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# **Next Generation Electric Machines: Enabling Technologies**

**FOA Webinar for DE-FOA-0001467**

**Presented 3/16/2016**

**Official PowerPoint Slides and Transcript**



Good day everyone and welcome to our webinar. Thank you for your interest in the U.S. Department of Energy's efforts on renewable energy and energy efficiency. You are joining us for the Informational Webinar for Applicants and other Interested parties for the Next Generation Electric Machines: Enabling Technologies Funding Opportunity Announcement, or FOA, which was issued last week on March 9th. My name Anant Agarwal and I am a Technology Manager in the Advanced Manufacturing Office within the DOE's Office of Energy Efficiency and Renewable Energy. We hope to cover the basic aspects of the Funding Opportunity Announcement during this webinar.

Before we begin, I'd like to draw your attention to the email address on the left hand side of this cover page. This is the official mailbox to direct all of your questions during the entire FOA process. Please do not contact EERE individuals directly with questions, including myself. All questions received at this mailbox are posted publicly at the Q&A section of the FOA page on EERE Exchange in an anonymous way. The official answers to your questions will typically also be posted within 3 business days. Please be careful not to submit any language that might be business sensitive, proprietary or confidential.

Let's get started!

DE-FOA-0001467 Next Generation Electric Machines: Enabling Technologies	
Anticipated Schedule:	
FOA Issue Date:	3/9/2016
FOA Informational Webinar:	3/16/2016 1:00pm ET
Submission Deadline for Concept Papers:	4/12/2016 5:00pm ET
Submission Deadline for Full Applications:	6/7/2016 5:00pm ET
Submission Deadline for Replies to Reviewer Comments:	7/8/2016 5:00pm ET
Expected Date for EERE Selection Notifications:	September 2016
Expected Timeframe for Award Negotiations:	September 2016 – December 2016
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This slide shows the anticipated schedule for the FOA. The FOA has already been posted, and we are conducting the FOA Informational Webinar now. Please note that there are a few requirements that we will go over in the presentation that are different than in past FOAs, such as Replies to Reviewer Comments – we will cover all requirements for this FOA later in the presentation.

## Notice

- All applicants are strongly encouraged to carefully read the Funding Opportunity Announcement DE-FOA-0001467 (**"FOA"**) and adhere to the stated submission requirements.
- This presentation summarizes the contents of FOA. If there are any inconsistencies between the FOA and this presentation or statements from DOE personnel, the FOA is the controlling document and applicants should rely on the FOA language and seek clarification from EERE.
- If you believe there is an inconsistency, please contact [AMONGEM@ee.doe.gov](mailto:AMONGEM@ee.doe.gov).

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Agenda	
1)	FOA Description
2)	Topic Areas/Technical Areas of Interest
3)	Award Information
4)	Statement of Substantial Involvement
5)	Cost Sharing
6)	Concept Papers
7)	Full Applications
8)	Merit Review and Selection Process
9)	Registration Requirements
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The agenda for this presentation is as follows: READ SLIDE 4

We encourage you to have a copy of the FOA in front of you for reference as we go through the presentation.

## FOA Description

AMO's Next Generation Electric Machines (NGEM) program is an RD&D effort leveraging recent technology advancements in power electronics and electric motors to develop a new generation of energy efficient, high power density, high speed, integrated drive systems for a wide variety of critical energy applications.

This specific Financial Opportunity Announcement (FOA) is focused on advancing key enabling technologies that can take the development of electric machines a giant step further by addressing significant reductions in three major categories of energy losses in an electric machine.

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## Topic Areas/Technical Areas of Interest

### Topic Area 1: High Performance Thermal and Electrical Conductor Manufacturing

- ~ \$3M over 3 years is available from DOE.
- ~2-3 projects with a DOE share of \$1M - \$1.5M per project.
- Topic Area 1 seeks methods that inexpensively increase the electrical and thermal conductivity of winding metals to provide more efficient motors and generators.
- **Metrics & Deliverables:**
  - Build 28AWG round >1Meter length wire based on exemplar components or materials.
  - Demonstrate >33% reduction in I<sup>2</sup>R losses when compared to conventional conductor materials.
  - >1hp single phase Induction Motor built and tested.

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There are a total of 4 Topic Areas under this FOA. Within Topic Area 1, **High Performance Thermal and Electrical Conductor Manufacturing**, an estimated \$3.0 million over 3 years is available from DOE and approximately 2-3 projects could be selected with a DOE share of \$1.0 million - \$1.5 million per project.

Topic Area 1 of this FOA seeks methods that inexpensively increase the electrical and thermal conductivity of winding metals to provide more efficient motors and generators.

Deliverables for this category are divided in two stages. In the first stage, a 28AWG round wire based of exemplar components or materials will be built at minimum of at least one meter in length. A minimum of 33% reduction in I<sup>2</sup>R losses per unit weight or volume (in W/g or W/cm<sup>3</sup>) will be demonstrated over a similar 28AWG, single build film-insulated, round copper or aluminum wire operating at 150°C and cooled through natural ventilation and radiation.

In the second stage, an industry standard minimum one hp single phase IM will be built and tested using the improved high performance wire from stage 1.

## Topic Areas/Technical Areas of Interest

### Topic Area 2: Low Loss Si Steel Manufacturing

- ~\$4M over 3 years is available from DOE.
- ~2-3 projects with a DOE share of \$1M - \$2M per project.
- Topic Area 2 seeks methods that inexpensively increase the resistivity of electrical steels to provide low core losses in motors and generators.
- **Metrics & Deliverables:**
  - Demonstrate a scalable, high throughput process.
  - Build 0.5mm thick lamination, >150 mm width.
  - Demonstrate >50% reduction in core losses when compared to 3.2% Silicon electrical steel.
  - >5hp single phase Induction Motor built and tested.

Within Topic Area 2, an estimated \$4.0 million over 3 years is available from DOE and approximately 2-3 projects could be selected with a DOE share of \$1.0 million - \$2.0 million per project.

Topic Area 2 seeks methods that inexpensively increase the resistivity of electrical steel to provide low core losses in motors and generators.

Applicants to this topic would develop and demonstrate a scalable, high throughput process to make low loss soft magnetic materials with performance target provided in the FOA.

Deliverables for Topic Area 2 are divided into two stages. In the first stage, a 0.5mm thick lamination of exemplar material will be built at minimum of 150 mm width. A minimum of 50% reduction in core losses per unit weight (W/g) will be demonstrated over a 3.2% Si steel of similar thickness operating at 60Hz and 400Hz.

In the second stage, an industry standard minimum five hp single phase IM will be built and tested using the improved low loss soft magnetic material from stage 1.



## Topic Areas/Technical Areas of Interest

### Topic Area 3: Superconducting Wire Manufacturing

- ~\$13M over 3 years is available from DOE
- ~2-3 projects with a DOE share of \$4M - \$6.5M per project
- Topic Area 3 seeks to improve the current carrying performance of 2G HTS wires from state-of-the-art 480A/cm-width to 1440A/cm-width at 77K, 1.5T, and meet price target of \$35-\$50/kA-m.
- **Metrics & Deliverables:**
  - 50% reduction in number of dropouts on 500m long production runs as proof of improved yield.
  - 50% cost reduction in major components to meet FOA price target.
  - Rotor coil for >500hp motor built and tested.

Under Topic Area 3, **Superconducting Wire Manufacturing**, an estimated \$13.0 million over 3 years is available from DOE and approximately 2-3 projects could be selected with a DOE share of \$4.0 million - \$6.5 million per project.

Topic Area 3 seeks to improve the current carrying performance of 2G HTS wires from state-of-the-art 480A/cm-width to 1440A/cm-width at operating condition of 77°K, 1.5T. and/or bring down the manufacturing costs of 2G HTS wires through doubling the yield in kilometer long lengths, and/or reducing the cost of major components by 50%.

In the first stage to triple the current carrying performance, improvements are expected from flux pinning and increase in superconducting film thickness, which should be quantified in cost/performance to meet the price goals. Minimum sample wire lengths must exceed 50m to prove the scalability of the technology.

Also in the first stage for yield improvement efforts, teams will show 50% reduction in number of dropouts on 500m long production runs.

Also in the first stage for cost reduction efforts, teams will show 50% cost reduction in major components to meet FOA price target.

In the second stage, one coil representing one rotor pole of an industry standard minimum 500hp motor will be built and tested using the improved HTS wire from the first stage.

## Topic Areas/Technical Areas of Interest

### Topic Area 4: Other Enabling Technologies to Increase Performance

- ~\$5M over 3 years is available from DOE.
- ~2-3 projects with a DOE share of \$1.5M - \$2.5M per project.
- **Topic Area 4a - Advanced soft magnetic materials**
  - Benefits validated against FOA metrics with modeling.
  - 5 kW prototype will be built and tested.
- **Topic Area 4b - Lead and Bismuth free economical bearing materials & Topic Area 4c - Advanced high frequency insulation materials**
  - Quantitative explanation of impact on system-level functionality.
  - Feasible plan for transition and demonstration at a system level.

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Under Topic Area 4, Other Enabling Technologies to Increase Performance, an estimated \$5.0 million over 3 years is available from DOE and approximately 2-3 projects could be selected with a DOE share of \$1.5 million - \$2.5 million per project.

Under this Topic Area, DOE encourages RD&D efforts in advanced soft magnetics, high frequency insulation materials and lead free low loss bearing technologies.

Deliverables for Advanced soft magnetic materials work are divided in two stages. In the first stage, the benefits of advanced soft magnetic material used in the proposed motor topology will be validated against the FOA metrics through mathematical and simulation modeling. In the second stage, a 5 kW prototype will be built and tested according to NEMA test standards using the optimized design from stage 1.

Deliverables for work on lead and bismuth free economical bearing materials and advanced high frequency insulation materials need not include incorporation into a full motor prototype. However, there must be a clear, compelling and quantitative explanation of the new component's impact on system-level functionality, and an outline of a feasible plan for subsequent transition and demonstration at a system level.

## Non-Responsive Applications

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

- Applications that fall outside the technical parameters specified in Section I.B of the FOA, including but not limited to:
  - Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the law of thermodynamics).
  - Applications that primarily focus on the development of novel power electronics for motor applications
  - Simulations or assessment studies that do not include demonstration of a new innovative component level technology

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And now I will hand it over to Dr. Gibson Asuquo, Project Officer.

Read Slide 12

## Award Information

<b>Total Amount to be Awarded</b>	\$25 Million*
<b>Average Award Amount</b>	EERE anticipates making awards that range from \$1 Million to \$6.5 Million.
<b>Types of Funding Agreements</b>	Cooperative Agreements, Grants, Technology Investment Agreements, Work Authorizations, and Interagency Agreements
<b>Period of Performance</b>	24 to 36 months
<b>Cost Share Requirement</b>	20% of Total Project Costs

\*Subject to the availability of appropriated funds



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EERE expects to make approximately \$25 million of Federal funding available for new awards under this FOA subject to the availability of appropriated funds. The average award amount is anticipated to range from \$1 Million to \$6.5 Million.

EERE intends to fund mostly cooperative agreements under this FOA, but may also fund Grants, TIAs, Work Authorizations, and Interagency Agreements. Cooperative Agreements include Substantial Involvement, which we will discuss next.

## Statement of Substantial Involvement

EERE has substantial involvement in work performed under Awards made following this FOA. EERE does not limit its involvement to the administrative requirements of the Award. Instead, EERE has substantial involvement in the direction and redirection of the technical aspects of the project as a whole. Substantial involvement includes, but is not limited to, the following:

- EERE shares responsibility with the Recipient for the management, control, direction, and performance of the Project.
- EERE may intervene in the conduct or performance of work under this Award for programmatic reasons. Intervention includes the interruption or modification of the conduct or performance of project activities.
- EERE may redirect or discontinue funding the Project based on the outcome of EERE's evaluation of the Project at that the Go/No Go decision point.
- EERE participates in major project decision-making processes.

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- Under cooperative agreements, there will be what is known as “substantial involvement” between EERE and the Recipient during the performance of the project which means EERE has substantial involvement in the direction and redirection of the technical aspects of the project as a whole.

## Cost Sharing Requirements

- Applicants must contribute a minimum of 20% of the total project costs for R&D projects. *Unless the project qualifies for the Cost Share Reduction.*
- **Cost Share Reduction:** EERE has reduced the Recipient Cost Share Requirement to **10%** for R&D activities where:
  - The Prime Recipient is a domestic institution of higher education; domestic nonprofit entity; FFRDC; or U.S. State, local, or tribal government entity; and
  - The Prime Recipient performs more than 50% of the project work, as measured by the Total Project Cost

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Applicants who believe their project qualifies for the reduced recipient cost share must be able to provide verification that the above requirements are satisfied

## Cost Share Contributions

- Contributions must be:
  - Specified in the project budget
  - Verifiable from the Prime Recipient's records
  - Necessary and reasonable for proper and efficient accomplishment of 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

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The total budget presented in the application must include both Federal (DOE), and Non-Federal (cost share) portions, thereby reflecting TOTAL PROJECT COSTS proposed. All costs must be verifiable from the Recipient's records and be necessary and reasonable for the accomplishment of the project.



## Allowable Cost Share

- Cost Share must be allowable and must be verifiable upon submission of the Full Application
- Refer to the following applicable Federal cost principles:

Entity	Cost Principles
For-profit entities	FAR Part 31
All other non-federal entities	2 CFR Part 200 Subpart E - Cost Principles

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Cost Share must be allowable and must be verifiable upon submission of the Full Application. Please refer to this chart for your entity's applicable cost principles. It is imperative that you follow the applicable cost principles when creating your budget for the full application.

## Allowable Cost Share

- Cash Contributions
  - May be provided by the Prime Recipient, Subrecipients, or a Third Party
- In-Kind Contributions
  - Can 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

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Cost share can be provided in cash and/or in-kind. It can be provided by the Prime Recipient, subs, or a third party.

The basic definition of in-kind cost share is the donation of personnel time, equipment, facilities, or other items that an organization will contribute to the project. It can take many forms, each of which must be assigned a dollar value to be included in the budget. Some examples of in-kind cost share are the donation of work hours, facility use, equipment use.

## Unallowable Cost Share

- 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
  - Expenditures reimbursed under a separate Federal Technology Office
  - Independent research and development (IR&D) funds
  - The same cash or in-kind contributions for more than one project or program

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Be aware that there are items that are considered unallowable cost share. If a cost is considered unallowable, it cannot be counted as cost share. This slide provides some examples of cost share that are unallowable.

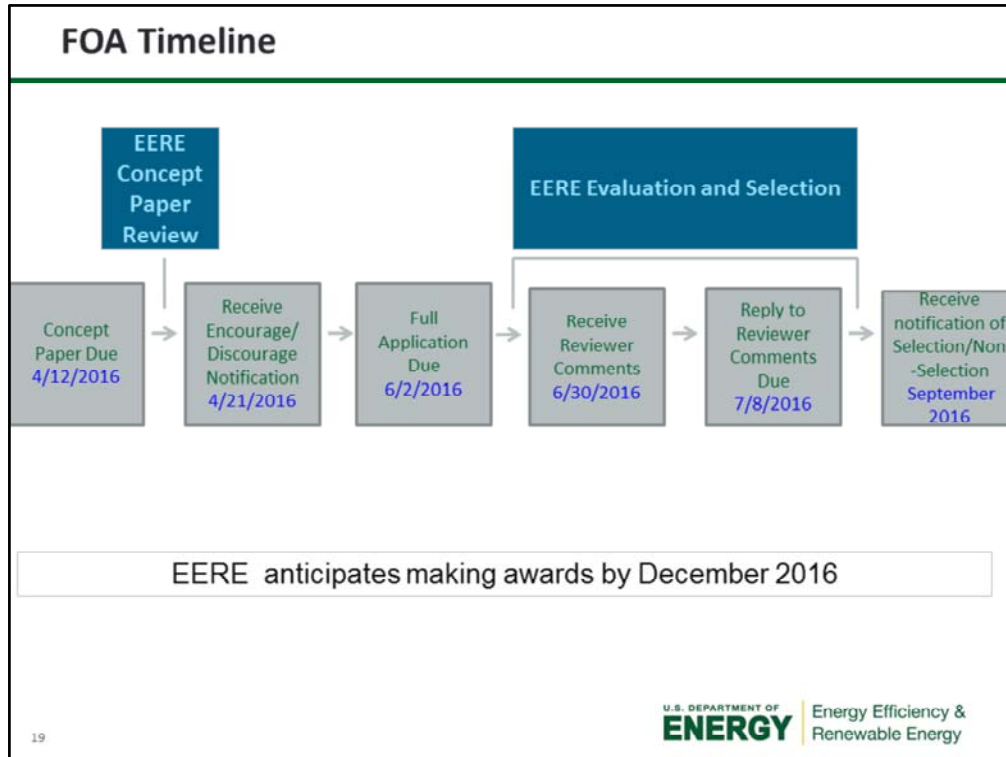
## Cost Share Payment

- Recipients must provide documentation of the cost share contribution, incrementally over the life of the award
- The cumulative cost share percentage provided on each invoice 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. See [Section III.B.vi](#) of the FOA.

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Cost Share must be provided on an invoice basis, unless a waiver is requested and approved by the DOE Contracting Officer.



EERE's Evaluation and Selection Process is shown in the blue boxes. EERE will review Concept Papers, Replies to Reviewer Comments (which we will cover later in the presentation), and Full Applications. The gray boxes represent the actions that apply to applicants throughout the FOA process.

## Concept Papers

- Applicants must submit a Concept Paper
  - Each Concept Paper must be limited to a single concept or technology
- The Concept Paper must include a technology description (See Section IV.C of the FOA)
  - The technology description is limited to 2 pages
  - The Concept Paper can also include graphs, charts, or other data (limited to 1 page)
- Concept Papers must be submitted 4/12/2016 5:00PM ET through EERE Exchange, and must comply with the content and form requirements in Section IV.C of the FOA
- EERE provides applicants with: (1) an “encouraged” or “discouraged” notification, and (2) the reviewer comments

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Concept Papers are required for this FOA. Concept Papers are brief descriptions of the proposed project. It allows applicants to submit their ideas with minimal time and expense. EERE will provide feedback on the proposed project so the Applicant can make an informed decision whether to expend additional resources to prepare a full application.

## Concept Paper Review

EERE evaluates the Concept Papers based on the following technical review criteria:

- **Concept Paper Criterion: Overall FOA Responsiveness and Viability of the Project (Weight: 100%)** This criterion involves consideration of the following factors:
  - The applicant clearly describes the proposed technology, describes how the technology is unique and innovative, and how the technology will advance the current state-of-the-art;
  - The applicant has identified risks and challenges, including possible mitigation strategies, and has shown the impact that EERE funding and the proposed project would have on the relevant field and application;
  - The applicant has the qualifications, experience, capabilities and other resources necessary to complete the proposed project; and
  - The proposed work, if successfully accomplished, would clearly meet the objectives as stated in the FOA.

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Please READ this SLIDE for concept paper review criterion which is weighted 100%

EERE will provide applicants with (1) either an “encouraged” or “discouraged” notification, and (2) the reviewer comments.

Please note that regardless of the date applicants receive the Encourage/Discourage notifications, the submission deadline for the Full Application remains the date stated on the FOA cover page

## Full Applications

- The Full Application includes:
  - **Technical Volume:** The key technical submission - info relating to the technical content, project team members, etc.
  - **SF-424 Application for Federal Assistance:** The formal application signed by the authorized representative of the applicant.
  - **SF-424A Budget & Budget Justification:** a detailed budget and spend plan for the project.
  - **Summary for Public Release**
  - **Summary Slide**
  - **Statement of Project Objectives (SOPO)**
  - **Administrative Documents:** E.g., U.S. Manufacturing Plan, FFRDC Authorization (if applicable), Disclosure of Lobbying Activities, etc

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The Full Application includes the elements listed here in the slide.



## Full Applications: Technical Volume Content

- **Technical Volume: the key technical component of the Full Application**

Content of Technical Volume	Suggested % of Technical Volume
Cover Page	
Project Overview	10%
Technical Description, Innovation and Impact	30%
Workplan and Market Transformation Plan	40%
Technical Qualifications and Resources	20%

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The key technical component of the full application is the Technical Volume, which helps applicants frame the technical information that the application will be evaluated on. The Technical Volume provides information regarding what the project is, how the project tasks will be accomplished, and the project timetable.

The Technical Volume is comprised of a cover page, project overview, technical description, innovation, and impact, workplan and Market Transformation Plan, and technical qualifications and resources. Please note that the percentages listed here are suggested and are not mandatory.

## Full Application Eligibility Requirements

- Applicants must submit a Full Application by 6/7/2016 5:00PM ET
- Full Applications are eligible for review if:
  - The Applicant is an eligible entity Section III.A of FOA;
  - The Applicant submitted an eligible Concept Paper;
  - The Cost Share requirement is satisfied Section III.B of FOA;
  - The Full Application is compliant Section III.C of FOA; and
  - The proposed project is responsive to the FOA Section III.D of FOA
  - Each entity is limited to 1 Concept Paper and 1 Full Application for each topic area per Section III.F.
  - The Full Application meets any other eligibility requirements listed in Section III of the FOA.

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Hell, this John Harrington and I will present the remaining slides. As we previously pointed out, applicants must submit full applications by June 7, 2016. EERE will conduct an eligibility review, and full application will be deemed eligible if: READ SLIDE

## Who's Eligible to Apply?

Eligible applicants for this FOA include:

1. Individuals
2. Domestic Entities
3. Foreign Entities
4. Incorporated Consortia
5. Unincorporated Consortia

For more detail about each eligible applicant, please see Section III.A of the FOA for eligibility requirements

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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## Multiple Applications

Applicants may submit one concept paper and one application to each topic area of this FOA

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## Multiple Applications

- If an applicant submits more than one Concept Paper or Full Application under the same Topic Area, EERE will only consider the last timely submission for evaluation
  - Any other submissions received listing the same applicant will be considered non-compliant and not eligible for further consideration
  - This limitation does not prohibit an applicant from collaborating on other applications (e.g., as a potential Subrecipient or partner) so long as the entity is only listed as the Prime Applicant on one Concept Paper and Full Application submitted under this FOA

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### Merit Review and Selection Process (Full Applications)

- The Merit Review 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, to make the selection decisions

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## Technical Merit Review Criteria

### Criterion 1: Technical Merit, Innovation, and Impact (45%)

#### Technical Merit and Innovation

- Extent to which the proposed technology or process is innovative and has the potential to advance the state of the art;
- Degree to which the current state of the technology and the proposed advancement are clearly described;
- Extent to which the application specifically and convincingly demonstrates how the applicant will move the state of the art to the proposed advancement; and
- Sufficiency of technical detail in the application to assess whether the proposed work is scientifically meritorious and revolutionary, including relevant data, calculations and discussion of prior work in the literature with analyses that support the viability of the proposed work.

#### Impact of Technology Advancement

- How the project supports the topic area objectives and target specifications and metrics; and
- The potential impact of the project on advancing the state of the art.

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Applications will be evaluated against the following 4 merit review criteria: Criterion 1, Technical Merit, Innovation, and Impact with a weighting of 45%

## Technical Merit Review Criteria - Continued

### Criterion 2: Project Research and Commercialization Plan (25%)

#### Research Approach and Workplan

- Degree to which the approach and critical path have been clearly described and thoughtfully considered; and
- Degree to which the task descriptions are clear, detailed, timely, and reasonable, resulting in a high likelihood that the proposed Workplan will succeed in meeting the project goals.

#### Identification of Technical Risks

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

Criterion 2, Project Research and Commercialization Plan with a weighting of 25%



## Technical Merit Review Criteria - Continued

### Criterion 2, Continued

#### Baseline, Metrics, and Deliverables

- The level of clarity in the definition of the baseline, metrics, and milestones; and
- Relative to a clearly defined experimental 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.

#### Market Transformation Plan

- Identification of target market, competitors, and distribution channels for proposed technology along with known or perceived barriers to market penetration, including mitigation plan; and
- Comprehensiveness of commercialization plan including but not limited to product development and/or service plan, commercialization timeline, financing, product marketing, legal/regulatory considerations including intellectual property, infrastructure requirements, Data Management Plan and Open Source Software Distribution Plan, U.S. manufacturing plan etc., and product distribution.

## Technical Merit Review Criteria - Continued

### Criterion 3: Team and Resources (20%)

- The capability of the Principal Investigator(s) and 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 consortia/team demonstrates the ability to facilitate and expedite further development and commercial deployment of the proposed technologies;
- Level of participation by project participants as evidenced by letter(s) of commitment and how well they are integrated into the Workplan; and
- Reasonableness of budget and spend plan for proposed project and objectives.

### Criterion 4: Contribution to US Manufacturing (10%)

- Degree to which the commitments made in the U.S. Manufacturing Plan will strengthen the competitiveness of domestic manufacturing and translate into increased long-term manufacturing and employment in the United States.

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**Criterion 3, team and resources with a weighting of 20% and Criterion 4 with a weighting of 10%.**

## Replies to Reviewer Comments

- EERE provides applicants with reviewer comments
- Applicants are not required to submit a Reply - it is optional
- To be considered by EERE, a Reply must be submitted by 7/8/2016 5:00PM ET and submitted through EERE Exchange
- Content and form requirements:

Section	Page Limit	Description
Text	2 pages max	Applicants may respond to one or more reviewer comments or supplement their Full Application.
Optional	1 page max	Applicants may use this page however they wish; text, graphs, charts, or other data to respond to reviewer comments or supplement their Full Application are acceptable.

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The Full Application are reviewed by experts in the FOA topic area. After those experts review the applications, EERE will provide applicants with reviewer comments. Applicants will have a brief opportunity to review the comments and prepare a short Reply to Reviewer Comments responding to comments however they desire. The Reply to Reviewer Comments is due by the date and time provided on this slide. Applicants should anticipate receiving the independent reviewer comments approximately three business days before this due date. The Reply to Reviewer Comments is an optional submission; applicants are not required to submit a Reply to Reviewer Comments.

This a **customer centric** process that provides applicants with a unique opportunity to correct misunderstandings and misinterpretations and to provide additional data that might influence the selection process in their favor. The Replies are considered by the reviewers and the selection official.

Replies to Reviewer Comments must conform to the content and form requirements listed here, including maximum page lengths. If a Reply to Reviewer Comments is more than three pages in length, EERE will review only the first three pages and disregard any additional pages.

Please see [Sections IV.F. and V.A.3](#) for additional information regarding Replies to Reviewer Comments

## Selection Factors

The Selection Official may consider the merit review recommendation, program policy factors, and the amount of funds available in arriving at selections for this FOA

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## Program Policy Factors

- The Selection Official may consider the following program policy factors in making his/her selection decisions:
  - The degree to which the proposed project, including proposed cost share, optimizes the use of available EERE funding to achieve programmatic objectives
  - The level of industry involvement and demonstrated ability to commercialize energy or related technologies
  - Technical, market, organizational, and environmental risks associated with the project
  - 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
  - The degree to which the proposed project represents diverse types and sizes of Applicant organizations while not being detrimental to the overall objectives of the program;
  - The degree to which the proposed project represents diverse technology concepts, applications, and/or technical approaches both within and amongst the FOA's Topic Areas; and
  - Whether the applicant is a Climate Action Champion designated under DOE's Request for Applications DE-FOA-0001189 (RFA) or the applicant has a letter of support from a Climate Action Champion designated under the above referenced RFA

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After the Merit Review process, the Selection Official may consider these program policy factors to come to a final selection decision.

## Registration Requirements

- To apply to this FOA, Applicants must register with and submit application materials through EERE Exchange: <https://eere-Exchange.energy.gov>
- Obtain a “control number” at least 24 hours before the first submission deadline
- Although not required to submit an Application, the following registrations must be complete to received an award under this FOA:

Registration Requirement	Website
DUNS Number	<a href="http://fedgov.dnb.com/webform">http://fedgov.dnb.com/webform</a>
SAM	<a href="https://www.sam.gov">https://www.sam.gov</a>
FedConnect	<a href="https://www.fedconnect.net">https://www.fedconnect.net</a>
Grants.gov	<a href="http://www.grants.gov">http://www.grants.gov</a>

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

## Means of Submission

- Concept Papers, Full Applications, and Replies to Reviewer Comments must be submitted through EERE Exchange at <https://eere-Exchange.energy.gov>
  - 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 can be found at <https://eere-Exchange.energy.gov/Manuals.aspx>

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All required submissions must come through EERE Exchange. EERE will not review or consider applications submitted through any other means.

## Key Submission Points

- Check entries in EERE Exchange
  - Submissions could be deemed ineligible due to an incorrect entry
- EERE strongly encourages Applicants to submit 1-2 days prior to the deadline to allow for full upload of application documents and to avoid any potential technical glitches with EERE Exchange
- Make sure you hit the submit button
  - Any changes made after you hit submit will un-submit your application and you will need to hit the submit button again
- For your records, print out the EERE Exchange Confirmation page at each step, which contains the application's Control Number

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## Applicant Points-of-Contact

- Applicants must designate primary and backup points-of-contact in EERE Exchange with whom EERE will communicate to conduct award negotiations
- It is imperative that the Applicant/Selectee be responsive during award negotiations and meet negotiation deadlines
  - Failure to do so may result in cancellation of further award negotiations and rescission of the Selection

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## Questions

- Questions about this FOA? Email [AMONGEM@ee.doe.gov](mailto:AMONGEM@ee.doe.gov)
  - All Q&As related to this FOA will be posted on EERE Exchange
    - You must select this specific FOA Number in order to view the Q&As
  - EERE will attempt to respond to a question within 3 business days, unless a similar Q&A has already been posted on the website
- Problems logging into EERE Exchange or uploading and submitting application documents with EERE Exchange? Email [EERE-ExchangeSupport@hq.doe.gov](mailto:EERE-ExchangeSupport@hq.doe.gov).
  - Include FOA name and number in subject line

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Thank you, this concludes our webinar for today.