FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT

U.S. Department of Energy
Office of Science
Office of Biological and
Environmental Research (BER)

Terrestrial Ecosystem Science

Funding Opportunity Number: DE-FOA-0000536
Announcement Type: Amendment
CFDA Number: 81.049

Amendment Issued: **May 13, 2011**

ISSUE DATE: **May 10, 2011**

Preapplication Due Date: **June 14, 2011, 4:30 p.m. Eastern Time**
(Preapplications are Required)

Application Due Date: **September 12, 2011, 11:59 p.m. Eastern Time**

The purpose of this amendment is to notify applicants of a change in the eligibility requirements. All entities, not just domestic entities, are eligible. See **PART III – ELIGIBILITY INFORMATION, Eligible Applicants** on page 14.

NOTE: REQUIREMENTS FOR GRANTS.GOV

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.

Registration Requirements: There are several one-time actions you must complete in order to submit an application through Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), register with the credential provider, and register with Grants.gov). Use the Grants.gov Organization Registration Checklist at http://www.grants.gov/assets/OrganizationRegCheck.pdf to guide you through the process. Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in the CCR registration process. 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.

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).

Questions: 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. Part VII of this Funding Opportunity Announcement (FOA) explains how to submit other questions to the Department of Energy (DOE).

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

Questions regarding the content of the FOA 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. More information is available at https://www.fedconnect.net/FedConnect/PublicPages/FedConnect_Ready_Set_Go.pdf. 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.

Modifications: Notices of any modifications to this FOA will be posted on Grants.gov and the FedConnect portal. You can receive an email when a modification or an FOA 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. More information is available at http://www.fedconnect.net.

All applications should be in a single PDF file.

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PART I – FUNDING OPPORTUNITY DESCRIPTION

GENERAL INQUIRIES ABOUT THIS FOA SHOULD BE DIRECTED TO:

Technical/Scientific Program Contact:

Program Manager: Dr. Daniel Stover
Phone: (301) 903-0289
E-mail: Daniel.Stover@science.doe.gov

STATUTORY AUTHORITY

Public Law 95-91, US Department of Energy Organization Act
Public Law 109-58, Energy Policy Act of 2005

APPLICABLE REGULATIONS

U.S. Department of Energy Financial Assistance Rules, codified at 10 CFR Part 600
U.S. Department of Energy, Office of Science Financial Assistance Program Rule, codified at 10 CFR Part 605

SUMMARY:

The Office of Biological and Environmental Research (BER) of the Office of Science (SC), U.S. Department of Energy (DOE), hereby announces its interest in receiving applications for terrestrial ecosystem science that will improve the understanding of the role of terrestrial ecosystems in climate forcing related to a changing climate.

BER's Terrestrial Ecosystem Science (TES) program is the result of the consolidation of its former Terrestrial Carbon Processes (TCP) program and Program in Ecological Research (PER). The TES program will consider applications on measurements, experiments, modeling and synthesis that provide improved quantitative and predictive understanding of the terrestrial ecosystem that can affect atmospheric greenhouse gas concentration changes and thereby affect the anthropogenic gas forcing of climate. The emphasis of this FOA is to understand the impacts of, and feedbacks from a changing climate on non-managed terrestrial ecosystems. Authors should pose their research applications in the context of representing terrestrial ecosystem processes in earth system models.

Both single investigator projects and multi-investigator projects are encouraged. Multi-investigator projects are expected to integrate the efforts of a multi-disciplinary team to tackle problems that cannot be effectively addressed by a single investigator. All projects should clearly delineate an integrative, hypothesis-driven research approach or synthesis activity and describe how the results of the research would ultimately improve our ability to understand and predict the role of the terrestrial ecosystems in a changing climate.

Proposed research is intended to fill critical knowledge gaps, including the exploration of high-risk approaches. BER also encourages the submission of innovative exploratory applications with potential for future high impact on terrestrial ecosystem science. The probability of success and the risk-reward balance will be considered when making funding decisions.

SUPPLEMENTARY INFORMATION:

The TES program will consider applications on measurements, experiments, modeling and synthesis that provide improved quantitative and predictive understanding of the terrestrial ecosystem that can affect atmospheric greenhouse gas concentration changes and thereby affect the greenhouse gas forcing of climate. The emphasis of this FOA is to understand the impacts of, and feedbacks from a changing climate on non-managed terrestrial ecosystems. Authors should pose their research applications in the context of representing terrestrial ecosystem processes in earth system models.

A recent BER workshop outlined science needs for basic research in climate science, including terrestrial ecosystem science as described in the workshop report (http://www.sc.doe.gov/ober/ClimateRoadmapWorkshop_2010.pdf). BER encourages researchers to review this report with particular emphasis on the summary and chapters on "Terrestrial Science" and "Latitudinal Opportunities for Integrated Research Efforts" to familiarize themselves with the identified science needs. The goal of the TES program is to provide scientific knowledge of terrestrial ecosystems to (i) provide accurate predictions of their roles in influencing the atmospheric concentration of greenhouse gases; (ii) quantify terrestrial carbon sources and sinks and how they are changing in relation to other atmospheric, climatologic and hydrologic influences; and (iii) assess terrestrial feedbacks on carbon cycle and climate change. Ecosystems are the fundamental unit of research for the TES program. Using modeling and other extrapolation methods, results are expected to extend to bioregion scales, and also contribute to continental scale analysis of carbon cycle problems that are analyzed by the North American Carbon Program (NACP) (http://www.nacarbon.org/nacp/), for example. The TES program will consider applications on measurements, experiments, modeling and synthesis that provide improved quantitative and predictive understanding of the terrestrial ecosystem processes that can affect atmospheric greenhouse gas concentration changes and thereby affect climate forcing.

The emphasis of this FOA is to understand the feedbacks to non-managed terrestrial ecosystems from a changing climate. Authors should pose their research applications in the context of representing terrestrial ecosystem processes in earth system models. This can be done through process research applications that specify mechanisms for the incorporation of results into state of the art ecosystem models, by proposing direct improvements to such models (i.e., modeling applications) or through synthesis activities that draw on existing data sets. Authors are encouraged to consider utilization of or collaboration with sites that have existing support (e.g., former FACE or existing AmeriFlux projects) thereby leveraging existing investments, archived samples and long-term data sets.

Relevance of proposed research to DOE's mission will be gauged by the extent that proposed carbon cycle research products contribute to the **long-term performance measure** (LTM) of DOE's climate change research, which is -- *Deliver improved scientific data and models about the potential response of the Earth's climate and terrestrial biosphere to increased greenhouse gas levels for policy makers to determine safe levels of greenhouse gases in the atmosphere*. In addition to the merit review criteria mentioned in Part V – Application Review Information, it will be important for the proposed research to identify how anticipated research products will contribute to the LTM.

While the program supports a broad spectrum of fundamental research in terrestrial ecosystem science and will consider research applications within this scope, this FOA encourages applications in the following Science Areas:

- The role of natural disturbances in carbon cycling, particularly disturbances associated with changing climate (e.g., changes in atmospheric carbon, precipitation, nutrients)
- The role of belowground processes and mechanisms across scales (e.g., soil carbon transformation, root dynamics, mycorrhizal interactions, and plant mediated (e.g. root exudates) biogeochemical transformations) associated with a changing climate.
- Factors controlling belowground processes associated with transformation of biomass into soil organic matter and stabilization mechanisms of the long-lived carbon components in soil as well as the results of those processes in the context of a changing climate.
- Responses and feedbacks of coupled biogeochemical cycles to climate change, including coupled trace element cycling (e.g. Mo, Fe).
- New and improved understanding of carbon pathways, fluxes and ecosystem function with particular emphasis on Arctic and tropical ecosystems

Belowground processes are a critical component to carbon cycling, yet our understanding of the specific processes have been over simplified or ignored. This "black box" approach to belowground systems will not lead to a mechanistic and predictive understanding of these systems as potential long-term terrestrial sinks for carbon. The goals of belowground ecosystem research are to quantify rates and magnitudes of carbon accretion, and to understand processes and properties that control transformation of biomass into organic matter, including studies of stabilization mechanisms of the long residence time components, their fate, and ecosystem feedbacks. Research is needed on these processes for different climate and vegetation conditions (e.g., as represented by AmeriFlux research sites) where results can be spatially scaled to estimate carbon changes across climate zones and bioregions. Products of research that focus on belowground carbon processes (e.g., organic matter stabilization and dynamics, carbon turnover rates, root and microbial respiration, carbon/nitrogen/other relationships) should provide new insights and model representation opportunities for coupled interactions, residence time and other carbon source or sink properties of belowground ecosystem components.

Applications that include the collection of carbon flux measurements must contribute to the AmeriFlux Network (http://public.ornl.gov/ameriflux/). The establishment of new carbon flux locations will be balanced carefully against the value of existing sites. Potential applicants are encouraged to review the existing AmeriFlux locations and to consider opportunities for collaboration as alternatives to the establishment of new sites. For applications that seek to sustain existing AmeriFlux locations, priority will be placed on hypothesis-based research that has a strong record of measurement performance and prompt delivery of data products to the AmeriFlux archive for use by the broader scientific community. Applicants are referred to the "AmeriFlux self-evaluation" report on the web site for information on expected operational and performance requirements. There is an established archive for reporting AmeriFlux data (see AmeriFlux web site for protocols), and supported projects will be expected to comply rigorously with reporting guidelines and standards.

Modeling, synthesis and integration activities should consider utilization of available AmeriFlux and FACE data products. Applications should identify large computational requirements and their proposed plan for acquiring access to appropriate computational resources.
DOE's Climate Change research is an integral component of the U.S. Global Change Research Program (USGCRP) (http://www.globalchange.gov/), which is closely coordinated with other Federal carbon cycle research through the Carbon Cycle Science Program (http://www.carboncyclescience.gov/). The website for the Carbon Cycle Science Program includes a "Relevant Documents" section that provides links to key documents outlining science needs for U.S. carbon science research programs. The carbon cycle science community recently began an effort to update and revise the 1999 U.S. Carbon Cycle Science Plan – written by a committee chaired by Jorge Sarmiento and Steve Wofsy. Applicants are encouraged to review *A U.S. Carbon Cycle Science Plan* (Sarmiento and Wofsy, 1999) (http://www.carboncyclescience.gov/documents/cc_sp_1999.pdf), and the State of the Carbon Cycle Report (SOCCR) (http://www.carboncyclescience.gov/programs.php#SOCCR) as the latest descriptions of research needs for this area.

Collaboration and Training

Multi-disciplinary and inter-institutional collaborations are strongly encouraged to enhance and strengthen research capabilities as needed. Collaboration could include institutions such as universities, industry, non-profit organizations, federal laboratories and Federally Funded Research and Development Centers (FFRDCs), including the DOE National Laboratories. All collaborative applications should include letters of agreement from each collaborator who would receive funding. These letters should specify the contributions the collaborators intend to make if the application is accepted and funded. **Applications for multi-investigator projects must present a management structure** for integrating collaborating investigators. Involvement of students and post doctoral scientists is encouraged. Refer to http://www.sc.doe.gov/grants/colab.asp for details. Only the Lead Institution and PI need submit an application to this FOA at this time but the submission **must** include all budgetary information for all funded Co-PIs.

Data Sharing Policy: Research data obtained through public funding are a public trust. As such, these data must be publicly accessible. To be in compliance with the data policy of the U.S. Global Change Research Program of full and open access to global change research data, **applications submitted in response to this FOA must include a description of the researcher's data sharing plans if the proposed research involves the acquisition of data in the course of the research that would be of use to the climate research and assessment communities**. This includes data from extensive, long-term observations and experiments and from long-term model simulations of climate that would be costly to duplicate. The description must include plans for sharing the data that are to be acquired in the course of the proposed research, particularly how the acquired data will be preserved, documented, and quality assured, and where it will be archived for access by others. Data of potentially broad use in climate change research and assessments should be archived, when possible, in data repositories for subsequent dissemination. Examples of DOE-funded data repositories may be found at http://cdiac.ornl.gov/, http://www-pcmdi.llnl.gov/ipcc/about_ipcc.php. The repository where the researcher intends to archive the data should be notified in advance of the intention, contingent on a successful outcome of the application review. If data are to be archived at the researcher's home institution or in some other location, the application must describe how, where, and for how long the data will be documented and archived for access by others. Researchers are allowed an initial period of exclusive use of the acquired data to quality assure it and to publish papers based on the data, but they are strongly encouraged to make the data openly available as soon as possible after this period. DOE's Office of Biological and Environmental Research defines the exclusive use period to be one year after the end of the data acquisition period for the proposed performance period of the award but exceptions to extend this period may be justified for unique or extenuating circumstances.

Availability of User Facilities and Other Specialized Resources

The Department of Energy has responsibility for programs and facilities that offer unique and complementary resources that support research in terrestrial ecosystem science. Potential applicants are encouraged to consider use of these programs/facilities in developing their applications. The author must certify that site coordinators and/or advisory panels have agreed to plans for the proposed research. This certification should be in the form of a letter of support included with the application.

DOE has supported a number of FACE experiments (http://public.ornl.gov/face/index.shtml) that have recently undergone destructive harvest. Some of these sites have maintained archives of treatment and control plant material and soil which are available for use by the scientific community. DOE encourages the community to consider the use of these unique and valuable samples as part of applications to this FOA. For more information contact the appropriate FACE site coordinator (http://public.ornl.gov/face/global_face.shtml).

DOE also supports an experiment to assess the response of northern boreal and peatland ecosystems to increases in temperature and exposures to elevated atmospheric CO_2 concentrations. The Spruce and Peatland Responses Under Climatic and Environmental Change (SPRUCE) experiment is currently being established at the Marcell Experimental Forest in northern Minnesota. More information including opportunities for collaboration with this study can be found at: http://mnspruce.ornl.gov/.

The Environmental Molecular Science Laboratory (EMSL) (http://www.emsl.pnl.gov/emslweb/) at the Pacific Northwest National Laboratory (PNNL), a national scientific user facility, provides integrated experimental and computational resources for discovery and technological innovation in the environmental molecular sciences to support the needs of DOE and the nation. Advanced imaging, spectroscopy, high-resolution mass spectroscopy and transciptomics/proteomics are a few of the many capabilities at EMSL are available to users free of charge for understanding the complex biogeochemistry that occurs at mineral/water and microbe/mineral interfaces in the terrestrial biosphere.

The Center for Accelerator Mass Spectrometry (CAMS) (https://cams.llnl.gov/about.php) at Lawrence Livermore National Laboratory provides accelerator mass spectroscopy capabilities on a cost-recovery basis to the scientific community. In the context of carbon cycle studies, radiocarbon measurements can be used to determine the 'age' and rate of change of carbon stocks or as a biogeochemical tracer to elucidate processes and pathways. CAMS provides technical and analytical support to several existing research projects in the carbon cycle sciences. More information on the applicability of CAMS capability to carbon cycle science is available at https://cams.llnl.gov/naturalcarbon.php?id=8.

DOE supports high performance computing centers, which provide compute cycles to the scientific user community, including the National Energy Research Scientific Computing Center (NERSC) at the Lawrence Berkeley National Laboratory (http://www.nersc.gov), and the National Center for Computational Sciences (NCCS) at the Oak Ridge National Laboratory (http://nccs.gov).

The Joint Genome Institute (JGI) (http://www.jgi.doe.gov/) in Walnut Creek, California provides the scientific community access to state of the art genomic sequencing capabilities for microbial, plant, and other (non-pathogen) targets. In all cases, the aim of the JGI is to provide to the national and international scientific community the genome-derived "parts lists" that support further discovery.

DOE also provides users with access to synchrotron light sources that are capable of providing structural and chemical information often unavailable with conventional sources of x-rays. DOE laboratories with synchrotrons include: Argonne National Laboratory (http://www.aps.anl.gov/); Brookhaven National Laboratory (http://www.nsls.bnl.gov/); Lawrence Berkeley National Laboratory (http://www.als.lbl.gov/); and Stanford Synchrotron Radiation Laboratory (http://www-ssrl.slac.stanford.edu/index.html). Use of the synchrotron light sources requires a separate approval process.

Any Other Special Requirements:

Only the Lead Institution and PI need submit an application to this FOA, but the submission **must** include all budgetary information for all funded Co-PIs. The application narrative should begin with a cover page that includes: the project title, the Lead PI's name and complete contact information, whether the application is for a **Full** or **Exploratory** project, and a table listing the Lead PI and institution and all funded Co-PIs, their institutions and the amount of funding requested for each year for the project for each funded investigator. A sample cover page is available at http://www.science.doe.gov/ober/CESD/preapp_cover_page_templ.html.

In addition to the cover page mentioned in Part IV – Application and Submission Information, the submission package should include a one-page Executive Summary that identifies the name of the applicant, the project director/principal investigator(s), the project title, the objectives of the project, the hypotheses to be tested and/or the enabling capabilities to be developed, the proposed methodology, the names of **all investigators** and their affiliations, and the potential impact of the project to DOE (i.e., benefits, outcomes). **The Executive Summary must describe how the proposed research will support the accomplishment of the BER Long Term Measure to *"Deliver improved scientific data and models about the potential response of the Earth's climate and terrestrial biosphere to increased greenhouse gas levels for policy makers to determine safe levels of greenhouse gases in the atmosphere"***. Please include this behind the cover page. The Executive Summary does not count toward the narrative page limits.

Applications that previously have been submitted for review, but were declined, are required to address (within the Narrative Section) major issues and concerns raised from previous reviews and to describe how the application was improved and updated since the original submission. All applicants must check "NEW" on the SF-424 R&R when submitting. Do not select Revised or Resubmission.

All Lead PI's are required to attend TES PI meetings (generally a 2-day meeting) held in the Washington DC area or in conjunction with the North America Carbon Program (NACP). Travel funds should be budgeted to allow at least the lead PI to attend this meeting.

PART II – AWARD INFORMATION

A. TYPE OF AWARD INSTRUMENT.

DOE anticipates awarding new grants under this Funding Opportunity Announcement (FOA).

B. ESTIMATED FUNDING.

It is anticipated that up to $3,000,000 will be available for approximately 10 to 15 awards to be made in Fiscal Year 2012, contingent on the availability of appropriated funds. For a Full Application, applicants may request project support for up to three years with annual budgets not to exceed $350,000/year total costs. The proposed research project should be designed to be completed within the three year period. For an Exploratory Application, applicants may request project support for up to two years with a total budget of up to $150,000. Applicants should specify whether they are submitting a Full Application or an Exploratory Application. DOE is under no obligation to pay for any costs associated with preparation or submission of preapplications or applications. DOE reserves the right to fund, in whole or in part, any, all, or none of the applications submitted in response to this FOA.

C. MAXIMUM AND MINIMUM AWARD SIZE.

The award size will depend on the number of meritorious applications and the availability of appropriated funds.

D. EXPECTED NUMBER OF AWARDS.

The expected number of awards will depend on the number of meritorious applications and the availability of appropriated funds.

E. ANTICIPATED AWARD SIZE.

The award size will depend on the number of meritorious applications and the availability of appropriated funds.

F. PERIOD OF PERFORMANCE.

A maximum of three years will be considered. Out-year funding will depend upon suitable progress and the availability of funds. For an Exploratory submission, a maximum of two years will be considered.

G. TYPE OF APPLICATION.

DOE will accept new applications under this FOA.

PART III - ELIGIBILITY INFORMATION

A. ELIGIBLE APPLICANTS.

All types of entities are eligible to apply, except Federally Funded Research and Development Center (FFRDC) Contractors, and nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.

B. COST SHARING.

Cost sharing is not required.

C. OTHER ELIGIBILITY REQUIREMENTS.

N/A

PART 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 Funding Opportunity Announcement and then follow the prompts to download the application package.

B. LETTER OF INTENT AND PREAPPLICATION

1. Letter of Intent.

Letters of Intent are not required.

2. Preapplication.

Preapplications are required.

Potential applicants are required to submit a brief preapplication, referencing Funding Opportunity Announcement DE-FOA-0000536 for receipt by DOE by 4:30 p.m., Eastern Time, June 14, 2011.

Preapplications are limited to three pages total, including a prescribed cover page. The cover page should include: the project title, the Lead PI's name and complete contact information, whether a New/Revised and Full/Exploratory application is anticipated, and a table listing the Lead PI and institution and all Co-PIs requesting funds, their institutions and the approximate amounts of funding requested for each institution for each year for the project. A sample cover page can be downloaded from http://www.science.doe.gov/ober/CESD/preapp_cover_page_templ.html.

Preapplications should be sent individually as a single PDF file attachment via email to: Daniel.Stover@science.doe.gov. The subject line of the email must state: "Preapplication DE-FOA-0000536- [Full or Exploratory]". Preapplications must be received by DOE by 4:30 p.m., Eastern Time, June 14, 2011. No FAX or mail submission of preapplications will be accepted.

Preapplications will be reviewed for conformance with the guidelines presented in this FOA and suitability in the technical areas specified in this FOA. A response to the preapplications encouraging or discouraging formal applications will be communicated to the applicants by July 5, 2011. Applicants who have not received a response regarding the status of their preapplication by this date are responsible for contacting the program office to confirm the status of their preapplications.

Preapplications should describe the research objectives, the technical approach(es), and the proposed team members, their expertise and their roles in the proposed project. The intent in requesting a preapplication is to save the time and effort of applicants in preparing and submitting a formal project application that may be inappropriate for the program.

Preapplications will be reviewed relative to the scope and research needs as outlined in this FOA and outlined in the Climate Research Roadmap workshop report (at http://www.sc.doe.gov/ober/ClimateRoadmapWorkshop_2010.pdf). Biographical data are not required for preapplications, nor is an institutional endorsement necessary.

C. CONTENT AND FORM OF APPLICATION – SF 424 (R&R)

You must complete the mandatory forms and any applicable optional forms (e.g., SF-LLL-Disclosure of Lobbying Activities) 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 funding opportunity 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://management.energy.gov/business_doe/business_forms.htm, 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 project director/principal investigator(s) (PD/PI), 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. The project summary must not exceed 1-2 pages when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) 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 20 pages** for Full Applications and **must not exceed 10 pages** for Exploratory Applications, of technical information, including charts, graphs, maps, photographs, and other pictorial presentations, when printed using standard 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right). *Applications that are not compliant with either the page or budget limitations described above may be declined administratively without review.* EVALUATORS WILL ONLY REVIEW THE NUMBER OF PAGES SPECIFIED IN THE PRECEDING SENTENCE. The font must not be smaller than 11 point. Do not include any Internet addresses (URLs) that provide information necessary to review the application, 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."

Letters of endorsement from unfunded collaborators should also be included, if applicable. Please do not submit general letters of support as these are not used in making funding decisions.

The application narrative should begin with a cover page that includes: the project title, the Lead PI's name and complete contact information.

The cover page must also include the following information (this page will not count in the project narrative page limitation):

Applicant/Institution:
Street Address/City/State/Zip:
Principal Investigator:
Postal Address:
Telephone Number:
Email:
Funding Opportunity Announcement Number: DE-FOA-0000536
DOE/Office of Science Program Office: Office of Biological & Environmental Research
DOE/Office of Science Program Office Technical Contact: Dr. Daniel Stover
DOE Grant Number (if Renewal or Supplemental Application):

Is this a Collaboration? If yes, please list ALL Collaborating Institutions/PIs.

The project narrative must include:

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

The Project Narrative comprises the research plan for the project, it should contain enough background material in the Introduction, including review of the relevant literature, to demonstrate sufficient knowledge of the state of the science. The major part of the narrative should be devoted to a description and justification of the proposed project, including details of the method to be used. It should also include a timeline for the major activities of the proprosed project, and should indicate which project personnel will be responsible for which activities.

Appendix 1: Biographical Sketch Appendix.
Provide a biographical sketch for the project director/principal investigator (PD/PI) and each senior/key person listed in Section A on the R&R Budget form. **Provide the biographical sketch information as an appendix to your project narrative.** Do not attach a separate file. The biographical information for each person must not exceed two pages when printed on 8.5" by 11" paper with one-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 five professional and scholarly activities related to the effort proposed.
>
> *Identification of Potential Conflicts of Interest or Bias in Selection of Reviewers.* Provide the following information in this section:
>
> 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 five years. Also, list the names and current organizational affiliations of your graduate students and postdoctoral associates during the past five years.

Appendix 2: 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 subawardees, 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. **Provide the Current and Pending Support as an appendix to your project narrative. Do not attach a separate file.** The Current and Pending Support Appendix will not count in the project narrative page limitation. Concurrent submission of an application to other organizations for simultaneous consideration will not prejudice its review.

Appendix 3: Bibliography & References Cited.

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. **Provide the Bibliography and References Cited information as an appendix to your project narrative. This appendix will not count in the project narrative page limits.** Do not attach a separate file.

Appendix 4. Facilities & Other Resources.

This information is used to assess the capability of the organizational resources, including subawardee 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. **Provide the Facility and Other Resource information as an appendix to your project narrative. This appendix will not count in the project narrative page limits.** Do not attach a separate file.

Appendix 5: Equipment.
List major items of equipment already available for this project and, if appropriate identify location and pertinent capabilities. **Provide the Equipment information as an appendix to your project narrative. This appendix will not count in the project narrative page limits.** Do not attach a separate file.

Appendix 6: Other Attachments.
If you need to elaborate on your responses to questions 1-5 on the "Other Project Information" document, **provide the information as an appendix to your project narrative. This appendix will not count in the project narrative page limits.** Do not attach a separate file.

Do not attach any of the requested appendices described above as files for fields 9, 10, 11 and 12; instead follow the above instructions to include the information as appendices to the project narrative file (these appendices will not count in the project narrative page limitation).

3. RESEARCH AND RELATED BUDGET.

Complete the Research and Related Budget form in accordance with the instructions on the form. 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 FOA (See PART IV, G).

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

4. R&R SUBAWARD BUDGET ATTACHMENT(S) FORM.

Budgets for Subrecipients, other than DOE FFRDC Contractors. You must provide a separate cumulative R&R budget for each subawardee that is expected to perform work estimated to be more than $100,000 or 50 percent of the total work effort (whichever is less). If you are selected for award, you must submit a multi-year budget for each of these subrecipients (See Section IV.D for submission of Subrecipients' multi-year budgets). Download the R&R Budget Attachment from the R&R SUBAWARD BUDGET ATTACHMENT(S) FORM and e-mail it to each subrecipient that is required to submit a separate budget. After the subrecipient has emailed its completed budget back to you, attach it to one of the blocks provided on the

form. Use up to ten letters of the subrecipient's name (plus.xfd) as the file name (e.g., ucla.xfd or energyres.xfd).

5. 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 two-digit state code followed by a dash and a three-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.

6. SF-LLL DISCLOSURE OF LOBBYING ACTIVITIES.

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/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
RESEARCH & RELATED BUDGET	Form	N/A
Budget Justification	PDF	Field K
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 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. Letter of Intent.

Letters of Intent are not required.

2. Preapplication.

Preapplications are required.

Potential applicants are required to submit a brief preapplication, referencing Funding Opportunity Announcement DE-FOA-0000536 for receipt by DOE by 4:30 p.m., Eastern Time, June 14, 2011.

Preapplications are limited to three pages total, including a prescribed cover page. The cover page should include: the project title, the Lead PI's name and complete contact information, whether a New/Revised and Full/Exploratory application is anticipated, and a table listing the Lead PI and institution and all Co-PIs requesting funds, their institutions and the approximate amounts of funding requested for each institution for each year for the project. A sample cover page can be downloaded from http://www.science.doe.gov/ober/CESD/preapp_cover_page_templ.html.

Preapplications should be sent individually as a single PDF file attachment via email to: Daniel.Stover@science.doe.gov. The subject line of the email must state: "Preapplication DE-FOA-0000536- [Full or Exploratory]". Preapplications must be received by DOE by 4:30 p.m., Eastern Time, June 14, 2011. No FAX or mail submission of preapplications will be accepted.

Preapplications will be reviewed for conformance with the guidelines presented in this FOA and suitability in the technical areas specified in this FOA. A response to the preapplications encouraging or discouraging formal applications will be communicated to the applicants by July 5, 2011. Applicants who have not received a response regarding the status of their preapplication by this date are responsible for contacting the program office to confirm the status of their preapplications.

Preapplications should describe the research objectives, the technical approach(es), and the proposed team members, their expertise and their roles in the proposed project. The intent in requesting a preapplication is to save the time and effort of applicants in preparing and submitting a formal project application that may be inappropriate for the program.

Preapplications will be reviewed relative to the scope and research needs as outlined in this FOA and outlined in the Climate Research Roadmap workshop report (at http://www.sc.doe.gov/ober/ClimateRoadmapWorkshop_2010.pdf). Biographical data are not required for preapplications, nor is an institutional endorsement necessary.

3. Formal Applications.

Formal applications submitted in response to this FOA must be received by September 12, 2011, 11:59 PM Eastern Time, to permit timely consideration of awards in Fiscal Year 2012. **You are encouraged to transmit your application well before the deadline. APPLICATIONS RECEIVED AFTER THE DEADLINE WILL NOT BE REVIEWED OR CONSIDERED FOR AWARD.**

F. INTERGOVERNMENTAL REVIEW.

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

G. FUNDING RESTRICTIONS.

Cost Principles**.** Costs must be allowable in accordance with the applicable Federal cost principles referenced in 10 CFR Part 600 and 2 CFR 215.

Pre-award Costs**.** Recipients may charge to an award resulting from this FOA 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 Part 600 and 2 CFR 215. 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.

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

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.

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

PART V - APPLICATION REVIEW INFORMATION

A. CRITERIA

1. Initial Review Criteria.

Prior to a comprehensive merit evaluation, DOE will perform an initial review in accordance with 10 CFR 605.10(b).

2. Merit Review Criteria

Applications will be subjected to scientific merit review (peer review) and will be evaluated against the following criteria, listed in descending order of importance as found in 10 CFR Part 605.10 (d) :

a) Scientific and/or Technical Merit of the Project
b) Appropriateness of the Proposed Method or Approach
c) Competency of Applicant's Personnel and Adequacy of Proposed Resources; and
d) Reasonableness and Appropriateness of the Proposed Budget.

The evaluation process will include program policy factors such as the relevance of the proposed research to the terms of the FOA and the agencies' programmatic needs. Note that external peer reviewers are selected with regard to both their scientific expertise and the absence of conflict-of-interest issues. Both Federal and non-Federal reviewers may be used, and submission of an application constitutes agreement that this is acceptable to the investigator(s) and the submitting institution.

B. REVIEW AND SELECTION PROCESS.

1. Merit Review.

Applications that pass the initial review will be subjected to a merit review in accordance with the guidance provided in the "Office of Science Merit Review System for Financial Assistance." This Merit Review System is available at http://www.sc.doe.gov/grants/merit.asp.

2. Selection.

The Selection Official will consider the merit review evaluation, 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 part 600 and 605; 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 is striving to make **awards within 6 months**. The time interval begins on the date applications are due or the date the application is received. It is anticipated that selections will be made in Fiscal Year 2012.

PART 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 Part IV.G with respect to the allowability of pre-award costs.)

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

2. Notice of Award.

An Assistance Agreement issued by the contracting officer is the authorizing award document. It normally includes, either as an attachment or by reference: 1. Special Terms and Conditions; 2. Applicable program regulations, if any; 3. Application as approved by DOE; 4. DOE assistance regulations at 10 CFR Part 600; 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 and 10 CFR Part 605 (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.
The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements are located at:
http://management.energy.gov/business_doe/business_forms.htm.
The National Policy Assurances to Be Incorporated As Award Terms are located at http://www.nsf.gov/bfa/dias/policy/rtc/appc.pdf.

Intellectual Property Provisions.
The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at
http://www.gc.energy.gov/financial_assistance_awards.htm.

C. REPORTING.
Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F4600.2, attached to the award agreement.

PART VII - QUESTIONS/AGENCY CONTACTS

A. QUESTIONS

Questions regarding the content of the FOA 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. More information is available at https://www.fedconnect.net/FedConnect/PublicPages/FedConnect_Ready_Set_Go.pdf. 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.

Applications submitted through FedConnect will not be accepted.

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 cannot answer these questions.

B. AGENCY CONTACTS:

GENERAL INQUIRIES ABOUT THIS FOA SHOULD BE DIRECTED TO:

Technical/Scientific Program Contacts:

Program Manager: Dr. Daniel Stover
Phone: (301) 903-0289
E-mail: Daniel.Stover@science.doe.gov

PART VIII - OTHER INFORMATION

A. MODIFICATIONS.

Notices of any modifications to this FOA 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. More information is available at http://www.fedconnect.net.

B. GOVERNMENT RIGHT TO REJECT OR NEGOTIATE.

DOE reserves the right, without qualification, to reject any or all applications received in response to this FOA 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 _____ 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.

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 FOA, 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, http://www.gc.doe.gov/documents/patwaivclau.pdf.

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

N/A