

**FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT**



**U.S. Department of Energy
Energy Efficiency and Renewable Energy
Golden Field Office**

In-Water Wave Energy Conversion (WEC) Device Testing Support

Funding Opportunity Announcement Number: DE-FOA-0000705

Announcement Type: Initial

CFDA Number: 81.087

Issue Date: 05/17/2012

Application Due Date: 06/18/2012, 5:00 PM Eastern Time

REGISTRATION REQUIREMENTS

There are several one-time actions before submitting an Application in response to this Funding Opportunity Announcement (FOA), as follows:

- Register and create an account on EERE Exchange at <https://eere-exchange.energy.gov/>. This account will then allow the user to register for any open EERE FOAs that are currently in EERE Exchange. It is recommended that each organization or business unit, whether acting as a team or a single entity, use only one account as the contact point for each submission.

The applicant will receive an automated response when the Application is received. This will serve as a confirmation of receipt. Please do not reply to the automated response. The applicant will have the opportunity to re-submit a revised Application for any reason as long as the relevant submission is submitted by the specified deadline. The Users' Guide for Applying to the Department of Energy EERE Funding Opportunity Announcements is found at <https://eere-exchange.energy.gov/Manuals.aspx>.

The EERE Exchange registration does not have a delay; however, the remaining **registration requirements below could take several weeks to process and are necessary in order for a potential applicant to receive an award under this announcement**. Therefore, although not required in order to submit an Application through the EERE Exchange site, **all potential applicants lacking a DUNS number, or not yet registered with CCR or FedConnect should complete those registrations as soon as possible**.

Questions related to the registration process and use of the EERE Exchange website should be submitted to: EERE-ExchangeSupport@hq.doe.gov

- Obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number (including the plus 4 extension, if applicable) at <http://fedgov.dnb.com/webform>
- Register with the Central Contractor Registry (CCR) at <https://www.ccr.gov/>. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in CCR registration. Please update your CCR registration annually.

NOTE: As of May 2012 the Central Contractor Registry (CCR) along with several other Federal procurement systems is being incorporated into a single website called the System for Award Management (SAM). The SAM site is located at <https://www.sam.gov/sam/>. As the migration of CCR into the SAM website is currently in process, should you be unable to find the CCR website (<https://www.ccr.gov/>) at its previous location, please use the SAM website in this paragraph.

- Register in FedConnect at <https://www.fedconnect.net/>. To create an organization account, your organization's CCR MPIN is required. For more information about the CCR MPIN or other registration requirements, review the FedConnect Ready, Set, Go! Guide at https://www.fedconnect.net/FedConnect/PublicPages/FedConnect_Ready_Set_Go.pdf

- Register in Grants.gov to receive automatic updates when Amendments to this FOA are posted. However, please note that applications will not be accepted through Grants.gov
<http://www.grants.gov/>.

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SECTION I – FUNDING OPPORTUNITY DESCRIPTION

A. Description

Objective

The Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy (EERE), Wind and Water Power Program (WWPP), is issuing a Funding Opportunity Announcement (FOA) entitled “In-Water Wave Energy Conversion (WEC) Device Testing Support.”

The DOE, as described in detail below, is working closely with The Department of Navy (Navy) to support and promote wave energy technologies. This FOA will support the testing of one WEC device at the Navy’s existing 30m Wave Energy Test Site (WETS) located at Marine Corps Base Hawaii (MCBH), Kaneohe Bay, Hawaii. **Only WEC buoy (point-absorber) device types are being considered for funding at this time.**

Background

The mission of the DOE Water Power Program (the Program) is to research, test, and develop innovative technologies capable of generating renewable, environmentally responsible, and cost-effective electricity from U.S. water resources. These include marine and hydrokinetic (MHK) technologies that harness the energy from waves and ocean/tidal/river currents. DOE investments in these technologies aim to advance the technical readiness of MHK systems and support the development of a robust and competitive MHK industry in the U.S. The Program’s overarching MHK goal is to support the research, development, and deployment of innovative MHK systems with a credible potential for lowering the levelized cost of energy (LCOE) below the local “hurdle” price at which MHK energy can compete with other regional generation sources without subsidies.

As devices are tested and performance data is generated, DOE will continue to compile, analyze, and disseminate information to accurately characterize and evaluate the performance of MHK technologies. The Program will integrate this information into numerical models to establish baseline cost of energy, assess key cost drivers, and identify cost reduction pathways. The Program is ultimately focused on accelerating the development and deployment of these technologies to provide a domestic source of clean, affordable energy that is both economical and ecologically responsible. The ability to obtain in-water performance data of leading device designs is critical in achieving these goals. Additional information about the Program can be found at <http://water.energy.gov>.

DOE will require access to the full range of performance data collected during the award to be used by National Labs for the development of performance models. DOE will work with recipients during negotiation to facilitate the development of non-disclosure agreements (NDAs), where appropriate. Please note that DOE will not be a signatory to any NDAs because its employees are subject to the criminal penalties set forth in the Trade Secrets Act, 18 U.S.C. 1905. While DOE may require that certain data be shared with Federally Funded Research and Development Centers (FFRDCs), Test Centers, or other research partners, the data may otherwise be protected from public disclosure for 5 years from the date the data were first produced, as set forth in Section VIII, Paragraph F of this FOA.

DOE may publish aggregated industry data but will not release detailed cost and performance data specific to any one project. DOE will work with the recipient during negotiations to define the data/measurements to be collected. Please refer to Appendix D for an example list.

Similar to the goals of the Water Power Program, the Navy, through the Naval Facilities Engineering Command (NAVFAC) Engineering Service Center (ESC), supports the Department of Defense (DOD) energy goal to produce or procure up to 25% of the total quantity of electric energy it consumes on-shore by fiscal year 2025 from renewable energy sources. NAVFAC ESC has supported WEC research, with the expectation that this technology can be used to assist the DOD in achieving energy savings.

In 2003, NAVFAC designed and installed the existing intermediate-scale WETS facility located at Marine Corps Base Hawaii, Kaneohe Bay, Hawaii. The system includes a subsea power cable from an onshore data collection facility to a mooring assembly located at a 30m (98ft.) depth test site, 1.2 km (3,900 ft.) offshore. The DOE recipient whose project is selected under this FOA will be expected to enter into a Cooperative Research and Development Agreement (CRADA) with the Navy in order to gain access to the test site. An overview of the CRADA process, including handbook, templates, and example statements of work, can be found at <http://www.onr.navy.mil/en/Science-Technology/Directorates/Transition/Technology-Transfer-T2/Partnership-Options/CRADA-handbook.aspx>.

DOE's intent through this FOA, in support of the DOE Water Power Program's goal, is to fund one industry-led project that will deploy a long-term (one year) in-water WEC device at the Navy's WETS facility. DOE anticipates \$500,000 in federal funds to be available for this FOA and the period of performance to range from 18 to 24 months. The period of performance will include pre-deployment activities, operations and maintenance (O&M) of the one year deployment, and post-deployment activities. The berth is presently unoccupied and the berth is expected to be filled as soon as possible, once the application selected for negotiation has been awarded. The timeliness of the proposed deployment will be taken into consideration during the merit review of applications submitted in response to this FOA.

The Navy also gathered information from developers seeking to deploy a device at the WETS facility through a Request for Information (RFI) process. The full RFI, which posted on 2/23/12 and closed on 4/16/2012, can be viewed at <https://www.fbo.gov> by searching Solicitation No. N62742-12-R-1198, titled "Department of the Navy Ocean Energy Technology." The results and information gathered through the RFI for the 30m WETS facility will not be applied to this FOA.

Important: This DOE FOA supersedes the Navy's RFI process for the 30m site of the WETS facility. Applicants to this FOA are not required to have submitted to the RFI. Furthermore, applicants who have submitted responses to the RFI must also submit application packages to this FOA to be considered for an award. DOE, with assistance from the Navy, will review the submitted applications and this FOA process will be the mechanism for selecting the next device to be tested at the existing 30m WETS facility.

The existing WETS facility consists of infrastructure to support testing one WEC device offshore. The Navy, via the WETS facility, will provide the following:

- Existing rock bolted anchors that can support up to a 3-point mooring configuration located approximately 1.2km (3,900 ft) offshore at a water depth of 30m (98ft);
- An armored electrical and fiber optic transmission cable to support onshore data collection/power distribution at the MCBH;
 - Note: the developer will need to provide their own data acquisition and control system (DACS), as necessary;
- A land based equipment shelter/bunker containing onshore electrical power and control equipment; and
- An existing Environmental Assessment (EA) for the 30m WETS facility.

Important: The existing EA was completed in January 2003 and is included as an attachment to this Funding Opportunity Announcement in EERE Exchange. In order to be eligible for an award, the proposed project must comply with the findings of the EA for the 30m WETS facility. The Navy EA analyzed the potential environmental impacts of WEC buoy (point-absorber) devices. Accordingly, these are the only device type which is eligible for selection under this FOA. Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine whether the proposed project meets the required device type outlined in the existing EA. If an application fails to meet these requirements, it may be deemed non-responsive and eliminated from full Merit Review.

DOE is seeking projects in which the proposed device is substantially complete and ready for testing and data collection without significant modification. Please refer to Appendix D for an example list of data collection and measurements. Applications should include a detailed LCOE analysis for the proposed technology. During the period of performance of the award, DOE will work with the selected recipient on a set of standards from which to report cost and performance data, including a recommended methodology for LCOE calculation. Activities under consideration for funding through this FOA are tasks associated with testing at the 30m WETS facility including, but not limited to:

- Device Transportation to/from WETS facility
- Supplemental Environmental Analysis for purposes of NEPA compliance
- Deployment and Recovery
- Test Protocol Definition
- Instrumentation Interface
- O&M Protocol Definition
- Device Monitoring and Data Collection
- Data Analysis to include
 - Power Generation
 - Capacity Factor
 - LCOE Calculation
 - Engineering Measurements (strains, accelerations, etc.)

The authorizing statute for this FOA is the Energy Independence and Security Act of 2007 (EISA), Section 633-Marine and Hydrokinetic Renewable Energy Research and Development, Public Law 110-140 (Dec. 19, 2007).

SECTION II – AWARD INFORMATION

A. Type of Award Instrument

- DOE anticipates awarding a grant under this announcement.

B. Estimated Funding

- Approximately \$ 500,000 is expected to be available for one new award under this announcement.

C. Maximum and Minimum Award Amount

- Ceiling (i.e., the maximum amount for an individual award made under this announcement): \$500,000
- Floor (i.e., the minimum amount for an individual award made under this announcement): \$0

D. Expected Number of Awards

- DOE anticipates making one (1) award under this announcement.

E. Anticipated Award Amount

- DOE anticipates that the award will be \$500,000 (federal funds) for the total project period.

F. Period of Performance

- DOE anticipates making an award that will run for up to two (2) years.

G. Type of Application

- DOE will accept only new applications under this announcement (i.e., applications for renewals of existing DOE funded projects and applications submitted under the Navy's RFI without submitting to this FOA will not be considered).

SECTION III - ELIGIBILITY INFORMATION

A. Eligible Prime Applicants:

Domestic Entities Excluding Federal Agencies, FFRDC, and Nonprofit - 501(c)(4)

The following domestic entities are eligible to apply for this announcement: (1) institutions of higher education; (2) nonprofit and for-profit entities; (3) State and local governments; and (4) consortia of entities (1) through (3). All types of domestic entities are eligible to apply, except other Federal agencies, Federally Funded Research and Development Center (FFRDC) Contractors, and nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.

Foreign entities are not allowed to apply as prime applicants. However, foreign entities may be a team member or participant on a domestic entity's application, provided that the Federal funding for the work to be performed by foreign entities does not exceed 50% of the total Federal funding requested for the project. Applicants with foreign team members must explain how U.S. interest will be maintained. It is recommended that U.S. interests be maintained by the use of U.S.-produced goods and services to the fullest extent practicable and by dissemination of the results and lessons learned of the project to domestic stakeholders in the MHK industry.

B. Cost Sharing

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 FFRDC contractor 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 Part 600 for the applicable cost sharing requirements.)

C. Other Eligibility Requirements:

Federally Funded Research and Development Center (FFRDC) Contractors

FFRDC contractors may be proposed as a team member on another entity's application subject to the following guidelines:

Authorization for non-DOE FFRDCs. The Federal agency sponsoring the FFRDC contractor must authorize in writing the use of the FFRDC contractor on the proposed project and this authorization must be submitted with the application.

Authorization for DOE FFRDCs. The cognizant Contracting Officer for the FFRDC must authorize in writing the use of a DOE FFRDC contractor on the proposed project and this authorization must be submitted with the application. The following wording is acceptable for this authorization.

“Authorization is granted for the _____ Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or complementary to the missions of the laboratory and will not adversely impact execution of the DOE assigned programs at the laboratory.

Value/Funding. The value of, and funding for, the FFRDC contractor portion of the work will not normally be included in the award to a successful applicant. Usually, DOE will fund a DOE FFRDC contractor through the DOE field work proposal system and other FFRDC contractors through an interagency agreement with the sponsoring agency.

Cost Share. The applicant's cost share requirement will be based on the total cost of the project, including the applicant's and the FFRDC contractor's portions of the effort.

FFRDC Contractor Effort:

- The scope of work to be performed by the FFRDC contractor may not be more significant than the scope of work to be performed by the applicant.

Responsibility. The applicant, if successful, will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues, including but not limited to, disputes and claims arising out of any agreement between the applicant and the FFRDC contractor.

SECTION IV – APPLICATION AND SUBMISSION INFORMATION

A. Address to Request Application Forms

The Application forms and instructions are available on EERE Exchange. To access these materials, go to <https://eere-exchange.energy.gov/> and select the appropriate funding opportunity number.

B. Letter of Intent, Pre-Application, and Concept Paper

1. Letter of Intent

- Letter of Intent is not required.

2. Pre-application

- A pre-application is not required.

3. Concept Paper

- A concept paper is not required

C. Content and Form of Application

You must complete the following application forms found on the EERE Exchange website at <https://eere-exchange.energy.gov/>, in accordance with the instructions. **Applicants will receive a Control Number once they click the “Apply to this FOA” command on the EERE Exchange website, and should include the Control Number in the file name as indicated below.**

1. SF-424 – Application for Federal Assistance

Complete all required fields in accordance with the instructions on the form. The list of certifications and assurances in Field 21 can be found at <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms>, under Certifications and Assurances. Note: The dates and dollar amounts on the SF 424 are for the complete project period and not just the first year, first phase or other subset of the project period. Save the information in a single file titled “ControlNumber_LeadOrganization_App424.”

2. Project Summary/Abstract File

The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the public. It should be a self-contained document that identifies the name of the applicant, the project director/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (i.e., benefits, outcomes), and major participants (for collaborative projects). This document must not include any proprietary or sensitive business information, as the Department may make it available to the public if an award is made. The project summary must not exceed 1 page when printed using standard 8.5” by 11” paper with 1” margins (top, bottom, left and right), single spaced, with font not smaller than 11 point. Save the information in a single file titled “ControlNumber_LeadOrganization_Summary.”

3. Project Narrative File

The project narrative must not exceed 20 pages, including cover page, table of contents, charts, graphs, maps, photographs, and other pictorial presentations, when printed using standard 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right), single spaced. EVALUATORS WILL REVIEW ONLY THE NUMBER OF PAGES SPECIFIED IN THE PRECEDING SENTENCE. The font must not be smaller than 11 point. Do not include any Internet addresses (URLs) that provide information necessary to review the application. See Section VIII.D for instructions on how to mark proprietary application information. Save the information in a single file titled "[ControlNumber_LeadOrganization_Project.](#)"

The project narrative must include:

- Project Objectives.
This section should provide a clear, concise statement of the specific objectives/aims of the proposed project.
- Merit Review Criterion Discussion.
This section should be formatted to address each merit review criterion and sub-criterion listed in Part V. A. below. Provide sufficient information so that reviewers will be able to evaluate the application in accordance with these merit review criteria. DOE WILL EVALUATE AND CONSIDER ONLY THOSE APPLICATIONS THAT SEPARATELY ADDRESS EACH MERIT REVIEW CRITERION AND SUB-CRITERION.
- LCOE Analysis:
This section should provide a detailed LCOE analysis, including all assumptions, calculations, and sources used to calculate the impact of the proposed design on LCOE. LCOE provides a uniform basis from which to compare WECs and other energy generation technologies. The LCOE analysis should show a clear path from the demonstration-scale to cost-effective commercial-scale deployment below a local "hurdle" price at which WEC devices can compete with other regional generation sources without subsidies. The analysis should include the discussion of potential market entry points. LCOE and all underlying cost parameters should be presented in real terms in 2012 US dollars.
- Work Plan:
This section should provide a clear work plan, including detailed task descriptions and resource loaded schedule. The work plan should include a comprehensive plan to disseminate results of research to others in the water power industry in a timely manner. The work plan should also include a description of anticipated pre- and post-deployment reports to DOE as outlined in Section VI, Paragraph C of this FOA.
- Project Timetable:
This section should outline as a function of time, year by year, all the important activities or phases of the project, including any activities planned beyond the project period. Successful applicants must use this project timetable to report progress.

- Roles of Participants:
For multi-organizational or multi-investigator projects, describe the roles and the work to be performed by each participant/investigator, business agreements between the applicant and participants, and how the various efforts will be integrated and managed.
- Equipment:
List important items of equipment already available for this project, and if appropriate, note the location and pertinent capabilities of each. If you are proposing to acquire equipment, describe comparable equipment, if any, already at your organization and explain why it cannot be used.
- Bibliography and References, if applicable:
Provide a bibliography for any references cited in the Project Narrative section. This section must include only bibliographic citations.

All the components of your Project Narrative must be within the Narrative page limit specified in paragraph 3. Documents listed below may be included as clearly marked appendices to your Narrative and will not count towards the Project Narrative page limit. Please note that some of the required documents listed below may have their own page limits to which you must adhere.

4. Resume File

Provide a resume for each key person proposed, including subawardees and consultants if they meet the definition of a key person. A key person is any individual who contributes in a substantive, measurable way to the execution of the project. The biographical information for each resume must not exceed 2 pages when printed on 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right), single spaced, with font not smaller than 11 point and should include the information below, if applicable. Save the information in a file titled "[ControlNumber_LeadOrganization_Resume](#)."

Education and Training. Undergraduate, graduate and postdoctoral training; provide institution, major/area, degree and year.

Professional Experience: Beginning with the current position list, in chronological order, professional/academic positions with a brief description.

Publications. Provide a list of up to 10 publications most closely related to the proposed project. For each publication, identify the names of all authors (in the same sequence in which they appear in the publication), the article title, book or journal title, volume number, page numbers, year of publication, and website address, if available electronically.

Patents, copyrights and software systems developed may be provided in addition to, or substituted for, publications.

Synergistic Activities. List no more than 5 professional and scholarly activities related to the effort proposed.

- Of the key personnel identified in this file, indicate the Principal Investigator(s) (PI(s)).
- For Multiple Principal Investigators:

The applicant, whether a single organization or team/partnership/consortium, must indicate if the project will include multiple PIs. The decision to use multiple PIs for a project is the sole responsibility of the applicant. If multiple PIs will be designated, the application must identify the Contact PI/Project Coordinator and provide a “Coordination and Management Plan” that describes the organization structure of the project as it pertains to the designation of multiple PIs. This plan should, at a minimum, include:

- Process for making decisions on scientific/technical direction;
- Publications;
- Intellectual property issues;
- Communication plans;
- Procedures for resolving conflicts; and
- PIs’ roles and administrative, technical, and scientific responsibilities for the project.

The resume file does not have a page limitation.

5. Budget File

SF 424 A Excel, Budget Information – Non-Construction Programs File

You must provide a separate budget for each year of support requested and a cumulative budget for the total project period. Do not include government furnished property (i.e. existing WETS facility infrastructure) in the budget. Use the SF 424 A Excel, “Budget Information – Non Construction Programs” form on the DOE Financial Assistance Forms Page at <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms>. The SF424A provides columns for each individual budget-year as well as the commulative project-budget.

You may request funds under any of the Object Class Categories as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allowability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this announcement (see Section IV, G). Save the information in a single file titled “ControlNumber_LeadOrganization_SF424A.”

6. Budget Justification File (PMC 123.1)

PMC 123.1 Budget Justification File

You must justify the costs proposed in each Object Class Category/Cost Classification category using the PMC 123.1 Budget Justification File. The total project cost, including cost share (if applicable) and federal funding, must be represented in this document.

Save the budget justification information in a single file titled “ControlNumber_LeadOrganization_Budget.”

7. Letters of Commitment

If cost share is required, you must have a signed letter from each third party contributing cost share (i.e., a party other than the organization submitting the application) stating that the third party is committed to providing a specific minimum dollar amount of cost share.

All Letters of Commitment must be attached as an Appendix to the Project Narrative File. Identify the following information for each third party contributing cost share: (1) the name of the organization; (2) the proposed dollar amount to be provided; (3) the amount as a percentage of the total project cost; and (4) the proposed type of cost share – cash, services, or property. Letters of Commitment from parties participating in the project, exclusive of vendors, who will not be contributing cost share, but will be integral to the success of the project must be included as part of this Appendix to the Narrative. Letters of Commitment will not count towards the Project Narrative page limit.

8. Subaward Budget File(s)

You must provide a separate budget (i.e., budget for each budget year and a cumulative budget) for each subawardee that is expected to perform work estimated to be more than \$100,000 or 50 percent of the total work effort (whichever is less). The SF424A provides columns for each individual budget-year as well as the cumulative project-budget. The total project cost, including cost share (if applicable) and Federal funding, must be represented in this document. Use the SF 424 A Excel for Non Construction Programs or the SF 424 C Excel for Construction Programs. This form is found on the DOE Financial Assistance Forms Page at <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms>. Save each Subaward budget in a single file titled “ControlNumber_LeadOrganization_Subawardee_SF424A.”

If a separate subawardee budget is required as described above, a PMC 123.1 Budget Justification file for the subaward budget is also required. The budget justification must include the same justification information described in Paragraph 6 above. Save each Subaward budget justification in a single file titled “ControlNumber_Subawardee_Budget.pdf.”

9. Budget for DOE Federally Funded Research and Development Center (FFRDC) Contractor File, if applicable

If a DOE FFRDC contractor is to perform a portion of the work, you must provide a DOE Field Work Proposal (FWP) in accordance with the requirements in DOE Order 412.1 Work Authorization System. The DOE Order 412.1, Work Authorization System and the DOE O 412.1, Field Work Proposal form are available at the following link, under “DOE Budget Forms”: <https://www.directives.doe.gov/directives/current-directives/412.1-BOrder-a/view>. Save the Field Work Proposal in a single file titled “ControlNumber_LeadOrganization_FFRDC_FWP.”

10. Authorization for non-DOE or DOE FFRDCs

Save the Authorization for non-DOE or DOE FFRDCs, as specified in Section III.C. Other Eligibility Requirements, in a single file titled “ControlNumber_LeadOrganization_FFRDC_Auth”

11. SF-LLL Disclosure of Lobbying Activities

If applicable, complete the SF- LLL. Applicability: If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the grant/cooperative agreement, you must complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying." If applicable, save the SF-LLL in a single file titled "[ControlNumber_LeadOrganization_SF LLL](#)."

Summary of Required Forms/Files

Your application must include the following documents:

Name of Document	Format	File Name
SF 424 - Application for Federal Assistance	Part of Adobe Application Package	ControlNumber_LeadOrganization_App424
Project Summary/Abstract File	PDF	ControlNumber_LeadOrganization_Summary
Project Narrative File, including required appendices (e.g. Letters of Commitment)	PDF	ControlNumber_LeadOrganization_Project
Resume File	PDF	ControlNumber_LeadOrganization_Resume
SF 424A Excel – Budget Information for Non-Construction Programs File	Excel	ControlNumber_LeadOrganization_SF424A
PMC 123.1 Budget Justification File	PDF	ControlNumber_LeadOrganization_Budget
Letters of Commitment (if applicable)	PDF	
Subaward Budget File(s), if applicable PMC 123.1 Budget Justification(s)	Excel for Budget PDF for Justification	ControlNumber_LeadOrganization_Subawardee_SF424A
Budget for Federally Funded Research and Development Center (FFRDC) Contractor File, if applicable	PDF	ControlNumber_LeadOrganization_FFRDC_FWP
Authorization from cognizant Contracting Officer for FFRDC, if applicable	PDF	ControlNumber_LeadOrganization_FFRDC_Auth
SF-LLL Disclosure of Lobbying Activities	PDF	ControlNumber_LeadOrganization_SF LLL

D. Submissions from Successful Applicants

If selected for award, DOE reserves the right to request additional or clarifying information for any reason deemed necessary, including, but not limited to:

- Indirect cost information
- Other budget information
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5)
- Representation of Limited Rights Data and Restricted Software, if applicable
- Justification for foreign travel
- Environmental Questionnaire - Federal agencies are responsible for conducting the environmental review process required by the National Environmental Policy Act (NEPA) and related environmental statutes, regulations, permits, and approvals. NEPA applies to all federal grant programs and requires federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions. While NEPA compliance is a federal agency responsibility and the ultimate decisions remain with the federal agency, applicants will be required to assist in the timely and effective completion of the NEPA process in the manner most pertinent to the applicant's proposed project.

E. Submission Dates and Times

1. Application Due Date

Applications must be received by June 18, 2012, not later than **5:00 PM Eastern Time**.

You are encouraged to transmit your application well before the deadline.

APPLICATIONS RECEIVED AFTER THE DEADLINE WILL NOT BE REVIEWED OR CONSIDERED FOR AWARD.

F. Intergovernmental Review

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

G. Funding Restrictions

Cost Principles. Costs must be allowable in accordance with the applicable Federal cost principles referenced in: 2 CFR 220 for Educational Institutions; 2 CFR 225 for State, Local, and Indian Tribal Governments; 2 CFR 230 for Non Profit Organizations and FAR Part 31 for commercial organizations.

Pre-award Costs. Recipients may charge to an award resulting from this announcement pre-award costs that were incurred within the ninety (90) calendar day period immediately preceding the effective date of the award and no earlier than the selection date, if the costs are allowable in accordance with the applicable Federal cost principles referenced in 10 CFR part 600. Recipients must obtain the prior approval of the Contracting Officer for any pre-award costs that are for periods greater than this 90 day calendar period.

Pre-award costs are incurred at the applicant's risk. DOE is under no obligation to reimburse such costs if for any reason the applicant does not receive an award or if the award is made for a lesser amount than the applicant expected.

If recipients are State or Local Governments, they may not incur pre-award costs prior to award, without prior approval of the DOE Contracting Officer.

H. Submission and Registration Requirements

1. Where to Submit

TO BE CONSIDERED FOR AWARD, APPLICATIONS MUST BE SUBMITTED UNDER THIS ANNOUNCEMENT THROUGH EERE EXCHANGE AT

<https://eere-exchange.energy.gov/> You cannot submit an application through EERE Exchange unless you are registered. Please read the registration requirements below carefully and start the process immediately. Applications submitted by any other means will not be accepted.

If you have problems completing the registration process or submitting your application, send an email to the EERE Exchange helpdesk at EERE-ExchangeSupport@hq.doe.gov. It is the responsibility of the applicant to verify successful transmission, prior to the Application due date and time.

2. Registration Process Requirements

There are several one-time actions that must be completed before submitting an Application in response to this Funding Opportunity Announcement (FOA), as follows:

- Register and create an account on EERE Exchange at: <https://eere-exchange.energy.gov/>. This account will then allow the user to register for any open EERE FOAs that are currently in Exchange. It is recommended that each organization or business unit, whether acting as a team or a single entity, use only one account as the appropriate contact point for each submission.

The applicant will receive an automated response when the Application is received. This will serve as a confirmation of receipt. Please do not reply to the automated response. The applicant will have the opportunity to re-submit a revised Application for any reason as long as the relevant submission is submitted by the specified deadline. The Users' Guide for Applying to the Department of Energy EERE Funding Opportunity Announcements is found at <https://eere-exchange.energy.gov/Manuals.aspx>.

The EERE Exchange registration does not have a delay; however, the remaining **registration requirements below could take several weeks to process and are necessary in order for a potential applicant to receive an award under this announcement.** Therefore, although not required in order to submit an Application through the EERE Exchange site, **all potential applicants lacking a DUNS number, or not yet registered with CCR or FedConnect should complete those registrations as soon as possible.**

Questions related to the registration process and use of the EERE Exchange website should be submitted to: EERE-ExchangeSupport@hq.doe.gov

- Obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number (including plus 4 extension, if applicable) at <http://fedgov.dnb.com/webform>
- Register with the Central Contractor Registry (CCR) at: <https://www.bpn.gov/ccr/default.aspx>. Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in CCR registration. Please update your CCR registration annually.

NOTE: As of May 2012 the Central Contractor Registry (CCR) along with several other Federal procurement systems is being incorporated into a single website called the System for Award Management (SAM). The SAM site is located at <https://www.sam.gov/sam/>. As the migration of CCR into the SAM website is currently in process, should you be unable to find the CCR website (<https://www.ccr.gov/>) at its previous location, please use the SAM website in this paragraph.

- Register in FedConnect at <https://www.fedconnect.net/>. To create an organization account, your organization's CCR MPIN is required. For more information about the CCR MPIN or other registration requirements, review the FedConnect Ready, Set, Go! Guide at https://www.fedconnect.net/FedConnect/PublicPages/FedConnect_Ready_Set_Go.pdf
- Register in Grants.gov to receive automatic updates when Amendments to this FOA are posted. However, please note that applications will not be accepted through Grants.gov. <http://www.grants.gov/>

3. Electronic Authorization of Applications and Award Documents

Submission of an application and supplemental information under this announcement through electronic systems used by the Department of Energy, including EERE Exchange, constitutes the authorized representative's approval and electronic signature.

Submission of award documents, including modifications, through electronic systems used by the Department of Energy, including FedConnect, constitutes the authorized representative's approval and acceptance of the terms and conditions of the award. Award acknowledgement via FedConnect constitutes the authorized representative's electronic signature.

SECTION V - APPLICATION REVIEW INFORMATION

A. Criteria

1. Initial Review Criteria

Application Award Eligibility

- Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine that (1) the applicant is eligible for an award; (2) the information required by the announcement has been submitted; (3) all mandatory requirements are satisfied; (4) the proposed project uses point-absorber technology which is consistent with the existing Navy EA and finding of no significant impact (FONSI) for the 30m WETS facility; and (5) the proposed project is responsive to the objectives of the funding opportunity announcement. If an application fails to meet these requirements, it may be deemed non-responsive and eliminated from full Merit Review.

2. Merit Review Criteria

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

Criterion 1: Schedule and Scheduling Factors

Weight: [30%]

- The degree to which the developer has a WEC device readily available for deployment, and/or the plan for making available a seaworthy device for an anticipated deployment window in the 4th quarter of calendar year 2012.
- The thoroughness and feasibility of the overall project schedule, including the clarity, adequacy and timing of major milestones; including port, vessel and mobilization costs.
- The degree to which credible evidence is presented indicating that the WEC device is capable of undergoing 12 months of in-water testing at the proposed site.

Criterion 2: Technical Concept and Impact

Weight: [20%]

- The overall relevance and applicability of the technical concept and approach in addressing the specific innovation objectives of the FOA.
- The rationale and evidence provided supporting the conclusion that the proposed WEC device is ready for system demonstration, and that all technical components are at an appropriate TRL level.
- Likelihood that the proposed project will lead to a future commercial application in the U.S.
- Adequacy of the proposed data collection and performance validation plan to achieve IEC type certification (if applicable) and quantify device system technical and economic performance.
- Comprehensiveness of plan to produce appropriate data (test plan and analysis) to demonstrate technology advancement to a higher TRL designation (see Appendix D for example data to be collected).

Criterion 3: Reduction in Cost of Energy**Weight: [20%]**

- Credibility of approach to predict cost of energy, cost per installed kW, conversion efficiency, annual energy production, and operating and maintenance costs.
- Extent to which a detailed LCOE analysis, including all assumptions, calculations, and sources used to calculate the impact of the proposed design on LCOE, is presented for the proposed project with rigor, clarity, transparency and completeness.
- Extent to which the LCOE analysis for the proposed project can be projected to show a credible path from the demonstration-scale to cost-effective commercial-scale deployment below a local "hurdle" price at which WEC devices can compete with other regional generation sources without subsidies. Analysis should include the discussion of potential market entry points.

Criterion 4: Work Plan**Weight: [15%]**

- The relevance and clarity of the goals and objectives of the project.
- The clarity and adequacy of the work plan, including detailed task descriptions and resource loaded schedule.
- The clarity and adequacy of the work plan to address project deliverables including:
 - Pre and post deployment reports; and
 - Comprehensive plan to disseminate results of research to others in the water power industry (may include conferences, papers, workshops, and web-based information sharing) in a timely manner (i.e., publications, technical presentations, and patent filings).

Criterion 5: Team Qualifications and Project Management**Weight: [15%]**

- The capability of the proposed team to address all aspects of the proposed work.
- The relevant experience, clarity and appropriateness of the team member's roles.
- The knowledge and experience in project management techniques, methods, and practices to successfully complete the project scope on budget and on schedule.
- The identification and consideration of risk, and the use of effective risk management and change control systems to mitigate impacts.
- The approach to managing the team and ensuring communication among team members.

3. Other Selection Factors

The selection official may consider the following program policy factors in the selection process:

- Alignment with the mission and goals of the Water Power Program.

B. Review and Selection Process**1. Merit Review**

Applications that pass the initial review will be subjected to a merit review in accordance with the guidance provided in the "Department of Energy Merit Review Guide for Financial Assistance". This guide is available at <http://energy.gov/management/office->

[management/operational-management/financial-assistance](#) under Financial Assistance Policy and Guidance.

2. Pre-Selection Clarification

The Contracting Officer may contact applicants if he/she determines that pre-selection clarification is necessary and appropriate. The Contracting Officer has exclusive authority to make this determination. The Contracting Officer may contact one, multiple, or no applicants at his/her discretion. The Contracting Officer will convey any questions or requests for clarification to the applicant and set a deadline for responses. All responses must be sent to the Contracting Officer by the given deadline.

3. Selection

The Selection Official may consider the merit review recommendation, program policy factors, and the amount of funds available.

4. Discussions and Award

The Government may enter into discussions with a selected applicant for any reason deemed necessary, including, but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) the Government needs additional information to determine that the recipient is capable of complying with the requirements in 10 CFR part 600; and/or (4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the applicant.

C. Anticipated Notice of Selection and Award Dates

DOE anticipates notifying applicants selected for award by the end of August 2012 and making awards by the end of September 2012.

SECTION VI - AWARD ADMINISTRATION INFORMATION

A. Notice of Selection

1. Notice of Selection

DOE will notify applicants selected for award. This notice of selection is not an authorization to begin performance. (See Section IV.G with respect to the allowability of pre-award costs.)

Organizations whose applications have not been selected will be advised as promptly as possible. This notice will explain why the application was not selected.

2. Notice of Award

A Financial Assistance Award or Assistance Agreement issued by the Contracting Officer is the authorizing award document. It normally includes, either as an attachment or by reference: (1) Special Terms and Conditions; (2) Applicable program regulations, if any; (3) Application as approved by DOE; (4) DOE assistance regulations at 10 CFR part 600; (5) National Policy Assurances To Be Incorporated As Award Terms; (6) Budget Summary; (7) Federal Assistance Reporting Checklist; and (8) Statement of Project Objectives which identifies the reporting requirements.

For grants and cooperative agreements made to universities, non-profits and other entities subject to OMB Circular A-110, the Award also includes the Research Terms and Conditions and the DOE Agency Specific Requirements located at:
<http://www.nsf.gov/bfa/dias/policy rtc/index.jsp>.

B. Administrative Requirements, National Policy Requirements, and Applicant Certifications

1. Administrative Requirements

The administrative requirements for DOE grants and cooperative agreements are contained in Title 10 CFR Part 600 (See: [10 CFR 600](http://www.ecfr.gov/g10/cfrpt600)). Grants and cooperative agreements made to universities, non-profits and other entities subject to Title 10 CFR Part 600 are subject to the Research Terms and Conditions located on the National Science Foundation web site at:
<http://www.nsf.gov/bfa/dias/policy rtc/index.jsp>.

DUNS and CCR Requirements

Additional administrative requirements for DOE grants and cooperative agreements are contained in 2 CFR, Part 25 (See: <http://ecfr.gpoaccess.gov>). Prime awardees must keep their data at CCR current. Subawardees at all tiers must obtain DUNS numbers and provide the DUNS to the prime awardee before the subaward can be issued.

Subaward and Executive Reporting

Additional administrative requirements necessary for DOE grants and cooperative agreements to comply with the Federal Funding and Transparency Act of 2006 (FFATA) are contained in 2 CFR, Part 170. (See: <http://ecfr.gpoaccess.gov>). Prime awardees must register with the new FSRS database and report the required data on their first tier

subawardees. Prime awardees must report the executive compensation for their own executives as part of their registration profile in the CCR.

2. Special Terms and Conditions, National Policy Requirements, and Applicant Certifications

The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements are located at:

<http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms>.

The National Policy Assurances To Be Incorporated as Award Terms are located at <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms>

Applicant Certifications

By submitting an application in response to this FOA the Applicant certifies that:

- (1) It is **not** a corporation that has been convicted (or had an officer or agent of such corporation acting on behalf of the corporation convicted) of a felony criminal violation under any Federal law within the preceding 24 months,
- (2) It is **not** a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability,
- (3) If the Applicant's financial assistance application is chosen for award and the award is in excess of \$1,000,000, the applicant will, by the end of the fiscal year, upgrade the efficiency of their facilities by replacing any lighting that does not meet or exceed the energy efficiency standard for incandescent light bulbs set forth in Section 325 of the Energy Policy and Conservation Act (42 U.S.C. 6295).

3. Intellectual Property Provisions

The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms>

C. Reporting

Reporting requirements will be identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the assistance agreement. Specific reporting and deliverables will be defined during negotiation of award; however, DOE anticipates the submission of pre- and post-deployment reports such as:

Pre-Deployment Reports:

1. Device Deployment and Recovery Plan
2. Test Protocol Definition

3. Operations and Maintenance Plan
4. Device Monitoring and Data Collection Plan

Post-Deployment Reports:

1. Final Report
 - a. Summary Data Report
 - b. Data Analysis Report
 - c. LCOE Analysis
 - d. Lessons Learned (including a discussion of the opportunities for technical, environmental and economic improvement of the device)

SECTION VII - QUESTIONS

A. Questions

Questions regarding the content of this FOA must be submitted to WECtest@go.doe.gov not later than 3 business days prior to the application due date.

All questions and answers related to this FOA will be posted on EERE Exchange at: <https://eere-exchange.energy.gov/>. **Please note that you must first select this specific FOA Number in order to view the questions and answers specific to this FOA.** DOE will attempt to respond to a question within 3 business days, unless a similar question and answer has already been posted on the website.

Questions related to the registration process and use of the EERE Exchange website should be submitted to: EERE-ExchangeSupport@hq.doe.gov

SECTION VIII - OTHER INFORMATION

A. Amendments

Amendments to this announcement will be posted on the EERE eXCHANGE web site and the Grants.gov system. However, you will only receive an email when an amendment or an announcement is posted on these sites if you register for email notifications for this FOA in Grants.gov. DOE recommends that you register as soon after the release of the FOA as possible to ensure you receive timely notice of any amendments or other announcements.

B. Government Right to Reject or Negotiate

DOE reserves the right, without qualification, to reject any or all applications received in response to this announcement and to select any application, in whole or in part, as a basis for negotiation and/or award.

C. Commitment of Public Funds

The Contracting Officer is the only individual who can make awards or commit the Government to the expenditure of public funds. A commitment by other than the Contracting Officer, either explicit or implied, is invalid.

D. Proprietary Application Information

DOE will use data and other information contained in applications strictly for evaluation purposes. Applicants should not include confidential, proprietary, or privileged information in their applications unless such information is necessary to convey an understanding of the proposed project.

Applications containing confidential, proprietary, or privileged information must be marked as described below. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under the Freedom of Information Act or otherwise. The U.S. Government is not liable for the disclosure or use of unmarked information, and may use or disclose such information for any purpose.

The cover sheet of the application must be marked as follows and identify the specific pages containing confidential, proprietary, or privileged information:

Notice of Restriction on Disclosure and Use of Data:

Pages *[list applicable pages]* of this document may contain confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance or loan agreement between the submitter and the Government. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source.

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

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

E. Evaluation and Administration by Non-Federal Personnel

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

F. Intellectual Property Developed under this Program

Patent Rights. The government will have certain statutory rights in an invention that is conceived or first actually reduced to practice under a DOE award. 42 U.S.C. 5908 provides that title to such inventions vests in the United States, except where 35 U.S.C. 202 provides otherwise for nonprofit organizations or small business firms. However, the Secretary of Energy may waive all or any part of the rights of the United States subject to certain conditions. (See “Notice of Right to Request Patent Waiver” in paragraph G below.)

Rights in Technical Data. Normally, the government has unlimited rights in technical data created under a DOE agreement. Delivery or third party licensing of proprietary software or data developed solely at private expense will not normally be required except as specifically negotiated in a particular agreement to satisfy DOE’s own needs or to insure the commercialization of technology developed under a DOE agreement.

Special Protected Data Statutes. This program is covered by a special protected data statute. The provisions of the statute provide for the protection from public disclosure, for a period of up to five years from the date of its development, of first-produced data that would be trade secret, or commercial or financial information that is privileged or confidential, if the information had been obtained from a non-Federal party. Generally, the provision entitled, Rights in Data - Programs Covered Under Special Protected Data Statutes, (10 CFR 600 Appendix A to Subpart D), will apply to an award made under this announcement. This provision will identify data or categories of data first produced in the performance of the award that will be made available to the public, notwithstanding the statutory authority to withhold data from public dissemination, and may also identify data that will be recognized by the parties as protected data.

DOE will work with the selected applicants during negotiation of the award to define data that DOE may request to distribute among DOE and DOE National Labs and the data DOE may want to disseminate to the public. For example, performance data may be requested to better inform National Lab development of performance models. For additional information, please see Appendix D.

G. Notice of Right to Request Patent Waiver

Applicants may request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of an agreement as a result of this announcement, in advance of or within 30 days after the effective date of the award. Even if such advance waiver is not requested or the request is denied, the recipient will have a continuing right under the award to request a waiver of the rights of the United States in identified inventions, i.e., individual inventions conceived or first actually reduced to practice in performance of the award. Any patent waiver that may be granted is subject to certain terms and conditions in 10 CFR 784.

Domestic small businesses and domestic nonprofit organizations will receive the patent rights clause at 37 CFR 401.14, i.e., the implementation of the Bayh-Dole Act. This clause permits domestic small business and domestic nonprofit organizations to retain title to subject inventions. Therefore, small businesses and nonprofit organizations do not need to request a waiver.

H. Notice Regarding Eligible/Ineligible Activities

Eligible activities under this program include those which describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.

I. Notice of Right to Conduct a Review of Financial Capability

DOE reserves the right to conduct an independent third party review of financial capability for applicants that are selected for negotiation of award (including personal credit information of principal(s) of a small business if there is insufficient information to determine financial capability of the organization).

J. Notice of Potential Disclosure under Freedom of Information Act

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

REFERENCE MATERIAL

Appendix A – Definitions

“Amendment” means a revision to a Funding Opportunity Announcement

"Applicant" means the legal entity or individual signing the Application. This entity or individual may be one organization or a single entity representing a group of organizations (such as a Consortium) that has chosen to submit a single Application in response to a Funding Opportunity Announcement.

"Application" means the documentation submitted in response to a Funding Opportunity Announcement.

“Authorized Organization Representative (AOR)” is the person with assigned privileges who is authorized to submit grant applications through Grants.gov on behalf of an organization. The privileges are assigned by the organization’s E-Business Point of Contact designated in the CCR.

"Award" means the written documentation executed by a DOE Contracting Officer, after an Applicant is selected, which contains the negotiated terms and conditions for providing Financial Assistance to the Applicant. A Financial Assistance Award may be either a Grant or a Cooperative Agreement.

"Budget" means the cost expenditure plan submitted in the Application, including both the DOE contribution and the Applicant Cost Share.

“Central Contractor Registration (CCR)” is the primary database which collects, validates, stores and disseminates data in support of agency missions.

"Consortium (plural consortia)" means the group of organizations or individuals that have chosen to submit a single Application in response to a Funding Opportunity Announcement.

"Contracting Officer" means the DOE official authorized to execute Awards on behalf of DOE and who is responsible for the business management and non-program aspects of the Financial Assistance process.

"Cooperative Agreement" means a Financial Assistance instrument used by DOE to transfer money or property when the principal purpose of the transaction is to accomplish a public purpose of support or stimulation authorized by Federal statute, and Substantial Involvement (see definition below) is anticipated between DOE and the Applicant during the performance of the contemplated activity. Refer to [10 CFR 600.5](#) for additional information regarding cooperative agreements.

"Cost Sharing" means the respective share of Total Project Costs to be contributed by the Applicant and by DOE. The percentage of Applicant Cost Share is to be applied to the Total Project Cost (i.e., the sum of Applicant plus DOE Cost Shares) rather than to the DOE contribution alone.

“Data Universal Numbering System (DUNS) Number” is a unique nine-character identification number issued by Dun and Bradstreet (D&B). Organizations must have a DUNS number prior to registering in the CCR. Call 1-866-705-5711 to receive one free of charge.

“E-Business Point of Contact (POC)” is the individual who is designated as the Electronic Business Point of Contact in the CCR registration. This person is the sole authority of the organization with the capability of designating or revoking an individual’s ability to conduct CCR transactions.

“E-Find” is a Grants.gov webpage where you can search for Federal Funding Opportunities in FedGrants. <http://www.grants.gov/search/searchHome.do>

“EERE Exchange” is the Department of Energy, Energy Efficiency and Renewable Energy’s web system for posting Federal Funding Opportunity Announcements and receiving applications. [EERE eXCHANGE website](#)

"Financial Assistance" means the transfer of money or property to an Applicant or Participant to accomplish a public purpose of support authorized by Federal statute through Grants or Cooperative Agreements and sub-awards. For DOE, it does not include direct loans, loan guarantees, price guarantees, purchase agreements, Cooperative Research and Development Agreements (CRADAs), or any other type of financial incentive instrument.

“FedConnect” is where federal agencies make awards via the web. <http://www.fedconnect.net/FedConnect/>

“Federally Funded Research and Development Center (FFRDC)” means a research laboratory as defined by Federal Acquisition Regulation 35.017.

“Funding Opportunity Announcement (FOA)” is a publicly available document by which a Federal agency makes known its intentions to award discretionary grants or cooperative agreements, usually as a result of competition for funds. Funding opportunity announcements may be known as program announcements, notices of funding availability, solicitations, or other names depending on the agency and type of program.

"Grant" means a Financial Assistance instrument used by DOE to transfer money or property when the principal purpose of the transaction is to accomplish a public purpose of support or stimulation authorized by Federal statute, and no Substantial Involvement is anticipated between DOE and the Applicant during the performance of the contemplated activity.

“Grants.gov” is the “storefront” web portal which allows organizations to electronically find grant opportunities from all Federal grant-making agencies. Grants.gov is THE single access point for over 900 grant programs offered by the 26 Federal grant-making agencies. <http://www.grants.gov>

“Indian Tribe” means any Indian tribe, band, nation, or other organized group or community, including Alaska Native village or regional or village corporation, as defined in or established pursuant to the Alaska Native Claims Settlement Act (85 Stat. 688)[43 U.S.C. § 1601 et seq.],

which are recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

"Key Personnel" mean the individuals who will have significant roles in planning and implementing the proposed Project on the part of the Applicant and Participants, including FFRDCs.

"Marketing Partner Identification Number (MPIN)" is a very important password designated by your organization when registering in CCR. The E-Business Point of Contact will need the MPIN to assign privileges to the individual(s) authorized to perform CCR transactions on behalf of your organization. The MPIN must have 9 digits containing at least one alpha character (must be in capital letters) and one number (no spaces or special characters permitted).

"Participant" for purposes of this Funding Opportunity Announcement only, means any entity, except the Applicant substantially involved in a Consortium, or other business arrangement (including all parties to the Application at any tier), responding to the Funding Opportunity Announcement.

"Principal Investigator" refers to the technical point of contact/Project Manager for a specific project award.

"Project" means the set of activities described in an Application, State plan, or other document that is approved by DOE for Financial Assistance (whether such Financial Assistance represents all or only a portion of the support necessary to carry out those activities).

"Proposal" is the term used to describe the documentation submitted in response to a Funding Opportunity Announcement. Also see Application.

"Recipient" means the organization, individual, or other entity that receives a Financial Assistance Award from DOE, is financially accountable for the use of any DOE funds or property provided for the performance of the Project, and is legally responsible for carrying out the terms and condition of the award.

"Selection" means the determination by the DOE Selection Official that negotiations take place for certain Projects with the intent of awarding a Financial Assistance instrument.

"Selection Official" means the DOE official designated to select Applications for negotiation toward Award under a subject Funding Opportunity Announcement.

"Substantial Involvement" means involvement on the part of the Government. DOE's involvement may include shared responsibility for the performance of the Project; providing technical assistance or guidance which the Applicant is to follow; and the right to intervene in the conduct or performance of the Project. Such involvement will be negotiated with each Applicant prior to signing any agreement.

“Technology Investment Agreement (TIA)” is a type of assistance instrument used to support or stimulate research projects involving for-profit firms, especially commercial firms that do business primarily in the commercial marketplace. TIAs are different from grants and cooperative agreements in that the award terms may vary from the Government-wide standard terms (See DOE TIA regulations at 10 CFR Part 603). The primary purposes for including a TIA in the type of available award instruments are to encourage non-traditional Government contractors to participate in an R&D program and to facilitate new relationships and business practices. A TIA can be particularly useful for awards to consortia (See 10 CFR 603.225(b) and 603.515, Qualification of a consortium).

"Total Project Cost" means all the funds to complete the effort proposed by the Applicant, including DOE funds (including direct funding of any FFRDC) plus all other funds that will be committed by the Applicant as Cost Sharing.

“Tribal Energy Resource Development Organization or Group” means an “organization” of two or more entities, at least one of which is an Indian Tribe (see “Indian Tribe” above) that has the written consent of the governing bodies of all Indian Tribes participating in the organization to apply for a grant or loan, or other assistance under 25 U.S.C. § 3503.

Appendix B – Personally Identifiable Information

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

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

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

- a. **Public PII:** PII found in public sources such as telephone books, public websites, business cards, university listing, etc. Public PII includes first and last name, address, work telephone number, email address, home telephone number, and general education credentials.
- b. **Protected PII:** PII that requires enhanced protection. This information includes data that if compromised could cause harm to an individual such as identity theft.

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

- Social Security Numbers in any form
- Place of Birth associated with an individual
- Date of Birth associated with an individual
- Mother's maiden name associated with an individual
- Biometric record associated with an individual
- Fingerprint
- Iris scan
- DNA
- Medical history information associated with an individual
- Medical conditions, including history of disease
- Metric information, e.g. weight, height, blood pressure
- Criminal history associated with an individual
- Employment history and other employment information associated with an individual
- Ratings
- Disciplinary actions
- Performance elements and standards (or work expectations) are PII when they are so intertwined with performance appraisals that their disclosure would reveal an individual's performance appraisal

- Financial information associated with an individual
- Credit card numbers
- Bank account numbers
- Security clearance history or related information (not including actual clearances held)

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

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

Appendix C – Cost Share Information

Cost Sharing or Cost Matching

The terms “cost sharing” and “cost matching” are often used synonymously. Even the DOE Financial Assistance Regulations, 10 CFR Part 600, use both of the terms in the titles specific to regulations applicable to cost sharing. DOE almost always uses the term “cost sharing,” as it conveys the concept that **non-federal share is calculated as a percentage of the Total Project Cost**. An exception is the State Energy Program Regulation, 10 CFR Part 420.12, State Matching Contribution. Here “cost matching” for the non-federal share is calculated as a percentage of the Federal funds only, rather than the Total Project Cost.

How Cost Sharing Is Calculated

As stated above, cost sharing is calculated as a percentage of the Total Project Cost. Following is an example of how to calculate cost sharing amounts for a project with \$1,000,000 in federal funds with a minimum 20% non-federal cost sharing requirement:

Formula: Federal share (\$) divided by Federal share (%) = Total Project Cost

Example: \$1,000,000 divided by 80% = \$1,250,000

Formula: Total Project Cost (\$) minus Federal share (\$) = Non-federal share (\$)

Example: \$1,250,000 minus \$1,000,000 = \$250,000

Formula: Non-federal share (\$) divided by Total Project Cost (\$) = Non-federal share (%)

Example: \$250,000 divided by \$1,250,000 = 20%

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

What Qualifies For Cost Sharing

While it is not possible to explain what specifically qualifies for cost sharing in one or even a couple of sentences, in general, if a cost is allowable under the cost principles applicable to the organization incurring the cost and is eligible for reimbursement under a DOE grant or cooperative agreement, then it is allowable as cost share. Conversely, if the cost is not allowable under the cost principles and not eligible for reimbursement, then it is not allowable as cost share. In addition, costs may not be counted as cost share if they are paid by the Federal Government under another award unless authorized by Federal statute to be used for cost sharing.

The rules associated with what is allowable as cost share are specific to the type of organization that is receiving funds under the grant or cooperative agreement, though are generally the same for all types of entities. The specific rules applicable to:

- Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations are found at 10 CFR 600.123;
- State and Local Governments are found at 10 CFR 600.224;
- For-profit Organizations are found at 10 CFR 600.313.

In addition to the regulations referenced above, other factors may also come into play such as timing of donations and length of the project period. For example, the value of ten years of donated maintenance on a project that has a project period of five years would not be fully allowable as cost share. Only the value for the five years of donated maintenance that corresponds to the project period is allowable and may be counted as cost share.

Additionally, DOE generally does not allow pre-award costs for either cost share or reimbursement when these costs precede the signing of the appropriation bill that funds the award. In the case of a competitive award, DOE generally does not allow pre-award costs prior to the signing of the Selection Statement by the DOE Selection Official.

Following is a link to the DOE Financial Assistance Regulations. You can click on the specific section for each Code of Federal Regulations reference mentioned above.

[DOE Financial Assistance Rules \(10 CFR 600\)](#)

As stated above, the rules associated with what is allowable cost share are generally the same for all types of organizations. Following are the rules found to be common, but again, the specifics are contained in the regulations and cost principles specific to the type of entity:

(A) *Acceptable contributions*. All contributions, including cash contributions and third party in-kind contributions, must be accepted as part of the recipient's cost sharing if such contributions meet all of the following criteria:

- (1) They are verifiable from the recipient's records.
- (2) They are not included as contributions for any other federally-assisted project or program.
- (3) They are necessary and reasonable for proper and efficient accomplishment of project or program objectives.
- (4) They are allowable under the cost principles applicable to the type of entity incurring the cost as follows:

(a) *For-profit organizations*. Allowability of costs incurred by for-profit organizations and those nonprofit organizations listed in Attachment C to OMB Circular A-122 is determined in accordance with the for-profit costs principles in 48 CFR Part 31 in the Federal Acquisition Regulation, except that patent prosecution costs are not allowable unless specifically authorized in the award document. (v) Commercial Organizations. [FAR Subpart 31.2—Contracts with Commercial Organizations](#)

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

(i) *Institutions of higher education.* Allowability is determined in accordance with: [2 CFR 220 Cost Principles for Educational Institutions](#)

(ii) *Other nonprofit organizations.* Allowability is determined in accordance with: [2 CFR 230 Cost Principles for Nonprofit Organizations](#)

(iii) *Hospitals.* Allowability is determined in accordance with the provisions of: [Title 45 Appendix E to Part 74—Principles for Determining Costs Applicable to Research and Development Under Grants and Contracts With Hospitals](#)

(iv) *Governmental organizations.* Allowability for State, local, or federally recognized Indian tribal government is determined in accordance with: [PART 225—Cost Principles for State, Local, and Indian Tribal Governments \(OMB Circular A–87\)](#)

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

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

(B) *Valuing and documenting contributions*

(1) *Valuing recipient's property or services of recipient's employees.* Values are established in accordance with the applicable cost principles, which mean that amounts chargeable to the project are determined on the basis of costs incurred. For real property or equipment used on the project, the cost principles authorize depreciation or use charges. The full value of the item may be applied when the item will be consumed in the performance of the award or fully depreciated by the end of the award. In cases where the full value of a donated capital asset is to be applied as cost sharing or matching, that full value must be the lesser or the following:

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

(b) The current fair market value. If there is sufficient justification, the Contracting Officer may approve the use of the current fair market value of the donated property, even if it exceeds the certified value at the time of donation to the project. The Contracting Officer may accept the use of any reasonable basis for determining the fair market value of the property.

(2) *Valuing services of others' employees.* If an employer other than the recipient furnishes the services of an employee, those services are valued at the employee's regular rate of pay, provided these services are for the same skill level for which the employee is normally paid.

(3) *Valuing volunteer services.* Volunteer services furnished by professional and technical personnel, consultants, and other skilled and unskilled labor may be counted as cost sharing or matching if the service is an integral and necessary part of an approved project or program. Rates for volunteer services must be consistent with those paid for similar work in the recipient's organization. In those markets in which the required skills are not found in the recipient organization, rates must be consistent with those paid for similar work in the labor market in which the recipient competes for the kind of services involved. In either case, paid fringe benefits that are reasonable, allowable, and allocable may be included in the valuation.

(4) *Valuing property donated by third parties.*

- (a) Donated supplies may include such items as office supplies or laboratory supplies. Value assessed to donated supplies included in the cost sharing or matching share must be reasonable and must not exceed the fair market value of the property at the time of the donation.
- (b) Normally only depreciation or use charges for equipment and buildings may be applied. However, the fair rental charges for land and the full value of equipment or other capital assets may be allowed, when they will be consumed in the performance of the award or fully depreciated by the end of the award, provided that the Contracting Officer has approved the charges. When use charges are applied, values must be determined in accordance with the usual accounting policies of the recipient, with the following qualifications:
 - (i) The value of donated space must not exceed the fair rental value of comparable space as established by an independent appraisal of comparable space and facilities in a privately-owned building in the same locality.
 - (ii) The value of loaned equipment must not exceed its fair rental value.

(5) *Documentation.* The following requirements pertain to the recipient's supporting records for in-kind contributions from third parties:

- (a) Volunteer services must be documented and, to the extent feasible, supported by the same methods used by the recipient for its own employees.
- (b) The basis for determining the valuation for personal services and property must be documented.

SAMPLE COST SHARE CALCULATION FOR BLENDED COST SHARE PERCENTAGE

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

<u>Task</u>	<u>Proposed Federal Share</u>	<u>Required Federal Share %</u>	<u>Non-federal Cost Share %</u>
Task 1 (R&D)	\$1,000,000	80%	20%
Task 2 (R&D)	500,000	80%	20%
Task 3 (Demonstration)	400,000	50%	50%
Task 4 (Outreach)	100,000	100%	0%
	<u>\$2,000,000</u>		

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

Each task must be calculated individually as follows:

Task 1

\$1,000,000 divided by 80% = \$1,250,000 (Task 1 Cost)

Task 1 Cost minus federal share = Non-federal share

\$1,250,000 - \$1,000,000 = **\$250,000 (Non-federal share)**

Task 2

\$500,000 divided 80% = \$625,000 (Task 2 Cost)

Task 2 Cost minus federal share = Non-federal share

\$625,000 - \$500,000 = **\$125,000 (Non-federal share)**

Task 3

\$400,000 / 50% = \$800,000 (Task 3 Cost)

Task 3 Cost minus federal share = Non-federal share

\$800,000 - \$400,000 = **\$400,000 (Non-federal share)**

Task 4

Federal share = \$100,000

Non-federal cost share is not mandated for outreach = **\$0 (Non-federal share)**

The calculation may then be completed as follows:

<u>Task</u>	<u>Proposed Federal Share</u>	<u>Federal Share %</u>	<u>Required Non-federal Cost Share \$</u>	<u>Required Non-federal Cost Share %</u>	<u>Total Project Cost</u>
Task 1	\$1,000,000	80%	\$250,000	20%	\$1,250,000
Task 2	500,000	80%	125,000	20%	625,000
Task 3	400,000	50%	400,000	50%	800,000
Task 4	<u>100,000</u>	100%	<u>0</u>	0%	<u>100,000</u>
	\$2,000,000		\$775,000		\$2,775,000

Blended Cost Share %

Non-federal share (\$775,000) divided by Total Project Cost (\$2,775,000) = 27.9% (Non-federal)

Federal share (\$2,000,000) divided by Total Project Cost (\$2,775,000) = 72.1% (Federal)

Appendix D – Example Data/Measurements List

DOE will expect to have access to the full range of performance data collected during the award to be used by National Labs for the development of performance models. DOE will work with recipients during negotiation to facilitate the development of non-disclosure agreements (NDAs), where appropriate, that will protect the interests of all parties. While DOE may require that certain data be shared with Federally Funded Research and Development Centers (FFRDCs), Test Centers, or other research partners, the data will otherwise be protected from public disclosure for 5 years from the date the data were first produced, as set forth in Section VIII, Paragraph F of this Funding Opportunity Announcement.

DOE may publish aggregated industry data but will not release detailed cost and performance data specific to any one project. DOE will work with the recipient during negotiations to define the data/measurements to be collected. Below is an example list of information which may be collected.

Tier 1 – Information anticipated to be collected (if applicable) as part of a standard monitoring program

Device Measurements:

- *Motion
 - Geodetic position (GPS)
 - Heading
 - Altitude above bottom
 - Waterline
- *PTO - Drivetrain
 - Internal temperature
 - Cycles
 - Stroke length
- *System Health
 - Water intrusion
 - Internal humidity
 - Internal temperature
- *Power (power performance, min sample rate of 1hz (1 minute avg))
 - Voltage
 - Current
- *General
 - Fault status

Tier 2 – Additional measurements of interest

Device Measurements:

- *Motion
 - 6 Degrees of Freedom - surge, sway, heave, roll, pitch, yaw and derivatives
- *PTO - Drivetrain

- Linear position, velocity
- *PTO - Generator
 - Generator temperature
 - Linear or rotational velocity
- *Structural - PTO
 - Linear vibration/acceleration
 - Shaft strain
- *Primary structure
 - Linear vibration/acceleration
 - Loads (strain at primary components > 20 gauges)
 - Wave pressure force
- *Mooring
 - Line tension
 - Line angle
- *Power (power quality, min sampling rate of 50 kHz (1 minute avg))
 - Device voltage
 - Device current
 - Grid voltage - if applicable
 - Grid current - if applicable
- *Acoustic
 - Internal sound levels
- *Video
 - Surface video
 - Subsurface video

Metoccean Measurements:

- *Sea surface
 - Wave time histories (near device)
 - Directional wave spectra
 - Water depth
- *In-Flow
 - Current velocity profile
- *Water Properties
 - Temperature
 - Salinity
 - pH
 - Dissolved oxygen
- *Meteorology
 - Wind speed and direction
 - Air temperature
 - Relative humidity
 - Barometric pressure
- *Acoustic
 - Ambient noise/sound levels
- *Electromagnetic Field (EMF)
 - Strength
 - Spectra