

**FINANCIAL ASSISTANCE  
FUNDING OPPORTUNITY ANNOUNCEMENT**



**U. S. Department of Energy  
National Energy Technology Laboratory**

**“Small Scale Coal-Biomass to Liquids (CBTL) Production and  
Feasibility Study of a Commercial Scale CBTL Facility”**

**Funding Opportunity Number: DE-FOA-0000703**

**Announcement Type: Initial**

**CFDA Number: 81.089**

<b>Issue Date:</b>	<b>04/27/2012</b>
<b>Letter of Intent Due Date:</b>	<b>Not Applicable</b>
<b>Pre-Application Due Date:</b>	<b>Not Applicable</b>
<b>Application Due Date:</b>	<b>06/07/2012 at 8:00:00 PM Eastern Time</b>

## 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 Central Contractor Registration (CCR), and register with Grants.gov). Applicants, who are not registered with CCR and Grants.gov, should allow at least 21 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 CCR. CCR website:** <http://www.ccr.gov/>

**Applicants must register with Grants.gov. Grants.gov website:** <http://grants.gov/>

**Applicants must register with FedConnect to submit questions. FedConnect website:**

[www.fedconnect.net](http://www.fedconnect.net)

### **Questions**

Questions relating to the **system requirements or how an application form works** must be directed to Grants.gov at 1-800-518-4726 or [support@grants.gov](mailto: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 CCR 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**

### **A. BACKGROUND:**

Domestically abundant coal has the potential to be a significant primary energy source for the production of liquid fuels, particularly when energy security is a driver. Furthermore, coal mixed with optimum levels of biomass can reduce the carbon footprint of coal-biomass-to-liquid (CBTL) fuels processes. A recent National Energy Technology Laboratory (NETL) study<sup>1</sup> has indicated that addition of moderate amounts of biomass to coal for the production of liquids can substantially reduce Life Cycle Analysis (LCA) CO<sub>2</sub> emissions relative to a petroleum diesel baseline. As an example, 20% less CO<sub>2</sub> is produced with 8% biomass addition, with Carbon Capture and Storage (CCS) with CO<sub>2</sub> utilization. Therefore, projects selected under this proposed action will directly support the mission of the Coal Program to “ensure the availability of near-zero atmospheric emission, abundant and affordable, domestic energy to fuel economic prosperity, strengthen energy security, and enhance environmental quality.”

The NETL Fuel/Coal and Coal-Biomass to Liquids program has previously funded research and development (R&D) activities to evaluate general aspects of coal-biomass conversion processes. Although only at laboratory scale, results from these projects have not indicated any serious technical roadblocks for the use of combined coal-biomass feedstocks for liquids production. However, the program has not yet produced any actual liquid products from mixed coal and biomass feeds. In addition, minimal efforts have been directed at evaluating the feasibility of constructing and operating a commercial scale CBTL facility.

### **B. OBJECTIVES**

The objective of this Funding Opportunity Announcement (FOA) is to solicit and competitively award cooperative agreements for projects to (1) develop and test novel technologies for the economical and environmentally-sustainable conversion of coal-biomass feedstocks to liquid transportation fuels and (2) assess concepts and evaluate the feasibility of building and operating a commercial scale CBTL production facility.

### **C. AREAS OF INTEREST (AOI)**

This FOA solicits applications for R&D in two different Areas of Interest identified below.

Applicants must identify the Area of Interest they are applying for (i.e. AOI1 or AOI2). The required format for the project title will be: “AOI [specify: 1 or 2] (project title)”. An application should be submitted either to AOI1 or AOI2, as appropriate, but not to both.

#### **Area of Interest 1. Laboratory Scale Liquids Production and Assessment**

Applicants shall propose technology R&D to convert coal-biomass feedstocks to liquid transportation fuels, producing at a rate approximating 2 liter/day or higher. For this FOA, liquid transportation fuels are defined as liquid-naphtha or diesel blends – alternative fuels such as hydrogen, methane/SNG and alcohol products are not being considered under this area of interest. Selected projects will be required to demonstrate liquids production on a laboratory scale from low-level biomass and coal feedstock mixtures (optimal range 8-15% agricultural

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<sup>1</sup> Affordable, Low Carbon Diesel Fuel from Domestic Coal and Biomass, DOE/NETL 2009/1349, January 2009.

biomass, dry weight % basis). The conversion approach may include direct (liquefaction) or indirect (synthesis gas FT chemistry) processes. The following topics are excluded from consideration.

- Conversion via a substitute natural gas (methane) intermediate;
- Catalysis R&D;
- Co-generation with power.

The applicant shall define and submit in the application planned downstream processes for converting crude products to desired-range hydrocarbons. The chemical composition of the coal/biomass-derived liquids will be determined in order to assess the property differences from liquids produced from a coal-only feed. Applicants shall submit methodologies planned to test and characterize the quality of the coal-biomass derived liquid fuels and the differences and similarities of properties with coal-derived liquids. In addition, the applicant shall conduct a general analysis of the comparative process economics of the evolved coal-biomass-to-liquids process relative to a coal only process. Applicants will be required to provide finished liquid product samples (1 liter minimum) as a final deliverable under the agreement.

## **Area of Interest 2. Feasibility Study for a Coal-Biomass to Liquids Facility**

Applicants shall propose feasibility studies for the development, construction and operation of a U.S. site specific, greenfield, integrated commercial sized CBTL plant. The key focus of the study will be the business development, cost estimate, and economic sensitivity analysis of a commercial facility using cost, performance and operating data from existing and available technology. Sensitivity studies should include, but are not limited to, evaluation of competing technologies, feedstock variation and product mix. Major feedstocks are limited to coal and agricultural biomass (biomass level of 8-15 dry weight % basis), with a minimum plant size of 10,000 barrels-per-day (BPD). Plant data may be obtained from published reports, commercial vendors, existing commercially-available process units or operation data from large-scale pilot plants. The study should include evaluation of various U.S. sites and sources of feedstocks. Deliverables from these projects shall include, but are not limited to, the following:

1. Description of the proposed facility and process, including major processing units. A process block flow diagram (BFD) should be included. Material and energy balances, water, steam, and utilities summary should be included and be consistent with the streams shown in the BFD.
2. Discussion on the technology readiness level (TRL), with a supporting preliminary process flow diagram.
3. Plant cost estimate broken down according to the BFD. The sources of the cost data and the methodology in estimating the total installed cost and the Engineering, Procurement and Construction (EPC) cost should be clearly defined.
4. Economic sensitivity analysis which includes a summary of the major financial and project assumptions, including a sufficient break-down of the annual operating requirements and cost.
5. Discussion of the execution plan, including but not limited to issues related to feedstock supplies, site acquisition, product off-takes, and permitting.

## 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 \$3,000,000 of DOE funding is expected to be available for new awards under this announcement.

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 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

Under this announcement, DOE expects to make the following number of awards for each Area of Interest

<u>Area of Interest</u>	<u>Number of Awards</u>
1	2
2	2-3

### E. ANTICIPATED AWARD SIZE

The anticipated award size for projects under each Area of Interest in this announcement is:

<b>Area of Interest</b>	<b>Award Size*</b>
1	\$1,250,000 – \$1,562,500
2	\$312,500 - \$375,000

\*Award size equals the total project costs. Total project costs = DOE Share + FFRDC, other federal agency(ies), and/or DOE national laboratory costs (if applicable) + Recipient share.

### F. PERIOD OF PERFORMANCE

DOE anticipates making awards that have three budget periods, totaling not more than thirty-six (36) months.

**G. TYPE OF APPLICATION**

DOE will accept only new applications under this announcement.

### **Section III - ELIGIBILITY INFORMATION**

#### **A. ELIGIBLE APPLICANTS**

All types of domestic entities are eligible to apply, except Federal agencies, DOE National Laboratories, Federally Funded Research and Development Centers (FFRDC), 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.

#### **B. COST SHARING**

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

#### **C. OTHER ELIGIBILITY REQUIREMENTS**

##### **Area of Interest 2 projects:**

For Area of Interest 2, the project site for the proposed CBTL plant must be a U.S site.

##### **Federal Agencies, DOE National Laboratories and FFRDCs:**

Federal agencies, DOE National Laboratories and non-DOE FFRDCs may not receive an award under this announcement but may be included as a team member on another eligible entity's application. The efforts of Federal agencies, DOE National Laboratories and non-DOE FFRDCs, in aggregate, shall not exceed 20% of the total estimated cost of the award. DOE will directly fund any work performed by a Federal agency, DOE National Laboratory, or non-DOE FFRDC via a field work proposal (FWP) (for DOE National Laboratories) or Interagency Agreement (IA) (for non-DOE FFRDCs and Federal agencies). In the event that DOE directly funds work performed by a Federal agency, DOE National Laboratory, or FFRDC, the monies necessary to pay for this work will be withheld from the prime recipient's agreement and applied directly to the appropriate FWP or IA. DOE reserves the right to fund the work of the Federal agency, DOE National Laboratory, or non-DOE FFRDC as a subaward to the prime recipient if deemed appropriate or beneficial to the Government.

DOE's NETL is not eligible for an award or to participate as a team member.

Non-DOE FFRDCs and DOE National Laboratories 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 must authorize in writing the use of the FFRDC on the proposed project and this authorization must be submitted with the application. The use of a FFRDC must be consistent with the center's authority and must not place the FFRDC in direct competition with the private sector.

Authorization for DOE/NNSA National Laboratories. The cognizant contracting officer for the DOE/NNSA National Laboratory must authorize in writing the use the National



Laboratory 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] 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."

**Cost Share.** The applicant's cost share requirement will be based on the total cost of the project, including the applicant's and the Federal agency's, DOE National Laboratory's, or FFRDC'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 Federal agency, DOE National Laboratory, or FFRDC.

**Performance of Work in United States:**

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

## **Section IV - APPLICATION AND SUBMISSION INFORMATION**

### **A. ADDRESS TO REQUEST APPLICATION PACKAGE**

#### **Apply at Grants.gov**

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.

Applicants should identify the Area of Interest under which the application is being submitted (AOI1 or AOI2) as part of the project title in Field 11 of this form (Descriptive Title of Applicant's Project).

#### **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 project director/principal investigator(s), Area of Interest under which the application is being submitted (AOI1 or AOI2), 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 2 pages 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 40 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 in the Project Narrative page limitation.

*Project Title:* Identify within the project title the Area of Interest under which the application is being submitted. For example, the project title should follow the following format: *AOI [specify: 1 or 2] project title.*

1. *Project Objectives:* This section should provide a clear, concise statement of the specific objectives/aims of the proposed project.
2. *Merit Review Criterion Discussion:* The section should be formatted to address each of the merit review criterion and sub-criterion listed in Section V.A:
  - Scientific and Technical Merit [*Recommended 15 pages*]
  - Technical Approach and Understanding [*Recommended 10 pages*]
  - Applicant/Team Capabilities and Facilities [*Recommended 5 pages*]
  - Project Management Plan [*not included in Project Narrative file; attached as separate file named pmp.pdf. See below for content and format of PMP.*]

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.**

3. *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.
4. *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.

5. Multiple Principal Investigators (PI): 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.

6. *Statement Of Project Objectives (SOPo): [Recommended 10 pages]*

The Department of Energy's, National Energy Technology Laboratory uses a specific format for Statement of Project Objectives in its awards. In announcements such as this one, where the Government does not provide a Statement of Project Objectives, the Applicant is to provide one, which the DOE will then use to generate the Statement of Project Objectives to be included in the award.

The project narrative must contain a single, detailed Statement of Project Objectives that addresses how the project objectives, i.e., the intended results, 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 10 pages in total for the proposed work, and should provide enough detail to ensure the work is completed within schedule baselines, and will be counted as part of the 40 pages of the project narrative. 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 and SUBTASKS TO BE PERFORMED

Tasks, and subtasks, if applicable, should be concisely written, provided in a logical sequence, in definable components, and should be divided into the phases of the project, as appropriate, and include information and resources to initiate the task, procedures or actions to accomplish

the tasks, and the output or results of the task. Tasks must be numbered consecutively and continuously throughout the entire duration of the project, starting with Task 1.0 as outlined below. If the project has been divided into Phases, do not re-number the Tasks at the beginning of each Phase. Where appropriate, place go/no go decision point(s) in the SOPO to allow the DOE to review and determine continuation of the remaining Tasks. An outline of the Project Management Plan (referenced in Task 1.0 below and required to be submitted with your application) is provided later in this Section.

## PHASE I

### Task 1.0 - Project Management and Planning

This task shall 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.

It shall also include the necessary activities to ensure coordination and planning of the project with DOE/NETL and other project participants. These shall include, but are not limited to, the submission and approval of required NEPA documentation.

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

#### Subtask 1.1

(Description)

Task 2.0 - (Title)

Description

PHASE II (Optional)

Task 3.0 - (Title)

Description

## Phase II

Continue with phases and 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. See the following examples:

1. Task 1.0 – Project Management Plan
2. Task 2.0 – Deliverables Description

## E. BRIEFINGS/TECHNICAL PRESENTATIONS

The Recipient shall prepare detailed briefings for presentation to the Project Officer at the Project Officer's facility located in Pittsburgh, PA or Morgantown, WV. The Recipient shall make a presentation to the NETL Project Officer/Manager at a project kick-off meeting held within ninety (90) days of project start date. At minimum, annual briefings shall also be given by the Recipient to explain the plans, progress, and results of the technical effort. A final project briefing at the close of the project shall also be given. The Recipient shall also complete a minimum of one presentation at a National Conference.

(END OF SOPO)

### **Appendices to the Project Narrative**

The following appendices are to be provided and clearly defined by its corresponding heading. 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 SINGLE SPACED. The appendices are to be included in the Project Narrative document/file, but WILL NOT count towards the Project Narrative page limitation.

- *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.

**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.

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

This plan should be a stand-alone document and formatted to include the following sections with each section to include the information as described below. This Project Management Plan **WILL NOT** count in the Project Narrative page limitation.

Title Page:

**PROJECT MANAGEMENT PLAN  
for {insert project title}  
{Date Prepared}**

**SUBMITTED UNDER FUNDING OPPORTUNITY ANNOUNCEMENT**

DE-FOA-0000652

**SUBMITTED BY**

{Organization Name}  
{Organization Address}  
{City, State, Zip Code}

**PRINCIPAL INVESTIGATOR**

{Name}  
{Phone Number}  
{Fax Number}  
{E-mail}

**SUBMITTED TO**

U.S. Department of Energy  
National Energy Technology Laboratory

(end title page)

A. Executive Summary: Provide a description of the project that includes the objective, project goals, and expected results. For purposes of the application, this information is included in the Project Narrative (Field 8) and should be simply copied to this document for completeness, so that the Project Management Plan is a stand-alone document.

**B. Project Organization and Structure:** Provide the following information in this section:

- Organizational chart and sub-organizational charts
- A discussion of how the organizational structure will facilitate the performance of the Tasks described in the Statement of Project Objectives
- A description of which elements of the organization are responsible for the individual Tasks and their contact information
- A discussion of how communication and decision-making will occur within the context of the organizational structure

**C. Risk Management:** Provide a summary description of the proposed approach to identify, analyze, and respond to perceived risks associated with the proposed project. Project risk events are uncertain future events that, if realized, impact the success of the project. As a minimum, include the initial identification of significant technical, resource, and management issues that have the potential to impede project progress and strategies to minimize impacts from those issues.

**D. Milestone Log:** Provide milestones for each budget period (or phase) of the project. Each milestone should include a title and planned completion date. Milestones should be quantitative and show progress toward budget period and/or project goals. The table below illustrates an example of how the Milestone Log may be provided.

<b>Budget Period</b>	<b>Task/Subtask</b>	<b>Milestone Description</b>	<b>Planned Completion</b>	<b>Verification Method</b>
1	1.0	Updated Project Management Plan	11/30/2012	Project Management Plan file
1	1.0	Kickoff Meeting	12/31/2012	Presentation file

The milestone log should include the following milestones as shown above, in addition to any milestones developed by the Applicant. These milestones should include initial estimated due dates.

- Updated Project Management Plan
- Kickoff Meeting

[Note: During project performance, the Recipient will report the Milestone Status as part of the required quarterly Progress Report as prescribed under the Reporting Requirements Checklist. The Milestone Status will present actual performance in comparison with Milestone Log, and include:

- (1) the **actual** status and progress of the project,
- (2) specific progress made toward achieving the project's milestones, and,
- (3) any proposed changes in the project's schedule required to complete milestones.]



E. Funding and Costing Profile: Provide a table (the **Project Funding Profile**) that shows, by budget period, the amount of government funding going to each project team member. Also, provide a table (the **Project Costing Profile**) that projects, by month, the expenditure of government funds (in a column) and the Recipient's cost share funds (in a column) for the first budget period, at a minimum.

F. Resource Loaded Schedule: Provide a resource loaded schedule linking scope, schedule, and budgeted cost of specific Work Breakdown Structure elements. This shall include a timeline of the project (created in Microsoft Project or equivalent software) broken down by each task and subtask, as described in the Statement of Project Objectives. The timeline should include for each task, a start date, and end date. The timeline should show interdependencies between tasks and include the milestones that are identified in the Milestone Log (Section D). The cost of each task should be listed in this section. This will be used to guarantee that sufficient resources will be allocated to ensure completion of all activities.

G. Success Criteria and Decision Points: Provide success criteria for each decision point in the project, including go/no-go decision points and the conclusions of budget periods and the entire project. The success criteria should be objective and stated in terms of specific, measurable, and repeatable data. Usually, the success criteria pertain to desirable outcomes, results, and observations from the project.

H. Quality Assurance Strategy: Provide a quality assurance strategy for all of the project elements. The strategy shall include methodologies that will be employed to ensure that the data obtained from the field is defensible and that the methods used to evaluate the data are in accordance with industry standards where appropriate.

I. Statement of Project Objectives: Include the Statement of Project Objectives (SOPO) that was provided in the **Project Narrative**.

[Note: As the first task in the Statement of Project Objectives, successful Applicants will revise the version of the Project Management Plan that is submitted with their applications by including details from the negotiation process. This Project Management Plan will be updated by the Recipient as the project progresses, and the Recipient must use this plan to report schedule and budget variances.]

Save this Project Management Plan in a single file named "pmp.pdf" and attach it to the RESEARCH AND RELATED Other Project Information form. Click on "Add Attachments" in Field 12 to attach.

### **Commitment Letters from Third Parties Contributing to Cost Sharing**

If a third party, (i.e., a party other than the organization submitting the application) proposes to provide all or part of the required cost sharing, the applicant must include a letter from the third party stating that it is committed to providing a specific minimum dollar amount of cost sharing. The letter should also identify the proposed cost sharing (e.g., cash, services, and/or property) to be contributed. Letters must be signed by the person authorized to commit the expenditure of funds by the entity and be provided in a PDF format. Save this information in a single file named "CLTP.pdf" and click on "Add Attachments" in Field 12 to attach.

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

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>. Use the FFRDC name as the file name (up to 10 letters) and attach to the R&R Other Project Information form in Field 12 - Add Attachments.

### **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). The EQ is available for download at the following website: [http://www.netl.doe.gov/business/forms/451\\_1-1-3.pdf](http://www.netl.doe.gov/business/forms/451_1-1-3.pdf).

Save this information in a single file (even if multiple work sites require multiple EQs) named "EQ.pdf" and then attach it to the RESEARCH AND RELATED Other Project Information form. 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 PD/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 Project Director/Principal Investigator(s) (PD/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.

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

## **D. SUBMISSIONS FROM SUCCESSFUL APPLICANTS**

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

- Indirect cost information
- Other budget information
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5)
- Representation of Limited Rights Data and Restricted Software, if applicable

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

### **1. Pre-application Due Date**

Pre-applications are not required.

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

Applications should be received by 06/07/2012, not later than 8:00 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, 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.

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 authority.

## H. OTHER SUBMISSION AND REGISTRATION REQUIREMENTS

### 1. Where to Submit

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

Submit electronic applications through the "Apply for Grants" function at [www.Grants.gov](http://www.Grants.gov). If you have problems completing the registration process or submitting your application, call Grants.gov at 1-800-518-4726 or send an email to [support@grants.gov](mailto: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](http://www.grants.gov/applicants/get_registered.jsp)). We recommend that you start this process at least three weeks before the application due date. It may take 21 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 CCR 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).

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

### **A. CRITERIA**

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

Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine that (1) the applicant is eligible for an award; (2) the information required by the 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**

##### **Technical Review**

##### **Criterion 1: Scientific and Technical Merit (45%)** *[Recommended 15 pages]*

- Adequacy of discussion of competing commercial and emerging technologies and how the proposed concept/technology provides significant improvement;
- Degree to which the proposed technology and/or approach represents a significant advancement toward achieving the Funding Opportunity Announcement Area of Interest objectives;
- Degree to which the proposed work identifies, utilizes, and/or makes progress on new concepts in the field of coal-biomass to liquid fuels, thereby increasing the likelihood of a new successful technology;
- Feasibility and scalability of the proposed concept; the degree to which the proposed work is based on sound scientific and engineering principles;
- Adequacy of the discussion of the technical and process risks associated with the proposed technology and/or approach;
- Discussion of the potential market segment within the transportation fuels sector that could adopt their technology;
- Quality and quantity of existing experimental data to support the claims made in regards to the potential progress towards the goals of the FOA.

##### **Criterion 2: Technical Approach and Understanding (25%)** *[Recommended 10 pages]*

- Appropriateness, rationale, and completeness of the proposed Statement of Project Objectives (SOPO);
- Reasonableness of the proposed project schedule;
- Extent to which the proposed SOPO includes in an organized, logical, complete manner a description of the work elements to be done, including appropriate and clearly identified decision points;
- Planned experimental protocol, if applicable, with logic flow for accomplishing the SOPO.

##### **Criterion 3: Applicant/Team Capabilities and Facilities (20%)** *[Recommended 5 pages]*

- Appropriateness and extent of key personnel credentials, capabilities, and experience;
- Demonstrated experience of the applicant and participating organizations in the technology areas addressed in the application and in managing similar projects;

- Clarity, logic, and effectiveness of the project organization, including subcontractors; the roles and responsibilities of each partner for each task and the availability of key personnel to complete the proposed project;
- Project organization and structure, responsibilities and lines of authority, both technical and administrative, of the participating organizations and key personnel including sub-contractors, if applicable;
- Appropriateness and availability of facilities, equipment, and modeling tools to perform the SOPO tasks.

**Criterion 4: Project Management Plan (10%)** *[PMP template provided under Section IV.C should be followed]*

- Completeness, clarity, and effectiveness in addressing the requirements in each of the Project Management Plan sections as defined in this FOA;
- Effectiveness and thoroughness of the risk management methodologies; procedures, and identified technical, resource, and management risks;
- Completeness and reasonableness of the Milestone Log with respect to the SOPO and FOA guidelines;
- Completeness and reasonableness of the Success Criteria at Decision Points with respect to the SOPO, schedule, and FOA guidelines;
- Adequacy of the Funding and Costing Profiles and the Resource Loaded Schedule with respect to the needs of the project as defined by the SOPO and timeline and per the requirements of the FOA.

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

#### **Budget Evaluation**

The Technical Review constitutes the total evaluation scoring; however, the budget evaluation, which is not point scored, will be conducted on the most highly rated Application(s) to gain an understanding of the annual funding requirements for the suite of potential awards and to determine cost realism of the budget estimate, appropriateness, and reasonableness of resources, and reasonableness of the schedule relative to the Applicant's SOPO.

Although the budget evaluation does not affect the technical score, the results can be used by the Selection Official as a deciding factor.

#### **Program Policy Factors**

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 represents a diversity of technical approaches and methods;
- It may be desirable to support complementary and/or redundant efforts or projects, which, when taken together, will best achieve the Program's 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 desirable, that different types and sizes of projects be selected for award in order to best support the program budget.

## **B. REVIEW AND SELECTION PROCESS**

### **1. Merit Review**

#### **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**

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**

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

## **Section VI – AWARD ADMINISTRATION INFORMATION**

### **A. AWARD NOTICES**

#### **1. Notice of Selection**

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

#### **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**

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://ecfr.gpoaccess.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://ecfr.gpoaccess.gov>). Prime awardees must keep their data at CCR current. Subawardees at all tiers must obtain DUNS numbers and provide the DUNS to the prime awardee before the subaward can be issued.

#### **SUBAWARD AND EXECUTIVE REPORTING**

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

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

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

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/rpc/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.

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

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.

## Statement of Substantial Involvement

The Awards will be cost-shared financial assistance cooperative agreements, with substantial DOE involvement.

DOE RESPONSIBILITIES. DOE is responsible for:

- Reviewing in a timely manner project plans, including 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 program requirements or limitations are considered in performance of the work elements.
- Conducting periodic program review meetings to ensure adequate progress and that the work accomplishes the program and project objectives. Recommending alternate approaches or shifting work emphasis, if needed.
- Integrating and redirecting the work effort to ensure that project results address critical system and programmatic goals established by DOE Fossil Energy (FE), in coordination with the DOE Coal Program. Specific integration includes that required to ensure project plans, test plans, project milestones, and budget allocations.
- 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 presentations and publications.
- Serving as scientific/technical liaison between Recipients and other program or industry staff.

RECIPIENT'S RESPONSIBILITIES. The Recipient is responsible for:

The recipient shall be responsible for all aspects of project performance as set forth in this Cooperative Agreement, the Statement of Project Objectives, and the Project Management Plan. Specific examples of Recipient responsibilities include:

- Performing the activities supported by this award in accordance with the Project Management Plan, 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 defined by the current Project Management Plan;
- Notifying the DOE Project Officer in a timely manner of issues that arise during the course of the project that could potentially jeopardize the technical, schedule and/or budget objectives;
- 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 program review meetings and reporting project status;
- Submitting technical reports and incorporating DOE comments;
- Presenting the project results at appropriate technical conferences or meetings as directed by the DOE Project Officer (number of conferences may not exceed two per year);
- Facilitating DOE on-site inspection and/or evaluation of project work, at mutually agreed-upon times and in a manner that will not unduly interfere with the performance of the work. The Recipient shall furnish and shall require its subcontractors to furnish all reasonable facilities and assistance for successful project execution.

### **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 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 calendar days prior to the application due date. Questions submitted after that date may not allow the Government sufficient time to respond.

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

### **B. AGENCY CONTACT**

Name: Raelynn Honkus

E-mail Address: [Raelynn.Honkus@netl.doe.gov](mailto:Raelynn.Honkus@netl.doe.gov)

## Section VIII - OTHER INFORMATION

### **A. MODIFICATIONS**

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

### **B. GOVERNMENT RIGHT TO REJECT OR NEGOTIATE**

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

### **C. COMMITMENT OF PUBLIC FUNDS**

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

### **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 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.