provide a separate budget justification, EERE 335 (i.e., budget justification for each budget year and a cumulative budget) for each subawardee that is expected to perform work estimated to be more than $250,000 or 25 percent of the total work effort (whichever is less). The budget justification must include the same justification information described in the “Budget Justification” section above. Save each subaward budget justification in a Microsoft Excel file using the following convention for the title “ControlNumber\_LeadOrganization\_Subawardee\_Budget\_Justification”.

1. Budget for DOE/NNSA FFRDC (if applicable)

If a DOE/NNSA FFRDC contractor is to perform a portion of the work, the applicant must provide a DOE Field Work Proposal (FWP) in accordance with the requirements in DOE Order 412.1, Work Authorization System. DOE Order 412.1 and DOE O 412.1 (Field Work Proposal form) area available at the following link, under “DOE Budget Forms”: [https://www.directives.doe.gov/directives-documents/400-series/0412.1-BOrder-a-admchg1/@@images/file](https://www.directives.doe.gov/directives-documents/400-series/0412.1-BOrder-a-admchg1/%40%40images/file). Save the FWP in a single PDF file using the following convention for the title “ControlNumber\_LeadOrganization\_FWP”.

1. Authorization for non-DOE/NNSA or DOE/NNSA FFRDCs (if applicable)

The Federal agency sponsoring the FFRDC must authorize in writing the use of the FFRDC on the proposed project and this authorization must be submitted with the application. The use of a FFRDC must be consistent with the contractor’s authority under its award. Save the Authorization in a single PDF file using the following convention for the title “ControlNumber\_LeadOrganization\_FFRDCAuth”.

1. SF-LLL: Disclosure of Lobbying Activities

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

Prime Recipients and Subrecipients are required to complete and submit SF-LLL, “Disclosure of Lobbying Activities” (<http://www.whitehouse.gov/sites/default/files/omb/grants/sflllin.pdf>) if any non-Federal funds have been paid or will be paid to any person for influencing or attempting to influence any of the following in connection with your application:

* An officer or employee of any Federal agency;
* A Member of Congress;
* An officer or employee of Congress; or
* An employee of a Member of Congress.

Save the SF-LLL in a single PDF file using the following convention for the title “ControlNumber\_LeadOrganization\_SF-LLL”.

1. Waiver Requests: Foreign Entities and Performance of Work in the United States (if applicable)
	* + 1. **Foreign Entity Participation**:

As set forth in Section III.A.3, all Prime Recipients receiving funding under this FOA must be incorporated (or otherwise formed) under the laws of a State or territory of the United States. To request a waiver of this requirement, the applicant must submit an explicit waiver request in the Full Application. Appendix C lists the necessary information that must be included in a request to waive this requirement.

* + - 1. **Performance of Work in the United States**

As set forth in Section IV.K.iii, all work under EERE funding agreements must be performed in the United States. This requirement does not apply to the purchase of supplies and equipment, so a waiver is not required for foreign purchases of these items. However, the Prime Recipient should make every effort to purchase supplies and equipment within the United States. Appendix C lists the necessary information that must be included in a request to waive the Performance of Work in the United States requirement.

Save the Waiver Request in a single PDF file using the following convention for the title “ControlNumber\_LeadOrganization\_Waiver”.

1. U.S. Manufacturing Commitments

EERE requires subject inventions (i.e., inventions conceived or first actually reduced to practice under EERE awards) to be substantially manufactured in the United States by Project Teams and their licensees, as described below. The applicant may request a modification or waiver of the U.S. Manufacturing Requirement.

**1. Domestic Small Businesses, Educational Institutions and Nonprofits**

Domestic Small businesses (including Small Business concerns), domestic educational institutions, and nonprofits that are Recipients or Subrecipients under EERE funding agreements must require their exclusive licensees to substantially manufacture the following products in the United States for any use or sale in the United States: (1) articles embodying subject inventions, and (2) articles produced through the use of subject inventions. This requirement does not apply to articles that are manufactured for use or sale overseas.

Domestic small businesses, domestic educational institutions and nonprofits must require their assignees to apply the same U.S. Manufacturing requirements to their exclusive licensees.

These U.S. Manufacturing requirements do not apply to nonexclusive licensees.

**2. Large Businesses, Foreign Entities, and State and Local Government Entities**

Large businesses and foreign entities that are Recipients or Subrecipients under EERE funding agreements that take title to subject inventions through a patent waiver are required to substantially manufacture the following products in the United States: (1) products embodying subject inventions, and (2) products produced through the use of subject invention(s). This requirement applies to products that are manufactured for use or sale in the United States or overseas.

Large businesses and foreign entities must apply the same U.S. Manufacturing requirements to their assignees, licensees, and entities acquiring a controlling interest in the large business or foreign entity. Large businesses and foreign entities must require their assignees and entities acquiring a controlling interest in the large business or foreign entity to apply the same U.S. Manufacturing requirements to their licensees.

**3. FFRDCs**

DOE FFRDCs are subject to the U.S. Manufacturing requirements set forth in their Management and Operating Contracts. All other FFRDCs are subject to the U.S. Manufacturing requirements as set forth above, based on their size and for-profit status.

* 1. Post-Award Information Requests

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

* Indirect cost information
* Other budget information
* Commitment Letters from Third Parties Contributing to Cost Share, if applicable
* Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5)
* Representation of Limited Rights Data and Restricted Software, if applicable
* Environmental Questionnaire
	1. Dun and Bradstreet Universal Numbering System Number and System for Award Management

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

* 1. Submission Dates and Times

Concept Papers and Full Applications must be submitted in EERE Exchange no later than 5 p.m. Eastern on the dates provided on the cover page of this FOA.

* 1. Intergovernmental Review

This FOA is not subject to Executive Order 12372 – Intergovernmental Review of Federal Programs.

* 1. Funding Restrictions
1. Allowable Costs

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

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

* FAR Part 31 for For-Profit entities; and
* 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.
1. Pre-Award Costs

Selectees must request prior written approval to charge pre-award costs. Pre-award costs are those incurred prior to the effective date of the Federal award directly pursuant to the negotiation and in anticipation of the Federal award where such costs are necessary for efficient and timely performance of the scope of work. Such costs are allowable only to the extent that they would have been allowable if incurred after the date of the Federal award and **only** with the written approval of the Federal awarding agency, through the Contracting Officer assigned to the award.

Pre-award costs cannot be incurred prior to the Selection Official signing the Selection Statement and Analysis. Pre-award costs can only be incurred if such costs would be reimbursable under the agreement if incurred after award.

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

* + - 1. **Pre-Award Costs Related to National Environmental Policy Act (NEPA) Requirements**

EERE’s decision whether and how to distribute Federal funds under this FOA is subject to NEPA. Applicants should carefully consider and should 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 prior to EERE completing the NEPA review process.

EERE does not guarantee or assume any obligation to reimburse costs where the Prime Recipient incurred the costs prior to receiving written authorization from the Contracting Officer. If the applicant elects to undertake activities that may have an adverse effect on the environment or limit the choice of reasonable alternatives prior to receiving such written authorization from the Contracting Officer, the applicant is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share. Likewise, if a project is selected for negotiation of award, and the Prime Recipient elects to undertake activities that are not authorized for Federal funding by the Contracting Officer in advance of EERE completing a NEPA review, the Prime Recipient is doing so at risk of not receiving Federal Funding and such costs may not be recognized as allowable cost share. Nothing contained in the pre-award cost reimbursement regulations or any pre-award costs approval letter from the Contracting Officer override these NEPA requirements to obtain the written authorization from the Contracting Officer prior to taking any action that may have an adverse effect on the environment or limit the choice of reasonable alternatives.

1. Performance of Work in the United States
2. **Requirement**

All work performed under EERE Awards must be performed in the United States. This requirement does not apply to the purchase of supplies and equipment; however, the Prime Recipient should make every effort to purchase supplies and equipment within the United States. The Prime Recipient must flow down this requirement to its Subrecipients.

1. **Failure to Comply**

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

1. **Waiver**

There may be limited circumstances where it is in the interest of the project to perform a portion of the work outside the United States. To seek a waiver of the Performance of Work in the United States requirement, the applicant must submit a written waiver request to EERE. Appendix C lists the necessary information that must be included in a request to waive the Performance of Work in the United States requirement.

The applicant must demonstrate to the satisfaction of EERE that a waiver would further the purposes of the FOA and is in the economic interests of the United States. EERE may require additional information before considering a waiver request. Save the waiver request(s) in a single PDF file titled “ControlNumber\_PerformanceofWork\_Waiver”. The applicant does not have the right to appeal EERE’s decision concerning a waiver request.

1. Construction

Major construction is not allowable under this FOA.

1. Foreign Travel

Foreign travel costs are not allowable under this FOA.

1. Equipment and Supplies

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

Property disposition will be required at the end of a project if the current fair market value of property exceeds $5,000. The rules for property disposition are set forth in 2 CFR 200.310 – 200.316 as amended by 2 CFR 910.360.

1. Lobbying

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

Recipients and Subrecipients are required to complete and submit SF-LLL, “Disclosure of Lobbying Activities” (<http://www.whitehouse.gov/sites/default/files/omb/grants/sflllin.pdf>) if any non-Federal funds have been paid or will be paid to any person for influencing or attempting to influence any of the following in connection with your application:

* An officer or employee of any Federal agency;
* A Member of Congress;
* An officer or employee of Congress; or
* An employee of a Member of Congress.
1. Risk Assessment

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

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

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

1. Invoice Review and Approval

DOE employs a risk-based approach to determine the level of supporting documentation required for approving invoice payments. Recipients may be required to provide some or all of the following items with their requests for reimbursement:

• Summary of costs by cost categories

• Timesheets or personnel hours report

• Invoices/receipts for all travel, equipment, supplies, contractual, and other costs

• UCC filing proof for equipment acquired with project funds by for-profit recipients and subrecipients

• Explanation of cost share for invoicing period

• Analogous information for some subrecipients

* Other items as required by DOE

Application Review Information

* 1. Technical Review Criteria
1. Concept Papers

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

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

* The applicant clearly describes the traineeship focus area, including how the traineeship program will meet the needs of manufacturers for trained graduate students;
* The applicant has the qualifications, experience, capabilities and other resources necessary to complete the proposed traineeship program;
* Strength and quality of the partnerships planned including those for student internships;
* Student access to industry relevant R&D training opportunities throughout traineeship;
* Adequacy of proposed curricula and recruitment plans to support the program
1. Full Applications

Applications will be evaluated against the merit review criteria shown below. All sub-criteria are of equal weight.

**Criterion 1: Scientific and/or technical merit or the educational benefits of the proposed project (35%)**

Technical Merit and Innovation

* Extent to which the proposed traineeship program is innovative and has the potential to increase graduate student enrollment and graduation in Advanced Manufacturing engineering (advanced materials and processes in manufacturing);
* Degree to which the current gratuate-level advanced materials and processes in manufacturing education environment, workforce needs and the proposed traineeship program are clearly described; and
* Explanation of how specific advanced materials and process issue being addressed meets an identified gap in the science and technology workforce for advanced manufacturing.

Impact on Educational Benefits, including Broader Impact

* The potential impact of the traineeship on increasing advanced materials and processes in manufacturing engineering educational outcomes; and
* The potential broader impact of the traineeship, through the proposed curriculum promulgation plan, to generate increased levels of public interest in advanced manufacturing engineering education (advanced materials and processes in manufacturing).

**Criterion 2: Appropriateness of the proposed method or approach (35%)**

Traineeship Program Approach and Workplan

* Degree to which the approach and workplan have been clearly described and thoughtfully considered, including the process for student recruitment, planned courses, curricula, seminars, workshops or tutorials that address advanced manufacturing engineering, and how advanced manufacturing engineering will be incorporated into mentored research experiences;
* Degree to which the proposed recruitment plan clearly describes a meaningful recruitment plan for women and minority students;
* Scope of work, including the number of graduate students who will benefit, directly or indirectly, from the program at participating institutions;
* Degree to which the process descriptions are clear, detailed, timely, and reasonable, resulting in a high likelihood that the proposed Workplan will succeed in meeting the traineeship goals; and
* Degree to which program partnerships will ensure student access to industry-relevant R&D training opportunities throughout traineeship.

Identification of Traineeship Program Risks

* Demonstrated understanding of the programmatic risk areas involved in the proposed work, and the quality of the mitigation strategies to address the risks identified.

Baseline, Metrics, and Deliverables, Including Evaluation Plan

* Clarity in the definition of baseline, metrics, and milestones, including the evaluation plan and the curriculum promulgation plan;
* Relative to a defined graduate student enrollment and graduation in advanced manufacturing engineering baseline, the strength of the quantifiable metrics, milestones, and mid-point deliverables defined in the application, such that meaningful interim progress will be made; and
* Type and number of partners, including the ability to engage new partners on an ongoing basis.

**Criterion 3: Competency of applicant’s personnel and adequacy of proposed resources (20%)**

* The capability of the proposed team to address all aspects of the proposed work with a good chance of success. Qualifications, relevant expertise, and time commitment of the individuals on the team;
* The sufficiency of the facilities to support the work;
* Degree to which the proposed partnership/team demonstrates the ability to facilitate and manage the traineeship program; and
* Level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Workplan.

|  |  |
| --- | --- |
| **Criterion 4: Reasonableness and appropriateness of the proposed budget (10%)** |  |
| * Reasonableness and appropriateness of proposed budget and spend plan for proposed traineeship project and objectives; and
* Reasonableness of plan of support for the individual graduate students.
 |

* 1. Standards for Application Evaluation

Applications that are determined to be eligible will be evaluated in accordance with this FOA, by the standards set forth in EERE’s Notice of Objective Merit Review Procedure (76 Fed. Reg. 17846, March 31, 2011) and the guidance provided in the “Department of Energy Merit Review Guide for Financial Assistance,” which is available at: <http://energy.gov/management/downloads/merit-review-guide-financial-assistance>.

* 1. Other Selection Factors
1. Program Policy Factors

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

* The degree to which the proposed project, including any proposed cost share, optimizes the use of available U.S. Government, DOE and EERE funding to achieve programmatic objectives;
* Application from or partnership with minority serving institutions[[11]](#footnote-12); and
* Whether the proposed project will accelerate transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty.
	1. Evaluation and Selection Process
1. Overview

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

1. Pre-Selection Interviews

As part of the evaluation and selection process, EERE may invite one or more applicants to participate in Pre-Selection Interviews. Pre-Selection Interviews are distinct from and more formal than pre-selection clarifications (See Section V.D.3 of the FOA). The invited applicant(s) will meet with EERE representatives to provide clarification on the contents of the Full Applications and to provide EERE an opportunity to ask questions regarding the proposed project. The information provided by applicants to EERE through Pre-Selection Interviews contributes to EERE’s selection decisions.

EERE will arrange to meet with the invited applicants in person at EERE’s offices or a mutually agreed upon location. EERE may also arrange site visits at certain applicants’ facilities. In the alternative, EERE may invite certain applicants to participate in a one-on-one conference with EERE via webinar, videoconference, or conference call.

EERE will not reimburse applicants for travel and other expenses relating to the Pre-Selection Interviews, nor will these costs be eligible for reimbursement as pre-award costs.

EERE may obtain additional information through Pre-Selection Interviews that will be used to make a final selection determination. EERE may select applications for funding and make awards without Pre-Selection Interviews. Participation in Pre-Selection Interviews with EERE does not signify that applicants have been selected for award negotiations.

1. Pre-Selection Clarification

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

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

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

1. Recipient Integrity and Performance Matters

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

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

DOE will consider any written comments by the applicant, in addition to the other information in the designated integrity and performance system, in making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in 2 C.F.R. § 200.205.

1. Selection

The Selection Official may consider the technical merit, the Federal Consensus Board’s recommendations, program policy factors, and the amount of funds available in arriving at selections for this FOA.

* 1. Anticipated Notice of Selection and Award Dates

EERE anticipates notifying applicants selected for negotiation of award by October, 2017 and making awards by December, 2017.

Award Administration Information

* 1. Award Notices
1. Ineligible Submissions

Ineligible Concept Papers and Full Applications will not be further reviewed or considered for award. The Contracting Officer will send a notification letter by email to the technical and administrative points of contact designated by the applicant in EERE Exchange. The notification letter will state the basis upon which the Concept Paper or the Full Application is ineligible and not considered for further review.

1. Concept Paper Notifications

EERE will notify applicants of its determination to encourage or discourage the submission of a Full Application. EERE will send a notification letter by email to the technical and administrative points of contact designated by the applicant in EERE Exchange.

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

A notification letter encouraging the submission of a Full Application does not authorize the applicant to commence performance of the project. Please refer to Section IV.J.2 of the FOA for guidance on pre-award costs.

1. Full Application Notifications

EERE will notify applicants of its determination via a notification letter by email to the technical and administrative points of contact designated by the applicant in EERE Exchange. The notification letter will inform the applicant whether or not its Full Application was selected for award negotiations. Alternatively, EERE may notify one or more applicants that a final selection determination on particular Full Applications will be made at a later date, subject to the availability of funds or other factors.

1. Successful Applicants

Receipt of a notification letter selecting a Full Application for award negotiations does not authorize the applicant to commence performance of the project. If an application is selected for award negotiations, it is not a commitment by EERE to issue an award. Applicants do not receive an award until award negotiations are complete and the Contracting Officer executes the funding agreement, accessible by the Prime Recipient in FedConnect.

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

Please refer to Section IV.J.2 of the FOA for guidance on pre-award costs.

1. Alternate Selection Determinations

In some instances, an applicant may receive a notification that its application was not selected for award and EERE designated the application to be an alternate. As an alternate, EERE may consider the Full Application for Federal funding in the future. A notification letter stating the Full Application is designated as an alternate does not authorize the applicant to commence performance of the project. EERE may ultimately determine to select or not select the Full Application for award negotiations.

1. Unsuccessful Applicants

EERE shall promptly notify in writing each applicant whose application has not been selected for award or whose application cannot be funded because of the unavailability of appropriated funds.

* 1. Administrative and National Policy Requirements
1. Registration Requirements

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

* + - 1. **EERE Exchange**

Register and create an account on EERE Exchange at <https://eere-Exchange.energy.gov>.

This account will then allow the user to register for any open EERE FOAs that are currently in EERE Exchange. It is recommended that each organization or business unit, whether acting as a team or a single entity, use only one account as the contact point for each submission. Applicants should also designate backup points of contact so they may be easily contacted if deemed necessary. **This step is required to apply to this FOA.**

The EERE Exchange registration does not have a delay; however, **the remaining registration requirements below could take several weeks to process and are necessary for a potential applicant to receive an award under this FOA**.

* + - 1. **DUNS Number**

Obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number (including the plus 4 extension, if applicable) at <http://fedgov.dnb.com/webform>.

* + - 1. **System for Award Management**

Register with the System for Award Management (SAM) at <https://www.sam.gov>. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in SAM registration. Please update your SAM registration annually.

* + - 1. **FedConnect**

Register in FedConnect at <https://www.fedconnect.net>. 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 <http://www.fedconnect.net/FedConnect/Marketing/Documents/FedConnect_Ready_Set_Go.pdf>.

* + - 1. **Grants.gov**

Register in Grants.gov (<http://www.grants.gov>) to receive automatic updates when Amendments to this FOA are posted. However, please note that Concept Papers and Full Applications will not be accepted through Grants.gov.

* + - 1. **Electronic Authorization of Applications and Award Documents**

Submission of an application and supplemental information under this FOA through electronic systems used by the Department of Energy, including EERE Exchange and FedConnect.net, constitutes the authorized representative’s approval and electronic signature.

1. Award Administrative Requirements

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

1. Foreign National Access to DOE Sites

All applicants that ultimately enter into an award resulting from this FOA will be subject to the following requirement concerning foreign national involvement. Upon DOE’s request, Prime Recipients must provide information to facilitate DOE’s responsibilities associated with foreign national access to DOE sites, information, technologies, and equipment. A foreign national is defined as any person who was born outside the jurisdiction of the United States, is a citizen of a foreign government, and has not been naturalized under U.S. law. If the Prime Recipient or Subrecipients, contractors or vendors under the award, anticipate utilizing a foreign national person in the performance of an award, the Prime Recipient is responsible for providing to the Contracting Officer specific information of the foreign national(s) to satisfy compliance with all of the requirements for access approval.

1. Subaward and Executive Reporting

Additional administrative requirements necessary for DOE grants and cooperative agreements to comply with the Federal Funding and Transparency Act of 2006 (FFATA) are contained in 2 CFR Part 170. Prime Recipients must register with the new FFATA Subaward Reporting System database and report the required data on their first tier Subrecipients. Prime Recipients must report the executive compensation for their own executives as part of their registration profile in SAM.

1. National Policy Requirements

The National Policy Assurances that are incorporated as a term and condition of award are located at: <http://www.nsf.gov/awards/managing/rtc.jsp>.

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

EERE’s decision whether and how to distribute federal funds under this FOA is subject to the National Environmental Policy Act (42 USC 4321, *et seq.*). NEPA requires Federal agencies to integrate environmental values into their decision-making processes by considering the potential environmental impacts of their proposed actions. For additional background on NEPA, please see DOE’s NEPA website, at <http://nepa.energy.gov/>.

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

1. Applicant Representations and Certifications
	* + 1. **Lobbying Restrictions**

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

* + - 1. **Corporate Felony Conviction and Federal Tax Liability Representations**

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

1. It is **not** a corporation that has been convicted of a felony criminal violation under any Federal law within the preceding 24 months, and
2. 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.

* + - 1. **Nondisclosure and Confidentiality Agreements Representations**

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

1. It **does not and will not** require its employees or contractors to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting its employees or 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:
3. *‘‘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.’’*
4. 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.
5. Notwithstanding the provision listed in paragraph (a), a nondisclosure or confidentiality policy form or agreement that is to be executed by a person connected with the conduct of an intelligence or intelligence-related activity, other than an employee or officer of the United States Government, may contain provisions appropriate to the particular activity for which such document is to be used. Such form or agreement shall, at a minimum, require that the person will not disclose any classified information received in the course of such activity unless specifically authorized to do so by the United States Government. Such nondisclosure or confidentiality forms shall also make it clear that they do not bar disclosures to Congress, or to an authorized official of an executive agency or the Department of Justice, that are essential to reporting a substantial violation of law.
6. Statement of Federal Stewardship

EERE will exercise normal Federal stewardship in overseeing the project activities performed under EERE Awards. Stewardship Activities include, but are not limited to, conducting site visits; reviewing performance and financial reports, providing assistance and/or temporary intervention in usual 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.

1. Intellectual Property Provisions

The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at <http://www1.eere.energy.gov/financing/resources.html>.

1. Reporting

Reporting requirements are identified on the Federal Assistance Reporting Checklist, attached to the award agreement. The checklist can be accessed at <http://www1.eere.energy.gov/financing/resources.html>.

1. Go/No-Go Review

Each project selected under this FOA will be subject to a periodic project evaluation referred to as a Go/No-Go Review. Federal funding beyond the Go/No Go decision point (continuation funding), is contingent on (1) the availability of funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority; (2) meeting the objectives, milestones, deliverables, and decision point criteria of recipient’s approved project and obtaining approval from EERE to continue work on the project; and (3) the submittal of required reports in accordance with the Statement of Project Objectives.

As a result of the Go/No Go Review, DOE may, at its discretion, authorize the following actions: (1) continue to fund the project, contingent upon the availability of funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority; (2) recommend redirection of work under the project; (3) place a hold on federal funding for the project, pending further supporting data or funding; or (4) discontinue funding the project because of insufficient progress, change in strategic direction, or lack of funding.

The Go/No-Go decision is distinct from a non-compliance determination. In the event a recipient fails to comply with the requirements of an award, EERE may take appropriate action, including but not limited to, redirecting, suspending or terminating the award.

1. Conference Spending

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

1. UCC Financing Statements

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

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

Questions/Agency Contacts

Upon the issuance of a FOA, EERE personnel are prohibited from communicating (in writing or otherwise) with applicants regarding the FOA except through the established question and answer process as described below. Specifically, questions regarding the content of this FOA must be submitted to: AMOTraineeship@ee.doe.gov. Questions must be submitted not later than 3 business days prior to the application due date and time.

All questions and answers related to this FOA will be posted on EERE Exchange at: <https://eere-exchange.energy.gov>. **Please note that you must first select this specific FOA Number in order to view the questions and answers specific to this FOA**. EERE will attempt to respond to a question within 3 business days, unless a similar question and answer has already been posted on the website.

Questions related to the registration process and use of the EERE Exchange website should be submitted to: EERE-ExchangeSupport@hq.doe.gov.

Other Information

* 1. FOA Modifications

Amendments to this FOA will be posted on the EERE Exchange website and the Grants.gov system. However, you will only receive an email when an amendment or a FOA is posted on these sites if you register for email notifications for this FOA in Grants.gov. EERE recommends that you register as soon after the release of the FOA as possible to ensure you receive timely notice of any amendments or other FOAs.

* 1. Government Right to Reject or Negotiate

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

* 1. Commitment of Public Funds

The Contracting 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 Contracting Officer, either express or implied, is invalid.

* 1. Treatment of Application Information

In general, EERE will only use data and other information contained in applications for evaluation purposes, unless such information is generally available to the public or is already the property of the Government.

Applicants should not include trade secrets or commercial or financial information that is privileged or confidential in their application unless such information is necessary to convey an understanding of the proposed project or to comply with a requirement in the FOA.

The use of protective markings such as “Do Not Publicly Release – Trade Secret” or “Do Not Publicly Release – Confidential Business Information” is encouraged. However, applicants should be aware that the use of protective markings is not dispositive as to whether information will be publicly released pursuant to the Freedom of Information Act, 5 U.S.C. §552, et. seq., as amended by the OPEN Government Act of 2007, Pub. L. No. 110-175. (See Section I of this document, “Notice of Potential Disclosure Under the Freedom of Information Act (FOIA)” for additional information regarding the public release of information under the Freedom of Information Act.)

Applicants are encouraged to employ protective markings in the following manner:

The cover sheet of the application must be marked as follows and identify the specific pages containing trade secrets or commercial or financial information that is privileged or confidential:

Notice of Restriction on Disclosure and Use of Data:

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

The header and footer of every page that contains trade secrets or commercial or financial information that is privileged must be marked as follows: “May contain trade secrets or commercial or financial information that is privileged or confidential and exempt from public disclosure.”

In addition, each line or paragraph containing trade secrets or commercial or financial information that is privileged or confidential must be enclosed in brackets.

* 1. Evaluation and Administration by Non-Federal Personnel

In conducting the merit review evaluation, the Go/No-Go Review and Peer Review, the Government may seek the advice of qualified non Federal personnel as reviewers. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The applicant, by submitting its application, consents to the use of non-Federal reviewers/administrators. Non-Federal reviewers must sign conflict of interest and non-disclosure agreements prior to reviewing an application. Non-Federal personnel conducting administrative activities must sign a non-disclosure agreement.

* 1. Notice Regarding Eligible/Ineligible Activities

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

* 1. Notice of Right to Conduct a Review of Financial Capability

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

* 1. Notice of Potential Disclosure Under Freedom of Information Act (FOIA)

Under the Freedom of Information Act, (FOIA), 5 U.S.C. §552, et. seq., as amended by the OPEN Government Act of 2007, Pub. L. No. 110-175, any information received from the Applicant is considered to be an agency record, and as such, subject to public release under FOIA. The purpose of the FOIA is to afford the public the right to request and receive agency records unless those agency records are protected from disclosure under one or more of the nine FOIA exemptions. Decisions to disclose or withhold information received from the Applicant are based upon the applicability of one or more of the nine FOIA exemptions, not on the existence or nonexistence of protective markings or designations. Only the agency’s designated FOIA Officer may determine if information received from the Applicant may be withheld pursuant to one of the nine FOIA exemptions. All FOIA requests received by DOE are processed in accordance with 10 C.F.R. Part 1004.

* 1. Requirement for Full and Complete Disclosure

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

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

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

* 1. Title to Subject Inventions

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

* Domestic Small Businesses, Educational Institutions, and Nonprofits: Under the Bayh-Dole Act (35 U.S.C. § 200 et seq.), domestic small businesses, educational institutions, and nonprofits may elect to retain title to their subject inventions.
* All other parties: The Federal Non-Nuclear Energy Act of 1974, 42. U.S.C. 5908, provides that the Government obtains title to new inventions unless a waiver is granted (see below).
* Class Patent Waiver:

Under 42 U.S.C. § 5908, title to subject inventions vests in the U.S. Government and large businesses and foreign entities do not have the automatic right to elect to retain title to subject inventions. However, EERE may issue “class patent waivers” under which large businesses and foreign entities that meet certain stated requirements may elect to retain title to their subject inventions.

* Advance and Identified Waivers: Applicants may request a patent waiver that will cover subject inventions that may be invented under the award, in advance of or within 30 days after the effective date of the award. Even if an advance waiver is not requested or the request is denied, the recipient will have a continuing right under the award to request a waiver for identified inventions, i.e., individual subject inventions that are disclosed to EERE 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 terms and conditions in 10 CFR 784.
	1. Government Rights in Subject Inventions

Where Prime Recipients and Subrecipients retain title to subject inventions, the U.S. Government retains certain rights.

1. Government Use License

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

1. March-In Rights

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

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

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

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

* 1. Rights in Technical Data

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

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

Government Rights in Technical Data Produced Under Awards: The U.S. Government retains unlimited rights in technical data produced under Government financial assistance awards, including the right to distribute to the public. One exception to the foregoing is that invention disclosures may be protected from public disclosure for a reasonable time in order to allow for filing a patent application.

* 1. Copyright

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

* 1. Personally Identifiable Information (PII)

All information provided by the Applicant must to the greatest extent possible exclude Personally Identifiable Information (PII). The term “personally identifiable information” refers to information which can be used to distinguish or trace an individual's identity, such as their name, social security number, biometric records, etc. alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as date and place of birth, mother’s maiden name, etc. (See OMB Memorandum M-07-16 dated May 22, 2007, found at: <https://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2007/m07-16.pdf>

By way of example, Applicants must screen resumes to ensure that they do not contain PII such as personal addresses, phone/cell numbers, personal emails and/or SSNs. In short, if the PII is not essential to the application, it should not be in the application.

* 1. Annual Independent Audits

If a for-profit entity is a Prime Recipient and has expended $750,000 or more of DOE awards during the entity's fiscal year, an annual Compliance Audit performed by an independent auditor is required.  For additional information, please refer to 2 C.F.R. § 910.501 and Subpart F.

If an educational institution, non-profit organization, or state/local government is a Prime Recipient or Subrecipient and has expended $750,000 or more of Federal awards during the non-Federal entity's fiscal year, then a Single or Program-Specific Audit is required.  For additional information, please refer to 2 C.F.R. § 200.501 and Subpart F.

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

Appendix A – Cost Share Information

**Cost Sharing or Cost Matching**

The terms “cost sharing” and “cost matching” are often used synonymously. Even the DOE Financial Assistance Regulations, 2 CFR 200.306, use both of the terms in the titles specific to regulations applicable to cost sharing. EERE almost always uses the term “cost sharing,” as it conveys the concept that non-federal share is calculated as a percentage of the Total Project Cost. An exception is the State Energy Program Regulation, 10 CFR 420.12, State Matching Contribution. Here “cost matching” for the non-federal share is calculated as a percentage of the Federal funds only, rather than the Total Project Cost.

**How Cost Sharing Is Calculated**

As stated above, cost sharing is calculated as a percentage of the Total Project Cost. FFRDC costs must be included in Total Project Costs. Following is an example of how to calculate cost sharing amounts for a project with $1,000,000 in federal funds with a minimum 20% non-federal 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 ($) minus Federal share ($) = Non-federal share ($)

Example: $1,250,000 minus $1,000,000 = $250,000

* Formula: Non-federal share ($) divided by Total Project Cost ($) = Non-federal share (%)

Example: $250,000 divided by $1,250,000 = 20%

**What Qualifies For Cost Sharing**

While it is not possible to explain what specifically qualifies for cost sharing in one or even a couple of sentences, in general, if a cost is allowable under the cost principles applicable to the organization incurring the cost and is eligible for reimbursement under an EERE grant or cooperative agreement, then it is allowable as cost share. Conversely, if the cost is not allowable under the cost principles and not eligible for reimbursement, then it is not allowable as cost share. In addition, costs may not be counted as cost share if they are paid by the Federal Government under another award unless authorized by Federal statute to be used for cost sharing.

The rules associated with what is allowable as cost share are specific to the type of organization that is receiving funds under the grant or cooperative agreement, though are generally the same for all types of entities. The specific rules applicable to:

* FAR Part 31 for For-Profit entities, (48 CFR Part 31); and
* 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.

In addition to the regulations referenced above, other factors may also come into play such as timing of donations and length of the project period. For example, the value of ten years of donated maintenance on a project that has a project period of five years would not be fully allowable as cost share. Only the value for the five years of donated maintenance that corresponds to the project period is allowable and may be counted as cost share.

Additionally, EERE generally does not allow pre-award costs for either cost share or reimbursement when these costs precede the signing of the appropriation bill that funds the award. In the case of a competitive award, EERE generally does not allow pre-award costs prior to the signing of the Selection Statement by the EERE Selection Official.

**DOE Financial Assistance Rules 2 CFR Part 200 as amended by 2 CFR Part 910**

As stated above, the rules associated with what is allowable cost share are generally the same for all types of organizations. Following are the rules found to be common, but again, the specifics are contained in the regulations and cost principles specific to the type of entity:

1. Acceptable contributions. All contributions, including cash contributions and third party in-kind contributions, must be accepted as part of the Prime Recipient's cost sharing if such contributions meet all of the following criteria:
2. They are verifiable from the recipient's records.
3. They are not included as contributions for any other federally-assisted project or program.
4. They are necessary and reasonable for the proper and efficient accomplishment of project or program objectives.
5. They are allowable under the cost principles applicable to the type of entity incurring the cost as follows:
6. For-profit organizations. Allowability of costs incurred by for-profit organizations and those nonprofit organizations listed in Attachment C to OMB Circular A–122 is determined in accordance with the for-profit cost principles in 48 CFR Part 31 in the Federal Acquisition Regulation, except that patent prosecution costs are not allowable unless specifically authorized in the award document. (v) Commercial Organizations. FAR Subpart 31.2—Contracts with Commercial Organizations
7. Other types of organizations. For all other non-federal entities, allowability of costs is determined in accordance with 2 CFR Part 200 Subpart E.
8. They are not paid by the Federal Government under another award unless authorized by Federal statute to be used for cost sharing or matching.
9. They are provided for in the approved budget.
10. Valuing and documenting contributions
11. Valuing recipient's property or services of recipient's employees. Values are established in accordance with the applicable cost principles, which mean that amounts chargeable to the project are determined on the basis of costs incurred. For real property or equipment used on the project, the cost principles authorize depreciation or use charges. The full value of the item may be applied when the item will be consumed in the performance of the award or fully depreciated by the end of the award. In cases where the full value of a donated capital asset is to be applied as cost sharing or matching, that full value must be the lesser or the following:
12. The certified value of the remaining life of the property recorded in the recipient's accounting records at the time of donation; or
13. The current fair market value. If there is sufficient justification, the Contracting Officer may approve the use of the current fair market value of the donated property, even if it exceeds the certified value at the time of donation to the project. The Contracting Officer may accept the use of any reasonable basis for determining the fair market value of the property.
14. Valuing services of others' employees. If an employer other than the recipient furnishes the services of an employee, those services are valued at the employee's regular rate of pay, provided these services are for the same skill level for which the employee is normally paid.
15. Valuing volunteer services. Volunteer services furnished by professional and technical personnel, consultants, and other skilled and unskilled labor may be counted as cost sharing or matching if the service is an integral and necessary part of an approved project or program. Rates for volunteer services must be consistent with those paid for similar work in the recipient's organization. In those markets in which the required skills are not found in the recipient organization, rates must be consistent with those paid for similar work in the labor market in which the recipient competes for the kind of services involved. In either case, paid fringe benefits that are reasonable, allowable, and allocable may be included in the valuation.
16. Valuing property donated by third parties.
17. Donated supplies may include such items as office supplies or laboratory supplies. Value assessed to donated supplies included in the cost sharing or matching share must be reasonable and must not exceed the fair market value of the property at the time of the donation.
18. Normally only depreciation or use charges for equipment and buildings may be applied. However, the fair rental charges for land and the full value of equipment or other capital assets may be allowed, when they will be consumed in the performance of the award or fully depreciated by the end of the award, provided that the Contracting Officer has approved the charges. When use charges are applied, values must be determined in accordance with the usual accounting policies of the recipient, with the following qualifications:
19. The value of donated space must not exceed the fair rental value of comparable space as established by an independent appraisal of comparable space and facilities in a privately-owned building in the same locality.
20. The value of loaned equipment must not exceed its fair rental value.
21. Documentation. The following requirements pertain to the recipient's supporting records for in-kind contributions from third parties:
22. Volunteer services must be documented and, to the extent feasible, supported by the same methods used by the recipient for its own employees.
23. The basis for determining the valuation for personal services and property must be documented.

 Appendix B – Waiver Requests: Foreign Entity Participation as the Prime Recipient and Performance of Work in the United States

* + 1. Waiver for Foreign Entity Participation as the Prime Recipient

As set forth in Section III.A.3, all Prime Recipients receiving funding under this FOA must be incorporated (or otherwise formed) under the laws of a State or territory of the United States. To request a waiver of this requirement, an applicant must submit an explicit waiver request in the Full Application.

Overall, the applicant must demonstrate to the satisfaction of EERE that it would further the purposes of this FOA and is otherwise in the economic interests of the United States to have a foreign entity serve as the Prime Recipient. A request to waive the *Foreign Entity Participation as the Prime Recipient* requirement must include the following:

* Entity name;
* The rationale for proposing a foreign entity to serve as the Prime Recipient;
* Country of incorporation;
* A description of the project’s anticipated contributions to the US economy;
	+ How the project will benefit U.S. research, development and manufacturing, including contributions to employment in the U.S. and growth in new markets and jobs in the U.S.;
	+ How the project will promote domestic American manufacturing of products and/or services;
* A description of how the foreign entity’s participation as the Prime Recipient is essential to the project;
* A description of the likelihood of Intellectual Property (IP) being created from the work and the treatment of any such IP;
* Countries where the work will be performed (Note: if any work is proposed to be conducted outside the U.S., the applicant must also complete a separate request for waiver of the Performance of Work in the United States requirement).

EERE may require additional information before considering the waiver request.

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

* + 1. Waiver for Performance of Work in the United States

As set forth in Section IV.J.3, all work under EERE funding agreements must be performed in the United States. This requirement does not apply to the purchase of supplies and equipment, so a waiver is not required for foreign purchases of these items. However, the Prime Recipient should make every effort to purchase supplies and equipment within the United States. There may be limited circumstances where it is in the interest of the project to perform a portion of the work outside the United States. To seek a waiver of the Performance of Work in the United States requirement, the applicant must submit an explicit waiver request in the Full Application. A separate waiver request must be submitted for each entity proposing performance of work outside of the United States.

Overall, a waiver request must demonstrate to the satisfaction of EERE that it would further the purposes of this FOA and is otherwise in the economic interests of the United States to perform work outside of the United States. A request to waive the *Performance of Work in the United States* requirement must include the following:

* The rationale for performing the work outside the U.S. (“foreign work”);
* A description of the work proposed to be performed outside the U.S.;
* An explanation as to how the foreign work is essential to the project;
* A description of the anticipated benefits to be realized by the proposed foreign work and the anticipated contributions to the US economy;
	+ The associated benefits to be realized and the contribution to the project from the foreign work;
	+ How the foreign work will benefit U.S. research, development and manufacturing, including contributions to employment in the U.S. and growth in new markets and jobs in the U.S.;
	+ How the foreign work will promote domestic American manufacturing of products and/or services;
* A description of the likelihood of Intellectual Property (IP) being created from the foreign work and the treatment of any such IP;
* The total estimated cost (DOE and Recipient cost share) of the proposed foreign work;
* The countries in which the foreign work is proposed to be performed; and
* The name of the entity that would perform the foreign work.

EERE may require additional information before considering the waiver request.

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

1. “Advanced Manufacturing Office (AMO) Multi-Year Program Plan (draft) For Fiscal Years 2017 Through 2021”, <https://energy.gov/eere/amo/downloads/advanced-manufacturing-office-amo-multi-year-program-plan-fiscal-years-2017> [↑](#footnote-ref-2)
2. National Academy Press, “Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future”, https://www.nap.edu/catalog/11463/rising-above-the-gathering-storm-energizing-and-employing-america-for [↑](#footnote-ref-3)
3. National Academy Press, “Rising Above the Gathering Storm, Revisited: Rapidly Approaching Category 5”, <https://www.nap.edu/catalog/12999/rising-above-the-gathering-storm-revisited-rapidly-approaching-category-5> [↑](#footnote-ref-4)
4. “Advanced Manufacturing Office (AMO) Multi-Year Program Plan (draft) For Fiscal Years 2017 Through 2021”, <https://energy.gov/eere/amo/downloads/advanced-manufacturing-office-amo-multi-year-program-plan-fiscal-years-2017> [↑](#footnote-ref-5)
5. A DOE or DOD-Sponsored organization is defined as a for-profit or non-profit entity, including universities/colleges, that is currently receiving DOE or DOD funding in a technical area that is relevant to EERE’s objectives for advanced manufacturing Traineeships as defined in the FOA in Section I.A. Verification of the DOE or DOD sponsorship will need to include the award number, the title and short description of the project to confirm it is in a relevant technical area. [↑](#footnote-ref-6)
6. Defined as a for-profit or non-profit entity, including universities/colleges, that is currently receiving federal funding in a technical area that is relevant to EERE’s objectives as defined in the FOA in Section I.A. Verification of the sponsorship will need to include the award number, the title and short description of the project to confirm it is in a relevant technical area. An example of another relevant U.S. Government agency sponsoring DOE-relevant research includes the Department of Defense, where the shared national security and manufacturing challenges results in dual-use technologies. [↑](#footnote-ref-7)
7. Defined as a for-profit or non-profit entity, including universities/colleges, that is currently receiving federal funding in a technical area that is relevant to EERE’s objectives as defined in the FOA in Section I.A. Verification of the sponsorship will need to include the award number, the title and short description of the project to confirm it is in a relevant technical area. An example of another relevant U.S. Government agency sponsoring DOE-relevant research includes the Department of Defense, where the shared national security and manufacturing challenges results in dual-use technologies. [↑](#footnote-ref-8)
8. Defined as a for-profit or non-profit entity, including universities/colleges, that is currently receiving federal funding in a technical area that is relevant to EERE’s objectives as defined in the FOA in Section I.A. Verification of the sponsorship will need to include the award number, the title and short description of the project to confirm it is in a relevant technical area. An example of another relevant U.S. Government agency sponsoring DOE-relevant research includes the Department of Defense, where the shared national security and manufacturing challenges results in dual-use technologies. [↑](#footnote-ref-9)
9. Defined as a for-profit or non-profit entity, including universities/colleges, that is currently receiving federal funding in a technical area that is relevant to EERE’s objectives as defined in the FOA in Section I.A. Verification of the sponsorship will need to include the award number, the title and short description of the project to confirm it is in a relevant technical area. An example of another relevant U.S. Government agency sponsoring DOE-relevant research includes the Department of Defense, where the shared national security and manufacturing challenges results in dual-use technologies. [↑](#footnote-ref-10)
10. Defined as a for-profit or non-profit entity, including universities/colleges, that is currently receiving federal funding in a technical area that is relevant to EERE’s objectives as defined in the FOA in Section I.A. Verification of the sponsorship will need to include the award number, the title and short description of the project to confirm it is in a relevant technical area. An example of another relevant U.S. Government agency sponsoring DOE-relevant research includes the Department of Defense, where the shared national security and manufacturing challenges results in dual-use technologies. [↑](#footnote-ref-11)
11. <https://www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html> [↑](#footnote-ref-12)