EERE 124: FOA Webinar

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Targeted Algal Biofuels and Bioproducts (TABB)

TABBFOA@ee.doe.gov

FOA Webinar
DE-FOA-0001162
October 8, 2014

DE-FOA-0001162
TARGETED ALGAL BIOFUELS AND BIOPRODUCTS (TABB)

Anticipated Schedule:

FOA Issue Date:	**9/22/2014**
FOA Informational Webinar:	**10/8/14**
Submission Deadline for Concept Papers:	**10/30/2014** 5:00pm ET
Submission Deadline for Full Applications:	**12/15/2014** 5:00pm ET
Submission Deadline for Replies to Reviewer Comments:	**2/20/2015** 5:00pm ET
Expected Date for EERE Selection Notifications:	**April 2015**
Expected Timeframe for Award Negotiations:	**June 2015**

2

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Notice

- All applicants are strongly encouraged to carefully read the Funding Opportunity Announcement **DE-FOA-0001162 ("FOA")** and adhere to the stated submission requirements.
- This presentation summarizes the contents of the 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 *TABBFOA@ee.doe.gov*.

3

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

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

4

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

FOA Description

- The TABB FOA is an integral part of the Algae Program strategy and it seeks alternative pathways to overcome two key barriers to commercializing algal biofuels. The TABB FOA seeks bench and process development scale applied Research and Development (R&D) that focuses on:
  - developing technology to achieve higher overall values for the processed biomass (Topic Area 1); and
  - increased biomass productivity leading to higher yields by developing crop protection or CO_2 utilization strategies (Topic Area 2).
- It is anticipated that successful projects from the TABB FOA will contribute to improving Bioenergy Technologies Offices (BETO) 2019 projected state of technology (SOT) for the cost of algal biofuels from the projected model mature technology of about $8 per gallon gasoline equivalent (gge) to less than $5 gge.

5

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

FOA Description - Continued

TOPIC AREA 1:

- Under **Topic Area 1**, multi-disciplinary consortia will pursue technology improvements that will lead to higher overall values for the algae. This will be achieved by developing and improving yields of high-impact bioproducts (e.g. specialty or commodity chemicals or polymers or proteins) and biofuels.
- Consortia are required for this topic because of the broad range of expertise and facilities needed to develop technologies from algae cultivars to finished biofuels and bioproducts.
- **A critical component of this topic area is that bioproducts are expected to increase the overall value of the algal biomass and still allow for biofuel production**.

6

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

FOA Description - Continued

TOPIC AREA 2:

- Under **Topic Area 2**, single investigator or small teams will pursue technology improvements that will result in increased biomass productivity leading to higher overall feedstock yields. This will be achieved by projects that focus on advancements in either:

  1) crop protection; or

  2) CO_2 utilization.

FOA Description - Continued

CROP PROTECTION:

- Biological contamination presents one of the greatest challenges in cultivating robust, reliable algal cultures that meet target performance (growth rate, target product generation, culture density, etc.) specifications. Novel, safe, and effective strategies need to be developed to control culture contamination events that result in diminished target feedstock yield(s). Additionally, integrated pest management systems need to be developed to control pathogens and herbivores.

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

FOA Description - Continued

CARBON DIOXIDE UTILIZATION:

- Algae utilize a diversity of carbon concentrating mechanisms to maintain adequate carbon stores for photosynthesis. Obtaining adequate carbon is affected by the transfer of dissolved inorganic carbon into the cultivation system, levels of biologically available carbon, and sequestration of carbon by algae.
- Reservoirs could include atmospheric CO_2, supplied CO_2, and biologically available carbon in the cultivation system. Enhancing transfer efficiency could enhance productivity through ensuring adequate intracellular carbon stores, as well as lower operating costs through more efficient utilization of carbon sources.
- Target improvements may be measured through enhanced photosynthetic efficiency, increased carbon efficiency, and improved rates of transfer, either into carbon reservoir, or uptake by algae from the reservoir. Improvements must result in improved productivity that could lead to higher feedstock yields.

FOA Description - Continued

- Successful projects under this FOA will set targets (assuming mature scale deployment of technologies) for energy return on investment and GHG emissions. Extrapolated from bench and process development scale data, these targets should describe:
  - Significantly positive energy return on investment, in terms of energy content of final products / energy input.
  - Lifecycle GHG emissions attributable to biofuel production at modeled commercial scale that could meet or exceed Renewable Fuels Standard (RFS) requirements for advanced biofuels.
- Incorporation of these targets means that successful projects under this FOA must integrate techno-economic modeling and life-cycle assessment into experimental plans. This will be captured to some extent in the required technical and financial data. After award, these data will be used to establish a baseline and targets.
- Project progress from baseline towards targets will be externally validated by a DOE-selected performer and used to inform mid-project Go/No Go decision points.

Topic Areas/Technical Areas of Interest

APPLICATION REQUIREMENTS FOR BOTH TOPIC AREA 1 AND 2

1) The required technical and financial data (see Technical and Financial Datasheet template) will be used to establish the project baseline, midpoint, and ultimate technical targets. Regular reporting requirements on progress from baseline towards targets will be incorporated into the award terms and conditions. The baseline and progress from the baseline towards targets will be externally validated by a DOE-selected performer and used to inform mid-project Go/No Go decision points.
2) Biology and cultivation experimental plans must consider scaling explicitly in experimental design and objectives as shown by but not limited to: primary use of robust production organisms (instead of model organisms, e.g. Chlamydomonas reinhardtii); diurnal cycles, solar-strength irradiance, and fluctuating temperatures for growth experiments; and outdoor culture performance verification. The use of robust production strains and explicit feedback between laboratory-based studies and field cultivation is required to meet the FOA objectives.
3) If experimental plans rely on genetically modified organism (GMO) technology, a discussion of U.S. regulatory landscape – e.g., Toxic Substance Control Act (TSCA), the Animal and Plant Health Inspection Service (APHIS) – and the impacts of regulations on the project objectives, scope, and schedule are required.

Topic Areas/Technical Areas of Interest - Continued

APPLICATION REQUIREMENTS FOR BOTH TOPIC AREA 1 AND 2

4) Establishment of methods for integrating techno-economic and life-cycle analysis into experimental plans and definition of how these analyses will be used to inform deliverables to DOE documenting progress towards the FOA objective of less than $5 gge algal biofuel is required.
5) Production of algal biomass will refer to the cultivation of both micro- or macro-alga, as well as cyanobacteria.
6) Acceptable algae cultivation systems include open ponds, attached growth systems, and closed photobioreactors (PBRs), combinations of these systems, or other systems with similarly justifiable scalable potential.
7) Standardized analytical methods for measuring the key biochemical constituents are vital to developing reliable algal production performance data and must be addressed within the application .
8) Construction and capital costs to build cultivation acreage or capacity are not allowed within this FOA.

Topic Areas/Technical Areas of Interest - Continued

APPLICATION REQUIREMENTS FOR BOTH TOPIC AREA 1 AND 2

9) Applications must propose to work on algal biomass (i.e. proposing research activities on biofuels and bioproducts derived from lignocellulosic biomass (e.g., agricultural residues, woody biomass) is considered non-responsive and will not be accepted).
10) Applicants that receive awards through this FOA will, in coordination with BETO, issue press releases at award and at successful completion of the project to highlight the positive aspects of the work.
11) Applicants that receive awards through this FOA will submit to DOE during the award and for 5 years after the award an annual report on the utilization and impact of the work in the project (such as: papers; presentations; additional awards; investment; joint ventures; additional construction; and advancement towards the market) that is affiliated with the TABB FOA award. This report will be for DOE internal use only. Please also refer to section VI.B.12 for specific administrative reporting requirements regarding subject inventions that are in no way diminished or replaced.

Topic Areas/Technical Areas of Interest - Continued

TOPIC AREA 1 SPECIFIC REQUIREMENTS

- A successful TABB consortium must develop and characterize their proposed algal-derived biofuel(s) and their proposed algal-derived bioproduct(s) from their proposed algal biomass cultivation and processing system(s).
- It is anticipated that a project's technical targets for this topic area will span the entire algal biofuel and bioproduct production system (cultivation, harvesting, processing, and conversion to a biofuel and production of a bioproduct). Applicants should include a detailed discussion of the reasoning behind their proposed strategy or strategies and why the proposed technological pathway(s) has/have the highest probability of success.
- Sustainable practices, life-cycle and economic analyses, and resource management should be addressed relative to the proposed pathway(s).
- No major construction activities can be undertaken as part of this Topic Area. The use of a consortium is expected to bring together both the human and physical capital necessary to achieve the objectives of Topic Area 1.

Topic Areas/Technical Areas of Interest - Continued

Specific Topic Area 1 Requirements to be evaluated for technical merit

1. Demonstration that the consortium will have capability in:
   a. Photosynthetic algae strain development
   b. Mass culture of photosynthetic algae
   c. Recovery of target fuel and chemical precursors from mass cultures
   d. Conversion of precursors to valuable products
   e. Integrative analysis to assess LCA and TEA constraints together with national impact potential
2. Definition of baseline state of technology and establishment of target improvements for biology, cultivation, processing, and conversion using the provided Technical and Financial Datasheet template or the applicant's preferred format (see section IV.D.1). After selection, these targets will be evaluated by a DOE-selected external team and then will be incorporated into award documents for us in the mid-project Go/No Go evaluation (see section VI.C.15 for more detail on the use of Go/No Go decision points).
3. Approaches to characterizing value will be at an appropriate scale to provide information necessary to compare algal product specifications to the established product. The TABB FOA intent is to support applied R&D, not necessarily product certification. The intent of the TABB FOA is not for preparing pre-commercial or commercial quantities of material for sale.

15

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Topic Areas/Technical Areas of Interest - Continued

Specific Topic Area 1 Requirements to be evaluated for technical merit – cont.

4. Establishment of target production amounts and delivery schedules of all targeted biofuels and bioproducts and demonstration that delivery to downstream processing and conversion partners will be in timely support of consortium objectives.
5. Discussion of envisioned split, assuming mature technology deployment, between biofuels and bioproducts in terms of energy, mass, and value. Applicants should note that the production of biofuels is directly related to BETO's statutory authority and strategic goals (which are defined in the BETO Multi-Year Program Plan referenced above) and thus this discussion will inform the evaluation conducted under the Other Selection Factors as described in Section V.C.1.
6. Demonstration of understanding of target markets and market entry strategies.
7. Demonstration that the proposed technologies are currently at a minimum of Technology Readiness Level (TRL) of 3 and that the proposed consortium scope is adequate to advance the TRL of the proposed technologies to 5 or 6.
8. Demonstration that the consortium objectives can be accomplished without major construction activities.

16

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Topic Areas/Technical Areas of Interest - Continued

TOPIC AREA 2 SPECIFIC REQUIREMENTS

- This topic area is for single investigator or small team technology development projects focused on developing technologies for: 1) crop protection; or 2) CO_2 utilization to increase biomass productivity in a manner that can lead to increased feedstock yields.
- TABB Topic Area 2 technology development projects will focus on discrete aspects of the algal biofuel chain related to algae production at TRL 2-3 levels. Thus, successful projects will develop technologies that lead to higher yields of recoverable target biofuels and bioproducts, but will not necessarily develop finished fuels or products.

Topic Areas/Technical Areas of Interest - Continued

<u>Specific Topic Area 2 Requirements to be evaluated for technical merit</u>

1. Identification as to whether the project is focused on crop protection or CO_2 utilization.
2. Definition of baseline state of technology and establishment of target improvements for improved productivity that leads to higher recoverable yields. Use the provided Technical and Financial Datasheet template or the applicant's preferred format (see section IV.D.1). After selection, these targets will be evaluated by a DOE-selected external review team and then will be incorporated into award documents for us in the mid-project Go / No Go evaluation (see section VI.C.15 for more detail on the use of Go/No Go decision points).
3. Demonstration that the proposed technologies are currently at a minimum of TRL 2 and that the proposed project scope is adequate to advance the TRL of the proposed technologies to 3 or 4.

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.
- Applications that propose to develop technology that relies on purely heterotrophic algae cultivation.
- Applications that propose mixotrophic algae cultivation strategies that utilize food-based sugars.
- Applications that propose to develop technology for the artificial lighting-based cultivation of algae for energy products.
- Applications that propose to work on biomass other than algae biomass.
- Topic Area 1 project applications that are not from a consortium.
- Applications that propose construction of new facilities.
- Applications that propose modifications to existing facilities that exceed 20% of the total project cost.

Award Information

Total Amount to be Awarded	**$13,000,000 to $25,000,000***
Average Award Amount	EERE anticipates making awards that range from $5,000,000 to $10,000,000 in Topic Area 1 and $500,000 to $1,000,000 in Topic Area 2.
Types of Funding Agreements	Cooperative Agreements, Grants, Work Authorizations, and Interagency Agreements
Period of Performance	36 to 48 months
Cost Share Requirement	20% of Total Project Costs

*Subject to the availability of appropriated funds in both FY14 and FY15

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

- Applicants must contribute a minimum of 20% of the total project costs for R&D projects.
- The cost share must be at least 20% of the total allowable costs for research and development projects (i.e., the sum of the Government share, including Federally Funded Research and Development Centers (FFRDC) costs if applicable, and the recipient share of allowable costs equals the total allowable cost of the project) and must come from non-Federal sources unless otherwise allowed by law. (See 10 CFR 600.30 for the applicable cost sharing requirements.)

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

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
Educational Institutions	2 CFR Part 220
State, Local, and Indian Tribal Governments	2 CFR Part 225
Non-profit Organizations	2 CFR Part 230
For-profit Organizations	FAR Part 31

Allowable Cost Share

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

Unallowable Cost Share

- The Prime Recipient may not use the following sources to meet its cost share obligations including, but not limited to:
  - o Revenues or royalties from the prospective operation of an activity beyond the project period
  - o Proceeds from the prospective sale of an asset of an activity
  - o Federal funding or property
  - o Expenditures reimbursed under a separate Federal Technology Office
  - o Independent research and development (IR&D) funds
  - o The same cash or in-kind contributions for more than one project or program

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

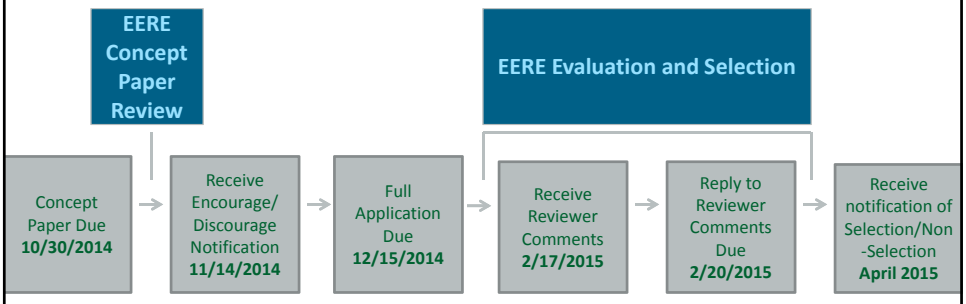
Cost Share Payment

- 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.7 of the FOA.

27

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

FOA Timeline



EERE anticipates making awards by **June 2015**

28

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

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 3 pages
  - The Concept Paper can also include graphs, charts, or other data (limited to 2pages)
- Concept Papers must be submitted by **10/30/2014**, **5:00pm EST**, 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

Concept Paper Review

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

- **Criterion 1: Impact of the Proposed Technology Relative to State of the Art (50%)** This criterion involves consideration of the following factors:
  - Method used to identify current state of the art technology
  - If technical success is achieved, the proposed idea would significantly improve technical and economic performance relative to the state of the art.
- **Criterion 2: Overall Scientific and Technical Merit (50%)**

  This criterion involves consideration of the following factors:
  - The proposed technology is unique and innovative; and
  - The proposed approach is without major technical flaws.

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**
  - **Administrative Documents:** E.g., U.S. Manufacturing Plan, FFRDC Authorization (if applicable), Disclosure of Lobbying Activities, etc.

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	25%
Workplan	50%
Technical Qualifications and Resources	15%

Full Application Eligibility Requirements

- Applicants must submit a Full Application by **12/15/2014 at 5:00pm EST**
- 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.

33

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

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.

34

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Multiple Applications

Applicants may submit more than one application to this FOA, provided that each application describes a unique, scientifically distinct project

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

Technical Merit Review Criteria

Criterion 1: Technical Merit, Innovation, and Impact (50%)

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.

Technical Merit Review Criteria - Continued

Criterion 2: Project Research and Commercialization Plan (30%)

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.

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.

39

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

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.

40

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

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 **2/20/2015 by 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.

41

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

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.

42

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

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 is likely to lead to increased employment and manufacturing in the United States
  - 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 directly addresses EERE's statutory mission and strategic goals

43

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

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	http://fedgov.dnb.com/webform
SAM	https://www.sam.gov
FedConnect	https://www.fedconnect.net
Grants.gov	http://www.grants.gov

44

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

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

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 TABBFOA@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 .
  - Include FOA name and number in subject line
- All questions asked during this presentation will be posted on EERE Exchange