

**FINANCIAL ASSISTANCE  
FUNDING OPPORTUNITY ANNOUNCEMENT**



**U.S. Department of Energy**

**Office of Science  
Office of Fusion Energy Sciences  
and  
National Nuclear Security Administration**

**Joint Solicitation for  
The OFES-NNSA Joint Program in  
High Energy Density Laboratory Plasmas**

**Funding Opportunity Number: DE-PS02-08ER08-16**

**Announcement Type: Initial**

**CFDA Number: 81.049**

**ISSUE DATE: June 24, 2008**

**PREAPPLICATION DUE DATE: Not Required**

**LETTER OF INTENT DUE DATE: August 18, 2008**

**APPLICATION DUE DATE: September 11, 2008, 8 PM Eastern Time**

## 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). See <http://www.grants.gov/GetStarted>. Use the Grants.gov Organization Registration Checklist at <http://www.grants.gov/assets/OrganizationRegCheck.doc> 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).

**MICROSOFT VISTA AND OFFICE 2007 COMPATIBILITY:** Grants.gov is currently incompatible with both the new Microsoft (MS) Vista Operating System and the new Microsoft (MS) Office 2007 versions of Word, Excel and Power Point. In order to create and submit your application to Grants.gov, you must find a computer with a previous version Microsoft Operating System, such as Windows XP.

If you attach a file created using MS Office 2007, you will not get an error message when you submit the application, HOWEVER your entire application will not be able to be processed or accepted at Grants.gov and will not reach DOE. Grants.gov can accept applications with attachments created in MS Office 2007 if the attachments are saved in the prior format. See [www.grants.gov/www.grants.gov/assets/Vista\\_and\\_office\\_07\\_Compatibility.pdf](http://www.grants.gov/www.grants.gov/assets/Vista_and_office_07_Compatibility.pdf) for detailed instructions on how to do this. A file created in MS Office 2007 can be identified by the "x" at the end of the file extension, for example "sample.docx" for a Word file. Contact Grants.gov at 1-800-518-4726 with any questions.

**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 announcement explains how to submit other questions to the Department of Energy.

**Application Receipt Notices:** After an application is submitted, the Authorized Organization Representative (AOR) will receive a series of five e-mails. It is extremely important that the AOR watch for and save each of the e-mails. It may take up to two (2) business days from application submission to receipt of e-mail Number 2. When the AOR receives e-mail Number 5, it is their responsibility to follow the instructions in the e-mail to logon to IIPS and verify that their application was received by DOE. The titles of the five 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

Number 5 – DOE e-Center Grant Application Received

The last e-mail will contain instructions for the AOR to register with the DOE e-Center. If the AOR is already registered with the DOE e-Center, the title of the last e-mail changes to:

Number 5 – DOE e-Center Grant Application Received and Matched

This e-mail will contain the direct link to the application in IIPS. The AOR will need to enter their DOE e-Center user id and password to access the application.

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## PART I – FUNDING OPPORTUNITY DESCRIPTION

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

**PROGRAM MANAGER:** Dr. Francis Thio, Office of Fusion Energy Sciences

**PHONE:** (301) 903- 4678

**FAX:** (301) 903- 1225

**E-MAIL:** [Francis.Thio@science.doe.gov](mailto:Francis.Thio@science.doe.gov)

**PROGRAM MANAGER:** Dr. Allan Hauer, National Nuclear Security Administration

**PHONE:** (202) 586-4797

**E-MAIL:** [Allan.Hauer@nnsa.doe.gov](mailto:Allan.Hauer@nnsa.doe.gov)

The Office of Fusion Energy Sciences (OFES) of the Office of Science (SC) and the Defense Program (DP) of the National Nuclear Security Administration (NNSA), both of the U.S. Department of Energy (DOE), jointly announce their interests in receiving grant applications including renewals of existing grants in FY 2009 for research in the OFES-NNSA Joint Program in High Energy Density Laboratory Plasmas (HEDLP). This Announcement is directed at researchers who are not affiliated with DOE national laboratories and government laboratories. Applications should clearly indicate in the Title Page and in the Executive Summary the research area or areas (i) – (ii) identified in Section 1 the application is responding to.

A companion Program Announcement to DOE Laboratories (LAB08-16) will be posted on the Office of Science Grants and Contracts web site at:

[http://www.science.doe.gov/grants/LAB08\\_16.html](http://www.science.doe.gov/grants/LAB08_16.html).

### SUPPLEMENTARY INFORMATION:

#### **1. Descriptions of the Research Programs and the Applications Solicited under this Announcement.**

The OFES and NNSA have agreed to coordinate their research activities in the field of HEDLP under a Joint Program. This coordination is aligned with the recommendations of the interagency Task Force on High Energy Density (HED) Physics to provide improved stewardship of the field of HEDLP, while maintaining the interdisciplinary nature of this area of science, by tying the basic scientific research to its roots in application [1]. An important objective of the Joint Program in HEDLP in the long term is to enable the broader scientific community to conduct research at the major NNSA HED facilities — e.g., the National Ignition Facility (NIF) at the Lawrence Livermore National Laboratory, the Z-pinch pulsed power accelerator at Sandia National Laboratory and the Omega laser at the Laboratory for Laser Energetics at the University of Rochester. However, extensive and comprehensive evaluation of concepts and proposed experiments are required to fully realize the scientific potential of these large-scale facilities and to capture the opportunities they afford. As a scientific path forward towards the use of these large-scale facilities, HEDLP conditions may be achieved at many small- or intermediate-scale

facilities using pulsed power driven accelerators, lasers, or ion-beam compression techniques. The availability and use of experimental facilities to address the objectives of this program is discussed in Section 2. Another important objective of the Joint Program in HEDLP is to provide an avenue to explore the HED physics that underpins the scientific foundation for inertial fusion energy sciences.

Planning of the Joint Program by the two Offices has been guided by the reports of the National Task Force on High Energy Density Physics chaired by Davidson [2], the interagency Task Force on High Energy Density Physics chaired by Keane and Kovar [1], and the HEDLP Workshop at Argonne National Laboratory chaired by Rosner and Browne [3]. Following are two of the main themes that encompass the scientific challenges and opportunities of HEDLP. Proposed research efforts can include experimental, theoretical, and/or computational science. Applications integrating experiments, theory, and simulation are encouraged.

**(i) Advance HED science that enables fusion energy**

Fusion power has potential as a limitless source of clean energy. HEDLP is the key scientific component necessary for realizing this goal. Emerging concepts in inertial fusion include fast ignition, shock ignition, magneto-inertial fusion and heavy ion fusion. An advanced understanding of the fundamentals of laser-plasma interaction, radiation-matter interaction, hydrodynamic and magnetohydrodynamic processes in HED plasmas, and equations of state of inertial fusion materials at relevant conditions is required for the successful development of these approaches. Novel approaches to inertial fusion energy sciences also include ion-driven fast ignition, plasma jets forming imploding liner, magnetic flux compression, compression of ion beams, general studies of high magnetic fields in dense plasmas, and new experimental diagnostics that can probe the fundamental properties of HEDLP. Research Applications are sought for advancing the scientific knowledge base underpinning the various inertial fusion approaches and their drivers.

**(ii) Creation, control, diagnosis and utilization of new HEDLP conditions**

There are substantial unexplored challenges to understanding phenomena in unique HEDLP conditions, including: shock-dominated, radiation-dominated, relativistic, high-pressure conditions, novel magnetic regimes, kinetic non-linear, and other unique physical states. This would also include novel methods of attaining those unique conditions. Research Applications are solicited that include investigations of the fundamental properties and behavior of plasmas created under high energy density conditions. Research addressing these questions includes novel methods of attaining and diagnosing those unique conditions, as well as *in situ* investigations of the dynamics of strongly-driven HED systems using advanced probes such as x-ray and synchrotron-radiation sources. Proposed investigations could include creating and probing the fundamental dynamical properties of HED states of matter using state-of-the-art ultrafast, ultraintense laser technology. Studies of HED conditions may be relevant to observed astrophysical phenomena. Laboratory astrophysics has been identified as a significant opportunity for new HEDLP studies. Research areas of investigations could include (but are not limited to) the development of scaling laws on compressible hydrodynamic mixing, strong shock phenomena, radiation flow, radiative shocks and jets, accretion disk dynamics, complex opacities, equations of state, and relativistic plasmas. It should also be recognized that the

regime identified as “warm dense matter” is also a significant area of opportunity in HEDLP research. This state which is dense enough to display both “solid-like” and “plasma-like” properties should be considered as a potential topic for this solicitation.

The total amount of funds available for competition including funds for renewals of existing grants is expected to be approximately \$6,000,000 in FY 2009, subject to further appropriation of funds for FY 2009 by the Congress and other factors.

[1] Office of Science and Technology Policy (OSTP), Report of the Interagency Task Force on High Energy Density Physics (Chairs: C. Keane, D. Kovar, Executive Secretary: Y. C. F. Thio), National Science and Technology Council, Committee on Science, Interagency Working Group on the Physics of the Universe.

[2] Office of Science and Technology Policy (OSTP), Frontiers for Discovery in High Energy Density Physics, National Task Force on High Energy Density Physics (Chair: R. C. Davidson), July 20, 2004.

[3] R. Rosner and J. C. Browne, Summary of a Workshop on Opportunities for High Energy Density Laboratory Plasma Science, Argonne National Laboratory, May 23-24, 2007.  
[http://www.science.doe.gov/ofes/ProgramNews/Orbach-HEDLP-final\\_\(2\).pdf](http://www.science.doe.gov/ofes/ProgramNews/Orbach-HEDLP-final_(2).pdf)

## **2. Use of Experimental Facilities**

A significant objective of the OFES-NNSA HEDLP Joint Program is to support and grow the use of intermediate- and large-scale experimental facilities by the external scientific community at large. These include National Laboratory-based, university-based and industrial HED science experimental facilities.

For applicants who propose investigations requiring the use of either laboratory- or university-based experimental facilities, the applicant must make arrangements with the appropriate laboratory or university. Potential applicants are responsible for contacting the specific laboratory or university to discuss any facility-related activities and utilization, including availability of beam-time and appropriate diagnostics, shot schedule, support for target fabrication, etc. A letter from either the facility manager or program manager indicating 1) the level of communication between the Principal Investigator (PI) and facility management, 2) the feasibility of the proposed use of the facility, and 3) arrangements pursued regarding facility availability for this project must be included with the application. For some national user facilities, such as those operated by the Office of Basic Energy Sciences (BES), the applicant may need to compete in a separate user facility access solicitation. A description of BES national scientific user facilities can be found at <http://www.sc.doe.gov/bes/BESfacilities.htm>.

Budget requests supporting investigations at either laboratory- or university-based experimental facilities must include all incremental costs necessary to perform the proposed experiment above the facility’s baseline operational budget.

Examples of HED science experimental facilities include:

***Intermediate-scale facilities:***

Jupiter Laser Facility (LLNL): <http://jlf.llnl.gov/>

Contact: Andrew Ng,

JLF Science Director (925-423-4429, [ng1@llnl.gov](mailto:ng1@llnl.gov),

<http://jlf.llnl.gov>)

Don Correll, ILSA Director (925-422-6784, [correll1@llnl.gov](mailto:correll1@llnl.gov),

<http://ilsa.llnl.gov>)

Trident Laser Facility (LANL): <http://Trident.lanl.gov>

Principal Contact: David Montgomery: [montgomery@lanl.gov](mailto:montgomery@lanl.gov)

(505) 665-7994, 699-1070

Alternate contact: Randy Johnson: [rpjohnson@lanl.gov](mailto:rpjohnson@lanl.gov)

(505) 665-5089, 665-5575

Nevada Terawatt Facility (University of Nevada at Reno): <http://www.ntf.unr.edu/>

Contact: Joseph M. Kindel

Director

Email: [jkindel@unr.edu](mailto:jkindel@unr.edu)

Phone: 775-682-9706

Petawatt Laser Facility (University of Texas at Austin):

[http://www.ph.utexas.edu/~utlasers/texas\\_petawatt\\_files/texas\\_petawatt.htm](http://www.ph.utexas.edu/~utlasers/texas_petawatt_files/texas_petawatt.htm)

Contact: Todd Ditmire

Professor

The Texas Center for High Intensity Laser Science

Department of Physics

University of Texas

Mail Stop C1600

Austin, TX 78712

Phone: 512-471-3296

FAX: 512-471-8865

email: [tditmire@physics.utexas.edu](mailto:tditmire@physics.utexas.edu)

Cobra Pulsed Power Facility (Cornell University): <http://www.plasmacenter.cornell.edu/>

Contact: David Hammer

Professor

Electrical and Computer Engineering

327 Rhodes Hall, Cornell University, Ithaca, NY 14853

Tel: 607-255-3916

Fax: 607-255-9072

Laboratory of Plasma Studies

439 Rhodes Hall, Cornell University, Ithaca, NY 14853 Admin. Office: 607-255-4275;

Laboratory: 607-255-5162

Heavy Ion Beam Experimental Facility (LBNL): <http://hif.lbl.gov/VNLresearch.html>

Contact: Grant Logan

Director, Virtual National Laboratory for Heavy Ion Fusion Science

Lawrence Berkeley National Laboratory

1 Cyclotron Road

MS/47-112

Berkeley, CA 94720

Tel: (510) 486-7206

Email: [BGLogan@lbl.gov](mailto:BGLogan@lbl.gov)

***Large-scale facilities:***

National Ignition Facility (LLNL): <https://lasers.llnl.gov/>

Contact: Rokaya Al-Ayat

Director, NIF User Support Office

National Ignition Facility and Photon Science Lawrence Livermore National Laboratory L-580

Livermore, CA 94551

925-422-8467, [alayati@llnl.gov](mailto:alayati@llnl.gov)

Z Pulsed Power Accelerator (SNL): <http://zpinch.sandia.gov/>

Contact: John Porter, (505)845-7526

Omega Laser (Laboratory for Laser Energetics at the University of Rochester):

<http://www.lle.rochester.edu/>

Contact: John M. Soures

Manager, National Laser Users Facility

Laboratory for Laser Energetics

University of Rochester

250 East River Rd.

Rochester, NY 14623

(585)-275-3866 (phone)

(585)-275-5960 (FAX)

[jsou@lle.rochester.edu](mailto:jsou@lle.rochester.edu)

For the use of the Omega Laser Facility at the University of Rochester, a parallel solicitation for the National Laser User Facility (NLUF) is planned to request access. A link to this solicitation can be found on Grants.gov. A link will also be posted at [www.lle.rochester.edu](http://www.lle.rochester.edu).

Other facilities of relevance to the solicitation include:

Los Alamos Neutron Science Center (LANL): <http://lansce.lanl.gov/>, (Proton Radiography, Weapons Nuclear Research, and Lujan Neutron Scattering Center)

Contacts: Kurt Schoenberg, [kurts@lanl.gov](mailto:kurts@lanl.gov), 505 667 5051

Leilani Conradson, [leilani@lanl.gov](mailto:leilani@lanl.gov), 505 665 9505,

[lansce\\_users@lanl.gov](mailto:lansce_users@lanl.gov)

Shiva Star Pulsed Power Facility

Air Force Research Laboratory, Kirtland AFB, Albuquerque, NM

Contact: James Degnan, (505) 846-1235, [james.degnan@kirtland.af.mil](mailto:james.degnan@kirtland.af.mil)

Principal Physicist and Team Leader of the High Current Pulsed Power Team, AFRL/RDHP

NIKE Laser Facility, Naval Research Laboratory, <http://other.nrl.navy.mil/>

Contact:

Victor Serlin

Naval Research Laboratory, Code 6731,

4555 Overlook Ave, S.W., Washington DC 20375

tel. (202) 767-0678, fax (202) 767-0046

Email: [serlin@this.nrl.navy.mil](mailto:serlin@this.nrl.navy.mil)

## **PART II – AWARD INFORMATION**

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

DOE anticipates awarding new and renewal grants and cooperative agreements under this program announcement.

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

Research Grant Awards (typically single-investigator projects) are expected to be made for a period of one to three years at a funding level appropriate for the proposed scope, with out-year support contingent on the availability of funds and satisfactory progress, though applications may request support for up to five years. Comprehensive, multi-disciplinary and multi-investigator Centers of Excellence are for five-year projects, managed as cooperative agreements with NNSA/DP or OFES. Applications for new Centers or for the renewal of existing Centers may be submitted under this solicitation. In addition, consideration will be given to multi-institution consortia proposing Grand Challenge investigations advancing the state-of-the-art in the technical themes identified in Section 1/Part I of this solicitation and, as appropriate, culminating in the use of large-scale HEDP facilities (such as NIF, Z, and Omega), or intermediate-scale facilities.

Funding of Research Grant Awards, typically a few hundred thousand dollars per year, will be managed as Research Grants. Centers of Excellence, with funding ranging from approximately \$1,000,000 to \$3,000,000 per year, will be managed under a negotiated cooperative agreement with substantial involvement by NNSA/DP or OFES.

OFES and NNSA reserve the right not to make any awards if no application is judged to be of suitable scientific quality or of sufficient relevance to the programs described in Section 1. The cost-effectiveness of the application will be considered when comparing applications with differing funding requirements. Previous awards have ranged from approximately \$50,000 to \$1,000,000 per year in similar areas, typically less than \$500,000 per year. A single award or multiple awards may be made depending on the number and quality of the applications received and favorably reviewed. If multiple awards are made, it is anticipated that award sizes may range from \$25,000 to \$1,000,000 per year, typically less than \$500,000 per year.

### **C. MAXIMUM AND MINIMUM AWARD SIZE.**

See B. Estimated Funding section above.

### **D. EXPECTED NUMBER OF AWARDS.**

See B. Estimated Funding section above.

### **E. ANTICIPATED AWARD SIZE.**

See B. Estimated Funding section above.

## **F. PERIOD OF PERFORMANCE.**

See B. Estimated Funding section above.

## **G. TYPE OF APPLICATION.**

DOE will accept new and renewal applications under this Announcement. Renewal applications compete with all other applications. In preparing a renewal application, applicants should assume that reviewers will not have access to previous applications. The application should be developed as fully as though the applicant were applying for the first time. The application must include all the information required for a new project, plus the project narrative section should discuss the results from prior work.

## **Collaboration**

Collaborative research projects involving more than one institution are encouraged. Applications submitted from different institutions, which are directed at a common research activity, should clearly indicate they are part of a proposed collaboration and contain a brief description of the overall research project, and include Letters of Coordination from the collaborative partners. However, each application must have a distinct scope of work and a qualified principal investigator, who is responsible for the research effort being performed at his or her institution. Further information on preparation of collaborative applications may be accessed via the Internet at: <http://www.science.doe.gov/grants/Colab.html>.

## **Additional Information**

In selecting applications for funding, priority will be given to applications that can produce experimental results within three to four years after grant initiation. Theoretical research will be accepted for consideration under this Notice when bundled with and in support of an experimental application. Preferred applications in this category would typically have a performance period of, but not limited to, three or four years.

Applications concerned with scientific assessment, theoretically and/or computationally, of new concepts or approaches that are not ready for experimental investigation should have a well-defined scope. The product of such assessment would be a clear scientific description of the concept and its operation, its physics and engineering basis, critical analysis of major difficulties to be overcome in developing the concept, and an analysis of what would be achieved by moving to experimental research. Applications in this category should propose research with a performance period of, but not limited to, one or two years. Applications in this category with a funding request between \$25,000 and \$50,000 are particularly welcome.

For important information on the format of the application, please see “Part IV Application and Submission Information.”

## **PART III – ELIGIBILITY INFORMATION**

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

All types of applicants 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.

A companion Program Announcement to DOE Laboratories (LAB08-16) will be posted on the Office of Science Grants and Contracts web site at:

[http://www.science.doe.gov/grants/LAB08\\_16.html](http://www.science.doe.gov/grants/LAB08_16.html).

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

Cost sharing is not required.

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

This program is covered under Title XX through XXIII of the Energy Policy Act (EPACT) of 1992 (See Part III. C, Other Eligibility Requirements). If an applicant is a business entity other than an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954, it must provide an EPACT Representation if the amount of Federal funds requested is more than \$100,000. The EPACT Representation form is on the Applicant and Recipient Page at [http://management.energy.gov/business\\_doe/business\\_forms.htm](http://management.energy.gov/business_doe/business_forms.htm).

Submission of an electronic application through Grants.gov constitutes the submission of a signed document. The person responsible for providing the representation does not need to sign the document. Type their name in the signature block and save as a .pdf file. Do not submit a scanned copy of the form. Name the file “EPACT.pdf,” and click on “Add Optional Other Attachment” to attach.

State, local, and tribal governments, as well as 501(c)(3) organizations, do not need to complete an EPACT representation form.

## 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 announcement and then follow the prompts to download the application package.

### B. LETTER OF INTENT AND PREAPPLICATION

#### 1. Letter of Intent.

**LETTER OF INTENT DUE DATE: August 18, 2008**

**A Letter-of-Intent (LOI) to submit an application is REQUIRED and should be submitted by August 18, 2008. Failure to submit a LOI by an applicant may preclude the full application from due consideration.** Electronic submission of the LOI and the formal application in PDF format is required. It is important that the submission be in a single PDF file. The LOI should clearly indicate the research area or areas identified in Section 1/Part I the application is responding to. The LOI should be submitted electronically by E-mail to [John.Sauter@science.doe.gov](mailto:John.Sauter@science.doe.gov), with a copy to [Francis.Thio@science.doe.gov](mailto:Francis.Thio@science.doe.gov) and [Allan.Hauer@nnsa.doe.gov](mailto:Allan.Hauer@nnsa.doe.gov). Please include "Letter of Intent for Notice DE-PS02-08ER08-16" in the subject line.

The purpose of the LOI is to facilitate the OFES and NNSA in planning the review and the selection of potential reviewers for the Application. For this purpose, the LOI must include a one-page abstract of the proposed research, and list the names and institutional affiliations of Principal Investigators, any Co-Principal Investigators, key investigators, collaborators, or consultants, so as to reveal any potential conflict of interest in the selection of reviewers for the application. For proposed investigations requiring access to experimental user facilities, confirmation of communication with the facility's point-of-contact should be indicated in the LOI.

#### 2. Preapplication.

Preapplications are not required.

### 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 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. To activate the instructions, turn on the “Help Mode” (Icon with the pointer and question mark at the top of the form). The list of certifications and assurances referenced in Field 18 can be found on the Applicant and Recipient Page at [http://management.energy.gov/business\\_doe/business\\_forms.htm](http://management.energy.gov/business_doe/business_forms.htm), under Certifications and Assurances.

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

Complete questions 1 through 5 and attach files. The files must comply with the following instructions:

**Project Summary/Abstract (Field 6 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), 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 7 on the form)**

Since we expect that some reviewers will be asked to review several applications, the project narrative should be limited to a **maximum of thirty (30) pages** of technical information, including text and figures, when printed using standard 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right) and font not smaller than 11 point. Applications from large groups (those requesting funding of \$1,000,000 per year or more) and whose scope of work includes more than one area of interest should be structured in a way that facilitates separate reviewing. This objective can be accomplished by breaking the *Background and Recent Accomplishments* and *Proposed Research and Tasks* sections of the narrative (as described below) into self-contained parts which can then be assigned to be reviewed by peer-reviewers whose areas of expertise are well-matched to the main focus of each proposed research task. The project narrative for large groups should be limited to 30 pages per area of interest.

The page count of 30 does not include the Face Page and Budget Pages, the Title Page, the biographical material and publication information, or any Appendices. However, it is important that the 30-page technical information section provide a complete description of the proposed work, since reviewers are not obliged to read the Appendices. Applications exceeding these page limits may be rejected without review. **The Abstract, Narrative, and Budget Justification should each be one**

**PDF file attachment.** The PDF file may also include a few selected publications in an Appendix as background information. In addition, in the electronic submission, please limit biographical and publication information for the principal investigator and senior personnel to no more than two pages each. Letters 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. Each principal investigator should provide an E-mail address. To attach a Project Narrative, click “Add Attachment.”

**The first page of your narrative must 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-PS02-08ER08-16

**DOE/Office of Science Program Office:** Office of Fusion Energy Sciences

**DOE/Office of Science Program Office Technical Contact:** Dr. Francis Thio

**DOE Grant Number (if Renewal Application)**

**Research area or areas (as identified in Part I, Section 1 (A) or Section 1 (B))**

Is this a Collaboration? If yes, please list ALL Collaborating Institutions/Pis\* and indicate which ones will also be submitting applications. Also indicate the PI who will be the point of contact and coordinator for the combined research activity.

\* Note that collaborating applications must be submitted separately.

**The project narrative must include the following sections:**

Executive Summary

Summarize the application in no more than two pages

Background and Recent Accomplishments

- Background – explanation of the importance and relevance of the proposed work
- Recent Accomplishments - this subsection is mandatory for renewal applications and should summarize the proposed work and the actual progress made during the previous funding period.

Proposed Research and Tasks

*In addition to the technical description of the proposed work and tasks, include a discussion of the following:*

- Plans for comparison with experimental measurements where appropriate

- Plans for verification and validation of computer codes where appropriate
- Impact of the proposed research on other fields of science, if appropriate
- Project schedules, milestones and deliverables

Management plan (for groups of large size), including work breakdown structure showing the level of effort for each task.

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 sketch appendix will not count in the project narrative page limitation. The biographical information for each person must not exceed 2 pages when printed on 8.5” by 11” paper with 1 inch margins (top, bottom, left, and right) with font not smaller than 11 point and must include:

*Education and Training.* Undergraduate, graduate and postdoctoral training, provide institution, major/area, degree and year.

*Research and Professional Experience:* Beginning with the current position list, in chronological order, professional/academic positions with a brief description.

*Publications.* Provide a list of up to 10 publications most closely related to the proposed project. For each publication, identify the names of all authors (in the same sequence in which they appear in the publication), the article title, book or journal title, volume number, page numbers, year of publication, and website address if available electronically.

Patents, copyrights and software systems developed may be provided in addition to or substituted for publications.

*Synergistic Activities.* List no more than 5 professional and scholarly activities related to the effort proposed.

Current and Pending Support Appendix.

List all current and pending support for each key person. 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. 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.

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 5 years. Also, list the names and current organizational affiliations of your graduate students and postdoctoral associates during the past 5 years.

**Bibliography & References Cited Appendix (Field 8 on the form)**

Provide a bibliography of any references cited in the Project Narrative. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Include only bibliographic citations. Applicants should be especially careful to follow scholarly practices in providing citations for source materials relied upon when preparing any section of the application. **In order to reduce the number of files attached to your application, please provide the Bibliography and References Cited information as an appendix to your project narrative. Do not attach a file in field 8.** This appendix will not count in the project narrative page limitation.

**Facilities & Other Resources Appendix (Field 9 on the form)**

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. **In order to reduce the number of files attached to your application, please provide the Facility and Other Resource information as an appendix to your project narrative. Do not attach a file in field 9.** This appendix will not count in the project narrative page limitation.

**Equipment Appendix (Field 10 on the form)**

List major items of equipment already available for this project and, if appropriate identify location and pertinent capabilities. **In order to reduce the number of files attached to your application, please provide the Equipment information as an appendix to your project narrative. Do not attach a file in field 10.** This appendix will not count in the project narrative page limitation.

**Other Attachment Appendix (Field 11 on the form)**

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. Do not attach a file in field 11.**

**3. RESEARCH AND RELATED BUDGET.**

Complete the Research and Related Budget form in accordance with the instructions on the form (Activate Help Mode to see instructions) and the following instructions. You must complete a separate budget for each year of support requested. The form will generate a cumulative budget for the total project period. You must complete all the mandatory information on the form before the NEXT PERIOD button is activated. You may request funds under any of the categories listed as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allowability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this announcement (See 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 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 (See Section IV.D for submission of Subawardees’ multi-year budgets). 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. Note: Subawardees must have installed PureEdge Viewer before they can complete the form. 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. 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."

**6. EPACT Representation File**

This program is covered under Title XX through XXIII of the Energy Policy Act (EPACT) of 1992 (See Part III. C, Other Eligibility Requirements). If an applicant is a business entity other than an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954, it must provide an EPACT Representation if the amount of Federal funds requested is more than \$100,000. The EPACT Representation form is on the Applicant and Recipient Page at [http://management.energy.gov/business\\_doe/business\\_forms.htm](http://management.energy.gov/business_doe/business_forms.htm). Submission of an electronic application through Grants.gov constitutes the submission of a signed document. The person responsible for providing the representation does not need to sign the document. Type their name in the signature block and save as a pdf file. Do not submit a scanned copy of the form. Name the file “EPACT.pdf,” and click on “Add Optional Other Attachment” to attach.

State, local, and tribal governments, as well as 501(c)(3) organizations, do not need to complete an EPACT representation form.

**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>	PureEdge Form	N/A
<b>RESEARCH AND RELATED Other Project Information</b>	PureEdge Form	N/A
Project Summary/Abstract	PDF	Field 6
Project Narrative, including required appendices	PDF	Field 7
<b>RESEARCH &amp; RELATED BUDGET</b>	PureEdge Form	N/A
Budget Justification	PDF	Field K

#### **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. Preapplication Due Date.**

Preapplications are not required.

##### **2. Letter of Intent Due Date.**

A Letter-of-Intent (LOI) to submit an application is REQUIRED and should be submitted by August 18, 2008. Eastern Standard Time. Failure to submit a Letter-of-Intent by an applicant may preclude the full application from due consideration. (See Part IV.B.1)

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

Formal applications submitted in response to this Announcement must be received by September 11, 2008, 8 PM Eastern Time. Applications must be submitted using [Grants.gov](http://Grants.gov). The Funding Opportunity Announcement can be found using the Funding Opportunity Announcement number, DE-PS02-08ER08-16. Applicants must follow the instructions and use the forms provided on Grants.gov. **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. GOVERNMENTAL 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.

Pre-award Costs. Recipients may charge to an award resulting from this announcement pre-award costs that were incurred within the ninety (90) calendar day period immediately preceding the effective date of the award, if the costs are allowable in accordance with the applicable

Federal cost principles referenced in 10 CFR 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 (See [www.grants.gov/GetStarted](http://www.grants.gov/GetStarted)). **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.doc> 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).

### 3. Application Receipt Notices

After an application is submitted, the Authorized Organization Representative (AOR) will receive a series of five 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. You will know that your application has reached DOE when the AOR receives email Number 5. You will need the Submission Receipt Number (email Number 1) to track a submission. The titles of the five 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
- Number 5 – DOE e-Center Grant Application Received

The last email will contain instructions for the AOR to register with the DOE e-Center. If the AOR is already registered with the DOE e-Center, the title of the last email changes to:

Number 5 – DOE e-Center Grant Application Received and Matched

This email will contain the direct link to the application in IIPS. The AOR will need to enter their DOE e-Center user id and password to access the application.

## 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 formal merit review and will be evaluated against the following criteria, which are listed in descending order of importance as set forth in 10 CFR Part 605. (<http://www.science.doe.gov/grants/605index.html>). Included with each criteria are the detailed questions that will be asked of the reviewers.

##### **Scientific and/or Technical Merit of the Proposed Research**

- Discuss and assess the importance of the research being proposed in the relevant field of science (one or more of the research areas identified in Section 1 of Part I).
- Does the Application clearly identify the scientific objectives and/or the scientific issues of the proposed research? Comment on the significance of the scientific objectives and/or the issues identified.
- What is the likelihood that it will lead to new or fundamental advances in its field? Comment on the potential impact of the expected findings on the development in its field (one or more of the research areas identified in Section 1 of Part I).

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

- Are the conceptual framework, proposed methods, and analyses sound and adequately developed and likely to lead to scientifically valid conclusions?
- To what extent does the applicant recognize significant potential problems and consider alternative strategies?
- Comment on the effectiveness of the proposed research efforts in addressing the scientific issues and/or objectives of the proposed research.

##### **Competency of Applicant's Personnel and Adequacy of Proposed Resources**

- How well qualified are the applicant's personnel to carry out the proposed research? (If appropriate, please comment on the scientific reputation and quality of recent research by the principal investigators and other key personnel.)
- Please comment on the applicant's research environment and resources.
- Does the proposed work take advantage of unique facilities and capabilities and/or make good use of collaborative arrangements?

### **Reasonableness and Appropriateness of the Proposed Budget**

- Is the proposed budget and staffing levels adequate to carry out the proposed research?

### **Performance under the Existing Award**

- Assess the progress the applicants made toward the research goals during the most recent performance period (last funding cycle) and the impact of the research in the relevant area of science.
- Have the applicants disseminated the results of their research through publications in peer-reviewed journals, meeting and conference presentations, workshops, or other appropriate means?
- If appropriate, have the applicants attempted to compare experimental results against theoretical predictions?

### **Other Appropriate Factors**

- Could the proposed research make a significant contribution to another field?
- Is there potential for spin-offs?
- If applicable, please comment on the educational benefits of the proposed activity.

The OFES and NNSA will also consider, as part of the evaluation, other available advice or information as well as program policy factors such as ensuring an appropriate balance among the program areas and within the program areas, coupling to the theory and computational efforts, and quality of previous performance. Selection of applications for award will be based upon the findings of the technical evaluations, the importance and relevance of the proposed research to the OFES and NNSA's missions in high energy density laboratory plasmas and stockpile stewardship, and funding availability. Funding under this Notice is limited to supporting research activities based in the U.S., though subcontracts with limited funding for collaborators outside the U.S. may be allowed with appropriate justifications.

## **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.science.doe.gov/grants/merit.html>

### **2. Selection.**

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

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

The Government may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) the Government needs additional information to determine that the recipient is capable of complying with the requirements in 10 CFR 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.**

It is anticipated that project selection will be completed by February 28, 2009.

## **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.**

A Notice of Financial Assistance Award issued by the contracting officer is the authorizing award document. It normally includes, either as an attachment or by reference: 1. Special Terms and Conditions; 2. Applicable program regulations, if any; 3. Application as approved by DOE; 4. DOE assistance regulations at 10 CFR Part 600, or, for Federal Demonstration Partnership (FDP) institutions, the FDP terms and conditions; 5. National Policy Assurances to Be Incorporated As Award Terms; 6. Budget Summary; and 7. Federal Assistance Reporting Checklist, which identifies the reporting requirements.

### **B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS.**

#### **1. Administrative Requirements.**

The administrative requirements for DOE grants and cooperative agreements are contained in 10 CFR Part 600 and 10 CFR Part 605 (See: <http://ecfr.gpoaccess.gov>), except for grants made to Federal Demonstration Partnership (FDP) institutions. The FDP terms and conditions and DOE FDP agency specific terms and conditions are located on the National Science Foundation web site at [http://www.nsf.gov/awards/managing/fed\\_dem\\_part.jsp](http://www.nsf.gov/awards/managing/fed_dem_part.jsp).

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

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

The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements are located at [http://management.energy.gov/business\\_doe/business\\_forms.htm](http://management.energy.gov/business_doe/business_forms.htm). The National Policy Assurances to Be Incorporated As Award Terms are located at [http://management.energy.gov/business\\_doe/business\\_forms.htm](http://management.energy.gov/business_doe/business_forms.htm).

##### **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](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 announcement must be submitted through the “Submit Question” feature of the DOE Industry Interactive Procurement System (IIPS) at <http://e-center.doe.gov>. Locate the program announcement on IIPS and then click on the “Submit Question” button. Enter required information. You will receive an electronic notification that your question has been answered. DOE will try to respond to a question within 3 business days, unless a similar question and answer have already been posted on the website.

Questions 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:**

#### **GENERAL INQUIRIES ABOUT THIS NOTICE SHOULD BE DIRECTED TO:**

**PROGRAM MANAGER:** Dr. Francis Thio, Office of Fusion Energy Sciences

**PHONE:** (301) 903- 4678

**FAX:** (301) 903- 1225

**E-MAIL :** [Francis.Thio@science.doe.gov](mailto:Francis.Thio@science.doe.gov)

**PROGRAM MANAGER:** Dr. Allan Hauer, National Nuclear Security Administration

**PHONE:** (202) 586-4797

**E-MAIL:** [Allan.Hauer@nnsa.doe.gov](mailto:Allan.Hauer@nnsa.doe.gov)

## **PART VIII - OTHER INFORMATION**

### **A. MODIFICATIONS.**

Notices of any modifications to this announcement will be posted on Grants.gov and the DOE Industry Interactive Procurement System (IIPS). You can receive an email when a modification or an announcement message is posted by joining the mailing list for this announcement through the link in IIPS. When you download the application at Grants.gov, you can also register to receive notifications of changes through Grants.gov.

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

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

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

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

### **D. PROPRIETARY APPLICATION INFORMATION.**

Patentable ideas, trade secrets, proprietary or confidential commercial or financial information, disclosure of which may harm the applicant, should be included in an application only when such information is necessary to convey an understanding of the proposed project. The use and disclosure of such data may be restricted, provided the applicant includes the following legend on the first page of the project narrative and specifies the pages of the application which are to be restricted:

“The data contained in pages \_\_\_\_\_ 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 announcement, in advance of or within 30 days after the effective date of the award. Even if such advance waiver is not requested or the request is denied, the recipient will have a continuing right under the award to request a waiver of the rights of the United States in identified inventions, i.e., individual inventions conceived or first actually reduced to practice in performance of the award. Any patent waiver that may be granted is subject to certain terms and conditions in 10 CFR 784.

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. REFERENCE MATERIAL**

N/A