



Water Power Manufacturing

FOA Webinar
DE-FOA-0001006
4/26/2014

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Water Power Manufacturing

Anticipated Schedule:

FOA Issue Date:	4/10/2014
FOA Informational Webinar:	4/23/2014
Submission Deadline for Concept Papers:	5/09/2014
Submission Deadline for Full Applications:	6/24/2014
Submission Deadline for Replies to Reviewer Comments:	8/15/2014
Expected Date for EERE Selection Notifications:	9/26/2014
Expected Timeframe for Award Negotiations:	60

Notice

- All Applicants are strongly encouraged to carefully read the Funding Opportunity Announcement DE-FOA-0001006 (“FOA”) and adhere to the stated submission requirements. The content included in this presentation is intended to summarize the contents of FOA. If there are any inconsistencies between the content of this presentation and the information presented in the FOA please contact WaterMfg@go.doe.gov. In the event there is an inconsistency, the Funding Opportunity Announcement is the controlling document and applicants should rely on the FOA language.

Agenda

- 1) FOA Information
- 2) Award Information
- 3) Evaluation Process
- 4) Concept Paper
- 5) Full Application
- 6) Review Process
- 7) Registration Requirements
- 8) Frequently asked Questions

FOA Description

This FOA addresses the application of advanced materials and advanced manufacturing techniques to the development of new hydropower technologies.

FOA Description

There is a significant opportunity to substantially increase hydropower generation at low-head sites in the US and around the world (“low-head” = sites with heads in the range of 2-20 meters, or 6-66 feet). These “new” hydropower opportunities, which are typically capable of generating between 100 kW - 30 MW, are readily presented at existing non-powered dams, and existing constrained waterways (to include canals and conduits).

FOA Description

The ability to leverage existing water resource infrastructure makes these sites particularly attractive from an economic and permitting perspective.

- These sites (non-powered dams and constrained waterways) tend to have roads and transmission lines already established on-site (or at least within close-proximity),
- And as the core infrastructure is already in place (dams and/or man-made conduits and canals), there would be minimal environmental impact due to the addition of a hydropower unit.

FOA Description

Development of low-cost, integrated hydropower turbine-generator sets capable of delivering cost-competitive electricity from these resources and within these head ranges is critical to fully exploit these emerging opportunities. The following criteria are considered essential design elements in this regard:

- Modular, self-contained units
- Variable Speed
- Cost Competitive
- Minimize costs of manufacturing, operations and maintenance, and repair
- Ecologically non-disruptive

FOA Description

Over the last decade, the application of advanced materials and advanced manufacturing techniques, such as Near Net Shape (NNS) manufacturing or additive manufacturing techniques, have rapidly evolved and have entered the marketplace, especially so in Department of Defense and aerospace industry applications.

FOA Description

- NNS manufacturing has proven itself as it enables a significant reduction in: machining work, raw material usage, production time, and energy consumption.
 - There are very limited examples where these advanced manufacturing techniques have been applied to the design and development of hydropower technologies.
- With the significant advancements realized over the last decade, it is believed that Computer Aided Design (CAD) driven, additive manufacturing technologies can effectively push the performance and speed the adoption of new hydropower technologies.

Topic Areas/Technical Areas of Interest

Applicants should propose to design an integrated hydropower turbine generator system that applies advanced materials and/or additive manufacturing techniques and produce a prototype unit at an appropriate scale to enable in-water performance testing in a laboratory environment.

Topic Areas/Technical Areas of Interest

- Applications should identify the basis and justify the rationale for the proposed scale of the prototype to be tested.
- In-water performance testing should demonstrate applicability across the self-identified head range, and allow for an accurate calculation of projected LCOE that takes into account production scale manufacturing costs.
- Proposals should include a manufacturing plan that estimates the material and process requirements for full-scale production of the design, noting where particular processes will not scale adequately from prototype to production scale.

Applications Specifically Not of Interest

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

- Applications that fall outside the technical parameters specified in Section I.B of the FOA, including but not limited to
 - Applications that propose to address manufacturing of marine and hydrokinetic technologies (MHK) as opposed to conventional hydropower technologies.
- Applications for proposed technologies that are not based on sound scientific principles (e.g., violates the law of thermodynamics). As defined in Section 632 of the Energy Independence and Security Act of 2007 <http://www.gpo.gov/fdsys/pkg/BILLS-110hr6enr/pdf/BILLS-110hr6enr.pdf>

Award Information

Total Amount to be Awarded	\$4,400,000*
Average Award Amount	EERE anticipates making awards that range up to \$2.2M.
Types of Funding Agreements	Cooperative Agreements, Work Authorizations, and Interagency Agreements
Period of Performance	Up to 24 months

*Subject to the availability of appropriated funds

Statement of Substantial Involvement

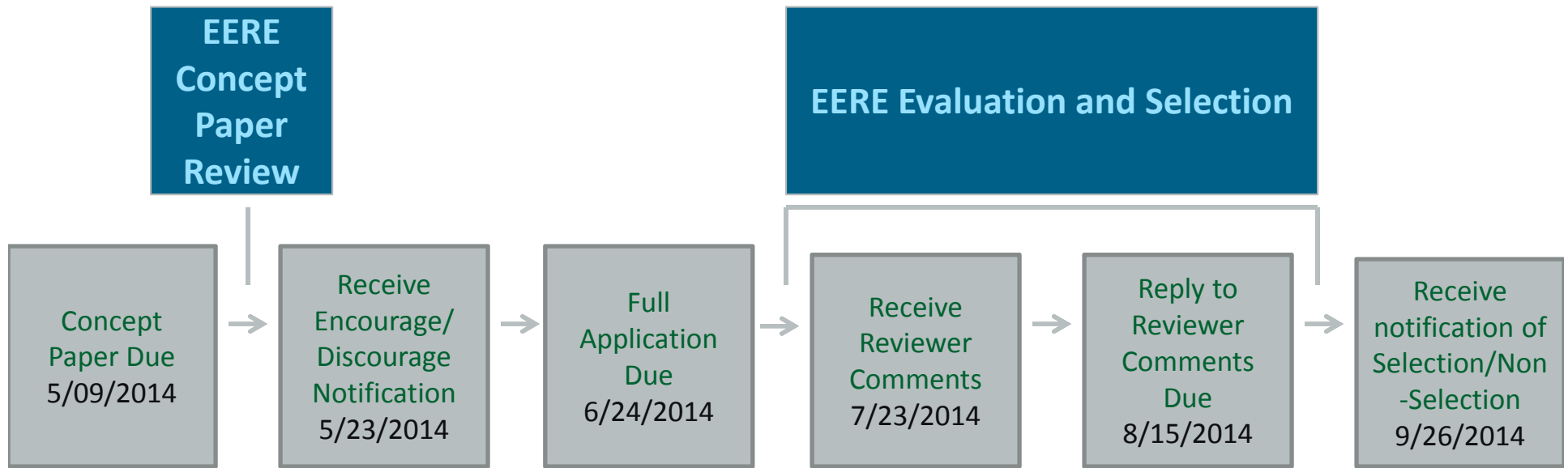
EERE has substantial involvement in work performed under Awards made following this FOA. EERE does not limit its involvement to the administrative requirements of the Award. Instead, EERE has substantial involvement in the direction and redirection of the technical aspects of the project as a whole. 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 reviews and approves in a timely manner project plans, including project management, testing and technology transfer plans, and recommending alternate approaches, if the plans do not address the critical programmatic issues.
- EERE participates in project management planning activities, including risk analysis, to ensure EERE Technology Office requirements or limitations are considered in performance of the work elements.

Statement of Substantial Involvement - Continued

- 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 promotes and facilitates technology transfer activities, including disseminating Technology Office results through presentations and publications.
- EERE may redirect or discontinue funding projects that fail to fully and satisfactorily complete the work described in the Statement of Project Objectives as evaluated at the Go/No Go decision points.
- EERE participates in major project decision-making processes.

FOA Review Timeline



EERE anticipates making awards by November 2014

Concept Papers

- EERE conducts an initial eligibility review of Concept Papers. For the Concept Paper to be considered eligible for the technical review, the Applicant must:
 - Submit the Concept Paper through EERE Exchange
 - Include the required documents
 - Submit the Concept Paper by 5/9/2014
- See Section IV.C of the FOA for information on the content requirements for Concept Papers
- If an Applicant fails to submit an eligible Concept Paper, the Applicant will not be eligible to submit a Full Application

Concept Paper Review

- Each eligible Concept Paper will be reviewed based on the criteria in Section V.A.1. of the FOA
- Applicants will be notified of an Encourage/Discourage decision, and review comments on their Concept Paper will be available in EERE Exchange
 - Applicants will be provided approximately 30 days to prepare a Full Application
 - An Applicant who receives a “discouraged” notification may still submit a Full Application
 - By **discouraging** the submission of a Full Application, EERE intends to convey its lack of programmatic interest in the proposed project

Full Application Eligibility Requirements

- Applicants must submit a Full Application by 6/24/2014
- Full Applications are deemed eligible 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

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

Cost Sharing Requirements

- Applicants must propose to contribute a minimum of 20% of the total project costs for R&D projects.

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

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

Cost Share Payment

- In limited circumstances, the Prime Recipient may submit a waiver request to meet its cost share requirements on a less frequent basis, such as monthly or quarterly
- Such waiver requests must be sent by email to the Contracting Officer during award negotiations and include:
 - (1) A detailed justification for the request;
 - (2) A proposed schedule of payments, including amounts and dates;
 - (3) A written commitment to meet that schedule; and
 - (4) Such evidence as necessary to demonstrate that the Prime Recipient has complied with its cost share obligations to date.
- The Contracting Officer must approve all such requests before they may go into effect

Allowable Cost Share

- If proposed, 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	2CFR220
State, Local, and Indian Tribal Governments	2CFR225
Non-profit Organizations	2CFR230
For-profit Organizations	FAR Part 31

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

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

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 - Overview

- 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, in determining which applications to select
- See Section V.A.2 of the FOA for information on the review criteria for Full Applications

Replies to Reviewer Comments

- EERE will provide Applicants with reviewer comments in EERE Exchange following evaluation of all eligible Full Applications
- Applicants will have approximately three business days to prepare a short Reply to Reviewer Comments responding to comments however they desire
- 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

Program Policy Factors

- The Selection Official may consider the following program policy factors in determining which Full Applications to select for award negotiations:
 - The degree to which the proposed project, including proposed cost 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

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 in order 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

- 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 cancelation of further award negotiations and rescission of the Selection

Questions

- Questions about this FOA? Email WaterMfg@go.doe.gov
 - All Q&As related to this FOA will be posted on EERE Exchange
 - You must first 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
- All questions asked during this presentation will be posted on EERE Exchange