



Department of Energy
Golden Field Office
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Golden, Colorado 80401-3393

DE-FOA-0000748
Amendment No. 001

DATE: November 6, 2012
FROM: Tina Kouch, Contracting Officer
TO: All Prospective Applicants

SUBJECT: Amendment No. 001 to Announcement DE-FOA-0000748, "Hydrogen Pathway Analyses"

- I. The purpose of this amendment is to extend the Application due date from November 8, 2012 to November 13, 2012
- II. All other parts of the FOA remain unchanged.
- III. The areas which have changed are highlighted in turquoise within the Funding Opportunity Announcement.

**FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT**



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

Hydrogen Pathway Analyses

Funding Opportunity Announcement Number: DE-FOA-0000748

Announcement Type: Initial

CFDA Number: 81.087

Issue Date: 10/05/2012

Application Due Date: 11/13/2012, 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 [Letter of Intent or] 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 [Letter of Intent or] 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>
- The System for Award Management (SAM) was launched on July 29th, 2012. If you have not previously registered with the Central Contractor Registry (CCR), you should register your entity with SAM. If you already have a registration in CCR, all your information has been migrated to SAM. Register with the System for Award Management at <http://sam.gov/>. Please update your SAM registration annually.
- Register in FedConnect at <https://www.fedconnect.net/>. For more information about 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/>

Table of Contents

<u>Number</u>	<u>Subject</u>	<u>Page</u>
	SECTION I – FUNDING OPPORTUNITY DESCRIPTION	5
	SECTION II – AWARD INFORMATION	8
A.	Type of Award Instrument.....	8
B.	Estimated Funding	8
C.	Maximum and Minimum Award Amount.....	8
D.	Expected Number of Awards	8
E.	Period of Performance	8
F.	Type of Application	8
	SECTION III - ELIGIBILITY INFORMATION	9
A.	Eligible Applicants	9
B.	Cost Sharing.....	9
C.	Other Eligibility Requirements.....	9
D.	Questions Regarding Eligibility	10
	SECTION IV – APPLICATION AND SUBMISSION INFORMATION.....	11
A.	Address to Request Application Forms.....	11
B.	Letter of Intent, Pre-Application, and Concept Paper	11
C.	Content and Form of Application.....	11
D.	Submissions from Successful Applicants	16
E.	Submission Dates and Times	16
F.	Intergovernmental Review.....	16
G.	Funding Restrictions.....	17
H.	Submission and Registration Requirements	17
	SECTION V - APPLICATION REVIEW INFORMATION	19
A.	Criteria.....	19
B.	Review and Selection Process.....	20
C.	Anticipated Notice of Selection and Award Dates.....	21
	SECTION VI - AWARD ADMINISTRATION INFORMATION	21
A.	Notice of Selection	21
B.	Administrative Requirements, National Policy Requirements, and Applicant Representations and Certifications	22
C.	Reporting	25
	SECTION VII - QUESTIONS/AGENCY CONTACTS	26
A.	Questions.....	26
	SECTION VIII - OTHER INFORMATION.....	26
A.	Amendments	26
B.	Government Right to Reject or Negotiate.....	26
C.	Commitment of Public Funds	26
D.	Proprietary Application Information.....	26
E.	Evaluation and Administration by Non-Federal Personnel	27
F.	Intellectual Property Developed under this Program	27
G.	Notice of Right to Request Patent Waiver	28
H.	Notice Regarding Eligible/Ineligible Activities.....	28
I.	Notice of Right to Conduct a Review of Financial Capability.....	28
J.	Notice of Potential Disclosure under Freedom of Information Act.....	28
K.	Lobbying Restrictions.....	29
L.	Notice of Potential Disclosure under Freedom of Information Act	29
	Appendix A – Definitions	30
	Appendix B – Personally Identifiable Information.....	34

SECTION I – FUNDING OPPORTUNITY DESCRIPTION

A. Background

The Fuel Cell Technologies (FCT) Program is a key component of the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) portfolio. The FCT Program aims to provide clean, safe, secure, affordable, and reliable energy from diverse domestic resources, providing the benefits of increased energy security and reduced criteria pollutants and green-house gas emissions. More detailed descriptions of the FCT Production and Delivery sub-Program, including technical and cost targets, can be found as attachments on the EERE Exchange website: Draft Multi-Year Research, Development and Demonstration Plan Chapters for Production and Delivery.

The DOE's goals for hydrogen and fuel cells are driven by the following legislations:

- Energy Policy Act (EPAcT) of 2005 (Public Law 109-58), Title VIII
- Energy Independence and Security Act (EISA) of 2007 (Public Law 110-140)

The Energy Policy Act of 2005 promotes the development, demonstration, and commercialization of fuel cell and hydrogen technology, in partnership with industry (*see* EPAcT Section 802). These activities include applications in transportation, utility, industrial, commercial and residential sectors (*see* EPAcT Section 805).

Fuel cells can lead to substantial energy savings and reductions in imported petroleum and carbon emissions. The Hydrogen Production and Delivery (P&D) sub-Program supports the goals of the DOE and FCT Program by addressing critical challenges to integrating hydrogen technology and developing new and advanced technologies to produce hydrogen from diverse, domestic, and renewable resources and additionally, delivering it from where it is produced to the point of end use.

The long-term goal of P&D research and development (R&D) is attaining a high-volume hydrogen threshold cost of \$2-\$4 per gallon gasoline equivalent (gge), delivered and dispensed, to allow fuel cell electric vehicles (FCEVs) to be competitive on a dollar-per-mile basis with gasoline in hybrid electric vehicles. To this end, break-through materials, processes, and systems are needed to establish the technical and cost feasibility for renewable hydrogen production. Production pathways of interest include reforming of natural gas for distributed and centralized production of hydrogen and reforming of biomass-derived renewable liquids for distributed production of hydrogen; distributed, semi-central and central water electrolysis; solar high-temperature water splitting; photoelectrochemical water splitting; and biological processes using micro-organisms for photolytic, fermentation, and microbial electrolysis for large-scale central hydrogen production. Delivery technologies of interest include high pressure tube trailers, liquid tankers, and pipelines as well as compression, dispensing, and off-board storage technologies.

B. Objective

With this Funding Opportunity Announcement (FOA), the DOE through the Fuel Cell Technologies (FCT) Program seeks to fund hydrogen pathway analyses to determine the most promising paths forward for the production and delivery of hydrogen, while also defining the key remaining challenges. The DOE will only accept applications that are responsive to the scope and topic area described below.

C. Scope

System-level analyses of hydrogen production and delivery technologies are needed to support selection of portfolio priorities through evaluations of technical progress and hydrogen cost status, as well as projections of technology timelines and benefits, and evaluation of the potential of production and delivery pathways to meet the FCT threshold cost goal of \$2-\$4/gge delivered and dispensed hydrogen by 2020. This effort will include annual cost analyses of key remaining challenges for technology pathways within the Hydrogen P&D sub-program portfolio using, primarily, the Hydrogen Analysis (H2A)¹ model to determine status improvements resulting from technology advancements, cost as a function of production volume, illustrate uncertainties in the cost estimates with error bars, and show potential for cost reductions based on sensitivity analyses. For example, production pathways that may be considered under the direction of the FCT Program include, but are not limited to: reforming of biomass-derived renewable liquids for distributed production of hydrogen; distributed, semi-central and central water electrolysis; solar high-temperature water splitting; photoelectrochemical water splitting; and biological processes using micro-organisms for photolytic, fermentation, and microbial electrolysis for large-scale central hydrogen production. H2A case studies have been developed and are publicly available². Current cost status and targets for several distributed and central production pathways are provided in Table 1.

¹ The H2A Distributed and Central Production Models3.0 can be found at www.hydrogen.energy.gov/h2a_production.html

² The H2A Production Case Studies can be found at http://www.hydrogen.energy.gov/h2a_production

Table 1: Cost Status and Targets for Hydrogen Production*

	\$/gge (production costs only)	2011 Status	2015 Target	2020 Target	Ultimate Production Target
Distributed	Electrolysis from grid electricity	\$4.20	\$3.90	\$2.30	\$1-\$2
	Bio-derived Liquids (based on ethanol reforming case)	\$6.60	\$5.90	\$2.30	
Central	Electrolysis From renewable electricity	\$4.10	\$3.00	\$2.00	
	Biomass Gasification	\$2.20	\$2.10	\$2.00	
	Solar Thermochemical	NA	\$14.80	\$3.70	
	Photoelectrochemical	NA	\$17.30	\$5.70	
	Biological	NA	NA	\$9.20	

*A more detailed description of the FCT Production sub-Program technical and cost targets can be found as an attachment on the EERE Exchange website: Draft Multi-Year Research, Development and Demonstration Plan.

An initial cost model validation by the recipient will be required as part of the awarded projects. The validation will be done by defining a baseline cost based largely on data from a current industry accepted hydrogen production pathway which will be selected and approved by DOE's P&D Team.

The recipient will be responsible for vetting all user-input values used in the H2A analysis and for clearly and precisely presenting the results and sensitivity analyses of the technologies/pathways analyzed. The recipient's project will be subject to evaluation by system developers, independent peer review, and the DOE Annual Peer Review and Merit Evaluation process. Results of the evaluation will be used to determine whether the project will continue through the following years. The recipient will also be required to present results as needed to DOE and USDRIVE³ technology teams e.g., the Hydrogen Production Technology Team (HPTT). Project deliverables will include:

1. Cost estimates and analyses, and their updates of hydrogen technology pathways as directed by DOE (with power point slides and written reports when requested including Quarterly Research Performance Project Reports and other deliverables that will be defined upon award in the Federal Assistance Reporting Checklist) for distributed and central hydrogen production and delivery technologies/pathways

³ Information on USDRIVE can be found at
<http://www.uscar.org/guest/partnership/1/us-drive>

2. Validation of cost model based on data from current industry accepted hydrogen production technologies and processes
3. Final report documenting the results of the analyses including sensitivity analyses along with standard tornado charts to demonstrate critical correlation cost drivers

SECTION II – AWARD INFORMATION

A. Type of Award Instrument

DOE anticipates awarding a cooperative agreement under this program announcement (See Part VI.B.4 Statement of Substantial Involvement).

B. Estimated Funding

The Administration has requested up to \$1,000,000 in FY 2013 for this program. The actual level of funding, if any, depends on appropriations for this program. ***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.***

C. Maximum and Minimum Award Amount

Ceiling (i.e., the maximum amount for an individual award made under this announcement):
\$1,000,000

Floor (i.e., the minimum amount for an individual award made under this announcement): none

D. Expected Number of Awards

DOE anticipates making one award under this announcement. Up to two awards may be made depending on the quality and number of applicants. DOE reserves the right to fund, in whole or in part, any, all, or none of the applications submitted in response to this announcement and will award the number of financial assistance instruments that serves the public purpose and which is in the best interest of the Government.

E. Period of Performance

At this time, DOE anticipates making an award with a duration of 3-4 years. Projects must be designed with two distinct Budget Periods, with a formal go/no-go decision point between each Budget Period. The go/no-go decision will be made by DOE following a project review and consultation with the applicant. Decision criteria will be established prior to award. To assist with the decision-making process, DOE may use both federal and non-federal experts to provide independent evaluation and advice.

F. Type of Application

DOE will accept only new applications under this announcement (i.e., applications for renewals of existing DOE funded projects will not be considered).

SECTION III - ELIGIBILITY INFORMATION

A. Eligible Applicants

All types of entities, including both DOE and non-DOE Federally Funded Research and Development Center (FFRDC) Contractors, are eligible to apply as primary applicants, except other federal agencies 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.

All applicants must disclose in their proposal any organizational conflicts of interests (OCI) related to this FOA as a result of their involvement in the planning, development or preparation of the FOA. This OCI disclosure requirement applies to applicants, as well as proposed subcontractors, that are considered a third-party technology developer currently involved in the system analysis for DOE and that have provided related information to the applicants of this solicitation. The documentation should include an OCI mitigation plan to maintain the fairness of this competition if the entity with the OCI intends to compete in this FOA.

Note: For future reference in this FOA, “federally funded organizations” will include DOE FFRDCs, non-DOE FFRDCs and U.S. national laboratories.

B. Cost Sharing

Cost sharing is not required for analysis activities.

C. Other Eligibility Requirements

DOE National Laboratory Contractors and Other Federally Funded Research and Development Center (FFRDC) Contractors

A DOE National Laboratory Contractor is eligible to apply for funding under this announcement if its cognizant Contracting Officer provides written authorization and this authorization is submitted with the application. If a DOE National Laboratory Contractor is selected for award, the proposed work will be authorized under the DOE work authorization process and performed under the laboratory’s Management and Operating (M&O) contract.

The following wording is acceptable for the 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, will not adversely impact execution of the DOE assigned programs at the laboratory.

FFRDC contractors may be eligible to apply for funding, 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. The use of a FFRDC contractor must be consistent with the contractor’s authority under its award.

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, 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.

Responsibility. The Prime 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.

D. Questions Regarding Eligibility

DOE will not make eligibility determinations for potential applicants prior to the date on which applications to this FOA must be submitted. The decision whether to submit an application in response to this FOA lies solely with the applicant. However, clarifying questions may be sent to FOA0000748@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.

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

Letters of Intent, Pre-Applications, and Concept Papers are 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 “Apply to this FOA” 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. Save this information in a file named “SF-424.pdf.”

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.

2. Project Abstract File

The project 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 this information in a file named “Abstract.pdf.”

3. Project Narrative File

The Project Narrative should provide a clear description of the work to be undertaken and how you plan to accomplish it. It should address each of the merit review criteria and sub-criteria listed in Section V.A.2. Provide sufficient information so that the reviewers will be able to evaluate the application in accordance with these merit review criteria. Do not include any Internet addresses (URLs) that provide information necessary to review the application because the information contained in these websites will not be reviewed. See Section VIII.D. for instructions on how to mark proprietary application information.

The Project Narrative must not exceed 8 pages, including the 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), with font not smaller than 11 point. The Project Narrative 8-page limit does not include a section at the end for Bibliography/References Cited, which has no specific page limit. **NOTE: Evaluators will review only the number of pages specified above and will ignore any additional pages. As a result, any application requirements contained solely in additional pages will not be given credit during the evaluation process.** Save all of the Project Narrative information in a single file named "Narrative.pdf."

The Project Narrative should include the following sections:

i. Cover Page

The Narrative cover page must indicate the name and type of organization, the announcement number, the project title, both technical and business points of contact (include name, title, address, phone number, and email address), and all of the project participants (subcontractors, consultants, etc.).

ii. Technical Proposal

The technical proposal portion of the Narrative should be structured in accordance with the following sections. Graphics and visual material, including charts, graphs, maps, photographs, and other pictorial presentations, must be included in the Technical Proposal section and will be counted in the page limitation for this section. Lists of references for the document will not count against the page limit.

Section I: Technical Concept

This section should be used to address all of the sub-criteria for Evaluation Criterion 1 listed in Section V.A.2. The application should include background information on the current technology and then provide a detailed explanation of the proposed concept. Areas to be addressed include:

- Provide a clear statement of the specific objectives/aims of the proposed project as well as a discussion of the relevancy of these objectives to the FOA.
- Demonstrate a clear understanding of the principles of the potential systems/processes to be analyzed.
- Include quality control methods to track and ensure assumptions are well-founded, and all scenarios are addressed with adequate effort.

- The applicant should provide a convincing argument that shows the potential of the proposed cost analysis to provide valuable feedback that can guide the Hydrogen P&D R&D community and Hydrogen P&D sub-Program towards advancements in hydrogen production pathways that will enable \$2-\$4/gge delivered and dispensed hydrogen by 2020.

Section II: Work Plan

This section should be used to address all of the sub-criteria for Evaluation Criterion 2 listed in Section V.A.2. At least one milestone per year and the associated decision criteria (which should be as quantitative as possible) should be identified in the work plan. There will be a Go/No-Go decision points for the project where the DOE makes the Go/No-Go decision whether to continue or end the project based on the results of a technical review and the project's performance. A "No-Go" decision means that the project will not be continued past the current budget period. Areas to be addressed in the work plan include:

Statement of Project Objectives

- Define the goals and objectives of the project.
- Describe how the proposed work plan will successfully meet the project goals.
- Describe the work breakdown structure, including detailed task descriptions, milestones, and a project schedule (e.g. Gantt chart).

Project Management

- Describe how the proposed project organization will facilitate project success.
- Define the roles of the team members.
- Describe the approach to managing the team and ensuring communication among team members.

Section III: Qualifications

This section should be used to address all of the sub-criteria for Evaluation Criterion 3 listed in Section V.A.2. It is not necessary to repeat information included in the Personnel Resume File as this file will be used for the merit review. Areas to be addressed include:

Personnel and Organization Qualifications

- Describe the education, professional training, technical/business related skills, and work experience of the Principal Investigator and other key personnel, including personnel from major subcontractors.
- Address the capability of the proposed team to address all aspects of the proposed work; describe the involvement of the entities/organizations,

technology developers, original equipment manufacturers, government agencies, and other private sector entities.

- Describe the relevant experience of each organization on the proposed team in performing similar projects.
- Describe the level of time commitment (number of hours or percent time) of the Principal Investigator and other key personnel, including personnel from major subcontractors, assigned to the proposed project.

Applicants should also review Section V.A.2, Merit Review Criteria, to be certain that all aspects of the evaluation criteria are adequately covered in the Technical Proposal.

iii. Bibliography/References Cited, if applicable

Provide a bibliography of any references cited in the Project Narrative. Each reference must include the names of the authors, the article and journal title, book title, volume number, page numbers, and year of publication. Include only bibliographic citations. Applicants should be especially careful to follow scholarly practices in providing citations for source materials relied upon when preparing any section of the application. The bibliography will not count towards the Project Narrative page limit.

The combined length of the Project Narrative Sections i)-ii), listed above, must be within the specified 8 page limit. Section iii) Bibliography/References Cited is not included in this 8 page limit.

4. **Resume File**

Provide a resume for key personnel, including major subrecipients and consultants. This should include (at a minimum) education and training, professional experience, and relevant publications. Each resume must not exceed 3 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. Save all resumes in a single file named “Resumes.pdf.”

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. 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.F). For the cumulative budget, two columns should be used to divide the total project budget into two budget periods, per the requirement from Section II.E. Save the information in a single file named “SF-424A.xls.”

6. Letters of Commitment

All Letters of Commitment must be attached as an Appendix to the Project Narrative File. Letters of Commitment from parties participating in the project, exclusive of vendors, who 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.

7. 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. 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 separate file. Use up to 10 letters of the subawardee's name (plus SF-424A.xls) as the file name (e.g., companyABC – SF-424A.xls).

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

If a DOE FFRDC is to perform a portion of the work, applicants must provide a DOE Field Work Proposal in accordance with the requirements in DOE Order 412.1a Work Authorization System. The DOE Order 412.1a Work Authorization System and the example Field Work Proposal form are available at the following link, under "DOE Budget Forms": <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., labname.pdf).

9. 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 named "FFRDC_Auth.pdf."

10. 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." Save the information in a single file named "SF-LLL.pdf."

Summary of Required Forms/Files

Your application must include the following documents:

Name of Document	Format	File Name
1. SF-424, Application for Federal Assistance	PDF	SF-424.pdf
2. Public Abstract	PDF	Abstract.pdf
3. Project Narrative	PDF	Narrative.pdf
4. Resumes	PDF	Resumes.pdf
5. SF-424A Excel, Budget Information - Non-Construction Programs	Excel	SF-424A.xls
6. Letters of Commitment, if applicable	PDF	See instructions
7. Subaward Budget(s), if applicable	Excel	See Instructions
8. Budget for DOE FFRDC(s), if applicable	PDF	See Instructions
9. Authorization for DOE FFRDC(s) or non-DOE FFRDC(s), if applicable	PDF	FFRDC_Auth.pdf
10. SF-LLL, Disclosure of Lobbying Activities, if applicable	PDF	SF-LLL.pdf

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
- Commitment Letter from Third Parties, if applicable
- Environmental Questionnaire

E. Submission Dates and Times

Application Due Date and Submission Time

Applications must be received by 11/13/2012 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

APPLICATIONS MUST BE SUBMITTED UNDER THIS ANNOUNCEMENT THROUGH EERE EXCHANGE at

<https://eere-exchange.energy.gov/> TO BE CONSIDERED FOR AWARD. You cannot submit an application through EERE Exchange unless you are registered. Please read the registration requirements below carefully and start the process immediately as registration processing can take time and delay application submission. 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>
- The System for Award Management (SAM) was launched on July 29th, 2012. If you have not previously registered with the Central Contractor Registry (CCR), you should register your entity with SAM. If you already have a registration in CCR, all your information has been migrated to SAM. Register with the System for Award Management (SAM) at: <https://www.sam.gov/>. Please update your SAM registration annually.
- Register in FedConnect at <https://www.fedconnect.net/>. For more information about 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

Prior to a comprehensive merit review, DOE will perform an initial review to determine that: (1) the applicant is eligible for an award; (2) all mandatory requirements regarding the application are satisfied; and (3) 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. For each criterion, the weighting (out of a total of 100%) is indicated to show the relative importance.

Criterion 1: Technical Cost Analysis Concept (40%)

- The relevance of the proposed concept to the technical objectives of the FOA.
- The technical soundness of the proposed analysis plan, including evidence of recent detailed written results and/or experience with performing cost analyses.
- The applicant should show a clear understanding of the principles of the hydrogen pathways and associated technologies to be analyzed.
- The potential of the proposed cost analyses to provide valuable feedback that guides the R&D efforts of the Hydrogen P&D sub-Program, as well as a measurement of overall technical progress of the Hydrogen P&D sub-Program.
- The adequacy of quality control and validation methods to track and ensure that assumptions are well-founded, and to ensure all scenarios are addressed with sufficient effort.

Criterion 2: Work Plan (30%)

Statement of Project Objectives

- The relevance and clarity of the goals and objectives of the project.
- The adequacy and reasonableness of the work plan, including the project schedule and task descriptions.
- The likelihood of success of the proposed work plan to meet the project goals.
- The clarity, reasonableness, and timing of the milestones and Go/No-Go decision point, as well as the quantitative criteria upon which the Go/No-Go decision is based.

Project Management

- The adequacy of the proposed project organizations to facilitate project success, including the approach for managing the team and ensuring communication among team members.
- The adequacy and appropriateness of the roles and responsibilities of the team members.

Criterion 3: Qualifications (30%)

Personnel and Organization Qualifications

- The adequacy of the education, professional training, technical skills, and work experience of the Principal Investigator and other key personnel, including personnel from major subcontractors.
- The reasonableness of each organization's ability to perform their role in the proposed project, based upon relevant experience in performing similar work.
- The capability of the proposed team to comprehensively address all aspects of the proposed project.
- The level and reasonableness of the time commitment of the Principal Investigator and other key personnel, including personnel from major subcontractors.

3. Other Selection Factors

Program Policy Factors

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

- Selection of applications that optimize the amount of funds spent in the United States
- Selection of applications that provide high value (based on the detail and rigor of the planned analysis effort) for the Federal funding requested.
- Selection of applications to achieve a broader array of complementary technologies and projects, in conjunction with existing projects funded by the DOE FCT Program, to meet the overall goals and objectives of the Program.
- Selection of applications that leverage federal funds to optimize advancement of programmatic goals.
- Selection of applications that include applicant cost share for the award.
- Selection of applications involving a diversity of proposing organizations (type and size).

B. Review and Selection Process

1. Merit Review

Applications Subject to Merit Review

Applications that pass the initial review will undergo 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/sites/prod/files/meritrev.pdf>. Applications will be evaluated, scored, and ranked according to the merit review criteria listed in Section V.A.2 above. The merit review committee will make recommendations to the Selection Official as to whether or not each application is determined to have sufficient merit to be considered for funding based on the strengths and weaknesses of the application.

It is important that those documents, including the Project Summary/Abstract and Project Narrative files, that will be used during the Merit Review Process do not contain any Personally Identifiable Information as described in Appendix B.

DOE may, in its discretion, to support a fair and thorough merit review process, ask that the applicants respond in writing to any questions that may come up during the merit review process. If any questions are posed, they would be posed to all applicants so as not to provide an advantage or disadvantage to any specific applicant. Applicants would be given the same amount of time to provide a response and previously defined evaluation criteria would be used to evaluate the response in the merit review process.

2. Selection

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

3. Notice of Selection

DOE will notify applicants selected for negotiation of an award. This notice of selection is not an authorization to begin performance. (See Section IV.F 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.

C. Anticipated Notice of Selection and Award Dates

DOE anticipates notifying the applicant selected for award by **the end of January 2013** and making the award by **the end of March 2013**.

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.F with respect to the allowability of pre-award costs.)

Organizations whose applications have not been selected will be advised as promptly as possible. For applicants who do not pass the initial review, this notice will consist of the findings of the initial review as determined by DOE/Golden Field Office. For applicants who go forward to the comprehensive review, this notice will consist of the consensus strengths and weaknesses as determined by the Merit Review Committee and will constitute the debriefing.

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; 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 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 Representations and 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](#)). 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 SAM 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 SAM 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 SAM.

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

For general reference, 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 Representations and Certifications

Corporate Felony Conviction and Federal Tax Liability Representations (March 2012)

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

- a) 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,
- b) **No** officer or agent of the corporation have been convicted of a felony criminal violation for an offence arising out of actions for or on behalf of the corporation under Federal law in the past 24 months,
- c) 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.

For purposes of these representations the following definitions apply:

A Corporation includes any entity that has filed articles of incorporation in any of the 50 states, the District of Columbia, or the various territories of the United States [but not foreign corporations]. It includes both for-profit and non-profit organizations.

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>

4. Statement of Substantial Involvement

- a) DOE anticipates having substantial involvement through technical assistance, advice, intervention, integration with other Recipients performing related activities, and technology transfer activities. The Recipient's responsibilities are listed in paragraph c. and DOE's responsibilities are listed in paragraph d.

Under this Cooperative Agreement the responsibility for the management, control, or direction of the project is shared by both DOE and the Recipient. DOE shall have the right to intervene in the conduct or performance of project activities for programmatic reasons. Intervention includes the interruption or modification of the conduct or performance of project activities.

- b) The only persons authorized to exercise DOE responsibilities per paragraph d. below is the DOE Project Officer identified in Block 15 of the Assistance Agreement and the Contracting Officer identified in Block 26 of the Assistance Agreement. Any action taken by the Recipient in response to direction given by any person other than the Project Officer or the Contracting Officer shall not be binding on the Government and any costs associated with such action may be unallowable under this award.
- c) The Recipient is responsible for:
 - (1) Performing the activities supported by this award, including providing the required personnel, facilities, equipment, supplies, and services;
 - (2) Defining approaches and plans, and if requested by DOE, submitting the plans to DOE for review, and incorporating DOE comments;
 - (3) Managing and conducting the project activities, including, if applicable, coordinating with a DOE M&O contractor on activities performed under the M&O contract that are related to the project;
 - (4) Attending project review meetings and reporting the project status;
 - (5) Submitting technical reports, including, but not limited to Quarterly Research Performance Progress Reports and Annual Progress Reports, to the DOE and incorporating DOE comments; and
 - (6) Presenting the project results at appropriate technical conferences or meetings and as requested by the DOE.
- d) DOE is responsible for:
 - (1) Reviewing in a timely manner project plans (including technology transfer plans) and redirecting the work effort if DOE determines that the plans do not address critical programmatic issues;
 - (2) Conducting project review meetings to ensure adequate progress and that the work accomplishes the program and project objectives. Redirecting work or shifting work emphasis, if needed;
 - (3) Promoting and facilitating technology transfer activities, including disseminating project results through presentations and publications; and
 - (4) Serving as scientific/technical liaison between recipients and other program or industry staff.
 - (5) DOE will have the right to have National Laboratories or selected private organizations perform independent tests and evaluations of the Cooperative Agreement's deliverables, thus providing an additional measure of technical progress. Approximately once per year, DOE will specify an expert panel of

independent reviewers to study the project and provide commentary recommendations to DOE. For example, the participant may present an overview of the project at the FCT Program's Annual Merit Review meeting. After the reviews are completed, the DOE project officer may redirect the work effort if the plans and progress do not address critical DOE programmatic issues.

- e) DOE's substantial involvement shall not impose tasks or requirements upon the Recipient that are additional to, or different from, the tasks and requirements in the Statement of Objectives. For technical direction to be valid:
- (1) It must be issued in writing consistent with the tasks and requirements set forth in the Statement of Objectives, and;
 - (2) It may not:
 - (a) constitute an assignment of additional work outside the tasks and requirements of the Statement of Objectives;
 - (b) in any manner cause an increase or decrease in the approved budget or in the time required for project performance;
 - (c) change any of the expressed terms, conditions or specifications of this Award.
 - (3) If in the opinion of the Recipient, any direction issued is not within the conditions of this clause, the Recipient shall not proceed, and shall notify the Contracting Officer in writing within five working days after receipt of any such technical direction and shall request that the Contracting Officer modify the Award accordingly.

C. Reporting

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement. For a sample Checklist, see <http://www.management.energy.gov/documents/DOEF4600pt292009.pdf>.

Specific reporting requirements for all awards resulting from this announcement will include:

- Quarterly Technical Progress Reports
- Quarterly Financial Status Reports
- Annual presentations at the DOE Program Annual Merit Review and Peer Evaluation Meeting (typically in Washington, D.C.)
- Presentations at the Hydrogen Production Tech Team Meetings (typically 1 to 2 times a year, typically in Detroit, MI)
- Power Point type summaries of each of the Hydrogen Technology Pathway cost analysis study results, including key assumptions and Sensitivity Analyses with "Tornado" Charts, as well as written summary reports that describe the cost analysis, assumptions and results as requested by DOE
- Annual detailed cost-status reports
- Annual submissions to the DOE Program's Annual Progress Report
- Final technical report as described in the Federal Assistance Reporting Checklist and Instructions including requirements for projects involving computer modeling

SECTION VII - QUESTIONS/AGENCY CONTACTS

A. Questions

Questions regarding the content of this announcement must be submitted to: FOA0000748@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. 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.

G. Notice of Right to Request Patent Waiver

Applicants providing at least 20% non-federal cost share 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.

A waiver shall only be granted if it is determined that the waiver would best serve the United States and the general public. This determination shall be made according to the considerations set forth at 10 CFR 784.4 including a commitment by the recipient to U.S. manufacturing activities or other activities that would benefit the U.S. economy.

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.

K. 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.

L. 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. <https://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