

**FINANCIAL ASSISTANCE  
FUNDING OPPORTUNITY ANNOUNCEMENT**



**U. S. Department of Energy  
Idaho Operations Office**

**Advanced Reactor Research and Development  
Funding Opportunity Number: DE-FOA-0000818**

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**Letter of Intent Due Date: 03/20/2013**

**Application Due Date: 04/16/2013 at 8:00:00 PM Eastern  
Time**

**A DOE webinar covering project details and FOA application  
instructions will be conducted on 14 March 2013 at 1:00 p.m. (EST)  
Webinar login instructions are covered in appendix D of this FOA**

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## **Section I - FUNDING OPPORTUNITY DESCRIPTION**

### **Description**

#### **A. STATEMENT OF OBJECTIVES**

##### **ADVANCED REACTOR Research & Development (R&D) PROGRAM**

#### **Background**

The U.S. Department of Energy (DOE) Office of Nuclear Energy (NE) sponsors a program of research, development, and demonstration related to advanced non-light water reactor concepts. A goal of the program is to facilitate greater engagement between DOE and industry. In support of that goal, during 2012 DOE established a Technical Review Panel (TRP) process to identify R&D needs for viable advanced reactor concepts in order to inform DOE-NE R&D investment decisions. That process involved the use of a Request for Information (RFI) to solicit concept information from industry and engage technical experts to evaluate those concepts. Having completed this process, DOE desires to conduct a procurement action to partner with industry to conduct cost-shared R&D for selected technology needs identified by the TRP process. The intent of this Funding opportunity announcement (FOA) is to solicit proposals to conduct such cost-shared R&D activities. In this FOA, nine R&D activities are identified. However, due to limited funding, only three to six of the activities will be funded from this solicitation in FY13. DOE expects that only one R&D activity per applicant will be funded from this solicitation. Dissemination of information resulting from this effort will be in accordance with section VIII.G of this FOA.

#### **Advanced Reactor Research and Development FOA**

DOE seeks applications from industry participants for the accomplishment of R&D in support of specific needs identified through the Advanced Reactor Concepts Technical Review Panel process. Applicants are expected to provide a proposed R&D plan for their planned activity, including expected accomplishments, a timeline for performance, and anticipated costs for the accomplishment of the proposed work. Applicants are expected to provide detailed information on their capabilities and that of their partners to perform the specific R&D tasks. At completion of the proposed R&D, applicants will be expected to prepare a report to DOE on the results of their R&D.

Applications are sought for conduct of R&D activities on the following program elements:

1. Ceramic reflector system for a gas fast reactor
2. Corrosion control with Lead Bismuth Eutectic (LBE) coolant
3. LBE natural circulation fluid dynamics validation
4. Sodium thermal hydraulic analysis
5. Sodium fast reactor steam generator operations under extreme modes
6. Silicon Carbide Composite material
7. Development/Qualification of EM pumps
8. LBE reactor component development and testing
9. Helium cooled reactor component development and testing

Applicants may propose R&D in a selected and defined area within any of the program elements. Addressing all of the issues listed as examples for a program element is not necessary.

Details, including importance and examples, on each of the above program elements follow:

1. **Element: Ceramic reflector system for a gas fast reactor.**

**Importance:** R&D is needed to develop an improved understanding of the design requirements for a ceramic reflector for a gas cooled fast reactor. Research is needed to establish the properties and potential drawbacks and benefits of various materials in a reflector that is subject to fast spectrum

neutrons.

**Examples:** One design calls for an inner reflector of Be<sub>2</sub>C in a SiC composite can and an outer reflector of graphite. Crystalline Be<sub>2</sub>C is subject to fracture after  $\sim 10^{21}$  n/cm<sup>2</sup> due to buildup of helium from the (n,  $\alpha$ ) reaction and would require an understanding of helium generation and other radiation damage mechanisms, related mechanical and fracture properties of the Be<sub>2</sub>C, and size/structural requirements for the SiC composite container and its contents. Alternate concepts and their design parameters/limitations could also be investigated.

2. **Element: Corrosion control with lead-bismuth eutectic (LBE) coolant.**

**Importance:** R&D is needed to develop an improved understanding of the mechanisms of corrosion and for corrosion control in LBE. This is needed to provide more information on margins and operating constraints for structural components in this coolant.

**Examples:** Testing to determine corrosion rates and mechanisms for HT-9 (12Cr ferritic/martensitic steel) and T-91 (9Cr-1Mo martensitic steel) as a function of the oxygen content of the LBE and its velocity could provide data needed for oxygen-level corrosion control approaches and seek to gain an understanding of the optimum coolant velocity for LBE.

3. **Element: LBE natural circulation fluid dynamics validation.**

**Importance:** R&D is needed to examine natural circulation in LBE. Several advanced reactor concepts use natural circulation as a safety measure. To use natural circulation as the basis for a key safety feature requires validated and verified computer models that describe the natural circulation flow and experimental data that benchmarks the computer models.

**Examples:** The experimental data should cover the range of parameters (pressure drops, flow rates, etc.) that will be seen in normal and off-normal operating situations, and the experimental data should provide a high quality reference that the regulator and designers can both use as a verification point for the system's performance.

4. **Element: Sodium thermal hydraulic analysis.**

**Importance:** R&D is needed to provide experimental data to support future detailed design efforts.

**Examples:** **Data are needed to design for** pipe flow stratification at the discharge of EM (Electro-magnetic) pumps; flow recirculation zones induced in the inlet plenum from downcomer pipe inlets; determination of whether periodic flow eddies are generated at the outlet of the in-vessel intermediate heat exchangers to ensure there are minimal thermal-cycling issues; understand the laminarization of stratified shear layers in the upper plenum during reactor auxiliary cooling operation; and understand the recirculation zones in the Helical Coil Steam Generator tube bundles in the lower portion of the steam generator.

5. **Element: Sodium fast reactor steam generator operations under extreme modes.**

**Importance:** R&D is needed to gain deeper understanding of helical coil steam generator performance for sodium cooled reactors. This activity would perform computational analysis of a helical coil steam generator to determine: (a) Steady state performance; (b) Natural circulation during loss of flow and (c) Off-normal operations.

**Examples:** This R&D may include thermal-hydraulic issues in either the water or sodium sides (or both), structural and materials behavior of the SG or address the thermal performance of the SG as a function of lifetime and possible degradation. Lifetime performance of this component improves operating economics; therefore this steam generator model testing will help better understand steam generator lifetime, operation, scaling and material issues.

6. **Element: Silicon Carbide Composite material.**

**Importance:** R&D is needed to develop an improved understanding regarding design and use of silicon carbide (SiC) composite material (specifically SiC-SiC), in certain nuclear-related environments. This understanding is necessary to safely and reliably develop codes & standards for SiC-SiC composite materials that can be used for nuclear design and eventual licensing.

**Examples:** Applications of interest include tubular, sheet, and 3-dimensional shapes for core structural and core-support components where a combination of high-temperature strength and radiation resistance are needed. Coordination with existing codification and standardization activities within ASTM and

ASME related to targeted advanced reactor concepts would be valuable.

**7. Element: Development/Qualification of EM pumps.**

**Importance:** R&D is needed for the development/qualification of Electromagnetic pumps for various advanced reactor applications. Nuclear qualification of reliable, long-life pumps is needed in order to provide technical assurance for long-term, safe operations.

**Examples:** Testing of EM pump concepts under various thermal transient conditions is required to confirm predicted reliability. This may include pump performance, longevity and cavitation (and associated erosion) issues. Qualification of pumps for nuclear applications in advanced reactors could benefit both LBE and sodium cooled designs.

**8. Element: LBE reactor component development and testing.**

**Importance:** R&D is needed for development and testing of components for use in an LBE environment.

**Examples:** Development of a test LBE loop and conduct of component testing is needed to examine possible pump, heat exchanger and steam generator performance capabilities.

**9. Element: Helium cooled reactor component development and testing.**

**Importance:** R&D is needed to understand the effects of normal and transient operating conditions on certain reactor components.

**Examples:** The effects of flow conditions, high-temperature, the chemical operating environment (including a dry helium reducing atmosphere), and mechanical loading (including vibrations driven by flow and rotating machinery) such as instrumentation, reflector elements, control drums, shutdown heat exchanger, passive natural convection reactor auxiliary cooling system loops, helium shutoff valve actuators, and the containment filter/vent system.

## Section II - AWARD INFORMATION

### **A. TYPE OF AWARD INSTRUMENT**

DOE will award grants to industry under this FOA. This award is for industry only. Industry awardees may partner with DOE National Laboratories, universities, non-profits and for-profit organizations.

### **B. ESTIMATED FUNDING**

A total of approximately \$3.0 million is expected to be available for new awards in FY 2013 from the Government.

### **C. MAXIMUM AND MINIMUM AWARD SIZE**

**Ceiling** (i.e., the maximum amount for an individual award made under this announcement): \$1,200,000 (including 20% cost share). In the event an applicant proposes more than a 20% cost share, the maximum amount for an individual award may exceed \$1,200,000; however, the Government's portion shall not exceed \$1,000,000 for an individual award. (This is subject to the cost share requirements of Section III.)

**Floor** (i.e., the minimum amount for an individual award made under this announcement): \$300,000 (This is subject to the cost share requirements of Section III.)

### **D. EXPECTED NUMBER OF AWARDS**

**Number of Awards Depending on Size**

DOE anticipates making three to six awards under this FOA, depending on the size of the awards. DOE also anticipates making additional awards under this or a follow-on announcement, depending on the availability of funds in FY 2014. In this FOA, nine R&D activities are identified. However, due to limited funding only three to six of the activities will be funded from this solicitation in FY13. It is expected that only one R&D activity per applicant will be funded from this solicitation. If an applicant submits more than one proposal/activity, then the applicant shall indicate the relative priority for each of their R&D proposals/activities.

**E. ANTICIPATED AWARD SIZE**

While the maximum award size (i.e., the ceiling) is anticipated to be \$1 million, DOE anticipates that awards will be in the \$300,000 to \$1 million range. (This is subject to the cost share requirements of Section III.)

**F. PERIOD OF PERFORMANCE**

DOE anticipates making awards that will run for up to two years. Work must be completed according to the terms and conditions of the award.

**G. TYPE OF APPLICATION**

**New Applications Only**

DOE will accept only new applications under this announcement. A separate application must be submitted for each program element under Section I for which the applicant is interested in receiving an award. There is no limitation on the number of applications that an applicant may submit. However, it is expected that only one award will be made for each applicant. Each application must be complete and may not rely upon another application for submission of the required documents. The same project should not be submitted, and will not be evaluated, under more than one program element. If it is determined during the initial review that a project should be considered under a different program element, the application will be forwarded for review under that area.

**Section III - ELIGIBILITY INFORMATION**

**A. ELIGIBLE APPLICANTS**

All types of entities are eligible to apply, except organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995. However, the lead applicant must be a United States company. Partnering with other U.S. companies, universities and/or National Laboratories is allowed. Eligible applicants include, but are not limited to, teams, consortia, or other partnership arrangements consisting of universities, non-profits and for profit companies that are either U.S.-owned companies or companies meeting the requirements/definitions outlined in 10 CFR 600.502. Federally-owned independent corporations may apply, but should contact the DOE (see Part VII, B of this funding opportunity announcement for an eligibility determination). FFRDC Contractors may participate as members of a team, partnership or consortium, but may not apply as the prime.

**B. COST SHARING**

The Recipient cost share must be at least 20% of the total allowable costs of the project (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 costs of the projects) and must come from non-Federal sources, unless otherwise allowed by law. (See FOA Part VIII.F for additional information regarding cost sharing; see also 10 CFR Part 600 for the applicable cost sharing requirements.)

**C. OTHER ELIGIBILITY REQUIREMENTS**

## **FFRDC/National Laboratories**

Federally Funded Research and Development Center (FFRDC) Contractors. FFRDC contractors may be proposed as a team member on an industry entity's application subject to the following guidelines:

Authorization for non-DOE/NNSA 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. The use of a FFRDC contractor must be consistent with the contractor's authority under its award and must not place the FFRDC contractor in direct competition with the private sector.

Authorization for DOE/NNSA FFRDCs. The cognizant contracting officer for the FFRDC must authorize in writing the use of a DOE/NNSA 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 [Name] Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or complimentary to the missions of the laboratory, will not adversely impact execution of the DOE/NNSA assigned programs at the laboratory, and will not place the laboratory in direct competition with the domestic private sector."

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. The successful applicant will be responsible for establishing an agreement with the FFRDC.

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.

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 PACKAGE**

Application forms and instructions are available at **Grants.gov**. To access these materials, go to <http://www.grants.gov>, select "Apply for Grants," and then select "Download Application Package." Enter the CFDA and/or the funding opportunity number located on the cover of this announcement and then follow the prompts to download the application package.

### **B. LETTER OF INTENT**

Applicants are requested to submit a letter of intent by 03/20/2013. This letter should include the name of the applicant, the title of the project, the name of the Project Director/Principal Investigator(s), estimated project cost, and a one-page abstract. Letters of intent will be used by DOE to organize and expedite the merit review process. Failure to submit such letters will not negatively affect a responsive application submitted in a timely fashion. The letter of intent should be sent by e-mail to [pavnemb@id.doe.gov](mailto:pavnemb@id.doe.gov). In the subject line please type: Letter of Intent for FOA 818.

### **C. CONTENT AND APPLICATION FORMS**



You must complete the mandatory forms and any applicable optional forms (e.g., Disclosure of Lobbying Activities (SF-LLL)) in accordance with the instructions on the forms and the additional instructions below. Files that are attached to the forms must be in Adobe Portable Document Format (PDF) unless otherwise specified in this announcement.

## **1. SF 424 (R&R) FORM**

Complete this form first to populate data in other forms. Complete all the required fields in accordance with the pop-up instructions on the form. The list of certifications and assurances referenced in Field 17 can be found on the DOE Financial Assistance Forms Page at <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms> under Certifications and Assurances.

### **a). DISCLOSURE OF LOBBYING ACTIVITIES (SF-LLL) FORM (Attach in Field 18 on the SF424 (R&R) Form**

**If applicable**, complete 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."

## **2. RESEARCH AND RELATED OTHER PROJECT INFORMATION FORM**

Complete questions 1 through 5 and attach files. The files must comply with the following instructions:

### **a. Project Summary/Abstract (Field 7 on the Form)**

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 manager(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 DOE may make it available to the public. The project summary must not exceed one (1) page when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) single-spaced with font no smaller than 11 point. Save this information in a file named "Summary.pdf," and click on "Add Optional Other Attachment" to attach.

### **b. Project Narrative File (Field 8 on the Form)**

The project narrative must not exceed 30 pages, including cover page, table of contents, charts, graphs, maps, photographs, and other pictorial presentations, when printed using standard 8.5 x 11-inch paper with 1-inch margins (top, bottom, left, and right) [single spaced] with font no smaller than 11 point. 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 Part VIII.D for instructions on how to mark proprietary application information. Save the information in a single file named "Project.pdf," and click on "Add Mandatory Other Attachment" to attach.

The project narrative must include:

- 1) Narrative Cover Page which must indicate:

- a) The name and type of organization;
  - b) The announcement number;
  - c) The project title;
  - d) The technical and business points of contact for the applicant, denoting the names, titles, addresses, telephone and facsimile numbers, and electronic mail addresses (see Attachment C: Point of Contact Sheet);
  - e) Project Manager's name, telephone number, facsimile number, e-mail address, and organization name/unit; and
  - f) Names of team/partnership/consortium members and funding split;
- 2) Project Objectives. This section should provide a clear, concise statement of the specific objectives/aims of the proposed project.
  - 3) Merit Review Criterion and Other Selection Factors Discussion. This section should be formatted to address each of the merit review criterion and sub-criterion listed in Section V.A, as well as each Other Selection Factors. Provide sufficient information so that reviewers will be able to evaluate the application in accordance with these merit review criteria and Other Selection Factors. **DOE WILL EVALUATE AND CONSIDER ONLY THOSE APPLICATIONS THAT ADDRESS SEPARATELY EACH OF THE MERIT REVIEW CRITERION AND SUB-CRITERION AND OTHER SELECTION FACTORS.**
  - 4) All applicable elements of Section I must be addressed in this section of the application, including adequate information to indicate applicant understanding and commitment to meeting the statement of objectives for all aspects of the project.
  - 5) Relevance and Outcomes/Impacts. This section should explain the relevance of the effort to the objectives in the program announcement and the expected outcomes and/or impacts. The justification for the proposed project should include a clear statement of the importance of the project in terms of the utility of the outcomes.
  - 6) Roles of Participants. For multi-organizational projects, describe the roles and the work to be performed by each participant (including estimates of percentages of total project effort to be accomplished by each participant), business agreements between the applicant and participants, and how the various efforts will be integrated and managed.
  - 7) Multiple Principal Investigators: The applicant, whether a single organization or team/partnership/consortium, must indicate if the project will include multiple PIs. While the Department of Energy's preference is to have only one PI specified, this decision is solely the responsibility of the applicant; having multiple PIs specified will not affect the selection for award of applications submitted in response to this Funding Opportunity Announcement.

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 will, at a minimum, include:

- o process for making decisions on scientific/technical direction;
- o publications;
- o intellectual property issues;
- o communication plans;
- o procedures for resolving conflicts; and

- PIs' roles and administrative, technical, and scientific responsibilities for the project.
- 8) Facilities and Other Resources. Identify the facilities (e.g., office, laboratory, computer, testing, etc.) to be used at each performance site listed and, if appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Describe only those resources that are directly applicable to the proposed work.
- 9) Equipment. List critical items of equipment (e.g., items involved in key test programs or important long-lead procurements) required for successful completion of this project and identify whether the item of equipment is already available or proposed for acquisition, the pertinent capabilities of each and the location of available equipment and the estimated acquisition cost of equipment proposed for acquisition. For each item of equipment proposed for acquisition, identify, if any comparable equipment is already at your organization and explain why it cannot be used.
- 10) Biographical Sketch Appendix: Provide a biographical sketch for the Program Manager and each senior/key person listed in Section A on the R&R Budget form. Provide the biographical sketch information as an appendix to your project narrative. Do not attach a separate file. The biographical sketch appendix will not count in the project narrative page limitation. The biographical information for each person must not exceed 2 pages when printed on 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right) with font not smaller than 11 point and must include:
- Education and Training: Undergraduate, graduate and postdoctoral training, provide institution, major/area, degree, and year.
  - Research and 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.
- 11) Identification of Potential Conflicts of Interest or Bias in Selection of Reviewers Appendix:  
Provide the following information in this section. This appendix will not count in the project narrative page limitation:
- Collaborators and Co-editors: List in alphabetical order all persons, including their current organizational affiliation, who are, or who have been, collaborators or co-authors with you on a research project, book or book article, report, abstract, or paper during the 48 months preceding the submission of this application. Also, list any individuals who are currently, or have been, co-editors with you on a special issue of a journal, compendium, or conference proceedings during the 24 months preceding the submission of this application. If there are no collaborators or co-editors to report, state "None."
  - Graduate and Postdoctoral Advisors and Advisees: List the names and current organizational affiliations of your graduate advisor(s) and principal postdoctoral

sponsor(s) during the last 5 years. Also, list the names and current organizational affiliations of your graduate students and postdoctoral associates.

- 12) Statement of Project Objectives. The project narrative must contain a single, detailed Statement of Project Objectives (SOPO) that addresses how the project objectives will be met. The SOPO must contain a clear, concise description of all activities to be completed during project performance and follow the structure discussed below. The SOPO may be released to the public by DOE in whole or in part at any time. It is therefore required that it shall not contain proprietary or confidential business information.

Applicants shall prepare the SOPO in the following format:

TITLE OF WORK TO BE PERFORMED

(Insert the title of work to be performed. Be concise and descriptive.)

A. OBJECTIVES

Include one paragraph on the overall objective(s) of the work. Also, include objective(s) for each phase of the work.

B. SCOPE OF WORK

This section should not exceed one-half page and should summarize the effort and approach to achieve the objective(s) of the work for each Phase.

C. TASKS TO BE PERFORMED

Tasks, concisely written, should be provided in a logical sequence and should be divided into the phases of the project, as appropriate. This section provides a brief summary of the planned approach to this project.

D. DELIVERABLES

The periodic, topical, and final reports shall be submitted in accordance with the attached Appendix A "Federal Assistance Reporting Checklist" and the instructions accompanying the checklist.

[Note: The Recipient shall provide a list of deliverables other than those identified on the "Federal Assistance Reporting Checklist" that will be delivered, including the expected delivery dates. These reports shall also be identified within the text of the Statement of Project Objectives.] See the following examples:

1. Task 1.1 - (Report Description)
2. Task 2.2 - (Report Description)

**c. Other Attachments (Field 12 on the Research and Related Other Project Information Form)**

- 1) **If you need to elaborate** on your responses to question 1-5 on the "Other Project Information" document. If applicable attach to Field 12.
- 2) **Current and Pending Support (If applicable)**

Applicants shall identify other funding sources by agency source, project name, monetary amount, and length of term that are pending or currently in place for the proposed project within the past three years. Applicants shall also indicate any connection, similarities, duplication or synergism with work performed under the pending or current funding received and the work proposed in response to this FOA. Save the information in a file named "Support.pdf". If applicable attach to Field 12.

**3) Conflict of Interest Statement (Required for National Laboratories, DOE and NON-DOE FFRDCS Applicants and Sub-Applicants).**

Conflicts of interest may exist due to previous efforts performed by the Labs or assistance provided in program direction and other mission related activities. Accordingly, for each applicant or (or sub-applicant) that is a National Laboratory or DOE and/or Non-DOE FFRDCs, identify any potential conflicts of interest, fully explain the conflict, whether you feel it is significant or not, along with your rationale, and, if significant how you will avoid, neutralize, or mitigate the potential conflict. If applicable attach to Field 12.

**4) Awardee Point of Contact Data Input**

Complete the Appendix B "Contact Data Input" sheet. Attach to Field 12.

**5) Environmental Checklist**

You must complete the Appendix C "Environmental checklist". Save the checklist in a single file named "Env.pdf". Attach to Field 12.

**3. RESEARCH AND RELATED BUDGET (TOTAL FED + NONFED) FORM**

The name of the form on Grants.gov is RR FedNonFed Budget. Complete the form in accordance with the instructions on the form (Activate Help Mode to see instructions) and the following instructions. You must complete a separate budget for each year of support requested. The form will generate a cumulative budget for the total project period. You must complete all the mandatory information on the form before the NEXT PERIOD button is activated. You may request funds under any of the categories listed 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.).

**a) Budget Justification (Field K on the form).**

Provide the required supporting information for the following costs (See R&R instructions): equipment; domestic and foreign travel; participant/trainees; material and supplies; publication; consultant services; ADP/computer services; subaward/consortium/contractual; equipment or facility rental/user fees; alterations and renovations; and indirect cost type. Provide any other information you wish to submit to justify your budget request. Attach a single budget justification file for the entire project period in Field K. The file automatically carries over to each budget year.

**4. R&R SUBAWARD (Total Fed + non-Fed) ATTACHMENT(S) FORM**

Budgets for Subawardees, other than DOE National Laboratory and FFRDC Contractors. You must provide a separate cumulative R&R budget for each subawardee that is expected to perform work estimated to be more than \$150,000 or 50 percent of the total work effort (whichever is less). Download the R&R Budget Attachment from the R&R SUBAWARD BUDGET (Total Fed + Non-Fed) FORM and e-mail it to each subawardee that is required to submit a separate budget.

After the Subawardee has e-mailed its completed budget back to you, attach it to one of the blocks provided on the form. Use up to 10 letters of the subawardee's name as the file name.

**a) Budget for DOE/NNSA Federally Funded Research and Development Center (FFRDC) Contractor, if applicable**

If a DOE/NNSA FFRDC contractor is to perform a portion of the work, you must provide a DOE Field Work Proposal in accordance with the requirements in DOE Order 412.1 Work Authorization System. This Order and the DOE Field Work Proposal form are available at <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms>. Use up to 10 letters of the FFRDC name (plus .pdf) as the file name (e.g., lanl.pdf or anl.pdf), and click on "Add Attachment" to attach.

**5. SUMMARY OF REQUIRED FORMS AND FILES**

Applications must include the following documents which are all part of the Grants.gov application package:

Name of Form	Format	File Name
<b>SF 424 (R&amp;R)</b>	Form	N/A
SF-LLL Disclosure of Lobbying Activities, if applicable.	Form	Field 18
<b>RESEARCH AND RELATED Other Project Information</b>	Form	N/A
Project Summary/Abstract	PDF	Field 7
Project Narrative File	PDF	Field 8
Current and Pending Support	PDF	Field 12
Conflict of Interest Statement, if applicable	PDF	Field 12
Awardee Point of Contact Data Input Sheet (Appendix B)	PDF	Field 12
Environmental Checklist (Appendix C)	PDF	Field 12
<b>Research &amp; Related Budget (TOTAL FED + NON-FED)</b>	Form	N/A
Budget Justification File	PDF	Field K
<b>R&amp;R SUBAWARD BUDGET (Total Fed + Non-Fed) ATTACHMENT(S) FORM, if applicable</b>	Form	N/A
Budget for DOE National Laboratory Contractor or FFRDC, if applicable	PDF	Add Attachment

**D. SUBMISSIONS FROM SUCCESSFUL APPLICANTS**

DOE reserves the right to request, from successful applicants, 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.

- Commitment Letter from Third Parties Contributing to Cost Sharing, if applicable

## **E. SUBMISSION DATES AND TIMES**

### **1. Letter of Intent**

Letters of Intent must be received by 03/20/2013, not later than 8:00 p.m. (EST). Letters of Intent shall be sent in accordance with the instructions contained in Section IV, Section B, Paragraph 1.

### **2. Application Due Date:**

Applications must be received by 04/16/2013, no later than 8:00 p.m. (EST) in accordance with Section IV, Section H instructions. Applicants are encouraged to transmit applications 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**

Funding for all awards and future budget periods are contingent upon the availability of Fiscal Year 2013 (FY13) funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority.

**Cost Principles.** Costs must be allowable, allocable and reasonable in accordance with the applicable Federal cost principles referenced in 10 CFR 600. The cost principles for commercial organization are in FAR Part 31.

**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, if the costs are allowable in accordance with the applicable Federal cost principles referenced in 10 CFR 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.

## **H. OTHER SUBMISSION AND REGISTRATION REQUIREMENTS**

### **1. Where to Submit**

**APPLICATIONS MUST BE SUBMITTED THROUGH GRANTS.GOV TO BE CONSIDERED FOR AWARD.**

Submit electronic applications through the "Apply for Grants" function at [www.Grants.gov](http://www.Grants.gov). If you have problems completing the registration process or submitting your application, call [Grants.gov](http://Grants.gov) at 1-800-518-4726 or send an email to [support@grants.gov](mailto:support@grants.gov).

### **2. Registration Process**

You must COMPLETE the one-time registration process (all steps) before you can submit your first application through [Grants.gov](http://Grants.gov) (See [http://www.grants.gov/applicants/get\\_registered.jsp](http://www.grants.gov/applicants/get_registered.jsp)). We recommend that you start this process at least six weeks before the application due date. It may take

44 days or more to complete the entire process. Use the Grants.gov Organizational Registration Checklists at <http://www.grants.gov/assets/OrganizationRegCheck.pdf> to guide you through the process.

**IMPORTANT:** During the SAM registration process, you will be asked to designate an E-Business Point of Contact (EBIZ POC). The EBIZ POC must obtain a special password called "Marketing Partner Identification Number" (MPIN). When you have completed the process, you should call the Grants.gov Helpdesk at 1-800-518-4726 to verify that you have completed the final step (i.e., Grants.gov registration).

### **3. Application Receipt Notices**

After an application is submitted, the Authorized Organization Representative (AOR) will receive a series of four e-mails. It is extremely important that the AOR watch for and save each of the emails. It may take up to two (2) business days from application submission to receipt of email Number 2.

The titles of the four e-mails are:

- Number 1 - Grants.gov Submission Receipt Number
- Number 2 - Grants.gov Submission Validation Receipt for Application Number
- Number 3 - Grants.gov Grantor Agency Retrieval Receipt for Application Number
- Number 4 - Grants.gov Agency Tracking Number Assignment for Application Number

### **4. Application Validity Timeframe**

By submitting an application in response to this FOA applicants agree that their applications are valid for at least two years from the date set forth for receipt of applications to this FOA.

## **Section V - APPLICATION REVIEW INFORMATION**

### **A. CRITERIA**

#### **1. Initial Review Criteria**

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; and (4) the proposed project is responsive to the objectives of the Funding Opportunity Announcement.

#### **2. Merit Review Criteria**

a. Technical Merit of the Proposed Work (40%): The technical section of the application will clearly define what research is being performed and its relationship to the relevant program element(s). This criterion will consider the technical merit of the application including proposed technical objectives and deliverables and the likelihood of achieving them, and the potential contribution to the state of knowledge in the relevant program element(s).

b. Appropriateness of the Proposed Method or Approach (25%): This criterion will consider the technical approach, project management including the approach for integrating all personnel and resources, and the potential enhancement of U.S. infrastructure, such as trained personnel resources, new technologies, facilities or equipment, for the relevant program element(s).



c. Competency of the Proposed Team (25%): This criterion will consider the qualification and experience of the applicant's personnel and adequacy of proposed resources including facilities applied by the participating organization.

d. Schedule and Resources (10%): The applicant's schedule (list of tasks, task sequencing, milestones, decision points and estimated durations) is reasonable and appropriate. The planned resources proposed, including assignment of responsibilities and manpower levels, are adequate/appropriate to accomplish the proposed task and Statement of Objectives.

Note that merit review team members are selected with regard to both their technical expertise and the absence of conflict-of-interest issues. Both Federal and non-Federal reviewers may be used, and submission of an application constitutes agreement that this is acceptable to the applicant, sub-applicants(s) and the submitting institutions.

### **3. Other Selection Factors**

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

- a. An integrated technical and business approach may be given preferential consideration.
- b. Extent of industry cost-share (i.e., proposed contributions greater than 20%) may be given preferential consideration.
- c. Application selection will be balanced to best optimize the selection of an appropriate mix of technologies to meet program goals.
- d. Applications that have no potential, apparent, or actual organizational and individual conflicts of interest may be given preferential consideration.
- e. Applications that have the potential to enhance US nuclear infrastructure may be given preferential consideration.
- f. Extent pending or awarded funding is synergistic or duplicative to the proposed project. Preferential consideration may be given to projects which show synergism with pending or awarded funding. Duplication of pending or awarded funding may be considered unfavorable.

These factors, while not indicators of the Application's merit, e.g., technical excellence, applicant's ability, etc., may be essential to the process of selecting the application that, individually or collectively, will best achieve the program objectives. Such factors are often beyond the control of the Applicant. Each Applicant should recognize that some very good applications might not receive an award because they do not fit within a mix of projects that maximizes the probability of achieving the DOE's overall research and development objectives. Therefore, the above factors may be used by the Selection Official to assist in determining which ranked application shall receive DOE funding support.

## **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. Selection**

### **Selection Official Consideration**

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

### **3. 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 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**

### **Selection and Award Date**

DOE anticipates notifying applicants selected for award by 06/13/ 2013 and making award(s) no later than 08/01/2013. DOE reserves the right to make additional award selections using applications submitted in response to this FOA for up to two years after the initial award selection date, if agreed to by the applicant(s) selected for additional award(s). Award(s) for this project are subject to the availability of Federal funding.

## **Section VI - AWARD ADMINISTRATION INFORMATION**

### **A. AWARD NOTICES**

#### **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**

An 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, or, for Federal Demonstration Partnership (FDP) institutions, the FDP terms and conditions; (5) National Policy Assurances To Be Incorporated As Award Terms; (6) Budget Summary; and (7) Federal Assistance Reporting Checklist, which identifies the reporting requirements.

For grants and cooperative agreements made to universities, non-profits and other entities subject to Title 2 CFR the Award also includes the DOE specific Research Terms and Conditions dated 7/08 located at <http://www.nsf.gov/awards/managing/rtc.jsp>

### **B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS**

#### **1. Administrative Requirements**

The administrative requirements for DOE grants and cooperative agreements are contained in 10

CFR 600 (See: <http://www.eCFR.gov>). Grants and cooperative agreements made to universities, non-profits and other entities subject to Title 2 CFR are subject to the DOE specific Research Terms and Conditions dated 7/08 located on the National Science Foundation web site at <http://www.nsf.gov/awards/managing/rtc.jsp>

### **DUNS AND CCR REQUIREMENTS**

Additional administrative requirements for DOE grants and cooperative agreements are contained in 2 CFR, Part 25 (See: <http://www.eCFR.gov>). Prime awardees must keep their data at the System for Award Management (SAM) current at <http://www.sam.gov> current SAM is the government-wide system that replaced the CCR. If you had an active registration in the CCR, you have an active registration in SAM. 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://www.eCFR.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 System for Award Management (SAM).

## **2. Special Terms and Conditions and National Policy Requirements**

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> under Award Terms.

The National Policy Assurances To Be Incorporated As Award Terms are located at <http://www.nsf.gov/bfa/dias/policy/rtc/appc.pdf> and at <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms> under Award Terms.

Intellectual Property Provisions. The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at: <http://energy.gov/gc/standard-intellectual-property-ip-provisions-financial-assistance-awards>

Lobbying Restrictions. By accepting funds under this award, you agree that none of the funds obligated on the award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

## **C. REPORTING**

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement. A sample Checklist is included as Appendix A. the regular checklist is available at: <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms> under Award Forms.

## **Section VII - QUESTIONS/AGENCY CONTACTS**

## **A. QUESTIONS**

Questions regarding the content of the announcement must be submitted through the FedConnect portal. You must register with FedConnect to respond as an interested party to submit questions, and to view responses to questions. It is recommended that you register as soon after release of the FOA as possible to have the benefit of all responses. DOE/NNSA will try to respond to a question within 3 business days, unless a similar question and answer have already been posted on the website.

Questions and comments concerning this FOA shall be submitted not later than five calendar days prior to the application due date. Questions submitted after that date may not allow the Government sufficient time to respond.

Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov. DOE/NNSA cannot answer these questions.

## **B. AGENCY CONTACT**

Name: Mark Payne  
E-mail: paynemb@id.doe.gov

## **Section VIII - OTHER INFORMATION**

### **A. MODIFICATIONS**

Notices of any modifications to this announcement will be posted on Grants.gov and the FedConnect portal. You can receive an email when a modification or an announcement message is posted by registering with FedConnect as an interested party for this FOA. It is recommended that you register as soon after release of the FOA as possible to ensure you receive timely notice of any modifications 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.

Funding for all awards and future budget periods are contingent upon the availability of funds appropriated by Congress for the purpose of this program and the availability of future-year budget authority.

### **D. PROPRIETARY APPLICATION INFORMATION**

Patentable ideas, trade secrets, proprietary or confidential commercial or financial information, disclosure of which may harm the applicant, should be included in an application only when such information is necessary to convey an understanding of the proposed project. The use and disclosure of such data may be restricted, provided the applicant includes the following legend on the first page of the project narrative and specifies the pages of the application which are to be restricted:

"The data contained in pages [*Insert pages*] of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation

purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent provided in the award. This restriction does not limit the government's right to use or disclose data obtained without restriction from any source, including the applicant."

To protect such data, each line or paragraph on the pages containing such data must be specifically identified and marked with a legend similar to the following:

"The following contains proprietary information that (name of applicant) requests not be released to persons outside the Government, except for purposes of review and evaluation."

#### **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. UNDERSTANDING COST SHARING REQUIREMENTS**

Department-wide cost sharing requirements are established by Section 988 of the Energy Policy Act (EPA) of 2005. The DOE Financial Assistance Rules at 10 CFR 600 implement cost sharing requirements (see §600.30, §600.123, §600.224, or §600.313). The FOA requires a minimum of 20% cost sharing by awardees.

In accordance with section 988 (d), Calculation of Amount, when calculating the amount of the non-Federal contribution, the Government:

1. May include the following costs as allowable in accordance with the applicable cost principles:
  - a. Cash;
  - b. Personnel costs;
  - c. The value of a service, other resource, or third party in-kind contribution determined in accordance with the applicable circular of the Office of Management and Budget [Note: In-kind contributions, like any other cost, need to be incurred during the award project period, e.g., cannot give credit for costs incurred prior to the award, including prior development costs, unless otherwise authorized by the applicable cost principles.];
  - d. Indirect costs or facilities and administrative costs; or
  - e. Any funds received under the power program of the Tennessee Valley Authority (except to the extent that such funds are made available under an annual appropriation Act).
2. Shall not include:
  - a. Revenues or royalties from the prospective operation of an activity beyond the time considered in the award;
  - b. Proceeds from the prospective sale of an asset of an activity; or
  - c. Other appropriated Federal funds.

The terms and conditions of the grant will include appropriate provisions on cost allowability.

The Federal share shall not be required to be repaid as a condition of award. Royalties should not be used to repay or recover the Federal share, but may be used as a reward for technology transfer activities.

Cost Share is often confused with some form of cost matching. The key to understanding how cost share works is to understand the base from which the cost share percentage is calculated. Cost share percentage is a percentage of the Total Allowable Costs of the project. Note that it is NOT a percentage of the DOE funds, but rather the entire project, including all awardee funds, DOE funds and all FFRDC requirements.

When determining the cost share requirement in dollars, it is first necessary to determine the entire project cost. Initially, no consideration would be given as to where the funds would come from. An applicant would determine that a certain cost (e.g., hours, travel, supplies, etc.) would be needed to complete the project as proposed in the application. Once the project cost is determined, an applicant can then calculate the cost share requirement by multiplying the cost share percentage by the project cost. The resulting dollar figure would be the dollar requirement that the applicant must provide as cost share.

Below are several examples of how the cost share amount would be calculated:

**Example 1**

The applicant determines that the following budget requirements are needed to carry out the work described in its proposal to DOE:

Direct Labor	\$100,000
Travel	3,000
Equipment	17,000
Supplies	10,000
Subcontract	20,000
<b>Total Project Cost</b>	<b>\$150,000</b>

A cost share requirement of 20% was specified in the funding announcement.

Cost Share = (cost share percentage) x (*total project cost*)

Cost Share = (20%) x (\$150,000)

Cost Share = \$30,000

The applicant must now identify \$30,000 of \$150,000 as “Cost Share.”

The applicant would then request DOE funding in the amount of \$120,000.

**DOE Share = \$120,000**

**Awardee Share = \$30,000**

**Example 2**

The applicant determines that the following budget requirements are needed to carry out the work described in its proposal to DOE:

Direct Labor	\$200,000
Travel	10,000
Equipment	20,000
Supplies	10,000
FFRDC Subcontract	60,000
<b>Total Project Cost</b>	<b>\$300,000</b>

A cost share requirement of 20% was specified in the funding announcement.

Cost Share = (cost share percentage) x (total project cost)

Cost Share = (20%) x (\$300,000)

Cost Share = \$60,000

The applicant must now identify \$60,000 of \$300,000 as “Cost Share”.  
 Applicant will be required to establish agreement with the FFRDC for \$60,000.  
 The applicant would then request DOE funding in the amount of \$180,000.

**DOE Share = \$180,000 (funds to Awardee) + \$60,000 (FFRDC) = \$240,000**

**Awardee Share = \$60,000**

Note: FFRDC funds are paid directly to the FFRDC by DOE. The work provided by the FFRDC is still considered part of the Total Project Cost; therefore, it is included in the base from which the Awardee cost share is calculated.

In all cases, the applicant must specify the individual costs that make up each part of the total project cost and indicate whether DOE or Non-DOE funds will be used to cover the cost.

The budget from **Example 1** might look something like the following:

		<b>DOE</b>	<b>Non-Federal</b>
Direct Labor	\$100,000	\$70,000	\$30,000
Travel	3,000	3,000	0
Equipment	17,000	17,000	0
Supplies	10,000	10,000	0
Subcontract	<u>20,000</u>	<u>20,000</u>	<u>0</u>
<b>Total Project Cost</b>	<b>\$150,000</b>	<b>\$120,000</b>	<b>\$30,000</b>

The application forms in this funding opportunity announcement will facilitate the identification of funding sources.

**G. 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 (5) years from the development of the information, of 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 Part 600 Appendix A to Subpart D), would 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 will also identify data that will be recognized by the parties as protected data.

**H. 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 at <http://energy.gov/gc/patents-licensing-and-patent-waivers> under the Patent Waivers.

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.

## **I. 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.

### **Section IX - APPENDICES/REFERENCE MATERIAL**

Appendix A: Sample Reporting Requirements Checklist

Appendix B: Awardee Points of Contact Data Input Sheet

Appendix C: Environmental Checklist

Appendix D: 14 March 2013 DOE Webinar Login Instructions