

**FINANCIAL ASSISTANCE  
FUNDING OPPORTUNITY ANNOUNCEMENT**



**U.S. Department of Energy**

**Office of Science**

**Office of Biological and Environmental Research (BER)  
and Office of Advanced Scientific Computing Research (ASCR)**

*Scientific Discovery through Advanced Computing: Scientific Computation  
Application Partnerships in Earth System Science*

**Funding Opportunity Number: DE-FOA-0000588**

**Announcement Type: **Amendment****

**CFDA Number: 81.049**

**AMENDMENT ISSUED:** October 7, 2011  
**ISSUE DATE:** September 16, 2011  
**APPLICATION DUE DATE:** December 5, 2011, 11:59 p.m. Eastern Time

This Funding Opportunity Announcement (FOA) was deleted from Grants.gov and reposted on October 7, 2011. A new Application Package (Forms) was posted at that time. The new Application Package is identical to the old one except it is encoded differently behind the scenes, so the information requested on the forms remains the same. Application Packages downloaded prior to October 7 will generate errors upon submission. If you downloaded the Application Package prior to October 7, please discard it, download a new Application Package, and use the new one for submitting your application. No other changes were made to this FOA on October 7. We apologize for the inconvenience.

## 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 Central Contract Registry (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 (i.e., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the CCR, register with the credential provider, and register with Grants.gov). To register with Grants.gov go to “Get Registered” at [http://grants.gov/applicants/get\\_registered.jsp](http://grants.gov/applicants/get_registered.jsp). 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](mailto: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

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## PART I – FUNDING OPPORTUNITY DESCRIPTION

### GENERAL INQUIRIES ABOUT THIS FOA SHOULD BE DIRECTED TO:

#### Technical/Scientific Program Contact:

Dr. Dorothy Koch, 301-903-0105  
Earth System Modeling, Climate and Environmental Sciences  
Biological and Environmental Research  
[Dorothy.Koch@science.doe.gov](mailto:Dorothy.Koch@science.doe.gov)

Dr. Randall Laviolette, 301-903-5195  
Advanced Scientific Computing Research  
[Randall.Laviolette@science.doe.gov](mailto:Randall.Laviolette@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) and the Office of Advanced Scientific Computing Research (ASCR) of the Office of Science (SC), U.S. Department of Energy (DOE), hereby announces its interest in receiving collaborative applications to the Scientific Discovery through Advanced Computing (SciDAC) program for SciDAC Scientific Computation Application Partnerships in Earth System Science (hereafter, Partnerships) in support of the Office of Biological and Environmental Research's (BER's) Earth System Modeling research.

More specific information on each area of interest is included in the Description of Topical Areas section under **SUPPLEMENTARY INFORMATION**. A companion Program Announcement to DOE National Laboratories (LAB 11-588) will be posted on the SC Grants and Contracts web site at: <http://www.science.doe.gov/grants>

This FOA is soliciting collaborative-only applications, not lead applications. Lead proposals that may be accepted will be only those from DOE National Laboratories responding to the corresponding Program Announcement to DOE National Laboratories LAB 11-588.

## SUPPLEMENTARY INFORMATION:

### Background:

#### BER Climate Modeling Objectives

BER's Earth System Modeling (ESM) research (<http://science.energy.gov/ber/research/cesd/earth-system-modeling-program>), within the Climate and Environmental Sciences Division (CESD), aims to advance the simulation and predictive capabilities of state-of-science climate modeling. New approaches are needed to increase the spatial resolution, develop and incorporate refinements to physical process representation, and enhance quantification of uncertainty and model validation. The accuracy and skill of climate models requires improvements to model atmosphere, ocean, land and cryosphere components. There is an ongoing need for improved methods to parameterize or resolve, and couple, components and features such as clouds, atmospheric aerosols and chemistry, carbon cycle, ocean dynamics, land surface processes, sea and land ice. Development of these model components are expected to be accompanied by comparison with scale-appropriate measurements. Further information on the ESM research priorities within CESD may be found at: [http://science.energy.gov/~media/ber/pdf/Climate\\_strategic\\_plan.pdf](http://science.energy.gov/~media/ber/pdf/Climate_strategic_plan.pdf).

Applications in response to this FOA may therefore focus on improving climate system models or their components to make them more accurate and computationally efficient. This may include improved or new process representation of the model physical and biogeochemical components, or numerical formulations for high resolution modeling. Examples could include development of components or development of scale-aware parameterizations for atmospheric, oceanic, terrestrial or cryospheric systems. High-resolution formulations could include unstructured or adaptive grids, or other innovative techniques for resolving convection/eddy dynamics. Projects may include focus on ESM component coupling and exchange.

Projects are particularly encouraged in the following, with funding allocation of roughly 3 to 1 between the following two items:

- **Development of physics and dynamics for atmosphere, ocean or ice sheets to run efficiently and accurately using high resolution or unstructured grids.** Variable mesh approaches may be developed and improved to resolve features such as cloud dynamics, ocean eddies and ice sheet dynamics. Previous BER-ASCR SciDAC-supported efforts have helped to launch adaptive mesh capabilities; however, implementation of these in climate simulations continues to pose significant challenges. For variable resolution models, it is crucial that the physical components perform accurately across scales, transitioning from hydrostatic to non-hydrostatic, and from cloud-resolving or eddy-resolving to parameterized physics as appropriate. Physical schemes for components such as clouds, convection, eddies, high-stress regions of ice sheets, etc. need to be developed, tested and made computationally efficient in order to move climate modeling forward to the next generation of accuracy and performance for long-term climate simulations. New solvers may be considered to improve computational accuracy and performance. Computational bottlenecks in process or component coupling and in model input/output should also be targeted to speed the model calculations.

- **Development of efficient and accurate schemes for simulating atmospheric or oceanic chemical or biogeochemical tracers.** The next generation of climate simulations requires that atmospheric aerosols/chemistry and oceanic biogeochemistry interact with the climate systems. However this typically involves transport and transformation of multiple species, often with non-uniform distributions, greatly increasing the time required for climate calculations. Methods are sought to speed tracer transport, to incorporate tracer processes in new physics or mesh frameworks, and to improve or speed processes such as coupling between aerosols and clouds, aerosols and chemistry, or oceanic biogeochemistry.

The most competitive projects will include:

- **Development and application of methods to characterize uncertainty in climate simulations.** Climate model uncertainty derives from a complex combination of uncertainty regarding choice of model parameters, choice of model parameterization, model complexity, and sparse and uncertain measurement constraint. Analysis of climate model uncertainty could be advanced by collaboration among experts in the mathematical, computational and climate sciences. Uncertainty quantification frameworks are needed both to prioritize climate modeling research and to guide the interpretation of climate model results. A strong verification and validation (V&V) component is also essential for these efforts and therefore proposers should discuss their V&V plans in sufficient detail.
- **A plan to coordinate with and leverage from SciDAC Institutes.** Proposers should detail their plans for establishing partnerships with the SciDAC Institutes (<http://science.energy.gov/ascr/research/scidac/scidac-institutes/>), described below, in order to systematically address the applied math and computer science challenges that are inherent to the scale of new architectures or common across applications. In addition, proposers should detail their plans to establish partnerships maximizing synergy and leverage with other BER supported efforts, for example as described within <http://science.energy.gov/ber/research/cesd/>. Proposers must be explicit about the benefits that they expect to receive from Institutes or other Program Elements. In particular, the lead proposal must include a table in the Statement of Work that explains the tasks to be executed by the various collaborators and the support (whether from BER or ASCR) for those tasks. Reviewers will examine (see Merit Review below) the collaborations for, among others, duplication of effort. The proposal may include coverage of non-duplicative Applied Math/Computer Science expertise to supplement topics for which resources are provided by the Institutes, as well as expertise in topics for which no resources were provided by the Institutes.
- **A plan to utilize and develop community models** such as the Community Earth System Model.

To ensure that CESD modeling research meets both the broad needs of the climate modeling research community and the specific needs of the CESD, successful investigators will participate in the annual science team meeting. Costs for participation in Science Team annual meetings and workshops should be included in each application. Yearly estimates for Science Team travel should be based on one trip of five days to Washington, DC.

### **ASCR and SciDAC Program Objectives**

The SciDAC program accelerates progress in computational science by breaking down the barriers between disciplines and fostering productive partnerships between domain scientists and computational scientists (e.g., applied mathematicians, computer scientists) who are capable of exploiting the capabilities of leadership class computational systems (e.g. those existing at or planned in the next five years for the Oak Ridge and Argonne Leadership Computing Facilities, or the high performance production computational systems at the National Energy Research Scientific Computing Center, or similar computing facilities). These partnerships enable scientists to conduct complex scientific and engineering computations at a level of fidelity needed to simulate real-world conditions. In particular, the key components of SciDAC are SciDAC Institutes and SciDAC Partnerships; the latter is addressed in this FOA.

The Institutes will be the foundation for efforts by applied mathematicians and computer scientists to systematically address technical challenges that are inherent to the scale of new architectures and that are common across a wide range of science applications. The Institutes are responsible for developing new methods, algorithms and libraries spanning a wide range of SciDAC applications. The recently awarded SciDAC Institutes are as follows: .

- **FASTMath:** Frameworks, Algorithms, and Scalable Technologies for Mathematics (Director: Lori Diachin, Lawrence Livermore National Laboratory). Topics covered include structured and unstructured mesh tools and mesh-solver interfaces, particle methods, linear and nonlinear solvers, time integration, eigensolvers, and differential variational inequalities.
  
- **SUPER:** Sustained Performance, Energy and Resilience (Director: Robert Lucas, University of Southern California). Topics covered include performance engineering (including modeling and autotuning), energy efficiency, resilience, and optimization.
  
- **QUEST:** Quantification of Uncertainty in Extreme Scale Computations (Director: Habib Najm, Sandia National Laboratories). Topics covered include inverse problems, reduced stochastic representations, forward uncertainty propagation, fault tolerance, and experimental design and model validation.

A successful Partnership will:

1. Exploit leadership class computing resources to advance scientific frontiers in an area of strategic importance to the Office of Science; and
2. Effectively link to the intellectual resources in applied mathematics and computer science, expertise in algorithms and methods, and scientific software tools at one, or more, SciDAC Institutes.

Although not required, it is expected that all Partnerships funded under this FOA will request and will receive funds from both BER and ASCR to meet proposed objectives.

Reviewers of applications submitted to this FOA will be asked to comment upon the feasibility, benefits, and management of the proposed collaborations between the climate modeling scientists supported by BER on the one hand, and the computational scientists (i.e., applied mathematicians and computer scientists/engineers) supported by ASCR on the other.

The allocation of computing resources available to individual projects will not be part of this FOA but will be contingent on review and award through the process as described at <http://science.energy.gov/ascr/facilities/allocation-policy/>. Within the available computational resources, every effort will be made to ensure that successful applications will have the resources needed to support their efforts.

**MANAGEMENT STRUCTURE.** The proposers must identify a management structure that enables an effective collaboration between the BER-supported scientists and the ASCR-supported applied mathematicians and computer scientists/engineers. The structure and management must be sufficiently flexible to adapt quickly to changing technical challenges and scientific needs. **Proposers responding to this collaboration-only FOA will not identify a Director of their own (see LAB 11-588) [but they must identify the Team Leads for the Climate and Computational Science tasks.]** Key unfunded personnel should also be mapped into this structure as appropriate. Note that some individuals may have both Science and Computational Science tasks, and some individuals may be assigned to link tasks within or between the climate and computational Science research. For completeness, all of the typical duties, responsibilities and authorities for each category of the Management Structure are provided below:

- **Director** - The Director is the Lead Principal Investigator and will serve as the primary contact responsible for communications with the DOE Program Officer on behalf of all of the Science Team and Laboratory Leads.
- **Science Team Leads (STLs)** are the individuals with the appropriate level of authority and responsibility for the proper conduct of the research within scientific research areas (such as numerical methods, ocean modeling, atmospheric modeling, etc.). When a project designates more than one Science Team Lead, it identifies them as individuals who share the authority and responsibility for leading and directing the research, intellectually and logistically. In particular, a responsive application would have at a minimum one STL for Science and one for Computational Science.
- **Laboratory Leads** are the individuals with the appropriate level of authority and responsibility to ensure that laboratory personnel complete required tasks in a timely manner. They are also responsible for ensuring appropriate use of funds and administrative requirements. An individual may serve as both a Laboratory and a Science Team Lead.

- **Senior/Key Personnel** - are individuals who contribute in a substantive, measurable way to the scientific or technical development or execution of the project. This definition includes, but is not limited to, the Director, the STLs and the Laboratory Leads.

The Budget Justification Narrative should clearly map performers/tasks to the appropriate science program (BER or ASCR).

#### **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 proposer'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 change 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 they 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://pcmdi3.llnl.gov/>, <http://esg2-gw.ccs.ornl.gov/esgcet/home.htm> and <http://esgf.org>. The repository where the applicant 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 proposer'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. Proposers 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.

#### **Collaboration**

Collaborative research projects with other institutions, such as universities, industry, non-profit organizations, and Federally Funded Research and Development Centers (FFRDCs), including the DOE National Laboratories, are required under this FOA. Collaborative applications submitted from different institutions, which are directed toward a single SciDAC Partnership, should clearly indicate they are part of a proposed collaboration and contain the Abstract for that SciDAC Partnership research project. In addition, such applications must describe the work and the associated budget for the research effort being performed under the leadership of the Principal Investigator at that participating institution.

These collaborative applications should all have the same title as the lead proposal. Each collaborating institution submitting an application must use the same title in Block 11 of the SF 424 (R&R) form. The narrative of these applications needs to be the same and should include a summary of the main contributions from each of the collaborating institutions. However, the respective applications must have their own budget and budget justification.

## **PART II – AWARD INFORMATION**

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

DOE anticipates awarding Cooperative Agreements under this FOA.

### **B. ESTIMATED FUNDING.**

The five-year SC-total (BER and ASCR) funding up to \$6,500,000 per year is expected to be available in Fiscal Year 2012, contingent on the availability of appropriated funds. Awards are expected to be made for a period of five years at a funding level appropriate for the proposed scope, with out-year support contingent on the availability of appropriated funds and satisfactory progress. Funding for the final two years is contingent upon satisfactory completion of a progress review during the third year of each project. This amount refers to the total available funding for both the Cooperative Agreements and the corresponding Program Announcement to DOE National Laboratories LAB 11-588 subject to appropriation of funds by Congress. DOE is under no obligation to pay for any costs associated with the preparation or submission of an application. DOE reserves the right to fund, in whole or in part, any, all, or none of the applications submitted in response to this FOA.

Although a SciDAC Partnership may be supported by a single award, BER and ASCR expect each Partnership to be a collaboration comprised of several separate awards. BER and ASCR reserve the right to make fewer awards than would be possible at \$6,500,000 per year, if an insufficient number of applications are judged to be of suitable scientific quality or of sufficient relevance to the programs.

### **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.**

BER and ASCR expect to support between two and five SciDAC Partnerships. The exact 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 five years will be considered. Out-year funding will depend upon suitable progress and the availability of appropriated funds. Funding for the final two years is contingent upon satisfactory completion of a progress review during the third year of each project.

**G. TYPE OF APPLICATION.**

DOE will accept new applications under this FOA. This FOA is soliciting collaborative-only applications, not lead applications. Lead proposals that may be accepted will be only those from DOE National Laboratories responding to the corresponding Program Announcement to DOE National Laboratories LAB 11-588.

### **PART III - ELIGIBILITY INFORMATION**

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

All types of domestic entities are eligible to apply, except other Federal agencies, 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.**

This FOA is soliciting collaborative-only applications, not lead applications. Lead proposals that may be accepted will be only those from DOE National Laboratories responding to the corresponding Program Announcement to DOE National Laboratories LAB 11-588.

## 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 a Grant Application Package**". Enter the CFDA and/or the funding opportunity number located on the cover of this FOA 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 not required. Only the lead investigator from a DOE National Laboratory applying to the corresponding Program Announcement to DOE National Laboratories LAB 11-588 need to submit a preproposal.

### 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 FOA.**

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

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

#### 2. RESEARCH AND RELATED Other Project Information.

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

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

The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the public. It should be a self-contained document that identifies the name of the applicant, the 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 page 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 25 pages** 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). **EVALUATORS WILL ONLY REVIEW THE NUMBER OF PAGES SPECIFIED IN THE PRECEDING SENTENCE.** The font must not be smaller than 11 point. 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 and can interfere with the selection of peer reviewers.

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 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-0000588**

**DOE/Office of Science Program Office: Office of Biological and Environmental  
Research/Office of Advanced Scientific  
Computing Research**

**DOE/Office of Science Program Office Technical Contact: Dr. Dorothy Koch/  
Dr. Randall Laviolette**

Please list ALL Collaborating Institutions/PIs and indicate which ones will also be submitting applications. Also indicate the Lead PI who will be the point of contact and coordinator for the combined research activity.

## **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 proposed project, and should indicate which project personnel will be responsible for which activities.

## **Appendix 1: Biographical Sketch.**

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 Sketch Appendix will not count in the project narrative page limitation.**

The biographical information (curriculum vitae) 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.

*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. For publications or collaborations with more than 10 authors or participants, only list those individuals in the

core group with whom the Principal Investigator interacted on a regular basis while the research was being done. Also, list any individuals who are currently, or have been, co-editors with you on a special issue of a journal, compendium, or conference proceedings during the 24 months preceding the submission of this application. If there are no collaborators or co-editors to report, state "None."

Graduate and Postdoctoral Advisors and Advisees: List the names and current organizational affiliations of your graduate advisor(s) and principal postdoctoral sponsor(s) during the last 5 years. Also, list the names and current organizational affiliations of your graduate students and postdoctoral associates during the past 5 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 and 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. Do not attach a separate file. The Bibliography and References Cited Appendix will not count in the project narrative page limitation.**

### **Appendix 4: Facilities and 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. Do not attach a separate file. The Facility and Other Resources Appendix will not count in the project narrative page limitation.**

**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. Do not attach a separate file. The Equipment Appendix will not count in the project narrative page limitation.**

**Appendix 6: Other Attachment.**

If you need to elaborate on your responses to questions 1-6 on the “Other Project Information” document, **please provide the Other Attachment information as an Appendix to your project narrative. Do not attach a separate file. The Other Attachment Appendix will not count in the project narrative page limitation.**

**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 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 FOA (See PART IV, G).

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

Provide the required supporting information for the following costs: 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 Subawardees, 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 subawardees. Download the R&R Budget Attachment from the R&R SUBAWARD BUDGET ATTACHMENT(S) FORM and e-mail it to each subawardee that is required to submit a separate budget. After the Subawardee has e-mailed its completed budget back to

you, attach it to one of the blocks provided on the form. Use up to 10 letters of the subawardee's name (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 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.

**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, 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:

<b>Name of Document</b>	<b>Format</b>	<b>Attach to</b>
<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
<b>RESEARCH &amp; RELATED BUDGET</b>	Form	N/A
Budget Justification	PDF	Field K
<b>PROJECT/PERFORMANCE SITE LOCATION(S)</b>	Form	N/A
<b>SF-LLL Disclosure of Lobbying Activities, if applicable</b>	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. Pre-application.**

Preapplications are not required. Only the lead investigator from a DOE National Laboratory applying to the corresponding Program Announcement to DOE National Laboratories LAB 11-588 need submit a preproposal.

##### **3. Formal Applications.**

**APPLICATION DUE DATE:** December 5, 2011, 11:59 PM Eastern Time

Formal applications submitted in response to this FOA must be received by December 5, 2011, 11:59 PM Eastern Time, to permit timely consideration of awards in Fiscal Year 2012. **You are encouraged to submit 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. The cost principles for commercial organization are in FAR Part 31.

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. Recipients must obtain the prior approval of the contracting officer for any pre-award costs that are for periods greater than this 90-day calendar period.

Pre-award costs are incurred at the applicant's risk. DOE is under no obligation to reimburse such costs if for any reason the applicant does not receive an award or if the award is made for a lesser amount than the applicant expected.

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

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

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

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

### **2. Registration Process.**

You must COMPLETE the one-time registration process (all steps) before you can submit your first application through Grants.gov. 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. To register with Grants.gov go to "Get Registered" at [http://grants.gov/applicants/get\\_registered.jsp](http://grants.gov/applicants/get_registered.jsp). Use the Grants.gov Organization Registration Checklist 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) to determine that (1) the applicant is eligible for the award; (2) the information required by the FOA has been submitted; (3) all mandatory requirements are satisfied; and (4) the proposed project is responsive to the objectives of the FOA. 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**

Applications will be subjected to scientific merit review (peer review) and will be evaluated against the following evaluation criteria which are listed in descending order of importance codified at 10 CFR 605.10(d):

##### **1. Scientific and/or Technical Merit of the Project**

- a. How would the proposed research lead to significant improvements in capability to accurately or efficiently simulate the climate system?
- b. What current bottlenecks in climate modeling research or predictability are targeted by the proposed project?
- c. What key uncertainties in understanding of the climate system are targeted by the project?
- d. Is it likely that the proposed research will accelerate scientific discovery through leadership class computation?
- e. What science will become feasible with this collaboration that is not feasible now?
- f. Does the project demonstrate a functional partnership among the indicated science application scientists, applied mathematicians, and computational scientists? Does the research plan contain appropriate performance metrics that will allow progress and contributions to be measured?

##### **2. Appropriateness of the Proposed Method or Approach**

- a. Does the proposed research include a plan to characterize climate model uncertainty and a plan for validation and verification?
- b. Does the proposed research employ or lead to state-of-the-art approaches that effectively employ leadership-scale computing resources available to DOE researchers?
- c. Does the proposed research exploit existing resources and contribute new resources (e.g., algorithms, software) or would it result in a duplication of existing resources?

- 3. Competency of Proposer's Personnel and Adequacy of Proposed Resources**
  - a. Does the proposer have a proven record of success in managing diverse teams of scientific and technical experts and delivering results for advanced computational science research?
  - b. Has the proposer identified a credible and fruitful collaboration between climate scientists and computational scientists?
  - c. Are any of the computational scientists identified in the application also engaged in work for the SciDAC Institutes? For those who are not in the Institutes, is their work duplicative of work going on in the Institutes?
  - d. Are the roles and intellectual contributions of the Director and the Principal Investigators and each senior/key personnel adequately described?
  
- 4. Reasonableness and Appropriateness of the Proposed Budget**
  - a. Is the proposer's requested budget appropriate?
  - b. Does the requested budget support the proposer's specified management structure in a meaningful way?

The evaluation process will include program policy factors such as the relevance of the proposed research to the terms of the FOA and the agency's 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 formal merit review and will be evaluated based on the criteria codified at 10 CFR Part 605.10(d) 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.**

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

### **3. Discussions and Award.**

**Government Discussions with Applicant:** 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, if there is no specified due date/deadline. Awards will be made in Fiscal Year 2012.

## PART VI - AWARD ADMINISTRATION INFORMATION

### A. AWARD NOTICES.

#### 1. Notice of Selection.

**Selected Applicants Notification:** DOE will notify applicants selected for award. This notice of selection is not an authorization to begin performance. (See Part 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; 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://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms> under Award Terms. The National Policy Assurances to Be Incorporated As Award Terms are located at: <http://www.nsf.gov/bfa/dias/policy/rtc/appc.pdf>.

### **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>.

### **Statement of Substantial Involvement**

Either a grant or cooperative agreement may be awarded under this FOA. If the award is a cooperative agreement, the DOE Contract Specialist and DOE Project Officer will negotiate a Statement of Substantial Involvement prior to award.

## **C. REPORTING.**

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F4600.2, attached to the award agreement. For a sample Checklist, see <http://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms> under Awards Forms.

## 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](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](mailto:support@grants.gov). DOE cannot answer these questions.

### B. AGENCY CONTACTS:

#### **Technical/Scientific Program Contact:**

Dr. Dorothy Koch, 301-903-0105  
Earth System Modeling, Climate and Environmental Sciences  
Biological and Environmental Research  
[Dorothy.Koch@science.doe.gov](mailto:Dorothy.Koch@science.doe.gov)

Dr. Randall Laviolette, 301-903-5195  
Advanced Scientific Computing Research  
[Randall.Laviolette@science.doe.gov](mailto:Randall.Laviolette@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 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 FOAs. 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 784.12, [http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title10/10cfr784\\_main\\_02.tpl](http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title10/10cfr784_main_02.tpl)

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

**I. AVAILABILITY OF FUNDS.**

Funds are not presently available for this award. The Government's obligation under this award is contingent upon the availability of appropriated funds from which payment for award purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are made available to the Contracting Officer for this award and until the awardee receives notice of such availability, to be confirmed in writing by the Contracting Officer.