

FINANCIAL ASSISTANCE FUNDING OPPORTUNITY ANNOUNCEMENT



U. S. Department of Energy Advanced Gasification and Novel Transformational Coal Conversion Technologies

National Energy Technology Laboratory
Funding Opportunity Number: DE-FOA-0001051
Announcement Type: Initial
CFDA Number: 81.089

Issue Date of Amendment 000003:	03/10/2014
Letter of Intent Due Date:	Not Applicable
Pre-Application Due Date:	Not Applicable
Application Due Date:	04/18/2014 at 11:59:59 PM Eastern Time

NOTE: Applications in response to this Funding Opportunity Announcement (FOA) must be submitted through Grants.gov.

Applications can be submitted any time before the closing date/time and all Applicants are strongly encouraged to submit their applications well in advance (at least 48 hours) of the closing date of 04/18/2014.

The purpose of this amendment is to revise the program policy factors under Section V, Application Review Information (see pages 27-28). Changes are highlighted in yellow.

NOTE: REGISTRATION/SUBMISSION REQUIREMENTS

Registration Requirements

There are several one-time actions you must complete in order to submit an application in response to this Announcement (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the System for Award Management (SAM), and register with Grants.gov). Applicants who are not registered with SAM and Grants.gov, should allow at least 44 days to complete these requirements. It is suggested that the process be started as soon as possible.

Applicants must obtain a DUNS number. DUNS website:
<http://fedgov.dnb.com/webform>.

Applicants must register with the SAM. SAM website: <http://www.sam.gov/>. If you had an active registration in CCR, you should have an active registration in SAM. More information about SAM registration for applicants is found at: [https://www.sam.gov/sam/transcript/Quick Guide for Grants Registrations v1.7.pdf](https://www.sam.gov/sam/transcript/Quick%20Guide%20for%20Grants%20Registrations%20v1.7.pdf).

Applicants must register with Grants.gov. There are 3 steps to this process.

- 1) The Authorized Organizational Representative (AOR) must register at: <https://apply07.grants.gov/apply/OrcRegister> .
- 2) An email is sent to the E-Business (E-Biz) POC listed in SAM. The E-Biz POC must approve the AOR registration using their MPIN from their SAM registration.
- 3) AOR verifies that registration was completed at: http://grants.gov/applicants/applicant_profile.jsp.

More information about the above steps is provided at:
http://www.grants.gov/applicants/organization_registration.jsp.

Applicants must register with FedConnect to submit questions. FedConnect website: www.fedconnect.net.

Questions

Questions relating to the registration process, **system requirements, or how an application form works** must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov.

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.

Application Preparation and Submission

Applicants must download the application package, application forms and instructions, from Grants.gov. Grants.gov website: <http://www.grants.gov/>
(Additional instructions are provided in Section IV A of this FOA.)

Where to Submit

Applications must be submitted through Grants.gov to be considered for award. You cannot submit an application through Grants.gov unless you are registered. Please read the registration requirements carefully and start the process immediately. Remember you have to update your SAM registration annually. If you have any questions about your registration, you should contact the Grants.gov Helpdesk at 1-800-518-4726 to verify that you are still registered in Grants.gov.

IMPORTANT NOTICE TO POTENTIAL APPLICANTS: 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).

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Section I - FUNDING OPPORTUNITY DESCRIPTION

The objective of this activity is to competitively solicit projects in novel technologies under the Gasification Program Area to support Department of Energy (DOE) strategic goals. This work will target technological advancements that will reduce the cost of coal conversion to hydrogen or chemical-grade syngas. These objectives will be explored through: (1) reducing plant capital/operation costs; (2) increasing overall plant efficiency; and (3) reducing the cost of lower greenhouse gas (GHG) emissions.

The proposed activity will pursue technologies designed to lower the cost of producing hydrogen and/or high-hydrogen syngas from coal for use in carbon capture power and co-production plants (power and a chemical/fuel product). It is also designed to assure significant reduction in the cost of coal conversion and environmental impacts, enabling coal resources to both improve U.S. economic competitiveness and provide environmental benefits over the globe. The proposed activity coincides with the FY14 Annual Procurement Plan and is part of an initiative supporting the mission and goals of the Office of Fossil Energy's Gasification Systems program, as well as DOE strategic goals.

The purpose of this activity is to support advanced gasification technologies for low cost high hydrogen syngas by pursuing technologies designed to lower the cost of producing hydrogen and/or high-hydrogen syngas from coal for use in 90% carbon capture power and co-production plants (power and a chemical/fuel product). R&D projects are sought to investigate technologies that have the potential to significantly decrease the cost of producing syngas that is high in hydrogen, low in CH₄ and N₂, and with near-zero trace contaminants, such that they are applicable to high-carbon capture power production and/or liquid fuels production. Possibilities include, but are not limited to, novel gasifiers that greatly increase availability/efficiency, gasifiers that provide the needed H₂ to CO ratio without the need for water gas shift (WGS), novel applications for commercial gasifiers, co-gasification approaches, chemical looping gasification, new technologies to increase the hydrogen content of commercially available syngas, and technologies to separate CO and H₂. DOE is especially interested in technologies and/or plant configurations that are small scale and economical (500 to 1000 TPD), have a high availability (98% as a stretch goal), and possess the ability to shut down and start up quickly. The least mature technology proposed in the test plan should include bench-scale component testing (for example, where relevant, 1 – 100 scfm of syngas). The project will focus on physical R&D, and will culminate in a systems analysis intended to show the commercial potential for the technology being developed, based as much as practical on R&D progress made during the project. The systems analysis should cost no more than 20% of the project, or \$250,000, whichever is least.

Technical Objectives - To develop technologies that will significantly contribute to commercially competitive plant configurations for IGCC with 90% carbon capture, and gasification-based liquid (transportation) fuel production: methanol or diesel. Liquid fuel production must be GHG equivalent to conventional petroleum-based processes. Technologies need not be limited to 100 percent coal; however, coal must be the predominant fuel (i.e., >50 percent by heating value).

- Project deliverables will include a report showing significant progress on technology development, and a techno-economic analysis, which must include at least two cases: (1) IGCC with 90 percent carbon capture and enhanced oil recovery (EOR) use, and (2) coal-to-liquids (methanol or diesel).

- DOE is especially interested in:
 - o Plant configurations that coordinate with new technologies expected to be commercial by 2020 to take advantage of integrated cost benefits.
 - o Small scale (50 - 300 MWe), cost-effective gasification.

Schedule Objectives:

- The proposed project will make progress on technology development such that the technology is on a path to be ready for first-of-a-kind commercially relevant demonstration by 2030.

This FOA consists of the main body of the FOA plus two (2) additional attachments described as follows:

Attachment 1 is the Design Basis for the Techno-Economic Analyses (TEA) Deliverables. Please reference Attachment 1 for details.

Attachment 2 is the Project Management Plan (PMP) template. Please reference Attachment 2 for details.

Section II - AWARD INFORMATION

A. TYPE OF AWARD INSTRUMENT

DOE anticipates awarding cooperative agreements under this funding opportunity announcement (See Section VI.B.2 Statement of Substantial Involvement).

B. ESTIMATED FUNDING

Approximately \$10,000,000 in federal funding is expected to be available for new awards under this announcement. Funding for all awards is contingent upon the availability of funds appropriated by Congress for the purpose of this program.

C. MAXIMUM AND MINIMUM AWARD SIZE

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

None

Floor (i.e., the minimum amount for an individual award made under this announcement):

None

D. EXPECTED NUMBER OF AWARDS

DOE anticipates making two (2) to three (3) awards under this announcement depending on the size of the awards.

E. ANTICIPATED AWARD SIZE

DOE anticipates having multiple awards. DOE anticipates that the award size will be up to \$5,000,000 in federal funding.

F. PERIOD OF PERFORMANCE

DOE anticipates making awards with an estimated project period of one (1) to three (3) years.

G. TYPE OF APPLICATION

DOE will accept only new applications under this announcement.

Section III - ELIGIBILITY INFORMATION

A. ELIGIBLE APPLICANTS

1. Individuals

U.S. citizens and lawful permanent residents are eligible to apply for funding as a prime recipient or subrecipient.

2. Domestic Entities

For-profit entities, educational institutions, and nonprofits that are incorporated (or otherwise formed) under the laws of a particular State or territory of the United States are eligible to apply for funding as a prime recipient or subrecipient.

State, local, and tribal government entities are eligible to apply for funding as a prime recipient or subrecipient.

DOE/NNSA Federally Funded Research and Development Centers (FFRDCs) are eligible to apply for funding as a subrecipient for funding, but are not eligible to apply as a prime recipient. **NOTE: NETL is not considered eligible for award under this announcement and may not be proposed as a team member on another entity's application.**

Non-DOE/NNSA FFRDCs and non-DOE GOCOs are eligible to apply for funding as a subrecipient, but are not eligible to apply as a prime recipient.

Federal agencies and instrumentalities (other than DOE) are eligible to apply for funding as a subrecipient, but are not eligible to apply as a prime recipient.

3. Foreign Entities

Foreign entities, whether for-profit or otherwise, are eligible to apply for funding under this FOA.

Other than as provided in the "Individuals" or "Domestic Entities" sections above, all prime recipients receiving funding under this FOA must be incorporated (or otherwise formed) under the laws of a State or territory of the United States. If a foreign entity applies for funding as a prime recipient, it must designate in the Full Application a subsidiary or affiliate incorporated (or otherwise formed) under the laws of a State or territory of the United States to be the prime recipient. The Full Application must state the nature of the corporate relationship between the foreign entity and domestic subsidiary or affiliate. Foreign entities may request a waiver of this requirement in the Full Application. See Section VIII for waiver request information. The DOE Contracting Officer has discretion to waive this requirement if he/she determines that it will further the purposes of this FOA and is otherwise in the interests of DOE's Office of Fossil Energy.

A foreign entity may receive funding as a subrecipient.

4. Incorporated Consortia

Incorporated consortia, which may include domestic and/or foreign entities, are eligible to apply for funding as a prime recipient or subrecipient. For consortia incorporated (or otherwise formed) under the laws of a State or territory of the United States, please refer to "Domestic Entities" above. For consortia incorporated in foreign countries, please refer to the requirements in "Foreign Entities" above.

Each incorporated consortium must have an internal governance structure and a written set of internal rules. Upon request, the consortium must provide a written description of its internal governance structure and its internal rules to the DOE Contracting Officer.

5. Unincorporated Consortia

Unincorporated consortia, which may include domestic and foreign entities, must designate one member of the consortium to serve as the prime recipient/consortium representative. The prime recipient/consortium representative must be incorporated (or otherwise formed) under the laws of a State or territory of the United States. The eligibility of the consortium will be determined by the eligibility of the prime recipient/consortium representative under Section III.A of the FOA.

Upon request, unincorporated consortia must provide the DOE Contracting Officer with a collaboration agreement, commonly referred to as the articles of collaboration, which sets out the rights and responsibilities of each consortium member. This agreement binds the individual consortium members together and should discuss, among other things, the consortium's:

- * Management structure;
- * Method of making payments to consortium members;
- * Means of ensuring and overseeing members' efforts on the project;
- * Provisions for members' cost sharing contributions; and
- * Provisions for ownership and rights in intellectual property developed previously or under the agreement.

B. COST SHARING

The cost share must be at least 20% of the total allowable costs for research and development projects (i.e., the sum of the Government share, including FFRDC contractor costs if applicable, and the recipient share of allowable costs equals the total allowable cost of the project) and must come from non-Federal sources unless otherwise allowed by law. (See 10 CFR 600 for the applicable cost sharing requirements.)

A minimum cost share of 30% is required for projects where the technology will be tested at large pilot-scale under relevant commercial conditions (equal or greater than 10 MWe equivalent scale).

Total Project Costs = DOE Share + Recipient Cost Share

If FFRDC participates: Total Project Costs = DOE share + FFRDC Costs + Recipient Cost Share.

C. OTHER ELIGIBILITY REQUIREMENTS

FFRDC/National Laboratories

NOTE: NETL is not considered eligible for award under this announcement and may not be proposed as a team member on another entity's application.

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

Authorization for non-DOE/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. Usually, DOE/NNSA will fund a DOE/NNSA FFRDC contractor through the DOE field work proposal system and other FFRDC contractors through an interagency agreement with the sponsoring agency.

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

FFRDC Contractor Effort:

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

- The FFRDC contractor effort, in aggregate, shall not exceed **25%** of the total estimated 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.

D. PERFORMANCE OF WORK IN THE UNITED STATES

The Recipient agrees that at least **75%** of the cost for the project (including subrecipient cost) shall be incurred in the United States, unless the Recipient can demonstrate to the satisfaction of the Department of Energy that the United States economic interest will be better served through a greater percentage of the work being performed outside of the United States.

Applicants and prime recipients may request a waiver of this requirement. Applicants must include a written waiver request in the Full Application. Prime recipients must submit any waiver requests in writing to the DOE Contracting Officer for this FOA. The DOE Contracting Officer has discretion to waive this requirement if he/she determines that it will further the purposes of this FOA and is otherwise in the best interest of the Government. If you would like to request a waiver see Section VIII.

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 AND PRE-APPLICATION

1. Letter of Intent.

Letters of Intent are not required.

2. Pre-application

Pre-applications are not required.

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)

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.

2. RESEARCH AND RELATED Other Project Information

Complete questions 1 through 6 and attach files. The files must comply with the following instructions:

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 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 after awards are 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. To attach a Project Summary/Abstract, click "Add Attachment."

Project Narrative (Field 8 on the Form)

The project narrative must not exceed 25 pages, including cover page, table of contents, charts, graphs, maps, photographs, tables, and other pictorial presentations, when printed using standard 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right) {double spaced} with font not smaller than 11 point. **EVALUATORS WILL ONLY REVIEW THE NUMBER OF PAGES SPECIFIED IN THE PRECEDING SENTENCE.** Do not include any Internet addresses (URLs) that provide information necessary to review the application, because the information contained in these sites will not be reviewed. See Part VIII.D for instructions on how to mark proprietary application information. To attach a Project Narrative, click "Add Attachment."

The project narrative must include the following information that WILL count towards the project narrative page limit detailed above.

- **Project Objectives:** This section should provide a clear, concise statement of the specific objectives/aims of the proposed project.

- **Merit Review Criterion Discussion:** The section should be formatted to address each of the merit review criterion and sub-criterion listed in Part V.A. Provide sufficient information so that reviewers will be able to evaluate the application in accordance with these merit review criteria. **DOE WILL EVALUATE AND CONSIDER ONLY THOSE APPLICATIONS THAT ADDRESS SEPARATELY EACH OF THE MERIT REVIEW CRITERION AND SUB-CRITERION.**

- **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.

- **Roles Of Participants:** For multi-organizational or multi-investigator projects, describe the roles and the work to be performed by each participant/investigator, business agreements between the applicant and participants, and how the various efforts will be integrated and managed.

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

- process for making decisions on scientific/technical direction;
- publications;
- intellectual property issues;
- communication plans;
- procedures for resolving conflicts; and
- PIs' roles and administrative, technical, and scientific responsibilities for the project.

- **Statement Of Project Objectives (SOPO):** The project narrative must contain a single, detailed Statement of Project Objectives that addresses how the project objectives will be met. The Statement of Project Objectives must contain a clear, concise description of all activities to be completed during project performance and follow the structure discussed below. The Statement of Project Objectives may be released to the public by DOE in whole or in part after award. It is therefore required that it shall not contain proprietary or confidential business information. The Statement of Project Objectives is generally 5 -10 double-spaced pages in total for the proposed work and the above referenced pages will count toward the project narrative page limitation total. Applicants shall prepare the Statement of Project Objectives 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 - This section provides a brief summary of the planned approach to this project. Guidelines for developing the Task/Subtask structure follows:

- Tasks and subtasks shall include a concisely written summary, provided in a logical sequence that outlines the Technical Approach provided in the Project Narrative, and apportioned within the Budget Periods as appropriate.
- Tasks shall be numbered consecutively throughout the entire duration of the project, starting with Task 1.0 as outlined below.
- Task 1.0, the Project Management and Planning task, shall be the only task that is active throughout the duration of the project and shall be active in multiple Budget Periods.
- Activities should be described at the task and subtask level in this application as appropriate.

Task 1.0 – Project Management and Planning

THIS TASK IS MANDATORY AND MUST ADDRESS THE FOLLOWING:

This Task shall include the necessary activities to ensure coordination and planning of the project with DOE/NETL and other project participants. A sample template is provided as Attachment 2 to this FOA. These activities shall include, but are not limited to, the monitoring and controlling of project scope, cost, schedule, and risk, and the submission and approval of required NEPA documentation.

Note: The project is restricted from taking any action using Federal funds, which would have an adverse effect on the environment or limits the choice of reasonable alternatives prior to DOE providing the final NEPA decision regarding this project.

This Task shall also include all work elements required to maintain and revise the Project Management Plan, and to manage and report on activities in accordance with the plan.

Note: Successful applicants shall revise the version of the Project Management Plan that is submitted with their applications by including details from the negotiation process and through consultation with the Federal Project Officer.

This Project Management Plan will be updated by the applicant as the project progresses, and the applicant must use this plan to report schedule and budget variances as applicable.

Task 2.0 – Title
(Description)

Subtask 2.1 – Title
(Description)

Subtask 2.2 – Title
Description

Task 3.0 – Title
(Description)

Subtask 3.1 – Title
(Description)

Subtask 3.2 – Title
(Description)

Task 4.0 – Title
(Description)

Continue with Tasks as necessary

D. DELIVERABLES

The periodic, topical, and final reports shall be submitted in accordance with the attached "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. These reports shall also be identified within the text of the Statement of Project Objectives as either tasks or subtasks. See the following examples:

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

E. BRIEFINGS/TECHNICAL PRESENTATIONS - The applicant will prepare detailed briefings for presentation to the Federal Project Officer at the Federal Project Officer's facility located in Pittsburgh, PA or Morgantown, WV. Briefings will be given by the Recipient to explain the plans, progress and results of the technical effort as requested by the Project Officer.

The Applicant shall make a presentation to the NETL Project Officer/Manager at a project kick-off meeting held within 45 days of the project start date. The Applicant may also attend/present project information at technical conference(s) (subject to approval by the DOE Project Officer during award negotiation).

The Recipient shall provide and present project overview(s) and/or technical paper(s) at the Program Peer Review Meetings or other designated program meetings that are held biannually, typically at the NETL facility located in Pittsburgh, PA or Morgantown, WV.

(End of SOPO)

Appendices to the Project Narrative - The following appendices are to be provided and clearly defined by their respective headings. Appendices are to be utilized to validate information within the Project Narrative as appropriate and should not be utilized as an extension for information requested to be addressed in the narrative. The **font must not be smaller than 11 point**. Information in the appendices **WILL NOT count** toward the page limits of the Project Narrative.

- 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.

- Third Parties Contributing to Cost Sharing Appendix: At the time you submit your application, you must have a letter from each third party (i.e., party other than the organization submitting the application). The letter must state that the third party is committed to providing a specific minimum dollar amount of cost sharing.

By submitting your application, you are providing assurance that you have signed letters of commitment. In an appendix to your Project Narrative, you must identify the following information for each third party contributing to cost sharing: (1) the name of the organization; (2) the scope of the effort to be provided by referencing tasks within the project SOPO; (3) the proposed dollar amount to be provided in cost share; (4) the amount as a percentage of the total project cost; and (5) the proposed cost sharing - cash, services, or property. Letters must be signed by the person authorized to commit the expenditure of funds by the entity and be provided in a PDF format. In order to reduce the number of files attached to your application, please provide the commitment letters as an appendix to your Project Narrative. Do not attach a file in Field 12. This appendix **will not count** in the project narrative page limitation.

TEA Cost Identification - The total cost associated with the TEA Analyses shall be clearly identified.

- Bibliography & References Cited Appendix: Provide a bibliography of any references cited in the Project Narrative. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), 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. In order to reduce the number of files attached to your application, please provide the Bibliography and References Cited information as an appendix to your project narrative. Do not attach a file in Field 9. This appendix **will not count** in the project narrative page limitation.

- Facilities & Other Resources Appendix: This information is used to assess the capability of the organizational resources, including subrecipient resources, available to perform the effort proposed. Identify the facilities to be used (Laboratory, Animal, Computer, Office, Clinical, and Other). 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. Describe other resources available to the project (e.g., machine shop, electronic shop) and the extent to which they would be available to the project. In order to reduce the number of files attached to your application, please provide the Facility and Other Resource information as an appendix to your project narrative. Do not attach a file in Field 10. This appendix **will not count** in the project narrative page limitation.

- Equipment Appendix: List major items of equipment already available for this

project and, if appropriate identify location and pertinent capabilities. In order to reduce the number of files attached to your application, please provide the Equipment information as an appendix to your project narrative. Do not attach a file in Field 11. This appendix **will not count** in the project narrative page limitation.

- Authorizing Access to Testing Facilities Appendix: At the time of application submittal, the applicant must have a letter of commitment from each proposed testing facility. The letter must state the following information for each facility: (1) the name of the organization; (2) demonstration of support of the proposed technology by authorizing access to the selected test facility (if selected for award); and (3) a description of the facility to be accessed. Letters must be signed by the person authorized to commit facility access by the entity and be provided in a PDF format. By submitting your application, you are providing assurance that you have signed letters of commitment. In order to reduce the number of files attached to your application, please provide the Commitment Letters as an appendix to your Project Narrative. Do not attach a file in Field 12. This file **will not count** in the Project Narrative page limitation.

- Budget for DOE FFRDC Contractor Appendix: If a DOE/NNSA FFRDC contractor or DOE National Laboratory 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 <https://www.directives.doe.gov/directives/current-directives/412.1-BOrder-a/view> . In order to reduce the number of files attached to your application, please provide the DOE Field Work Proposal as an appendix to your Project Narrative. Do not attach a file in Field 12. This file **will not count** in the Project Narrative page limitation.

Other Attachments (Field 12 on the form)

If you need to elaborate on your responses to questions 1-6 on the "Other Project Information" document, attach a file in field 12.

(End of Project Narrative)

Also, attach the following files:

Project Management Plan

This plan should be formatted to include the following sections with each section to include the information as described below. See Attachment 2 for a Project Management Plan template.

Save this plan in a single file named "pmp.pdf" and click on "Add Attachments" in Field 12 to attach.

Environmental Questionnaire – An Environmental Questionnaire (EQ) must be filled out for each geographic location where activities will be conducted for the project. This will facilitate a National Environmental Policy Act (NEPA) determination by DOE for the project activity site(s). You must complete the environmental questionnaire at <http://netl.doe.gov/business/business-forms#FUNDING>. Save the questionnaire in a single file named "Env.pdf" and click on "Add Attachments" in Field 12 to attach.

3. RESEARCH AND RELATED SENIOR/KEY PERSON

Complete this form before the Budget form to populate data on the Budget form. Beginning with the Principal Investigator (PI), provide a profile for each senior/key person proposed. A senior/key person is any individual who contributes in a substantive, measurable way to the scientific/technical development or execution of the project, whether or not a salary is proposed for this individual. Subrecipients and consultants must be included if they meet this definition. For each senior/key person provide:

Biographical Sketch. Complete a biographical sketch for each senior/key person and attach to the "Attach Biographical Sketch" field in each profile. 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.

Current and Pending Support

- Provide a list of all current and pending support (both Federal and non-Federal) for the Principal Investigator(s) (PI) and senior/key persons, including subrecipients, for ongoing projects and pending applications. For each organization providing support, show the total award amount for the entire award period (including indirect costs) and the number of person-months per year to be devoted to the project by the senior/key person. Concurrent submission of an application to other organizations for simultaneous consideration will not prejudice its review. Save the information in a separate file and attach to the "Attach Current and Pending Support" field in each profile.

Note: Supporting documentation of Research & Related Senior/Key Personnel **will not count** toward the Project Narrative page limitation.

4. RESEARCH AND RELATED BUDGET (TOTAL FED + NON-FED)

Complete the Research and Related Budget (Total Fed & Non-Fed) form in accordance

with the instructions on the form 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).

Budget Justification (Field K on the form).

Provide the required supporting information for the following costs (See R&R instructions): labor; 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. If cost sharing is required, provide an explanation of the source, nature, amount, and availability of any proposed cost sharing. Attach a single budget justification file for the entire project period in Field K. The file automatically carries over to each budget year.

5. R&R SUBAWARD (TOTAL FED + NON-FED) FORM

Budgets for Subrecipients, other than DOE FFRDC Contractors. You must provide a separate cumulative R&R budget for each subrecipient that is expected to perform work estimated to be more than \$100,000 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 subrecipient that is required to submit a separate budget. After the Subrecipient 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 subrecipient's name as the file name.

6. PROJECT/PERFORMANCE SITE LOCATION(S)

Indicate the primary site where the work will be performed. If a portion of the project will be performed at any other site(s), identify the site location(s) in the blocks provided.

Note that the Project/Performance Site Congressional District is entered in the format of the 2 digit state code followed by a dash and a 3 digit Congressional district code, for example VA-001. Hover over this field for additional instructions.

Use the Next Site button to expand the form to add additional Project/Performance Site Locations.

7. DISCLOSURE OF LOBBYING ACTIVITIES (SF-LLL)

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."

Summary of Required Forms and Files

Your application must include the following documents:

Name of Document	Format	Attach to
SF 424 (R&R)	Form	N/A
RESEARCH AND RELATED Other Project Information	Form	N/A
Project Summary/Abstract	PDF	Field 7
Project Narrative, including required appendices	PDF	Field 8
Project Management Plan	PDF	Field 12
Budget for DOE FFRDC, if applicable	PDF	Field 12
Commitment Letters from Third Parties	PDF	Field 12
Environmental Questionnaire	PDF	Field 12
RESEARCH & RELATED SENIOR/KEY PERSON Profile (Expanded)	Form	N/A
Biographical Sketch	PDF	Attach to appropriate block
Current and Pending Support	PDF	Attach to appropriate block
RESEARCH AND RELATED BUDGET (Total Fed + Non-Fed)	Form	N/A
Budget Justification	PDF	Field K
Provisional Indirect Rate Agreement	PDF	N/A
R&R SUBAWARD BUDGET (Total Fed + Non-Fed), ATTACHMENT(S) FORM, if applicable	Form	N/A
PROJECT/PERFORMANCE SITE LOCATION(S)	Form	N/A
SF-LLL Disclosure of Lobbying Activities, if applicable	Form	N/A

D. SUBMISSIONS FROM SUCCESSFUL APPLICANTS

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

- Indirect cost information
- Other budget information
- Name and phone number of the Designated Responsible Employee for

complying with national policies prohibiting discrimination (See 10 CFR 1040.5)

- Representation of Limited Rights Data and Restricted Software, if applicable
- Commitment Letter from Third Parties Contributing to Cost Sharing, if applicable

E. SUBMISSION DATES AND TIMES

1. Pre-application Due Date

Pre-applications are not required.

2. Application Due Date

Applications should be received by April 18, 2014, not later than 11:59:59 PM Eastern Time. You are encouraged to transmit your application well before the deadline. The Grants.gov Helpdesk is available for extended periods, please check their website for the Helpdesk hours of operation. 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 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. If you have problems completing the registration process or submitting your application, call Grants.gov at 1-800-518-4726 or send an email to support@grants.gov.

2. Registration Process

One Time Registration Process

You must COMPLETE the one-time registration process (all steps) before you can submit your first application through Grants.gov (See 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

Section V - APPLICATION REVIEW INFORMATION

A. CRITERIA

1. Initial Review Criteria

Application Award Eligibility

Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine that (1) the applicant is eligible for an award; (2) the information required by the funding opportunity announcement has been submitted; and (3) the proposed project is responsive to the objectives of the funding opportunity announcement. Applications that fail to pass the initial review will not be forwarded for merit review and will be eliminated from further consideration.

2. Merit Review Criteria

All applications that pass the initial review process will receive a detailed and consistent technical evaluation utilizing the evaluation criteria described below.

Merit Criterion 1 – Scientific and Technical Merit – 40%

- a) The degree to which successful, completed, physical R&D can be expected to contribute to a scientific or technical breakthrough capable of meeting the *Technical Objectives*.**

Submission Requirements:

- The applicants must clearly describe the technology and explain how the proposed technology (if successfully developed) will significantly contribute to the *Technical Objectives*. The proposed technology must be compared to state-of-the-art technologies and the Project Narrative must clearly explain why the new technology has the potential to be a significant improvement over existing technologies.
- All applications must include a block flow diagram (legible at 8.5 inches by 11 inches) and a corresponding process description.
- Briefly describe and reference other government projects – completed, ongoing and proposed – that integrate meaningfully with this project.

- b) The degree to which the application is based on sound engineering and scientific principles, including the thoroughness and relevance of the technical data provided to support project readiness at the proposed scale.**

Submission Requirements: This sub-criterion will be rated on the quality and quantity of existing experimental data to support the claims made in regards to the potential progress towards the goals of the FOA.

- The technical basis for the technology must be discussed in detail.

- Provide evidence (test data, systems analysis results, flow diagrams, similar commercial systems/applications, etc.) to support the potential benefits described in 1.a., and the readiness of the technology to be tested at the proposed test scale.
- Provide hard evidence that the (1) technology has been developed to the point where it is ready for the work described in the Statement of Project Objectives (SOPO), and (2) the technology supports the anticipated benefits described in 1.a.

c) The likelihood that the proposed project will meet the *Schedule Objective*.

Submission Requirements:

- Summarize the development work that needs to be completed prior to first-of-a-kind commercially relevant demonstration by the Schedule Objective date. Then specifically describe the technical risks that will not be addressed as part of this project and why.
- Assuming successful development of this technology, describe any additional R&D on different technologies that are needed to enable first-of-a-kind commercially relevant demonstration of this technology by the Schedule Objective date. If development of another technology is necessary (turbines, gasifier, injectors, etc.), briefly explain what this R&D is, and the likelihood of it occurring. Letters of support are encouraged; these letters will not count toward the page limit for the Project Narrative.

d) The degree to which the proposed technology—if successfully developed—will have widespread industrial and commercial usefulness and a beneficial impact on the U.S. economy.

Submission Requirements:

- Describe the anticipated extent to which the technology will be available to industry. Any specific/exclusive technology integration requirements or exclusive business agreements that may limit technology deployment must be described.
- Describe the potential market segment within the energy sector and/or gasification industry that could adopt the proposed technology. Describe other industries (if any) that would benefit from this technology.

Merit Criterion 2 – Project Planning – 40%

Criterion Submission Requirement: a complete Project Management Plan, including Statement of Project Objectives, must be submitted for this criterion to be evaluated. The following sub-criteria will be based primarily on review of these documents.

a) The extent to which the overall approach is reasonable and well thought out with regard to effectively balancing technical risk with technical progress.

Submission Requirements:

- Explain the rationale of the experimental protocol described in the Statement of Project Objectives (SOPO), and the reasons for decision point choices and how they will help to mitigate project risk.
- Discuss the R&D work chosen to be performed in the SOPO, and why it reflects a reasonable prioritization of the most significant challenges that can be investigated at the scale of the work proposed.

b) The extent to which the overall approach will conserve project funding and reduce the risk to DOE funding.

Submission Requirements:

- Describe how the chosen SOPO structure, decision points and end point will limit the cost exposure of technical failure; the strategies taken to reduce R&D cost; and justify the project end point.
- Explain the logic flow for accomplishing the SOPO, including the reasonableness of tasks order, and why any tasks are performed in parallel and the rationale for why the approach was taken.

c) Completeness and reasonableness of the success criteria at the decision points and at project completion to make the most possible progress on the *Technical Objectives*.

Submission Requirements:

- Clearly describe success criteria for each task in the SOPO.
- Describe how the success criteria chosen correlate to the commercial vision for the proposed technology or technologies.

d) The adequacy and completeness of the Project Management Plan (PMP) and SOPO.

Submission Requirements: The attached PMP (including the SOPO) must include sufficient quality information to justify all discussion of previous sub-criterion.

Furthermore:

- The SOPO must be of sufficient detail, organization and quality to support the project technical objectives, project cost, and project schedule.
- The PMP must be of sufficient detail, organization and quality to enable clear understanding of projects costs over time in correlation to technical milestones.
- The PMP must be of sufficient detail, organization and quality to clearly describe how Recipient planning and actions will help monitor, control and mitigate potential project management risks—including cost overruns, schedule impacts and predicament communication with DOE and other partners—as they arise to ensure efficient resolution.

Merit Criterion 3 – Technical Capabilities of Personnel and Facilities – 20%

a) The ability, experience and commitment of key personnel, other personnel, and the organization to support successful completion of the project.

Submission Requirements:

- The Application must include resumes of key personal and qualifications of project partners. Note: See Section IV.C.3 Research and Related Senior/Key Person for more information and instruction. Note that these resumes **will not count** toward the Project narrative page limitation.
- If receiving cost share from sub-awardees and/or third parties, a letter of cost share commitment/intent from each cost share providing organization must be provided. Note: See section IV.C.2 Third Parties Contribution to Cost Sharing Appendix for more information and instruction. Note that these letters **will not count** toward the Project Narrative page limitation.
- Describe prior corporate experience in managing and successfully completing R&D projects of similar type, size and complexity.
- Clearly describe the project team organization, including subcontractors and subcontractor value to the project.

b) The appropriateness and availability of facilities, equipment and modeling analysis tools. Highest value will be attributed towards the existing facilities, etc. that can support this project; however, failure to accurately describe legitimate procurement and/or fabrication needs will be considered a serious proposal flaw.

Submission Requirements:

- Describe existing facilities in sufficient detail to show their ability to support work described in the SOPO, to the extent that is expected of them.
- Describe what facilities/equipment must be procured/fabricated as a part of this project, and why this is necessary.
- Letters of support from proposed host site(s) for tests must be provided. Note: See section IV.C.2 Authorizing Access to Testing Facilities Appendix for more information and instruction. Note that these letters of support **will not count** toward the Project Narrative page limitation.

Program Policy Factors

The selection official will consider program policy factors in the selection process. These factors, while not indicators of the Application's merit, e.g., technical excellence, cost, applicant's ability, etc., may be essential to the process of selecting the applications(s) that, individually or collectively, will best achieve the program objectives. Program policy factors may be used by the Source Selection Official to select projects when such selection is deemed likely to result in a superior overall research and development portfolio. The selection official will consider the following program policy factors in the selection process:

- It may be desirable to select for award a group of projects which, in the context of the entire Office of Fossil Energy Gasification technology area project portfolio,

represents a diversity of technical approaches, methods, applications and/or market segments;

- It may be desirable to support complementary and/or duplicative projects, which, when taken together, will best achieve the research goals and objectives;
- It may be desirable that different kinds and sizes of organizations be selected for award in order to provide a balanced programmatic effort and a variety of different technical perspectives;
- It may be desirable, because of the nature of the energy source, the type of projects envisioned, or limitations of past efforts, to select for award a group of projects with a broad or specific geographic distribution;
- It may be desirable, that different types and sizes of projects be selected for award in order to best support the program budget;
- It may be desirable to select projects more likely to result in technologies with near term commercial deployment;
- It may be desirable to select for award project(s) that reduce Federal investment and maximize corporate commitment, as demonstrated by cost share levels or other resource leveraging (e.g., in-kind contributions) that exceeds 20%;
- It may be desirable to select for award project(s) of lesser technical merit if such a selection will optimize the use of available funds by allowing more projects to be supported, or leverages previous DOE funding, without being detrimental to the overall objectives of the program; and
- It may be desirable to select for award project(s) that present lesser schedule, budget, and technical consequences and risks resulting from environmental factors.

B. REVIEW AND SELECTION PROCESS

1. Applications Subject to 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 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 the end of June 2014 and making awards by the end of August 2014.

Section VI - AWARD ADMINISTRATION INFORMATION

A. AWARD NOTICES

1. Notice of Selection

Selected Applicants Notification

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.)

Non-selected Notification

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

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 Research Terms and Conditions located at <http://www.nsf.gov/bfa/dias/policy/rtc/index.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 Research Terms and Conditions located on the National Science Foundation web site at <http://www.nsf.gov/bfa/dias/policy/rtc/index.jsp>.

DUNS AND CCR REQUIREMENTS

Additional administrative requirements for DOE grants and cooperative agreements are contained in 2 CFR, Part 25 (See: <http://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.

Equipment and Property. Disposition of property acquired under awards resulting from this FOA will be governed by the applicable sections of the DOE Financial Assistance Regulations (10 CFR 600).

Corporate Felony Conviction and Federal Tax Liability Representations

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

- (1) It is not a corporation that has been convicted (or had an officer or agent of such corporation acting on behalf of the corporation convicted) of a felony criminal violation under any Federal law within the preceding 24 months,
- (2) No officer or agent of the corporation have been convicted of a felony criminal violation for an offense arising out of actions for or on behalf of the corporation under Federal law in the past 24 months,
- (3) 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.

Foreign National Involvement

All applicants selected for an award resulting from this FOA may be required to provide information to the Department of Energy (DOE) in order to facilitate our responsibilities associated with foreign national access to DOE sites, information, technologies, and equipment. Foreign national is defined as any person who was born outside the jurisdiction of the United States, is a citizen of a foreign government, and has not been naturalized under U.S. law. If the selected applicant, including subrecipients/contractors, anticipates utilizing a foreign national person in the performance of an award, the selected applicant may be responsible for providing to the DOE representative specific information of the foreign national(s) to satisfy compliance with all of the requirements for access approval

Statement of Substantial Involvement

DOE will have substantial involvement to include the following:

- Collaboration with the Recipient on the project plans to include project management, testing and technology transfer plans, and recommending alternate approaches if the plans do not address critical programmatic issues.
- Participating in project management planning activities, including risk analysis, to ensure DOE's program requirements or limitations are considered in the performance of the work elements.
- Conducting periodic program review meetings to ensure adequate progress and that the work accomplishes the program and project objectives.
- With consultation with the Contracting Officer, shifting work emphasis or recommending alternate approaches, if needed.
- Integrating and redirecting the work effort to ensure that project results address

critical system and programmatic goals established by DOE – FE in coordination with the Advanced Energy Systems Program.

- Reviewing scientific/technical reports to ensure programmatic needs and the requirements of the Financial Assistance award instrument, including intellectual property rights, are satisfied and providing comments to the Recipient in a timely manner.
- Promoting and facilitating technology transfer activities, including disseminating program results through presentation and publication.
- Serving as scientific/technical liaison between Recipient and other DOE program or industry staff.

The Recipient's Responsibilities include the following:

- Performing the activities supported by this award in accordance with the Project Management Plan (PMP), including providing the required personnel, facilities, equipment, supplies, and services.
- Managing and controlling project activities in accordance with established processes and procedures to ensure tasks and subtasks are completed within schedule and budget constraints as defined by the current PMP.
- Implementing an approach to identify, analyze, and respond to project risks that is commensurate with the complexity of the project.
- Defining and revising approaches and plans, submitting the plans to DOE for review, and incorporating DOE comments.
- Coordinating related project activities with external suppliers, including DOE M&O contractors, to ensure effective integration of all work elements.
- Attending periodic program review meetings and reporting project status.
- Submitting technical reports, in accordance with the Federal Assistance Reporting Checklist and Statement of Project Objectives, and incorporating DOE comments.
- Presenting the project results at appropriate technical conferences or meetings as approved by the DOE Project Officer.

C. REPORTING

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement. The 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 5 business 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: Carla Winaught

Email: Carla.Winaught@netl.doe.gov

Questions: **All questions shall be submitted in writing as outlined above through FedConnect.** FOA

Questions should not be submitted via the above email and FOA questions will not be answered via the above email or via phone calls.

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. 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.

Program Covered Under Special Protected Data

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 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.

G. NOTICE OF RIGHT TO REQUEST PATENT WAIVER

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

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. CONFERENCE SPENDING (APRIL 2013)

The recipient shall not expend funds for the purpose of defraying the cost to the United States Government of a conference [described in subsection (c) of the Consolidated and Further Continuing Appropriations Act, 2013] that was more than \$20,000, or circumventing the required notification by the head of any such Executive Branch department, agency, board, commission, or office to the Inspector General or senior ethics official for any entity without an Inspector General, of the date, location, and number of employees attending such conference that is not directly and programmatically related to the purpose for which the grant or cooperative agreement was awarded.

J. FOREIGN ENTITY WAIVER REQUEST

As set forth in Section III.A.3, all prime recipients receiving funding under this FOA must be incorporated (or otherwise formed) under the laws of a State or territory of the United States. If a foreign entity applies for funding as a prime recipient, it must designate a subsidiary or affiliate incorporated (or otherwise formed) under the laws of a State or territory of the United States to be the prime recipient.

To request a waiver for this requirement, the Applicant must submit a waiver request in the Full Application, which includes the following information: entity name, country (or state) of incorporation, description of the work to be performed by that entity, and the location where the work will be performed. If the applicant is seeking a waiver to have a foreign entity serve as the prime recipient, the applicant must explain why it is necessary to have a foreign entity serve as the prime recipient. Waiver requests should explain how the waiver would further the purposes of this FOA and otherwise serve the interests of the Department of Energy. The Contracting Officer may require additional information before considering the waiver request. Save the Waiver Request(s) in a single filed titled:

"LeadOrganization_Waiver.pdf"

K. PERFORMANCE OF WORK IN THE UNITED STATES WAIVER REQUEST

As set forth in Section III.D., at least 75% of the cost for the project (including subrecipient cost) shall be incurred in the United States, unless the Recipient can demonstrate to the satisfaction of the Department of Energy that the United States

economic interest will be better served through a greater percentage of the work being performed outside of the United States.

To request a waiver for this requirement, the Applicant must submit a waiver request in the Full Application, which includes the following information: entity name, description of work to be performed outside the United States and the location where the work will be performed. Waiver requests should explain how the waiver would further the purposes of this FOA and otherwise serve the interests of the Department of Energy. The Contracting Officer may require additional information before considering the waiver request. Save the Waiver Request(s) in a single file titled: "PerformanceofWork_Waiver.pdf"

L. REQUIREMENTS FOR SELECTED APPLICANTS

Accounting System: If your application is selected for negotiation toward award, you should have an accounting system that meets government standards for recording and collecting costs. See 10 CFR 600.121, 10 CFR 600.220, or 10 CFR 600.311 for the applicable standards. If you have not had prior government awards or a recent accounting system review, the DOE may request that the Defense Contract Audit Agency (DCAA) or an independent auditor verify that the accounting system is acceptable. A resulting cooperative agreement may contain a Term and Condition that prohibits DOE reimbursement until the system is deemed acceptable.

Indirect Costs & Indirect Rates: Indirect costs are an acceptable cost component of an approved budget if they are adequately supported and properly allocated. Potential Recipients and major sub-recipients proposing indirect costs will need to demonstrate that the proposed indirect (e.g., overhead, G&A) rates were developed using a methodology acceptable for Government contracting, and in accordance with applicable Federal cost principles. If a current provisional indirect rate agreement has been issued by a Federal agency, that agreement should be provided with the Application as "RateAgreement.pdf" (see the table under "Summary of Required Forms/Files in Section IV above). The Recipient and major sub-recipients may be subject to an audit/review if an approved rate agreement is not available or an indirect rate audit has not been performed within the previous twelve months.

Compliance with the resultant Reporting Requirements Checklist requires the submission of an Annual Indirect Cost Proposal and Reconciliation. Potential Recipients and sub-recipients should be aware that this requirement mandates annual indirect cost reconciliations (i.e., Annual Indirect Cost Proposal) be prepared and submitted; this proposal is due within six (6) months of the Recipient and/or sub-recipient's fiscal year end. Since the Reporting Requirements Checklist instructions do not provide a format for this proposal, a suggested format can be found at <http://www.dcaa.mil/ice.htm>. This proposal is developed using the actual, allowable costs incurred by the Recipient during each fiscal year period. This is not a project-specific proposal; it must encompass the organization's entire business base (Government and commercial), and it must incorporate the total direct and indirect costs incurred to develop the actual indirect rates for each fiscal year. Because the proposal is not project-specific, the costs to prepare the proposal should be classified as indirect costs, part of the organization's indirect pool of expenses. If DOE is not the cognizant federal agency for negotiating and approving indirect rates, an informational copy of the proposal may be requested.

Annual Compliance Audits: If a for-profit entity is the Prime Recipient, an annual compliance audit performed by an independent auditor may be required. For additional information, please refer to 10 C.F.R. § 600.316 along with for-profit audit guidance documents posted under the “Coverage of Independent Audits” heading at <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms>

If an educational institution, non-profit organization, or state/local government is a Prime Recipient or SubRecipient and has expended greater than \$500K of Federal funds in a respective fiscal year, then an A-133 audit is required. For additional information, please refer to OMB Circular A-133 link below.

<http://www.whitehouse.gov/sites/default/files/omb/assets/omb/circulars/a133/a133.pdf>

Applicants shall propose sufficient costs in the project budget to cover the costs associated with the annual audit.

Notice of Potential Disclosure Under Freedom of Information Act: Applicants are advised that identifying information regarding all applicants, including but not limited to 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.

Section IX - APPENDICES/REFERENCE MATERIAL

APPENDICES/REFERENCE MATERIAL