DEPARTMENT OF ENERGY (DOE)
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY (EERE)

DOE TRAINEESHIP IN POWER ENGINEERING (LEVERAGING WIDE BANDGAP POWER ELECTRONICS)

Funding Opportunity Announcement (FOA) Number: DE-FOA-0001378
FOA Type: Initial
CFDA Number: 81.117

<table>
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<tr>
<th>FOA Issue Date:</th>
<th>7/17/2015</th>
</tr>
</thead>
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<tr>
<td>Submission Deadline for Letter of Intent:</td>
<td>8/7/2015, 5:00pm ET</td>
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<tr>
<td>Submission Deadline for Full Applications:</td>
<td>9/3/2015, 5:00pm ET</td>
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<tr>
<td>Expected Date for EERE Selection Notifications:</td>
<td>10/1/2015, 5:00pm ET</td>
</tr>
<tr>
<td>Expected Timeframe for Award Negotiations</td>
<td>November 2015</td>
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</table>

- Applicants should submit a Letter of Intent by 5:00pm ET on the due date listed above. EERE will use the Letters of Intent for planning purposes.

- 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. Frequently asked questions for this FOA and the EERE Application process can be found at https://eere-exchange.energy.gov/FAQ.aspx.

- 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.
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Questions about this FOA? Email AMOTraineeship@ee.doe.gov.  
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# Executive Summary

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<tr>
<th>Letters of Intent Means of Submission</th>
<th>Letters of Intent must be submitted through EERE Exchange at <a href="https://eere-exchange.energy.gov">https://eere-exchange.energy.gov</a>, EERE’s online application portal and submitted via email to <a href="mailto:AMOTraineeship@ee.doe.gov">AMOTraineeship@ee.doe.gov</a> by the deadline stated in the FOA. The Users’ Guide for Applying to the Department of Energy EERE Funding Opportunity Announcements is found at <a href="https://eere-exchange.energy.gov/Manuals.aspx">https://eere-exchange.energy.gov/Manuals.aspx</a>.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Applications Means of Submission</td>
<td>Full Applications must be submitted through EERE Exchange at <a href="https://eere-exchange.energy.gov">https://eere-exchange.energy.gov</a>, EERE’s online application portal. EERE will not review or consider applications submitted through other means. The Users’ Guide for Applying to the Department of Energy EERE Funding Opportunity Announcements is found at <a href="https://eere-exchange.energy.gov/Manuals.aspx">https://eere-exchange.energy.gov/Manuals.aspx</a>.</td>
</tr>
<tr>
<td>Total Amount to be Awarded</td>
<td>$10M subject to the availability of appropriations and congressional direction.</td>
</tr>
<tr>
<td>Average Award Amount</td>
<td>EERE anticipates making awards that range from $500,000 to $1.0 million/year, with a five-year award not to exceed $5.0 million in total Federal funding.</td>
</tr>
<tr>
<td>Types of Funding Agreements</td>
<td>Grants</td>
</tr>
<tr>
<td>Period of Performance</td>
<td>60 months (five years)</td>
</tr>
<tr>
<td>Eligible Applicants</td>
<td>Only U.S.-based institutions of higher education that meet the following requirements are eligible to apply to this FOA. The applicant must have an accredited college or school of engineering that is an integral part of its institutional structure and have a graduate degree program granting Masters and Ph.D. degrees in power engineering or an equivalent curriculum. In addition, the applicant’s project team must include at least one partnership with either (1) a DOE national laboratory or (2) a non-Federal for-profit or non-profit organization currently sponsored by DOE or DOD as described in Section I.A.2.g. of the FOA.</td>
</tr>
<tr>
<td>Cost Share Requirement</td>
<td>Applicants are encouraged, but not required to contribute cost share under this FOA.</td>
</tr>
<tr>
<td>Submission of Multiple Applications</td>
<td>Applicants may submit more than one application to this FOA, provided that each application describes a unique, academically distinct traineeship program.</td>
</tr>
<tr>
<td>Application Forms</td>
<td>Required forms and templates for Full Applications are available on EERE Exchange at <a href="https://eere-exchange.energy.gov">https://eere-exchange.energy.gov</a>.</td>
</tr>
<tr>
<td>FOA Summary</td>
<td>The purpose of this FOA is to create a DOE funded Graduate Power Engineering Traineeship Program that supports university-led traineeships that strategically addresses workforce training needs in the area of power engineering (leveraging wide bandgap power electronics).</td>
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Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov. Include FOA name and number in subject line.
I. FUNDING OPPORTUNITY DESCRIPTION

A. DESCRIPTION/BACKGROUND

Through this Funding Opportunity Announcement (FOA), DOE intends to fund university-led traineeship programs that strategically address workforce training needs in the area of power engineering, leveraging wide bandgap power electronics. The following objectives guide the Office of Energy Efficiency and Renewable Energy (EERE) Advanced Manufacturing Office’s (AMO) traineeship efforts:

• Advance the DOE mission – DOE funded 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, energy, and environmental challenges.

• Address priority STEM workforce needs and identified gaps – DOE funded Traineeship Programs focus on advancing those critical STEM disciplines and competencies specifically relevant to the EERE and AMO missions where other U.S. Government or academic workforce development programs either do not exist or where DOE-relevant applications are not being leveraged to support specific DOE mission responsibilities.

The high priority topic identified to be piloted in this traineeship program is power engineering (leveraging wide bandgap power electronics). Power Engineering is a critical enabling workforce gap that must be addressed. Power engineers are needed to enable the design, manufacturing, and deployment of advanced new high-efficiency electrical equipment such as motors, inverters, and grid equipment, as well as high-efficiency electrical systems. Power engineers are needed in all advanced manufacturing industries and energy intensive industries including the automotive, aerospace, chemical and clean energy industries. The advent of wide bandgap semiconductor (WBG) technology enables a whole new design space for power electronic equipment\(^1\). A new generation of power engineers will need to be trained if we are going to translate an emerging U.S. leadership role in WBG power devices into U.S. leadership in inventing, designing, and manufacturing the next generation electrical equipment that WBG technology enable.

A number of third parties have identified this growing need for more scientists and engineers trained in advanced power electronics/power engineering as the energy sector evolves. The President’s Council of Advisors on Science and Technology (PCAST)\(^2\) has found that new skills are needed by scientists and engineers to address the changes in energy technology in the 21st century. In its 2010 report to the President entitled “Report to the President on Accelerating the Pace of Change in Energy Technologies through an Integrated Federal Energy Policy”, PCAST identified power electronics as a priority area where DOE should establish traineeship grant

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programs to support critical energy workforce needs. In its “Future of the Electric Grid” report, Massachusetts’s Institute of Technology (MIT)’s Energy Initiative\(^3\) indicated that many historically strong university power engineering programs have ended or significantly declined over the past several decades as other engineering disciplines became more popular and better supported. According to a 2009 report by the Institute of Electrical and Electronics Engineers (IEEE) U.S. Power and Energy Engineering Workforce Collaborative, the U.S. has less than five very strong power engineering university programs.\(^4\) Furthermore, approximately 40 percent of key power engineering faculty at U.S. universities will be eligible for retirement in five years. The Power Electronic Industry Collaborative confirms in their April 2015 report that U.S. manufacturers are struggling with a talent gap resulting from fewer university programs and fewer graduates from power engineering degree programs.\(^5\)

The DOE EERE will competitively select U.S.-based institutions of higher education to implement masters or doctoral training programs designed to train a new generation of power engineers, leveraging wide bandgap semiconductor technologies, who can fill the identified workforce needs across industry, national labs, and universities. Hands-on, laboratory-based work to design and build high-efficiency power electronics equipment is expected to be part of the traineeship program. Recipient institutions will utilize a competitive application process to award traineeship funding to individual graduate students of high merit who are entering the first two years of their graduate program and otherwise meet the requirements described below in Section I.A.2.f.i of the FOA.

1. Required Traineeship Program Elements

   a. The DOE funded Traineeship Program providing funding for university-led traineeships in power engineering will support one or more five-year proposals from universities proposing to train graduate students in specific disciplines or sub-disciplines aligned with power engineering (leveraging wide bandgap power electronics) workforce needs.

   b. Applications should target support for two years of a graduate student’s Ph.D. level training, but could also support graduate students pursuing a terminal Master’s degree if the Master’s degree requires a thesis project. Traineeship programs at a given academic institution should be relatively focused, supporting 5-10 new students per year beginning in the fall of 2016, with a total of 10-20 students per year supported in the year(s) subsequent to the first year.

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c. The overall university-led graduate training program will include a combination of targeted, relevant and innovative power engineering (leveraging wide bandgap power electronics) course work, mentored graduate research, 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 laboratory or other DOE or DOD-sponsored 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 laboratory-based, hands-on work in designing and building high efficiency power electronics equipment (leveraging wide bandgap semiconductors).

d. The graduate training program should also include structured support for graduate student 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.

e. 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 overall award).

f. In order to ensure focus on critical power engineering disciplines and competencies specifically relevant to the Department of Energy’s missions, applications must include proposed partnerships with either a DOE national laboratory or a non-Federal DOE or DOD sponsored organization. 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 Power Engineering 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.

2. Content of University Applications

University applications should include the following content:

a. Detailed information about planned curricula, including courses, workshops and seminars, research experiences, and mentoring that will be incorporated into the proposed DOE funded power engineering traineeship program.

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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 Power Engineering 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.

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b. Plans for new curriculum development to meet the scientific and technical training needs in power engineering.

c. How the proposed training program will specifically address the power engineering workforce training needs.

d. 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 2016. This plan needs to specifically address the approach for recruitment of women and minority students.

e. 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.

f. Acknowledgement of the requirements for eligible graduate students, mentors, and academic institutions as outlined below:

i. **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.
   - Be at least 18 years of age.
   - Be enrolled full-time in a qualified graduate program at the Principal Investigator’s academic institution either pursuing a Ph.D. or a Master’s degree as their degree objective. A Master’s degree-level traineeship program must require a thesis project to be eligible.
   - Conduct graduate research aligned with Power Engineering.

ii. **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.

iii. **Requirements for Academic Institutions**: Applications must be submitted by qualified individuals from eligible institutions of higher education who are established researchers with demonstrated scientific and administrative leadership skills. Eligible institutions include U.S. based academic institutions of higher education with accredited graduate programs granting Masters and Ph.D. degrees in a field for which a power engineering (leveraging wide bandgap power electronics) program would be appropriate and aligned with the mission of the Office of Energy Efficiency and Renewable Energy. Successful proposals will be expected to publicly and widely share information regarding innovative 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.

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Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov. Include FOA name and number in subject line.
g. Inclusion of at least one of the identified partnership options specified below to ensure focus on critical power engineering disciplines and competencies specifically relevant to the EERE and AMO mission. Applications that do not include one of the following partnerships will not be considered for funding under this FOA. Additional Eligibility information can be found in Section III.A.1 of the FOA.

i. Partnership with a DOE National Laboratory.

Universities may propose to partner with one or more DOE national laboratories to incorporate program elements that enhance the quality of the training program and specifically address the power engineering (leveraging wide bandgap power electronics) training. The required structured program elements for graduate trainees carried out in partnership with a DOE national laboratory can include:

- Long-term or short-term research internships at a DOE national laboratory in collaboration with DOE laboratory scientists or engineers;
- Laboratory practicums that occur at a DOE national laboratory in collaboration with DOE laboratory scientists or engineers;
- Scientific or technical workshops at a DOE laboratory that hosts unique research capabilities or facilities relevant to power engineering;
- Focused long-term or short-term summer credit-bearing courses at a DOE laboratory that offers unique research capabilities or facilities related to power engineering; 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.

ii. Partnership with a non-Federal for-profit or non-profit organization currently sponsored by DOE or DOD.\(^7\)

Universities may propose to partner with one or more DOE or DOD-sponsored non-Federal organizations (for-profit or non-profit), which may include DOE or DOD sponsored industry research consortia led at public or private universities. This would help incorporate elements that enhance the quality of the training program and specifically address the Power Engineering training sought by EERE. Required, structured program elements for graduate trainees carried in partnership with a non-Federal organization can include:

- Research internships at the organization;

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\(^7\) 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 Power Engineering 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.

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• Scientific or technical workshops at a partner organization hosting unique research capabilities or facilities related to power engineering;

• 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.

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 power engineering 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 $55K per student per year assumes 12-month student participation, a $30-35K stipend per year, and no more than $2-3K for traineeship-related travel per student per year. The remainder should provide for 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).

B. 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):

i. Applications that fall outside the traineeship program academic areas specified in Section I.A of the FOA.

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Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov. Include FOA name and number in subject line.
II. Award Information

A. Award Overview

1. Estimated Funding

EERE expects to make approximately $10 million of Federal funding available for new awards under this FOA, subject to the availability of appropriated funds and congressional direction. EERE anticipates making approximately 1-4 awards under this FOA. EERE may issue one, multiple, or no awards.

Individual awards may vary between $500k and $1.0 million/year, with a five-year award not to exceed $5.0 million in total Federal funding. It is anticipated that awards will be in the range of $2.5M over 5 years, supporting 9-10 students per year for 5 years.

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

2. Period of Performance

EERE anticipates making awards that will run up to 60 months in length. 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 traineeship program required elements including assessment, 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 support for the traineeship project, re-direct the traineeship project, or discontinue funding the traineeship project. Only those traineeship projects demonstrating a high probability of successfully meeting the program targets will be continued.

3. 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.

B. EERE Funding Agreements

Through Grants and other similar agreements, 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.

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1. **Grants**

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

2. **Funding Agreements with FFRDCs, Federal Agencies and Federal Instrumentalities**

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.

III. **Eligibility Information**

A. **Eligible Applicants**

1. **Statement of Applicant Eligibility.**

Institutions of higher education are uniquely qualified to implement graduate traineeship programs to meet the objectives of the FOA. EERE has further limited eligibility to accredited U.S.-based institutions of higher education with graduate degree programs in power engineering or equivalent curriculum to ensure applicants have the necessary foundation (i.e., engineering curriculum, faculty and staff in place) to successfully develop a graduate traineeship program in power engineering and to establish a competitive application process to recruit qualified graduate students by the fall of 2016. 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 an accredited college or school of engineering that is an integral part of its institutional structure and have a graduate degree program granting Masters and Ph.D. degrees in power engineering or an equivalent curriculum. In addition, the applicant’s project team must include at least one partnership with either (1) a DOE national laboratory or (2) a non-Federal for-profit or non-profit organization currently sponsored by DOE or DOD\(^8\) (See Sections III.A.2 and I.A.2.g. of the FOA for partnership information).

Nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995, are not eligible to apply for funding.

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Note: Effective 12/26/2014, the DOE Financial Assistance regulations contained in 10 CFR 600 is superseded by the Financial Assistance regulations contained in 2 CFR Part 200 as amended by 2 CFR Part 910.

Questions about this FOA? Email AMOTraineeship@ee.doe.gov

Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov. Include FOA name and number in subject line.
2. Partnership Requirement

To ensure focus on critical power engineering disciplines and competencies specifically relevant to the EERE and AMO mission, the proposed Project Team must include of at least one of the identified partnership options specified below:

i. Partnership with a DOE National Laboratory.
To satisfy the partnership requirement, Applicants may propose to partner with one or more DOE National Laboratories to incorporate program elements that enhance the quality of the training program and specifically address the power engineering (leveraging wide bandgap power electronics) training. The required structured program elements for graduate trainees carried out in partnership with a DOE National Laboratory can include:

- Long-term or short-term research internships at a DOE National Laboratory in collaboration with DOE laboratory scientists or engineers;
- Laboratory practicums that occur at a DOE National Laboratory in collaboration with DOE laboratory scientists or engineers;
- Scientific or technical workshops at a DOE laboratory that hosts unique research capabilities or facilities relevant to power engineering;
- Focused long-term or short-term summer credit-bearing courses at a DOE laboratory that offers unique research capabilities or facilities related to power engineering; 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.

ii. Partnership with a non-Federal for-profit or non-profit organization currently sponsored by DOE or DOD.
To satisfy the partnership requirement, applicants may propose to partner with one or more DOE or DOD-sponsored non-Federal organizations (for-profit or non-profit), which may include DOE or DOD sponsored industry research consortia led at public or private universities. This would help incorporate elements that enhance the quality of the training program and specifically address the Power Engineering training sought by EERE. Required, structured program elements for graduate trainees carried in partnership with a non-Federal organization can include:

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8 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 Power Engineering 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.

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Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov. Include FOA name and number in subject line.
B. **Cost Sharing**

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

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.

2. **Cost Share Allocation**

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

3. **Cost Share Types and Allowability**

Every cost share contribution must be allowable under the applicable Federal cost principles, as described in Section IV.1.1 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: personnel costs, indirect costs, facilities and
administrative costs, rental value of buildings or equipment, and the value of a service, other 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 Technology Office.

In addition, Project Teams may not use independent research and development (IR&D) funds to meet their cost share obligations. 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.

4. 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.
5. **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 B of the FOA for guidance on the requisite cost share information and documentation.

6. **Cost Share Payment**

All proposed cost share contributions must be reviewed in advance by the Contracting Officer and incorporated into the project budget before the expenditures are incurred.

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 by email 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 may go into effect.

C. **Compliance Criteria**

Letters of Intent 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 Letters of Intent 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**

   i. **Letters of Intent**
Letters of Intent are deemed compliant if:

- The Applicant entered all required information, clicked the “Create Submission” button in EERE Exchange and submitted via email to AMOTraineeship@ee.doe.gov by the deadline stated in the FOA.

ii. Full Applications

Full Applications are deemed compliant if:

- The Full Application 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 the FOA.

D. RESPONSIVENESS CRITERIA

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

E. 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:

i. 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.

ii. 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 _____ 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.

iii. 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 other FFRDC through an interagency agreement with the sponsoring agency.

iv. 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.

v. 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.

vi. 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.

F. LIMITATION ON NUMBER OF FULL APPLICATIONS ELIGIBLE FOR REVIEW

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

G. 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.
IV. APPLICATION AND SUBMISSION INFORMATION

A. APPLICATION PROCESS

The application process will include two phases: a recommended Letters of Intent phase and a Full Application phase. 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 noncompliant and/or nonresponsive or otherwise ineligible submissions. 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 Letter of Intent 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 and 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 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 Letters of Intent 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 Letter of Intent, and Full Application. Once the Application is submitted in EERE Exchange, Applicants may revise or update their application until the expiration of the applicable deadline.

EERE urges Applicants to carefully review their Letters of Intent and Full Applications and to allow sufficient time for the submission of required information and documents. All Full Applications that meet the 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 Application 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 issue with submissions that result in late submissions: 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 (EERE-ExchangeSupport@hq.doe.gov) will assist the Applicant in resolving all issues (including finalizing submission on behalf of and with the Applicant’s concurrence). PLEASE NOTE, however, that Applicants who are unable to timely submit their application 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.

B. 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 LETTER OF INTENT

It is recommended that Applicants submit a Letter of Intent by the Due Date set forth on the FOA cover page. The Letter of Intent should not contain any proprietary or sensitive business information. Two steps are required to complete the Letter of Intent submission process. First, Applicants need to create a Letter of Intent record in EERE Exchange by selecting the ‘Apply’ button next to the FOA; populating the required information; and selecting the ‘Create Letter of Intent’ button at the bottom of the record. Note that a control number will be issued when an Applicant creates the Letter of Intent record in EERE Exchange. This control number must be included in the Letter of Intent document as described below, as well as in all the Full Application documents.

Secondly, the Applicant must create a separate Letter of Intent document for email submission to EERE. The Letter of Intent must not exceed two (2) pages, including cover page, charts, graphs, maps, and photographs when printed using standard 8.5” by 11” paper with 1 inch margins (top, bottom, left, and right), single spaced. Do not include any Internet addresses (URLs) that provide information necessary to review the letter. Save the information in a single file named “Control#_Institution_LetterofIntent.pdf.”

Letters of Intent must be submitted via email to the following email address AMOTraineeship@ee.doe.gov.

Each Applicant must provide the following information as part of the Letter of Intent:

- Project Title;
- Lead Organization;
- Organization Type (University);
- Whether the Application has been previously submitted to EERE;
- % of effort contributed by the Lead Organization;
- The Project Team, including:
  - The Principal Investigator for the Prime Recipient;
  - Partner organizations (as defined in Section I.A.2.g, including verification of the DOE or DOD sponsorship, if partnering with non-Federal DOE or DOD-sponsored organization, which should include the award number, the title and short description of the project to confirm it is in a relevant technical area) and Team Members (i.e., Subrecipients); and
  - Key Participants (i.e., individuals who contribute in a substantive, measureable way to the execution of the proposed project); and
- Abstract – The abstract provided should be 200 words in length, and should provide a truncated explanation of the proposed project.
C. CONTENT AND FORM OF THE FULL APPLICATION

Applicants must submit a Full Application by the specified due date 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.

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 Letter of Intent, 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 should be limited to a single traineeship project. Unrelated concepts should not be consolidated in a single Full Application.

Full Applications must conform to the following requirements:

<table>
<thead>
<tr>
<th>SUBMISSION</th>
<th>COMPONENTS</th>
<th>FILE NAME (IF NECESSARY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Application (PDF, unless stated otherwise)</td>
<td>Technical Volume (20 page limit, see Chart in Section IV.D.2)</td>
<td>ControlNumber_LeadOrganization_TechnicalVolume</td>
</tr>
<tr>
<td></td>
<td>SF-424 (no page limit)</td>
<td>ControlNumber_LeadOrganization_App424</td>
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<tr>
<td></td>
<td>Budget Justification (EERE 159) (no page limit, Microsoft Excel format. Applicants must use the template available in EERE Exchange)</td>
<td>ControlNumber_LeadOrganization_BudgetJustification</td>
</tr>
<tr>
<td></td>
<td>Summary for Public Release (1 page max)</td>
<td>ControlNumber_LeadOrganization_Summary</td>
</tr>
<tr>
<td></td>
<td>Summary Slide (1 page limit, Microsoft PowerPoint format)</td>
<td>ControlNumber_LeadOrganization_Slide</td>
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<tr>
<td></td>
<td>Subaward Budget Justification (EERE 159);</td>
<td>ControlNumber_LeadOrganization_Subwardee_Budget_Justification</td>
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<tr>
<td></td>
<td>Budget for Federally Funded Research and Development Center Contractor File, (if applicable)</td>
<td>ControlNumber_LeadOrganization_FWP</td>
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<tr>
<td></td>
<td>Authorization from cognizant Contracting Officer for FFRDC, if applicable</td>
<td>ControlNumber_LeadOrganization_FFRDCAuth</td>
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<tr>
<td></td>
<td>SF-LLL Disclosure of Lobbying Activities</td>
<td>ControlNumber_LeadOrganization_SF-LLL</td>
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<tr>
<td></td>
<td>Foreign Entity and Performance of Work in the United States waiver requests (if applicable)</td>
<td>ControlNumber_LeadOrganization_Waiver</td>
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<tr>
<td></td>
<td>Statement of Project Objectives (See Appendix C for template) (Microsoft Word format)</td>
<td>ControlNumber_LeadOrganization_SOPO</td>
</tr>
</tbody>
</table>

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Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov. Include FOA name and number in subject line.
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.

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.

2. **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. EERE and reviewers may review primary research literature in order to evaluate applications. However, EERE and reviewers are under no obligation to review cited sources (e.g., internet websites).

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.

<table>
<thead>
<tr>
<th>SECTION/PAGE LIMIT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover Page</td>
<td>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.</td>
</tr>
</tbody>
</table>
### Project Overview

*(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 power engineering graduate training program status (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 project team must include at least one partnership with either (1) a DOE National Laboratory or (2) a non-Federal for-profit or non-profit organization currently sponsored by DOE or DOD as defined in Section 1.A.2.g of the FOA. 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, if partnering with non-Federal DOE or DOD-sponsored organization.

### Program Description

*(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 principals, objectives and approach that will be pursued during the project. This section should describe the relevance of the proposed project 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 project.

- **Feasibility:** The Applicant should demonstrate the 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 power engineering traineeship program.**

- **Plans for new curriculum development to meet the scientific and technical training needs in power engineering.**

- **How the proposed training program will specifically address the power engineering 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 2016. 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 (Approximately 25% of the Technical Volume)

The Workplan section in the application should include a summary of the Traineeship Objectives, Program Scope, Work Breakdown Structure, Milestones, Go/No-Go Decision Points and Project Schedule.

Summarize in Technical Volume and provide additional detail of the following items in SOPO:

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.

- **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 fully 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. Appropriate milestones should be incorporated into the task and subtask structure.

- **Milestones:** The Applicant should provide appropriate milestones throughout the project to demonstrate success, where success is defined as technical achievement rather than simply completing a task. To ensure that milestones are relevant, Applicants should follow the SMART rule of thumb, which is that all milestones should be Specific, Measurable, Achievable, Relevant, and Timely. The Applicant should propose relevant milestones for each semester for the duration of the project or other term as appropriate tied to the universities annual calendar by which to measure traineeship program progress and results.

- **Go/No-Go Decision Points:** The Applicant should provide 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 year (12-month period) of the project. The Applicant should also provide the specific technical criteria to be used to make the go/no-go decision.

- **Project Schedule (Gantt Chart or similar):** The Applicant should provide a detailed schedule for the entire project, including task and subtask durations, milestones, and go/no-go decision points.

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Questions about this FOA? Email AMOTraineeship@ee.doe.gov

Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov. Include FOA name and number in subject line.
- 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 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

<table>
<thead>
<tr>
<th>Qualifications and Resources (Approximately 15% of the Technical Volume)</th>
<th>The Qualifications and Resources should contain the following information:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Describe the Project Team’s unique qualifications and expertise, including those of mentors and key subrecipients</td>
</tr>
<tr>
<td></td>
<td>• 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</td>
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<tr>
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<td>• This section should also include relevant, previous work efforts, demonstrated innovations, and how these enable the Applicant to achieve the project objectives.</td>
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<td></td>
<td>• Describe the time commitment of the key team members to support the project.</td>
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<td>• 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.</td>
</tr>
<tr>
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<td>• Describe the technical services to be provided by DOE/NNSA FFRDCs if applicable.</td>
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<td>• Attach any letters of support from partners as an appendix (1 page maximum per letter). Letters of support do not count towards the page limit.</td>
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<td>• For multi-organizational or multi-investigator projects, describe succinctly:</td>
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<td></td>
<td>o The roles and the work to be performed by each PI and Key Participant;</td>
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<td>o Business agreements between the Applicant and each PI and Key Participant;</td>
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<td></td>
<td>o How the various efforts will be integrated and managed;</td>
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<td>o Process for making decisions on traineeship program direction;</td>
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<td>o Publication arrangements; and</td>
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<td>o Communication plans</td>
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Note: Effective 12/26/2014, the DOE Financial Assistance regulations contained in 10 CFR 600 is superseded by the Financial Assistance regulations contained in 2 CFR Part 200 as amended by 2 CFR Part 910.

Questions about this FOA? Email AMOTraineeship@ee.doe.gov
Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov. Include FOA name and number in subject line.
3. **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](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”.

4. **Budget Justification Workbook (EERE 159)**

Applicants are required to complete the Budget Justification Workbook. This form is available on EERE Exchange at [https://eere-exchange.energy.gov/](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 forward pricing rate agreement, Defense Contract Audit Agency or Government Audits and Reports, if available). Applicants should include costs associated with required annual audits and incurred costs 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”.

5. **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 identified the name of the Applicant, the project director), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (i.e., benefits, outcomes), and major participants (for collaborative projects). This document must not include any proprietary or sensitive business information as the Department 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 11 point. Save the Summary for Public Release in a single PDF file using the following convention for the title “ControlNumber_LeadOrganization_Summary”.

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Problems with EERE Exchange? Email [EERE-ExchangeSupport@hq.doe.gov](mailto:EERE-ExchangeSupport@hq.doe.gov). Include FOA name and number in subject line.
6. **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 Graduate Power Engineering Traineeship Program Summary;
- A description of the Traineeship program impact;
- Proposed project goals;
- Any key graphics (illustrations, charts and/or tables);
- Project title, Prime Recipient, and Key Participant information; and
- Requested EERE funds.

7. **Subaward Budget Justification (EERE159)**

Applicants must provide a separate budget justification, EERE 159 (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”.

8. **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/0412.1-BOrder-a/view](https://www.directives.doe.gov/directives/0412.1-BOrder-a/view). Save the FWP in a single PDF file using the following convention for the title “ControlNumber_LeadOrganization_FWP”.

9. **Authorization for Non-DOE/NNSA or 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 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”.

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10. **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](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”.

11. **Waiver Requests: Foreign Entities and Performance of Work in the United States**

   i. **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. Waiver information is provided in Section III.A.3 of the FOA.

   ii. **Performance of Work in the United States**

   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. Section IV.I.3 lists the necessary information that must be included in a request to waive the Performance of Work in the United States requirement.

12. **Statement of Project Objectives (SOPO)**

   The Statement of Project Objectives should be provided in a similar format as the SOPO template shown in Appendix B – Statement of Project Objectives (SOPO) Template. The SOPO must address how the project objectives will be met. It must contain a clear, concise description of all activities to be completed during the project performance and follow the...
requirements in the template. Save this information as a single Microsoft Word file titled “ControlNumber_LeadOrganization_SOPO.”

**D. 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

**E. SUBMISSION DATES AND TIMES**

Full Applications must be submitted no later than 5p.m. Eastern on the dates provided on the cover page of this FOA.

**F. INTERGOVERNMENTAL REVIEW**

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

**G. 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.

2. **PRE-AWARD COSTS**

Selectees may charge pre-award costs within the 90-day period immediately preceding the effective date of the award. 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.

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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.

   i. 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.

3. **Performance of Work in the United States**

   a. **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 Recipient
should make every effort to purchase supplies and equipment within the United States. The Recipient must flow down this requirement to its subrecipients.

b. **Failure to Comply.**

If the 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 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 Recipient, subrecipients, vendors or other project partners.

c. **Waiver.**

All work performed under this FOA must be performed in the United States. However, the Contracting Officer may approve the Recipient to perform a portion of the work outside the United States under limited circumstances. Recipient must obtain a waiver from the Contracting Officer prior to conducting any work outside the U.S. To request a waiver, the Recipient must submit a written waiver request to the Contracting Officer, which includes the following information:

- The rationale for performing the work outside the U.S.;
- A description of the work proposed to be performed outside the U.S.;
- Proposed budget of work to be performed; and
- The countries in which the work is proposed to be performed.

For the rationale, the Recipient must demonstrate to the satisfaction of the Contracting Officer that the performance of work outside the United States would further the purposes of the FOA that the Award was selected under and is in the economic interests of the United States. The Contracting Officer may require additional information before considering such request. EERE may require additional information before considering a waiver request. Save the waiver request(s) in a single PDF file titled “ControlNumber_PerformanceofWork_Waiver”.

**4. 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 property is no longer used by the Prime Recipient for the objectives of the project, and the fair market value of property exceeds $5,000. The rules for property disposition are set forth in the following sections of 2
5. 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.

V. Application Review Information

A. Technical Review Criteria

1. Full Applications

Applications will be evaluated against the merit review criteria shown below.

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 power engineering (leveraging wide bandgap power electronics);
- Degree to which the current graduate-level power engineering education environment, workforce needs and the proposed traineeship program are clearly described;

Impact on Educational Benefits, including Broader Impact

- The potential impact of the traineeship on increasing power engineering educational outcomes.
The potential broader impact of the traineeship, through the proposed curriculum promulgation plan, to generate increased levels of public interest in power engineering education (leveraging wide bandgap semiconductors).

Criterion 2: Appropriateness of the proposed method or approach

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 power engineering, and how power engineering will be incorporated into mentored research experiences.
- Degree to which the proposed recruitment plan clearly describes a meaningful plan for the recruitment of women and minority students.
- 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.

Identification of Traineeship Program Risks

- Brief discussion and demonstrated understanding of the key programmatic risk areas involved in the proposed work, and the quality of the mitigation strategies to address them.

Baseline, Metrics, and Deliverables, Including Evaluation Plan

- The level of clarity in the definition of the baseline, metrics, and milestones; including the evaluation plan and the curriculum promulgation plan, and
- Relative to a clearly defined graduate student enrollment and graduation in power engineering baseline, the strength of the quantifiable metrics, milestones, and a mid-point deliverables defined in the application, such that meaningful interim progress will be made.

Criterion 3: Competency of Applicant’s personnel and adequacy of proposed resources

- 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.
- 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

- Reasonableness and appropriateness of the proposed budget and spend plan for proposed traineeship project and objectives.

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B. STANDARDS FOR APPLICATION EVALUATION


C. 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 proposed cost shares, optimizes the use of available DOE and EERE funding to achieve programmatic objectives;
- Institutional diversity or partnership with minority serving institutions.\(^9\)
- 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;
- Whether the proposed project will advance the goals of the Climate Action Champion initiative, as committed to by the designated Champion pursuant to its designation agreement. The Climate Action Champion initiative goals include improving climate resilience and reducing greenhouse gas emissions.

Note: The Climate Action Champion initiative program policy factor is only applicable to (1) projects proposed by Climate Action Champions\(^10\) as designated under DOE’s Request for Applications DE-FOA-0001189; (2) projects proposed by a member of a regional collaboration or consortium designated as a Champion; and (3) projects proposed in a Climate Action Champion community where the applicant submits a letter from the Champion confirming the proposed project would further the Champion’s goals under the Climate Action Champion

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\(^9\) [https://www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html](https://www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html)

\(^10\) In recognition of the importance of the dual policy goals of reducing greenhouse gas emissions and enhancing climate resilience, the U.S. Department of Energy (DOE) – in close collaboration with other Federal agencies – launched the Climate Action Champion initiative to identify and showcase U.S. local and tribal governments that have proven to be climate leaders through pursuing opportunities to advance both of these goals in their communities. Recently, DOE selected sixteen (16) U.S. local governments and tribal governments – or regional collaborations or consortia thereof – that demonstrated a strong and ongoing commitment to implementing strategies that both reduce greenhouse gas emissions and enhance climate resilience, with a particular emphasis on strategies that further both goals. [http://www.whitehouse.gov/blog/2014/12/03/announcing-first-class-climate-action-champions](http://www.whitehouse.gov/blog/2014/12/03/announcing-first-class-climate-action-champions)

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initiative.) If an applicant is seeking to receive consideration under (3), the applicant must contact the applicable Champion to obtain a letter of support.

D. EVALUATION AND SELECTION PROCESS

1. OVERVIEW

The evaluation process consists of multiple phases that each include an initial eligibility review and a thorough technical review. Rigorous technical reviews 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.

2. 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.

3. PRE-SELECTION CLARIFICATION

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

4. 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.

VI. Award Administration Information

A. Anticipated Notice of Selection and Award Dates

EERE anticipates notifying applicants selected for negotiation of award by October 1, 2015 and making awards by November 2015.

B. Award Notices

1. Rejected Submissions

Ineligible Full Applications are rejected by the Contracting Officer and are not reviewed or considered. The Contracting Officer sends a notification letter by email to the technical and administrative points of contact designated by the Applicant in EERE Exchange. The notification letter states the basis upon which the Full Application was rejected.

2. Full Application Notifications

EERE notifies 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 may inform the Applicant that its Full Application was selected for award negotiations, or not selected for award. 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.
3. **SUCCESSFUL APPLICANTS**

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 to issue an award. Applicants do not receive an award until award negotiations are complete and the Contracting Officer executes the funding agreement.

The award negotiation process will take approximately 30-60 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 (e.g., provide requested documentation) and meet the negotiation deadlines. If the Applicant fails to do so or negotiations are otherwise unsuccessful, EERE will cancel 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.I.2 of the FOA for guidance on pre-award costs.

4. **POSTPONED SELECTION DETERMINATIONS**

A notification letter postponing a final selection determination until a later date 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.

5. **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. If the application was not selected, the written notice shall explain why the application was not selected.

C. **ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS**

1. **REGISTRATION REQUIREMENTS**

There are several one-time actions before submitting an application in response to this Funding Opportunity Announcement (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:

i. **EERE Exchange**

Register and create an account on EERE Exchange at [https://eere-Exchange.energy.gov](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 applicants 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.** Therefore, although not required in order to submit an application through the EERE Exchange site, all potential applicants lacking a DUNS number, or not yet registered with SAM or FedConnect should complete those registrations as soon as possible.

**ii. 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](http://fedgov.dnb.com/webform).

**iii. System for Award Management**

Register with the System for Award Management (SAM) at [https://www.sam.gov](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.

**iv. Fedconnect**

Register in FedConnect at [https://www.fedconnect.net](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](http://www.fedconnect.net/FedConnect/Marketing/Documents/FedConnect_Ready_Set_Go.pdf).

**v. Grants.gov**

Register in Grants.gov ([http://www.grants.gov](http://www.grants.gov)) to receive automatic updates when Amendments to this FOA are posted. However, please note that Letters of Intent and Full Applications will not be accepted through Grants.gov.

**vi. 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.

2. **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.
Foreign National Involvement
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. 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.

3. **Subaward and Executive Reporting**

Additional administrative requirements necessary for DOE grants and cooperative agreements to comply with the Federal Funding and Transparency Act of 2006 (FFATA) are 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.

4. **National Policy Requirements**


5. **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/](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.
6. Applicant Representations and Certifications

i. Lobbying Restrictions

By accepting funds under this award, the 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.

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

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,

(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.

iii. Nondisclosure and Confidentiality Agreements Representations (January 2015)

In submitting an application in response to this FOA the Applicant represents that it will not require its employees or contractors seeking to report fraud, waste, or abuse to sign internal nondisclosure or confidentiality agreements or statements prohibiting or otherwise restricting such employees or contractors from lawfully reporting such waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.

7. 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.

8. SUBJECT INVENTION UTILIZATION REPORTING

To ensure that Prime Recipients and Subrecipients holding title to subject inventions are taking the appropriate steps to commercialize subject inventions, EERE may require that each Recipient holding title to a subject invention submit annual reports for 10 years from the date the subject invention was disclosed to EERE on the utilization of the subject invention and efforts made by Recipient or their licensees or assignees to stimulate such utilization. The reports must include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Prime Recipient, and such other data and information as EERE may specify.

9. INTELLECTUAL PROPERTY PROVISIONS

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

10. REPORTING

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement. The checklist can be accessed at http://energy.gov/sites/prod/files/2013/05/f0/Attch_FA_RepReqChecklist_COMBINED_FINAL_4-23-13%20%283%29_0.pdf.

EERE will require reporting on the progress of program participants Example reporting requirements include enrollment and graduation statistics, employment in field statistics, and career growth statistics.

11. Go/No-Go Review

Each project selected under this FOA will be subject to a period project evaluation referred to as a Go/No-Go Review. Federal funding beyond the Go/No Go decision point (continuation funding), is contingent, in part11, on the outcome of the Go/No Go Review.

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11 Continuation funding is contingent on (1) contingent upon 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, decision point criteria, and stage gates of Recipient’s approved project and obtaining approval from EERE to continue work on the project; (3) submittal of required reports; and/or (4) compliance with the terms and conditions of the award.

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Note: Effective 12/26/2014, the DOE Financial Assistance regulations contained in 10 CFR 600 is superseded by the Financial Assistance regulations contained in 2 CFR Part 200 as amended by 2 CFR Part 910.

Questions about this FOA? Email AMOTraineeship@ee.doe.gov

Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov. Include FOA name and number in subject line.
As a result of the Go/No Go Reviews, 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.

- **Go/No-Go Decision Points**: Go/No-Go decision points are similar to project milestones, in that EERE staff will review the project based on pre-established metrics defined in the award negotiations process following selection.

### 12. Conference Spending (February 2016)

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.

### VII. 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 not later than 3 business days prior to the application due date.

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.
VIII. **OTHER INFORMATION**

A. **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.

B. **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.

C. **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.

D. **TREATMENT OF APPLICATION INFORMATION**

In general, EERE will use data and other information contained in applications for evaluation purposes only 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. Applications containing trade secrets or commercial or financial information that is privileged or confidential, which the applicant does not want disclosed to the public or used by the Government for any purpose other than application evaluation, must be marked as described in this section.

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,
Problems with applicant’s disclosure.

U.S.C. reviewers in independent application, non information may be releasable in the application. The Government to make 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.

The above markings enable EERE to follow the provisions of 10 CFR 1004.11(d) in the event a Freedom of Information Act (FOIA) request is received for information submitted with an application. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under a FOIA request or otherwise. The U.S. Government is not liable for the disclosure or use of unmarked information, and may use or disclose such information for any purpose.

Subject to the specific FOIA exemptions identified in 5 U.S.C. 552(b), all information submitted to EERE by a FOA applicant is subject to public release under the Freedom of Information Act, 5 U.S.C. §552, as amended by the OPEN Government Act of 2007, Pub. L. No. 110-175. It is the applicant’s responsibility to review FOIA and its exemptions to understand (1) what information may be subject to public disclosure and (2) what information applicants submit to the Government that are protected by law. In some cases, DOE may be unable to make an independent determination regarding which information submitted by an applicant is releasable and which is protected by an exemption. In such cases, DOE will consult with the applicant, in accordance with 10 C.F.R. §1004.11, to solicit the applicant’s views on how the information should be treated.

E. Evaluation and Administration by Non-Federal Personnel

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

Eligible activities under this Technology Office 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.

G. **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).

H. **Notice of Potential Disclosure Under Freedom of Information Act**

Applicants should be advised that identifying information regarding all applicants, including applicant names and/or points of contact, may be subject to public disclosure under the Freedom of Information Act, whether or not such applicants are selected for negotiation of award.

I. **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 rejection of a Full Application;
- 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.

J. **Retention of Submissions**

EERE expects to retain copies of all Letters of Intent, 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.
K. 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.

L. GOVERNMENT RIGHTS IN SUBJECT INVENTIONS

Where 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.
2. 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.

M. 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.
N. COPYRIGHT

The Prime Recipient and Subrecipients may assert copyright in copyrightable data, 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.

O. PROTECTED PERSONALLY IDENTIFIABLE INFORMATION

In responding to this FOA, Applicants must ensure that Protected Personally Identifiable Information (PII) is not included in the following documents: Project Abstract, Project Narrative, Biographical Sketches, Budget or Budget Justification. These documents will be used by the Merit Review Committee in the review process to evaluate each application. PII is defined by the Office of Management and Budget (OMB) and EERE as:

Any information about an individual maintained by an agency, including but not limited to, education, financial transactions, medical history, and criminal or employment history and information that can be used to distinguish or trace an individual’s identity, such as their name, social security number, date and place of birth, mother’s maiden name, biometric records, etc., including any other personal information that is linked or linkable to an individual.

This definition of PII can be further defined as: (1) Public PII and (2) Protected PII.

Public PII: PII found in public sources such as telephone books, public websites, business cards, university listing, etc. Public PII includes first and last name, address, work telephone number, email address, home telephone number, and general education credentials.

Protected PII: PII that requires enhanced protection. This information includes data that if compromised could cause harm to an individual such as identity theft.

Listed below are examples of Protected PII that Applicants must not include in the files listed above to be evaluated by the Merit Review Committee.

- Social Security Numbers in any form
- Place of Birth associated with an individual
- Date of Birth associated with an individual
- Mother’s maiden name associated with an individual
- Biometric record associated with an individual
- Fingerprint
- Iris scan
- DNA

Note: Effective 12/26/2014, the DOE Financial Assistance regulations contained in 10 CFR 600 is superseded by the Financial Assistance regulations contained in 2 CFR Part 200 as amended by 2 CFR Part 910.

Questions about this FOA? Email AMOTraineeship@ee.doe.gov

Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov. Include FOA name and number in subject line.
• Medical history information associated with an individual
• Medical conditions, including history of disease
• Metric information, e.g. weight, height, blood pressure
• Criminal history associated with an individual
• Employment history and other employment information associated with an individual
• Ratings
• Disciplinary actions
• Performance elements and standards (or work expectations) are PII when they are so intertwined with performance appraisals that their disclosure would reveal an individual’s performance appraisal
• Financial information associated with an individual
• Credit card numbers
• Bank account numbers
• Security clearance history or related information (not including actual clearances held)

Listed below are examples of Public PII that Applicants may include in the files listed above to be evaluated by the Merit Review Committee:

• Phone numbers (work, home, cell)
• Street addresses (work and personal)
• Email addresses (work and personal)
• Digital pictures
• Medical information included in a health or safety report
• Employment information that is not PII even when associated with a name
• Resumes, unless they include a Social Security Number
• Present and past position titles and occupational series
• Present and past grades
• Present and past annual salary rates (including performance awards or bonuses, incentive awards, merit pay amount, Meritorious or Distinguished Executive Ranks, and allowances and differentials)
• Present and past duty stations and organization of assignment (includes room and phone numbers, organization designations, work email address, or other identifying information regarding buildings, room numbers, or places of employment)
• Position descriptions, identification of job elements, and those performance standards (but not actual performance appraisals) that the release of which would not interfere with law enforcement programs or severely inhibit agency effectiveness
• Security clearances held
• Written biographies (e.g. to be used in a Technology Office describing a speaker)
• Academic credentials
• Schools attended
• Major or area of study

Note: Effective 12/26/2014, the DOE Financial Assistance regulations contained in 10 CFR 600 is superseded by the Financial Assistance regulations contained in 2 CFR Part 200 as amended by 2 CFR Part 910.

Questions about this FOA? Email AMOTraineeship@ee.doe.gov
Problems with EERE Exchange? Email EERE-ExchangeSupport@hq.doe.gov. Include FOA name and number in subject line.
• Personal information stored by individuals about themselves on their assigned workstation or laptop unless it contains a Social Security Number

P. ANNUAL COMPLIANCE AUDITS

If a for-profit entity is a Prime Recipient and has expended $750,000 or more of Federal funds during the entity's fiscal year, an annual compliance audit performed by an independent auditor may be required. For additional information, please refer to 2 C.F.R. § 910.501 and Subpart F through the link below.
http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=1&SID=0ad8c722e3f878b7e8133fc80d48fea1&ty=HTML&h=L&r=PART&n=pt2.1.910.

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 funds 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 through the link below.
http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title02/2cfr200_main_02.tpl.

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 910.130, 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. 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%

See the sample cost share calculation for a blended cost share percentage below. Keep in mind that FFRDC funding is DOE funding.

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.


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:

(A) 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:

(1) They are verifiable from the recipient's records.

(2) They are not included as contributions for any other federally-assisted project or program.

(3) They are necessary and reasonable for proper and efficient accomplishment of project or program objectives.

(4) They are allowable under the cost principles applicable to the type of entity incurring the cost as follows:

a. 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

b. Other types of organizations. Allowability of costs incurred by other types of organizations that may be Subrecipients under a prime award is determined as follows:

i. Institutions of higher education. Allowability is determined in accordance with: 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities

ii. Other nonprofit organizations. Allowability is determined in accordance with: 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities

iii. Hospitals. Allowability is determined in accordance with the provisions of: 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities

iv. Governmental organizations. Allowability for State, local, or federally recognized Indian tribal government is determined in accordance with: 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities

(5) They are not paid by the Federal Government under another award unless authorized by Federal statute to be used for cost sharing or matching.

(6) They are provided for in the approved budget.

(B) Valuing and documenting contributions

(1) 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:

a. The certified value of the remaining life of the property recorded in the recipient's accounting records at the time of donation; or

b. 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.

(2) 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.

(3) 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.

(4) Valuing property donated by third parties.

a. 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.

b. 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:

   i. 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.

   ii. The value of loaned equipment must not exceed its fair rental value.

(5) Documentation. The following requirements pertain to the recipient's supporting records for in-kind contributions from third parties:
a. Volunteer services must be documented and, to the extent feasible, supported by the same methods used by the recipient for its own employees.

b. The basis for determining the valuation for personal services and property must be documented.
APPENDIX B – SAMPLE COST SHARE CALCULATION FOR BLENDED COST SHARE PERCENTAGE

The following example shows the math for calculating required cost share for a project with $2,000,000 in Federal funds with four tasks requiring different Non-federal cost share percentages:

<table>
<thead>
<tr>
<th>Task</th>
<th>Proposed Federal Share</th>
<th>Federal Share %</th>
<th>Recipient Share %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1 (R&amp;D)</td>
<td>$1,000,000</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>Task 2 (R&amp;D)</td>
<td>$500,000</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>Task 3 (Demonstration)</td>
<td>$400,000</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Task 4 (Outreach)</td>
<td>$100,000</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Federal share ($) divided by Federal share (%) = Task Cost

Each task must be calculated individually as follows:

Task 1
$1,000,000 divided by 80% = $1,250,000 (Task 1 Cost)
Task 1 Cost minus federal share = Non-federal share
$1,250,000 - $1,000,000 = $250,000 (Non-federal share)

Task 2
$500,000 divided 80% = $625,000 (Task 2 Cost)
Task 2 Cost minus federal share = Non-federal share
$625,000 - $500,000 = $125,000 (Non-federal share)

Task 3
$400,000 / 50% = $800,000 (Task 3 Cost)
Task 3 Cost minus federal share = Non-federal share
$800,000 - $400,000 = $400,000 (Non-federal share)

Task 4
Federal share = $100,000
Non-federal cost share is not mandated for outreach = $0 (Non-federal share)
The calculation may then be completed as follows:

<table>
<thead>
<tr>
<th>Tasks</th>
<th>$ Federal Share</th>
<th>% Federal Share</th>
<th>$ Non-Federal Share</th>
<th>% Non-Federal Share</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1</td>
<td>$1,000,000</td>
<td>80%</td>
<td>$250,000</td>
<td>20%</td>
<td>$1,250,000</td>
</tr>
<tr>
<td>Task 2</td>
<td>$500,000</td>
<td>80%</td>
<td>$125,000</td>
<td>20%</td>
<td>$625,000</td>
</tr>
<tr>
<td>Task 3</td>
<td>$400,000</td>
<td>50%</td>
<td>$400,000</td>
<td>50%</td>
<td>$800,000</td>
</tr>
<tr>
<td>Task 4</td>
<td>$100,000</td>
<td>100%</td>
<td>$0</td>
<td>0%</td>
<td>$100,000</td>
</tr>
<tr>
<td>Totals</td>
<td>$2,000,000</td>
<td></td>
<td>$775,000</td>
<td></td>
<td>$2,775,000</td>
</tr>
</tbody>
</table>

Blended Cost Share %
Non-federal share ($775,000) divided by Total Project Cost ($2,775,000) = 27.9% (Non-federal)
Federal share ($2,000,000) divided by Total Project Cost ($2,775,000) = 72.1% (Federal)
APPENDIX C - STATEMENT OF PROJECT OBJECTIVES TEMPLATE

[The instructional red and blue text and attachments below should be removed in the final version of the SOPO]

All of the information to be included in the SOPO must be consistent with the Application and any Negotiation Strategies upon which the award was selected. In most cases, the SOPO sections below can be extracted directly from the Work Plan portion of the Technical Volume submitted by the Applicant. Attachment 1 of this template highlights the sections of the Work Plan that form the basis of the SOPO. Significant deviations from the original application require approval of both the Selection Official and the Contracting Officer. The SOPO should accurately define what work is to be done and the expected progress to be achieved. In general, the total length typically should not exceed 10 pages, but could be substantially longer for complex projects.

The following items should not be included in the SOPO:

- Dollar amounts.
- Specific dates (only include general time frames (i.e. Demonstrate XYZ result by Month 3, not Demonstrate XYZ by June 8th, 2013).
- Subcontractors, vendors or individuals by name. The award is with the prime and, as such, the SOPO should not generally reference the subcontractors.

Intellectual property information and other aspects of the project that could be considered proprietary or business confidential should be clearly marked in the final version of the SOPO. The SOPO must be marked as follows and identify the specific pages containing confidential, proprietary, or privileged information:

Notice of Restriction on Disclosure and Use of Data:
Pages [list applicable pages] of this document may contain confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance 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.

The header and footer of every page that contains confidential, proprietary, or privileged information must be marked as follows: “Contains Confidential, Proprietary, or Privileged Information Exempt from Public Disclosure.”

In addition, every line and paragraph containing proprietary, privileged, or trade secret information must be clearly marked with double brackets or highlighting.
A. PROJECT OBJECTIVES

Note: This content may be extracted from the ‘Project Objectives’ section of the Work Plan submitted by the Applicant. The Technology Manager/Project Manager should ensure that the content meets the following guidelines:

Provide a clear and concise (high-level) statement of the goals and objectives of the project as well as the expected outcomes. If the award is to be structured in Budget Periods (or Phases), include the objective(s) for each Budget Period (or Phase).

B. TECHNICAL SCOPE SUMMARY

Note: This content may be extracted from the ‘Technical Scope Summary’ section of the Work Plan submitted by the Applicant. The Technology Manager/Project Manager should ensure that the content meets the following guidelines:

Provide a summary description of the overall work scope and approach to achieve the objective(s). The work scope description needs to be divided by Budget Periods (or Phases) 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.

C. TASKS TO BE PERFORMED

Note: This content may be extracted from the ‘Work Breakdown Structure (WBS) and Task Descriptions’ section of the Work Plan submitted by the Applicant. The task descriptions (i.e. Task Summary) should be included in the SOPO, but the ‘Task Details’ should not necessarily be included in the award document as this level of detail could result in overly burdensome award modifications. The Technology Manager/Project Manager should ensure that the content meets the following guidelines:

The section should describe the specific activities to be conducted over the life of the project. This section provides a summary of the planned approach to this project and should clearly articulate what work must be accomplished to execute the project scope and thus meet the established project objectives.

The task descriptions should be structured with a hierarchy of performance period separated by at least one project-wide go/no-go decision point approximately every 12 months of the project. In other words, tasks should be organized in a logical sequence and should be divided into the phases of the project, as appropriate.

Each task and subtask is to have a unique number and title and an indication of the approximate duration of the task or subtask in months. Each task and subtask is to have a task summary that describes the objectives, what work is to be accomplished, and relationship to project
deliverables or expected results. Appropriate milestones and go/no-go decision criteria should be incorporated into the task and subtask structure.

**Milestones:** The SOPO should identify appropriate milestones throughout the project to demonstrate success, where success is defined as technical achievement rather than simply completing a task. Milestones should follow the SMART rule of thumb, which is that all milestones should be Specific, Measurable, Achievable, Relevant, and Timely. The Applicant should propose relevant milestones for each semester for the duration of the project or other term as appropriate tied to the universities annual calendar by which to measure traineeship program progress and results. The Applicant should also provide the means by which the milestone will be verified. In addition to describing milestones in the SOPO text, the milestones should be included in the Milestone Summary Table below.

**Go/No-Go Decision Points:** The SOPO should include project-wide go/no-go decision points at appropriate points in the work plan. 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, technical 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 year (approximately each 12-month period) of the project. The SOPO should also include the specific technical criteria that will be used to evaluate the progress and make the go/no-go decision. In addition to describing the go/no-go decision points in the SOPO text, the go/no-go decision points and their method of verification should be included in the Milestone Summary Table below.

*Below is an example of a typical task structure. While the example illustrates two Phases and three tasks, the specific project work scope will dictate the appropriate number of phases, budget periods, tasks and subtasks:*

**BUDGET PERIOD 1 (or PHASE 1) [TITLE]** – Budget Period or Phase designations may not be necessary for all awards, but are required for multi-year projects when subsequent work authorization is dependent on meeting success or acceptance criteria associated with major milestones or go/no-go decision points. Text describing the milestone or go/no-go decision is to be inserted into the task structure at the point where prior completed work is expected to confirm attainment of the milestone or support the criteria established to make the go/no-go decision.

**Task 1.0:** Distinctive Title, Date range of the task in months (M1-M4)

**Task Summary:** Task summaries shall explicitly describe what work is to be accomplished, identify the project objectives/outcomes being addresses and provide a concise statement of the objectives of that task. In addition, the description should indicate the project deliverables or expected results that this task will help achieve.

Milestone 1.1 (if applicable)
Milestone 1.2 (if applicable)
Etc.
Subtask 1.1: Title, Date range (M1-M2)

Subtask Summary: Describe the specific and detailed work efforts that go into achieving the higher-level tasks.

Milestone 1.1.1 (if applicable)
Milestone 1.1.2 (if applicable)
Etc.

Subtask 1.2:
(Continue until all Task 1 subtasks are listed)

Task 2.0: (continue in the format above until all tasks and subtasks are listed)
Subtask 2.1: Title, Date range, Subtask Summary Description
Subtask 2.2: Title, Date range, Subtask Summary Description

Budget Period 1 (or Phase 1) Go/No-Go Decision Point: Insert go/no-go decision description, including the specific technical criteria or basis on which the decision is to be made.

BUDGET PERIOD 2 (or PHASE 2) [TITLE]

Task 3.0: Distinctive Title, Date range of the task in months (M1-M4)
(continue in the format above until all tasks and subtasks are listed)

D. PROJECT MANAGEMENT AND REPORTING

This section should briefly describe relevant project management and reporting activities during all budget periods, including any special reporting requirements or deliverables.

Reports and other deliverables will be provided in accordance with the Federal Assistance Reporting Checklist following the instructions included therein.

Additional deliverables as indicated in the task/subtask descriptions include the following:
[Note: If items other than those identified on the "Federal Assistance Reporting Checklist" will be delivered to DOE, these deliverables will be identified within the text of the Statement of Project Objectives and should be identified here. See the following examples:

1. Subtask 1.1 - (Topical Report or Item (e.g. hardware for testing) Description)
2. Task 2 - (Topical Report or Item (e.g. hardware for testing) Description)
<table>
<thead>
<tr>
<th>Task Number</th>
<th>Task or Subtask (if applicable) Title</th>
<th>Milestone Type (Milestone or Go/No-Go Decision Point)</th>
<th>Milestone Number* (Go/No-Go Decision Point Number)</th>
<th>Milestone Description (Go/No-Go Decision Criteria)</th>
<th>Milestone Verification Process (What, How, Who, Where)</th>
<th>Anticipated Date (Months from Start of the Project)</th>
<th>Anticipated Quarter (Quarters from Start of the Project)</th>
</tr>
</thead>
</table>

Note: This content may be extracted from the ‘Milestone Summary Table’ section of the Work Plan submitted by the Applicant. The Technology Manager/Project Manager should ensure that the content meets the following guidelines:

* Milestone numbering convention should align with Task and Subtask numbers, as appropriate. For example, M1.1, M3.2, etc.

Note 1: It is required that each project have at least one milestone per quarter for the entire project duration. It is not necessary that each task have one milestone per quarter.

Note 2: It is required that each project have at least one project-wide go/no-go decision point approximately each year. If a decision point is not specific to a particular task, then you may leave the task information blank for those decision points.

Note 3: All milestones should follow the SMART rule of thumb: **Specific**, **Measurable**, **Achievable**, **Relevant**, and **Timely**

See Milestone Summary Table examples in Attachment 2 below