



Welcome

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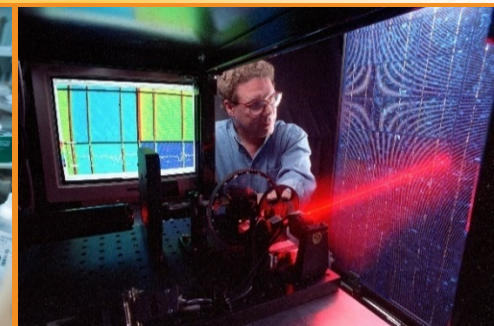
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Please mute your phones and we'll begin momentarily



Office of ENERGY EFFICIENCY
& RENEWABLE ENERGY

SOLAR ENERGY TECHNOLOGIES OFFICE



Solar Energy Technologies Office Fiscal Year 2019 Funding Program

Topic Area 2: Concentrating Solar-Thermal Power Research and Development

Questions? Email
SETO.FOA@ee.doe.gov
energy.gov/solar-office

CSP FOA Webinar – April 4, 2019
[DE-FOA-0002064](https://www.doe.gov/energy-efficiency/renewable-energy/solar-energy-technologies-office/foa-0002064)



Notice

- NO NEW INFORMATION OTHER THAN THAT PROVIDED IN THE FOA WILL BE DISCUSSED IN THE WEBINAR.
- There are no particular advantages or disadvantages to the application evaluation process with respect to participating on the webinar today.
- Your participation is completely voluntary.



Notice

- All applicants are strongly encouraged to carefully read the Funding Opportunity Announcement **DE-FOA-0002064** (“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 at SETO.FOA@ee.doe.gov



Anticipated Schedule:

FOA Issue Date	March 26, 2019
Informational Webinar	April 3, 2019, 2:00 pm ET
Submission Deadline for Mandatory Letter of Intent (LOI)	May 7, 2019, 5:00 pm ET
Submission Deadline for Concept Papers	May 14, 2019, 5:00 pm ET
Submission Deadline for Full Applications and SIPS Applications:	July 25, 2019, 5:00 pm ET
Expected Submission Deadline for Replies to Reviewer Comments:	September 6, 2019, 5:00 pm ET
Expected Date for EERE Selection Notifications:	November 2019
Expected Timeframe for Award Negotiations:	November 2019-February 2020



Agenda

- 1) FOA Description
- 2) Topic Areas/Technical Areas of Interest
- 3) Award Information
- 4) Statement of Substantial Involvement
- 5) Cost Sharing
- 6) Letters of Intent
- 7) Concept Papers
- 8) Full Applications
- 9) Merit Review and Selection Process
- 10) Registration Requirements

Solar Energy Technologies Office

WHAT WE DO: The U.S. Department of Energy's Solar Energy Technologies Office supports early-stage research and development of solar technologies while focusing on **grid reliability, resilience, and security.**

HOW WE DO IT: The office uses a competitive solicitation process to address critical research gaps, ensuring the solar industry has the technological foundations needed to **lower solar electricity costs, ease grid integration, and enhance the use and storage of solar energy.**



SETO's 2030 Cost Targets

- SETO works to achieve 2030 SunShot targets that reduce the cost of solar by an additional 40% to 70% beyond 2018 costs. Achieving these targets would make solar one of the most affordable sources of new electricity generation. The targets for the unsubsidized, levelized cost of energy (LCOE) at the point of grid connection are:
 - \$0.03 per kilowatt-hour (kWh) for utility-scale PV
 - \$0.04 per kWh for commercial rooftop PV
 - \$0.05 per kWh for residential rooftop PV
 - \$0.05 per kWh for CSP with thermal energy storage

The header features a gradient background from teal to orange. On the left, there are icons for a battery, solar panels, a recycling symbol, a fan, a microscope, and a laptop with a lightning bolt. On the right, there are icons for a power line tower, a padlock, a Wi-Fi symbol, a piggy bank, and a clock.

What's next *for* SOLAR?

Achieving SETO's priorities across the solar energy technology landscape requires sustained, multifaceted innovation. For our FY19 Funding Program, the office intends to support high-impact, early-stage research in the following areas:

- **Topic 1: Photovoltaics Research and Development**
- **Topic 2: Concentrating Solar-Thermal Power Research and Development**
- **Topic 3: Balance of Systems Soft Costs Reduction**
- **Topic 4: Innovations in Manufacturing: Hardware Incubator**
- **Topic 5: Advanced Solar Systems Integration Technologies**



Topic 2 – Concentrating Solar-Thermal Power Research and Development

This topic will support the development of thermal storage technologies that make solar energy available on-demand and advanced manufacturing and autonomous technologies to lower concentrating solar-thermal power (CSP) costs.

Topic 2.1: Firm Thermal Energy Storage (\$11 million)

Concepts that expand the dispatchability and availability of CSP plants to provide value to grid operators. Thermal energy storage (TES) systems of interest include:

- Long-term TES systems that store energy for weekly or seasonal dispatch
- Pumped heat electricity storage for CSP and concepts that enable charging of TES via off-peak grid electricity
- Commercializing TES through projects that pursue near-term market adoption

Topic 2.2: Materials and Manufacturing (\$11 million)

Solutions that reduce the cost of manufacturing CSP components, encourage the commercialization of new CSP technologies, and support the development of an agile, U.S.-based CSP manufacturing sector.

Topic 2.3: Autonomous CSP Collector Field (\$11 million)

Solutions that enable a solar field that can fully operate without any human input, reducing costs and maximizing thermal energy collection efficiency.



Estimated Award Funding Information

Topic 2: Concentrating Solar – Thermal Power Research and Development

2.1	Firm Thermal Energy Storage	<ul style="list-style-type: none">• \$11 million total• \$8 million maximum per award• Up to 3 years• 2 to 6 awards
2.2	Materials and manufacturing	<ul style="list-style-type: none">• \$11 million total• \$5 million maximum per award• Up to 3 years• 3 to 6 awards
2.3	Autonomous CSP Collector Field	<ul style="list-style-type: none">• \$11 million total• \$8 million maximum per award• Up to 3 years• 2 to 6 awards

*Subject to the availability of appropriated funds

energy.gov/solar-office



Teaming Partner List

- To facilitate the formation of new project teams for this FOA, a Teaming Partner List is available at [EERE Exchange](#).
- Any organization that would like to be included on this list should submit the following information to SETO.FOA@ee.doe.gov
 - Organization name, contact name, contact address, contact email, and contact phone number
 - Organization type, area of technical expertise, topic area, and a brief description of capabilities
- By submitting this information, you consent to the publication of the above-referenced information.
- By facilitating this Teaming Partner List, EERE does not endorse or otherwise evaluate the qualifications of the entities that self-identify themselves for placement on the Teaming Partner List.



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

Note: DOE/NNSA Federally Funded Research and Development Centers (FFRDCs) and Non-DOE/NNSA FFRDCs are eligible to apply for funding as a Subrecipient (receiving up to 49.9% of the award funding) but are not eligible to apply as a Prime Recipient.

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.



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, such as anything that violates the laws of thermodynamics



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.

Cost Sharing Requirements

- The cost share must be at least 20% of the total allowable costs for R&D projects and 50% of the total allowable costs for demonstration and commercial application projects and must come from non-federal sources unless otherwise allowed by law.*
- The following table illustrates the anticipated focus and required cost share for projects' demonstration activities, along with the anticipated time frames for each phase. Demonstration is an option for all projects in Topics 1, 2, 4, and 5 but may not be possible or applicable, depending on the technology, technology readiness level, or current regulations and market structures.**

	Budget Period 1	Budget Period 2	Budget Period 3
R&D projects <u>without</u> demonstration	Research and development (20% cost share)		
R&D projects <u>with</u> demonstration In Budget Period 3	Research and development (20% cost share)		Demonstration (50% cost share)

NOTE:

*The sum of the government share, including FFRDC costs if applicable, and the recipient share of allowable costs equals the total allowable cost of the project. See 2 CFR 200.306 and 2 CFR 910.130 for the applicable cost sharing requirements

** Any proposed project with demonstration is required to provide at least 50% cost share during the validation period See Appendix F of the FOA for further discussion of technology readiness levels.



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
- If you are selected for award negotiations, 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
- Please note, vendors/contractors may NOT provide cost share. Any partial donation of goods or services is considered a discount and is not allowable.

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 http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/31.htm
All other non-federal entities	2 CFR Part 200 Subpart E - Cost Principles https://www.ecfr.gov/cgi-bin/text-idx?node=2:1.1.2.2.1.5&rgn=div6



Allowable Cost Share

- Cash Contributions
 - May be provided by the Prime Recipient, Subrecipients, or a Third Party (may not be provided by vendors/contractors)
- In-Kind Contributions
 - Can include, but are not limited to: the donation of volunteer time or the donation of space or use of equipment.

For more information, see the Cost Share Appendix in the FOA



Unallowable Cost Share

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

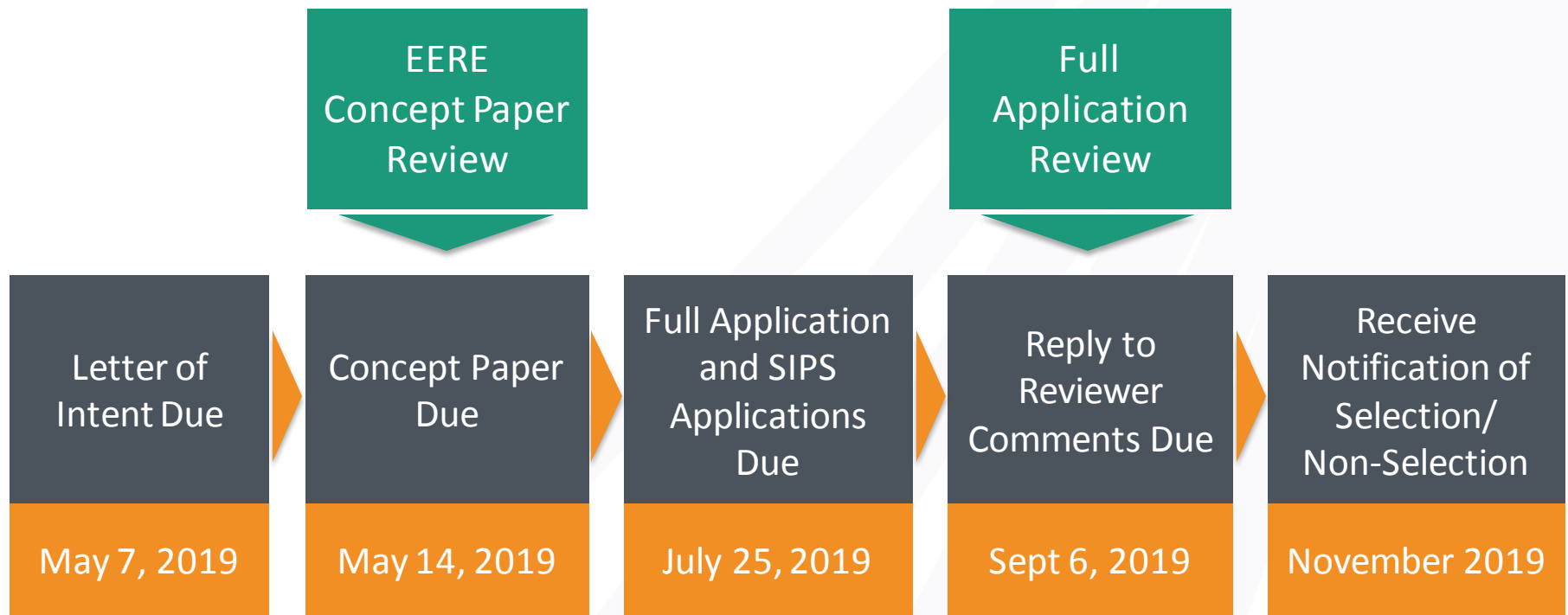
- Revenues or royalties from the prospective operation of an activity beyond the project period
- Proceeds from the prospective sale of an asset of an activity
- Federal funding or property
- Expenditures reimbursed under a separate Federal Technology Office
- The same cash or in-kind contributions for more than one project or program
- Vendor/contractor contributions



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.

FOA Timeline



Expected Timeframe for Award Negotiations: November 2019 - February 2020



Required Letters of Intent

- Letters of Intent (“LOIs”) are REQUIRED in order to be eligible to submit a Concept Paper and Full Application
- To be considered:
 - The LOI must comply with the content and form requirements of Section IV.C of the FOA, and
 - The applicant must enter all required information and click the “Create Submission” button in EERE Exchange by the deadline stated in the FOA.
- The LOIs should not contain any proprietary or sensitive business information
- EERE will not provide notification of acceptance for Letters of Intent



Concept Papers

- Applicants must submit a Concept Paper
 - Each Concept Paper must be limited to a single concept or technology
- Section IV.D of the FOA states what information a Concept Paper should include and the page limits.
 - Failure to include the required content could result in the Concept Paper receiving a “discouraged” determination or the Concept Paper could be found to be ineligible
- Concept Papers must be submitted by May 14, 2019, through EERE Exchange
- EERE provides applicants with an “encouraged” or “discouraged” notification and 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.

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

- **Overall FOA Responsiveness and Viability of the Project** *(Weight: 100%).*

This criterion involves consideration of the following sub-criteria:

- 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
- The proposed work, if successfully accomplished, would clearly meet the objectives as stated in the FOA



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.
 - **Summary Slide**
 - **Administrative Documents:**
 - Disclosure of Lobbying Activities
 - FFRDC Authorization (if applicable)
 - Waiver requests: Foreign Entities and Performance of Work in the United States (if applicable)



Full Applications: Technical Volume Content

- **Technical Volume:** the key technical component of the Full Application
- **Contents:**
 - Cover Page
 - Project Overview
 - Project Description, Innovation, and Impact
 - Summary Statement of Project Objectives (SOPO)
 - Team Qualifications and Resources
 - Appendices
- **Note:** There are not strict page limits on sections to allow applicants the flexibility to structure the application in a way to best articulate the project and address the content requirements



Full Application Eligibility Requirements

- Applicants must submit a Full Application by July 25, 2019, 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
 - The Full Application meets any other eligibility requirements listed in Section III of the FOA.



Multiple Applications

- An entity may submit more than one LOI, Concept Paper, and Full Application to this FOA, provided that each application describes a unique, scientifically distinct project and provided that an eligible LOI and Concept Paper was submitted for each Full Application.



Merit Review and Selection Process (Full Applications)

- The Merit Review process consists of multiple phases that each include an 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



Technical Merit Review Criteria for Full Applications

Criterion 1: Innovation and Impact (50%)

- The project is innovative and impactful, assuming the stated outcomes can be achieved as written. The project is differentiated with respect to existing commercial products, solutions, or technologies. If successful, the project is scalable to have a broader impact and maintained at a sufficiently large scale after project completion.



Technical Merit Review Criteria for Full Applications (continued)

Criterion 2: Quality and Likelihood of Completion of Stated Goals (30%)

- The application demonstrates an understanding and appreciation of project risks and challenges the proposed work will face and incorporates reasonable assumptions related to the execution of the project (i.e. market size, customer participation, costs, speed of proposed scale-up or adoption). The information included for the project is validated through customer trials, data from prior work, report references, technical baselines established, etc. The stated goals of the project are SMART (Specific, Measurable, Achievable, Relevant, and Timely) and likely to be accomplished within the scope of this project. The proposed budget is reasonable to achieve the objectives proposed.



Technical Merit Review Criteria for Full Applications (continued)

Criterion 3: Capability and Resources of the Applicant/Project Team (20%)

- The team is well qualified and has the capability and resources necessary to successfully complete the project. The team (including proposed subrecipients) have the training and experience to achieve the final results on time and to specification. The project team is fully assembled and committed to the project (verified through letters of support) and has a demonstrated record of successful past performance.



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, it is expected that a Reply must be submitted by September 6, 2019, 5:00pm ET through EERE Exchange
- Content and form requirements:

Section	Page Limit	Description
Text	3 pages max	Applicants may respond to reviewer comments or supplement their Full Application with graphs, charts, or other data.



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



Program Policy Factors

- The Selection Official may consider the following program policy factors in making their selection decisions:
 - The degree to which the proposed project exhibits technological or programmatic diversity when compared to the existing DOE project portfolio and other projects selected from the subject FOA
 - 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 accelerate commercialization and overcome key market barriers
 - Based on the commitments made in the U.S. Manufacturing Plan, the degree to which the proposed project is likely to lead to increased employment and manufacturing in the United States or provide other economic benefit to U.S. taxpayers
 - The degree to which the proposed project will accelerate transformational technological, financial, or other advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty



Program Policy Factors (continued)

- The Selection Official may consider the following program policy factors in making their selection decisions:
 - The degree to which the proposed project, or group of projects, represent a desired geographic distribution (considering past awards and current applications)
 - The degree to which the proposed project avoids duplication/overlap with other publicly or privately funded work
 - The degree to which the proposed project enables new and expanding market segments
 - The degree to which the project promotes increased coordination with nongovernmental entities for demonstration of technologies and research applications to facilitate technology transfer



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 at <https://eere-Exchange.energy.gov>
- 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	http://fedgov.dnb.com/webform
SAM	https://www.sam.gov
FedConnect	https://www.fedconnect.net
Grants.gov	http://www.grants.gov

Means of Submission

- Letters of Intent, 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>



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



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



Questions

- Questions about this FOA? Email SETO.FOA@ee.doe.gov
 - All Q&As related to this FOA will be posted on EERE Exchange
 - You must select this specific FOA Number (**DE-FOA-0002064**) 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.
 - Include FOA name and number in subject line