

**FINANCIAL ASSISTANCE  
FUNDING OPPORTUNITY ANNOUNCEMENT**



**U.S. Department of Energy  
Office of Science**

**Submission of Supplemental Applications for  
Phase II SBIR/STTR Grants**

**Funding Opportunity Number: DE-FOA-0000344**

**Announcement Type: Initial**

**CFDA Number: 81.049**

**Issue Date: April 19, 2010**

**Letter of Intent Due Date: Not Applicable**

**Pre-Application Due Date: Not Applicable**

**Application Due Date: May 18, 2010, 8:00 p.m. EDST**

## **Eligible Applicants:**

Only currently active DOE SBIR or STTR Phase II grantees that have written approval from their DOE Project Officer are eligible to apply for supplemental funding. Satisfactory completion of at least one (1) year of the current Phase II project is required in order to submit a supplemental request for funding. There must be at least 90 days remaining in the period of performance for the Phase II project at the time of the award. There is no resubmission at a later date if a supplemental application is declined.

Applicants are required to use the compatible version of Adobe Reader software to complete a [Grants.gov](http://www.grants.gov) Adobe application package. To ensure you have the [Grants.gov](http://www.grants.gov) compatible version of Adobe Reader, visit the download software page at [http://www.grants.gov/help/download\\_software.jsp](http://www.grants.gov/help/download_software.jsp)

## **NOTE: REQUIREMENTS FOR GRANTS.GOV**

### **Where to Submit:**

Applications must be submitted through [Grants.gov](http://www.grants.gov) to be considered for award. You cannot submit an application through [Grants.gov](http://www.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](http://www.grants.gov) Helpdesk at 1-800-518-4726 to verify that you are still registered in [Grants.gov](http://www.grants.gov).

### **Registration Requirements:**

There are several one-time actions you must complete in order to submit an application through [Grants.gov](http://www.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](http://www.grants.gov)). See <http://www.grants.gov/GetStarted>. Use the [Grants.gov](http://www.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 with [Grants.gov](http://www.grants.gov), should allow at least 21 processing 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](http://www.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](http://www.grants.gov) at 1-800-518-4726 or [support@grants.gov](mailto:support@grants.gov). The U. S. Department of Energy (DOE) cannot answer these

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

Questions regarding the content of the FOA must be submitted through the [FedConnect](#) portal at [www.fedconnect.net](http://www.fedconnect.net). 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 three business days, unless a similar question and answer have already been posted on the website.

### **Modifications**

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

<http://www.fedconnect.net> and

<http://www.compusearch.com/products/fedconnect/fedconnect.asp>.

### **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

## **TABLE OF CONTENTS**

### **PART I – FUNDING OPPORTUNITY DESCRIPTION**

### **PART II – AWARD INFORMATION**

- A. Type of Award Instrument**
- B. Estimated Funding**
- C. Expected Number of Awards**
- D. Anticipated Award Size**
- E. Period of Performance**
- F. Type of Application**

### **PART III – ELIGIBILITY INFORMATION**

- A. Eligible Applicants**
- B. Cost Sharing**
- C. Other Eligibility Requirements**

### **PART IV – APPLICATION AND SUBMISSION INFORMATION**

- A. Address to Request Application Package**
- B. Letter of Intent and Pre-Application**
- C. Content and Form of Application**
- D. Submissions from Successful Applicants**
- E. Submission Dates and Times**
- F. Intergovernmental Review**
- G. Funding Restrictions**

### **PART V – APPLICATION REVIEW INFORMATION**

- A. Criteria**
- B. Review and Selection Process**
- C. Anticipated Notice of Selection and Award Dates**

### **PART VI – AWARD ADMINISTRATION INFORMATION**

- A. Award Notices**
- B. Administrative and National Policy Requirements**
- C. Reporting**

### **PART VII – QUESTIONS/AGENCY CONTACTS**

- A. Questions**
- B. Agency Contacts**

### **PART VIII – OTHER INFORMATION**

- A. Modifications**
- B. Government Right to Reject or Negotiate**
- C. Commitment of Public Funds**
- D. Proprietary Application Information**

- E. Evaluation and Administration by Non-Federal Personnel**
- F. Intellectual Property Developed under this Program**
- G. Notice of Right to Request Patent Waiver**
- H. Notice Regarding Eligible/Ineligible Activities**

## **PART I – FUNDING OPPORTUNITY DESCRIPTION**

The Department of Energy (DOE) announces an opportunity for currently active DOE SBIR and STTR Phase II grantees that were awarded Phase II grants in response to the 2007 Phase II Funding Opportunity Announcement (DE-FG02-07ER07-17) and 2008 Phase II Funding Opportunity Announcement (DE-PS02-08ER08-17) to request supplemental funding for their Phase II research projects. Applicants must have already satisfactorily completed at least 1 year of their Phase II research project and must be formally invited by their DOE Project Officer to submit a request for supplemental funds to support their existing Phase II project. Proof of DOE Project Officer approval is required as part of the Project Narrative in the Supplemental Grant Application.

Two types of supplemental applications may be submitted:

**Type 1:** If the recipient is requesting financial support for a new task or activity to be added to the existing Phase II grant: The additional work must be in line with the original scope of work. These applications will undergo merit review.

**Type 2:** If the recipient needs additional funds:

1. for increased costs that could not have been predicted when the application was originally approved; or
2. to increase the level of effort or accelerate the project to prepare for commercialization with no change to the project description as contained in the approved application. These applications will be reviewed for approval by the technical DOE Project Officer assigned to the original Phase II grant.

The supplemental funding for either Type 1 or 2 may extend the Phase II grant for only one (1) year and the combined Phase II and supplemental award should typically not exceed three (3) years duration unless an unforeseen delay is encountered.

Submission to DE-FOA-0000344 will require completion of the Grants.gov Research & Related forms. The application package is attached to the Funding Opportunity Announcement. Since the SF-424 (R&R) form has no specific section on the form that requests the grant number, please enter the grant number into block #4 (Federal Identifier) and the type of submission (supplemental) following it.

## **PART II – AWARD INFORMATION**

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

DOE anticipates awarding grant amendments under this FOA.

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

About \$1,000,000 of the FY 2010 SBIR/STTR budget will be allocated to this supplemental Phase II FOA. The government is under no obligation to make any supplemental awards.

### **C. EXPECTED NUMBER OF AWARDS.**

DOE anticipates this supplemental Phase II FOA will result in approximately four (4) supplemental Phase II awards. DOE will only make awards under this FOA if the work is desired, of high quality, and approved by the DOE Project Officer of the Phase II grant.

### **D. ANTICIPATED AWARD SIZE.**

Up to \$250,000 or the dollar difference between \$1,000,000 and the dollar amount of the awarded Phase II project for up to 12 months. The total amount funded by DOE for Phase II including the supplemental work must not exceed \$1,000,000.

### **E. PERIOD OF PERFORMANCE.**

DOE anticipates that supplemental awards will typically not exceed 12 months.

### **F. TYPE OF APPLICATION.**

DOE is accepting supplemental applications under this FOA. Supplemental applications are requests for additional funding for the current project period or for a period subsequent to that provided by a current award. Supplemental applications are subject to a technical evaluation, are selected through a competitive process, and must be submitted by an established due date/deadline.

## **PART III - ELIGIBILITY INFORMATION**

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

Only currently active DOE SBIR or STTR Phase II grantees that have written approval from their DOE Project Officer are eligible to apply for supplemental funding. Satisfactory completion of at least 1 year of the current Phase II project is required in order to submit a supplemental request for funding. There must be at least 90 days remaining in the period of performance for the Phase II project at the time of the award.

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

Cost sharing is not required.

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

The research or R&D must be performed in the United States for both Phases I and II. "United States" means the 50 states, the territories, and possessions of the United States, the Commonwealth of Puerto Rico, the Trust Territory of the Pacific Islands, and the District of Columbia. Non-U.S. citizens are eligible to perform work on SBIR/STTR projects provided they are legally empowered to work in the U.S. at the time that an award is made.

#### **a. Restrictions on Submitting Applications:**

Applications for Phase II supplemental funding must be submitted during this current review cycle and must be submitted to the same technical topic/subtopic for which the Phase I award was made.

#### **b. Restrictions on the Level of Small Business Participation:**

- i. **SBIR** – As with the original Phase II award, at least 50 percent of the research or analytical effort of the supplemental award must be performed by the small business. Accordingly, at least 50 percent of the total funding requested on the budget form, excluding any purchased or leased equipment, materials, and supplies (whether purchased by the applicant or a subcontractor), must be allocated to the small business. The required level of effort must be met for both the entire Phase II effort and the supplemental portion.
- ii. **STTR** - STTR awards will be made to small businesses for cooperative R&D to be conducted jointly with a research institution. At least 40 percent of the work must be performed by the small business, and at least 30 percent of the work must be performed by a single research institution. The research institution must be the same as previously approved in the Phase II award. Accordingly, at least 40 percent of the total funding requested on the budget form, excluding any purchased or leased equipment, materials, and supplies (whether purchased by the applicant, the research institution, or a subcontractor), must be allocated to the small business, and at least 30 percent must be allocated to a research institution. The required

level of effort must be met for both the entire Phase II effort and the supplemental portion.

A Level of Effort worksheet is provided to assist in calculating the analytical effort for the project.

**c. Restrictions on the Principal Investigator (PI):**

- i. General PI Requirements and Restrictions – The PI is the key individual designated by the applicant to direct the project. The PI must be knowledgeable in all technical aspects of the grant application and be capable of leading the research effort. Because DOE's evaluation of the grant application is critically dependent on the qualifications of the PI, changes in the PI that are made after award selection are strongly discouraged. Requests for PI changes will be closely scrutinized and may cause delays in grant execution. In addition, the PI must devote a minimum of 5 hours per week to the supplemental portion of Phase II in addition to the hours previously certified to in the initial Phase II award. If the application is selected for funding, the PI will be required to sign a statement certifying adherence to all PI requirements. Applicants must state the duration of the project in weeks, in order to make clear that this requirement is fully met.

In order to ensure appropriate technical guidance for the project, only one PI will be accepted per project. Processing of applications that include co-PIs may be delayed while the error is corrected by the applicant. Before a grant is awarded, the PI will be required to sign a statement certifying adherence to these requirements. Non-U.S. citizens are eligible to perform work on SBIR/STTR projects provided he/she is legally empowered to work in the U.S. at the time that an award is made.

- ii. Additional PI Restrictions when submitting to SBIR – To be awarded an SBIR grant, the applicant must meet the general requirements and the PI's primary employment must be with the small business at the time of award and during the conduct of the proposed research. Primary employment means that no less than 20 hours per week is spent in the employment of the small business during the conduct of the project and no more than 19 hours per week spent in the employment of another organization.
- iii. Additional PI Restrictions when submitting to STTR – To be awarded an STTR grant, the applicant must meet the general requirements and the PI's primary employment may be with the small business or the research institution. However, the small business must still provide technical control and oversight of the project. If the PI is employed by the research institution, his or her primary employment (at least 20 hours per week) must be with the research institution, in order to qualify under STTR.

**d. Restrictions on the Level of Small Business Participation:**

For both SBIR and STTR, there are requirements on the amount of the research or analytical effort that must be performed by the small business in order to be selected for

and to receive a grant. The research or analytical effort is defined as the total requested funding minus the cost of any purchased or leased equipment, materials, and supplies (whether purchased by the applicant, a research institution, or by any other subcontractor). A Level of Effort worksheet may be found at [http://www.sc.doe.gov/sbir/solicitations/FYpercent202008/level\\_of\\_effort.doc](http://www.sc.doe.gov/sbir/solicitations/FYpercent202008/level_of_effort.doc) or [http://www.sc.doe.gov/sbir/solicitations/FYpercent202008/level\\_of\\_effort.xls](http://www.sc.doe.gov/sbir/solicitations/FYpercent202008/level_of_effort.xls) to assist you in assuring the application is in compliance. Work performed by a consultant, a DOE national laboratory, or any other subcontractor, will be considered as external to the applicant organization when complying with these requirements.

e. **Restrictions on the Management of SBIR/STTR Projects:**

All SBIR and STTR funding agreements are made with the Small Business regardless of the proportion of the work or funding of each of the performers (small business, research institution, subcontractor, etc.) under the grant. As the primary recipient, the small business has the overall responsibility of the project, including financial management and the direction and control of the performance. For STTR projects, where the principal investigator is from the research institution, the small business will maintain the overall supervision of the project, while the principal investigator will manage the research portion of the project.

It is recommended that all agreements between the small business and any subcontractor (including the research institution collaborating in a STTR project) reflect the controlling management position of the small business during the performance of the Phase I and/or Phase II. This includes, but is not limited to, any business plan concerning agreements and responsibilities between the parties or for the commercialization of the resulting technology.

## PART IV – APPLICATION AND SUBMISSION INFORMATION

### A. ADDRESS TO REQUEST APPLICATION PACKAGE.

Application forms and instructions are available at [Grants.gov](http://www.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 FOA and then follow the prompts to download the application package.

### B. LETTER OF INTENT AND PRE-APPLICATION

- a. **Letter of Intent.** Letters of Intent are not required.
- b. **Pre-application.** Pre-applications are not required.

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

Applicants must complete the mandatory forms 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.

- a. **SF 424 (R&R). [MANDATORY]**  
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 17 can be found on the DOE Financial Assistance Forms Page at [http://www.management.energy.gov/business\\_doe/business\\_forms.htm](http://www.management.energy.gov/business_doe/business_forms.htm), under Certifications and Assurances.
- b. **RESEARCH AND RELATED Other Project Information. [MANDATORY]**  
Complete questions 1 through 6. The files must comply with the following instructions:
- c. **Project Summary/Abstract (Field 7 on the Form). [MANDATORY]**  
The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the public and should be no longer than three paragraphs in length.
- d. **Project Narrative (Field 8 on the form). [MANDATORY]**  
The project narrative shall not exceed **15 pages** and must include written approval to apply from the DOE Project Officer. The supplemental work must fall within the scope of the present Phase II project. The project narrative must contain the following:
  - 1. an executive summary of the Commercialization Plan
  - 2. a discussion of the new R&D activities, if applicable
  - 3. an updated milestone chart, if applicable

4. a listing of key personnel including qualifications and a description of their involvement in the supplemental work an explanation of the need for additional funding
- e. **Bibliography & References Cited (Field 9 on the form).**  
Include this information, if any, in the project narrative. Do not attach a file in this field.
- f. **Facilities & Other Resources (Field 10 on the form).**  
Include this information, if any, in the project narrative. Do not attach a file in this field.
- g. **Equipment (Field 11 on the form).**  
Include this information, if any, in the project narrative. Do not attach a file in this field.
- h. **Other Attachments (Field 12 on the form).**  
If you need to elaborate on your responses to questions 1-5 on the “Other Project Information” document, provide the information in a single file named “projinfo.pdf.” Click on “Add Attachments” in Field 12 to attach file.

**Also, attach the following files:** Letters of Commitment, if any, from consultants, subcontractors or other third parties. The letters must include a breakdown of costs (labor, materials, supplies, travel, etc.) and be signed by the consultant or subcontractor or authorizing party, certifying their availability and salary (for consultants). Note: Consultants are not employees of either the small business or any subcontractor.

- i. **RESEARCH AND RELATED BUDGET. [MANDATORY]**  
You must provide a budget for the support requested. Applicants may request funding of up to \$250,000 or the dollar difference between \$1,000,000 and the dollar amount of the awarded Phase II project for up to 12 months. The total amount funded by DOE for Phase II including the supplemental work must not exceed \$1,000,000.

Complete the Research and Related Budget form in accordance with the instructions on the form (Activate Help Mode to see instructions) and the following additional instructions. The form will generate a cumulative budget for the total project period. 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, M).

- j. **BUDGET JUSTIFICATION (FIELD K ON THE FORM). [MANDATORY]**  
Provide the required supporting information for all proposed costs. Provide any other information you wish to submit to justify your budget request. Attach a single budget justification file for the entire supplemental project period in Field K. The file automatically carries over to each budget year. Note: All equipment will be carefully reviewed relative to need and appropriateness for the research or R&D proposed.

Travel funds must be justified and related to the needs of the project. Travel expenses for technical conferences are not permitted unless the purpose of attending the conference directly relates to the project (e.g., to present results of the project). Foreign travel is not normally an appropriate expense. Funds to cover travel expenses outside of the U.S. are considered an unallowable cost unless written approval has been obtained from the SBIR/STTR Program Manager.

With justification, Phase II grant funds, including supplemental funding may be used to pay up to \$10,000 in patent filing fees and related filing expenses for the first U.S. patent for subject inventions developed under the Phase I or Phase II projects. In the event some or the entire amount listed is not expended on a patent filing, the remaining funds may be budgeted to other allowable project costs.

Tuition expenses are allowable only if requested from a subcontractor that is a university as long as the amount requested for tuition is reasonable and comparable to what a student would be paid for performing research during the grant performance period.

Grants may include a profit or fee for the small business.

Any commercial and/or in-kind contribution to the project should be reflected in the project narrative and not included on the budget pages.  
Round all funds to the nearest dollar.

Complete Level of Effort worksheet located at:

- Microsoft Word Version - [http://www.sc.doe.gov/sbir/solicitations/FY%202008/level\\_of\\_effort.doc](http://www.sc.doe.gov/sbir/solicitations/FY%202008/level_of_effort.doc)
- Microsoft Excel Version - [http://www.sc.doe.gov/sbir/solicitations/FY%202008/level\\_of\\_effort.xls](http://www.sc.doe.gov/sbir/solicitations/FY%202008/level_of_effort.xls)

**(Attach in Field 12 – Research & Related Other Project Information)**

- k. **Research & Related (R&R) SUBAWARD BUDGET ATTACHMENT(S) FORM.** **[IF APPLICABLE]** Budgets for Subawardees (including research institutions). You must provide a separate cumulative R&R budget and budget justification 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). 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 sub-awardee's name (plus .xfd) as the file name (e.g., ucla.xfd or energyres.xfd).
- l. **Project/Performance Site Location(s).** **[MANDATORY]**  
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.

m. **SF-LLL DISCLOSURE OF LOBBYING ACTIVITIES.**

If applicable, complete SF-LLL. Applicability: If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the grant/cooperative agreement, you must complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying."

**Summary of Required Forms/Files -  
Your application must include the following documents:**

<b>Name of Document</b>	<b>Format</b>	<b>Attach to</b>
SF 424 (R&R)	PDF	N/A
RESEARCH AND RELATED Other Project Information	PDF	N/A
Project Summary/Abstract	PDF	Field 7
Project Narrative, including required appendices	PDF	Field 8
Level of Effort Worksheet	PDF	Field 12
RESEARCH & RELATED Senior/Key Person Profile (Expanded)	PDF	N/A
Biographical Sketch	PDF	Attach to appropriate block
RESEARCH & RELATED BUDGET	PDF	N/A
Budget Justification	PDF	Field K
SBIR/STTR Information	PDF	N/A
Commercialization Plan for Phase II (See Question 7 & PART V for Instructions)	PDF	Attach to appropriate block
Commercialization History, if applicable (See Question 8)	PDF	Attach to appropriate block
DOE Technical and Commercialization Assistance Support (Section F, Field 8, R&R Budget)	PDF	N/A
PROJECT/PERFORMANCE SITE LOCATION(S)	PDF	N/A
SF-LLL Disclosure of Lobbying Activities, if applicable	PDF	N/A

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

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

- a. Indirect cost information
- b. Fee justification
- c. Other budget information
- d. Representation concerning financial management system
- e. Consultant documentation/verification of rates

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

a. **Pre-application Due Date.**

Pre-applications are not required.

b. **Application Due Date.**

Supplemental applications must be received no later than **May 18, 2010 by 8:00 p.m. EDST.**

#### **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 Organizations may be found at FAR Part 31.

Pre-Award Costs: Recipients may charge to an award resulting from this FOA preaward costs that were incurred within a 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.

## Part V - APPLICATION REVIEW INFORMATION

### A. CRITERIA.

#### 1. Initial Review Criteria.

N/A

#### 2. Merit Review Criteria.

The supplemental application must contain enough information on progress accomplished under Phase II to enable an evaluation of the project's potential for success if continued. **Type 1** (See Part I for description) supplemental applications will be subjected to external merit peer review. **Type 2** (See Part I for description) supplemental applications will be evaluated internally by DOE technical experts. Please note, both Type 1 and Type 2 applications will be evaluated and rated for Commercial Potential. For additional information in this regard, please see Part V, Section B. REVIEW AND SELECTION PROCESS.

Type 1 supplemental applications will be evaluated using the following criteria:

**Strength of the scientific/technical approach:** (1) will the completion of the project activity lead to a solid foundation of the scientific and engineering knowledge and understanding base, (2) has the project progressed satisfactorily in the Phase II activity to justify supplemental funding, (3) is the proposed plan a sound approach establishing technical feasibility that could lead to commercialization?

**Ability to carry out the project in a cost effective manner** as evidenced by the qualifications of the Principal Investigator, other key staff, consultants and subcontractors, if any, and the level of adequacy of equipment and facilities.

**Impact** as evidenced by (1) the significance of the technical and/or economic benefits of the proposed work, if successful, (2) the likelihood that the proposed work could lead to a marketable product or process, and (3) the likelihood that the project could attract further development funding after the SBIR or STTR project ends.

Type 2 supplemental applications will be evaluated internally by DOE program experts to ensure the supplemental application for additional funds is technically sound and in line with the requested funds.

#### 3. Commercial Potential Criteria.

Both Type 1 and Type 2 applications will be evaluated for commercial potential using Commercialization Plan data and other information provided by the applicant in the

following four sections (1) Market Opportunity, (2) Competition/Intellectual Property, (3) Company/Team, and (4) Finance and Revenue Model.

Each section should be developed with careful analysis of your company's position within the industry and the market opportunity that is enabled by the proposed innovation. The key points required for each section are further described in Part V, Section B. "Review and Selection Process."

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

1. **Merit Review.** Phase II supplemental applications will be subject to a detailed technical evaluation by experts, both inside and outside the Government. The DOE will not fund any grant application for which there are weaknesses identified with respect to any of the three evaluation criteria, as determined by the review process. In addition, because the DOE supports only high quality research and development, grant applications will be considered candidates for funding only if they receive positive remarks from the peer reviewers with respect to at least two of the three criteria and no major weaknesses are identified in the application.
2. **Commercial Potential Review (Commercialization Plan cannot exceed 15 pages, excludes Letters of Support).** The DOE recognizes that each innovation requires a varied strategy to generate returns on invested capital and that no two businesses are exactly alike. Therefore, DOE supports a broad array of commercialization strategies. Each strategy requires varied emphasis on the parts of the plan depending on your innovation and the market landscape. For instance, the strategy and mechanisms for leveraging and protecting intellectual property (IP) vary according to industry and innovation.

The Commercialization Plan is your roadmap for the future and should convey how you plan to generate profits from your innovation. It should represent a compelling vision that describes a unique business opportunity that could be addressed with continued support from Phase II funding. The depth and quality of the analysis within your Commercialization Plan is a critical element of the DOE SBIR/STTR application review. Please Note: All assumptions and estimates provided should be clearly stated as such and evidence of validation should be provided in a footnote. Where you provide numerical data (e.g. market size, price, etc.) or data about customer needs, market forces, barriers to entry and the like, you should indicate the source of the data using footnotes. Market research reports, articles by experts in trade publications or professional journals, interviews, focus groups, surveys, are among commonly used sources of data.

To help you prepare your plan, DOE maintains an SBIR Technical Assistance Portal at <http://doecapreg.foresightst.com>. Although you must register for access, there is no fee for use of the site. The site contains a variety of data and tools to help you prepare your Commercialization Plan.

The following four sections must be addressed in your Commercialization Plan:

### **Market Opportunity**

1. Describe succinctly what product or service you are planning to deliver based on your innovation.
  - a. Who is your customer and what current or emerging needs will your product or service address?
  - b. Describe the critical needs that your product or service is fulfilling for your customer.
  - c. How does the target customer(s) currently meet the need that you are addressing and what do they pay to meet the need?
  - d. What is your customer willing to pay for your product or service?
  - e. What is the value proposition for your product or service?
  - f. Are the customers located domestically, internationally, or both?
2. Describe how your technology/innovation objectives and critical milestones enable you to address the market opportunity.
  - a. What is the current size of the market you plan to enter, in terms of either numbers of customers or revenues? (If you use number of customers, estimate revenues based on the anticipated selling price of your product or service.)
  - b. What are the growth trends for the market and the key market drivers that will affect whether customers will buy your product or service?
  - c. What barriers to entry exist in this market which will inhibit sales of your product or service?
3. Describe the channels you would employ to reach the targeted customer?
4. What business model will you adopt to generate revenue from your innovation?
  - a. Will you make and sell? License? Form a strategic alliance with a company already in the industry? Use a different model?
  - b. Explain why this model makes sense for the market opportunity described.
5. If there are potential societal, educational, or scientific benefits beyond commercial considerations that will generate goodwill for your company or the product or service, they should be included here and explained in sufficient detail to convey the significance of the effort.

### **Competition/Intellectual Property**

1. Describe currently existing products or services and those that are found in the patent literature (and if relevant, copyright and trademark literature) or are emerging from R&D which may be substitutes for your product or service.
  - a. How does your product or service match up to these substitutes in terms of the needs customers are seeking to meet?
  - b. Who is developing, making, and selling those products or services and what do you anticipate the competitive landscape to look like when you get to market?
2. Describe intellectual property (IP) rights you have secured for your technology to date and if any procedures are underway to expand or enhance the protection provided by those rights. Please describe your actions to protect these rights.

3. Describe which IP is closest and which is most threatening to your “freedom to operate” and how you are different enough to be able to secure your freedom to operate.
4. What other IP will you need to secure rights to make, use, or sell in order to address the market opportunity described above?

### **Company/Team**

1. Provide a short description of the origins of the company.
2. What type of corporate structure is in place?
3. What is the current capitalization and is it sufficient for implementing your Commercialization Plan?
4. What is the revenue history for the past three years (Phase I through Phase II)?
5. Provide a table with percentages or sums of operating capital or revenue: product sales, consulting/services, license revenues, R&D grants/contracts, and others.
6. What is the current employee count?
7. Give a brief description of the experience and credentials of the personnel responsible for taking the innovation to market and clarify how the background and experience of the team enhance the credibility of the Commercialization Plan.
8. What specific experience does the team lack and how will this be addressed during the remainder of the Phase II effort and beyond?
9. From what additional resources do you have commitments that address “8” above, e.g., Board of Directors, technical advisors, or retained legal counsel; and please provide details on names, affiliations, and expertise of these resources?

### **Finance and Revenue Model**

1. What are your costs to complete research and development, product, and production development/design/engineering, and to produce the product or service?
2. What are the costs required to implement your commercialization strategy?
3. Provide a table with costs for “1” and “2” and the revenues or other operating capital you can devote to these. If there is a shortfall, describe an appropriate staged finance plan that will provide the necessary cash given the market opportunity described above. If no additional cash is needed explain why you are confident that is the case.
4. Describe the revenue streams (licensing, product sales or other) associated with your Commercialization Plan.
5. When do you anticipate “first revenues” from each stream?
6. When do you expect to reach “break even”?
7. Provide annual pro formas for the next five years (two years of the Phase II effort + 3 years’ post Phase II). Income Statements are required. Cash Flow and Balance Sheets may be included if they are considered critical for your strategy.
8. Explain how you will raise or access the appropriate funds for post-Phase II and beyond. Provide specific contacts, leads, previous relationships, and agreements already in place.
9. Are any other commitments in place which will affect your ability to raise Phase III follow-on funding?

**Please Note:** You must indicate the assumptions and estimates being made in this part of your application and clearly state the source of the data you have used to validate these assumptions or as a basis for making assumptions or estimates. You must also indicate the source for any numerical or other hard data provided, such as market size, price, market drivers, and barriers to entry. Evaluate the competitive advantages of this technology vs. alternate technologies that can meet similar market needs.

3. **Selection.** Selection will be determined by the technical program area's SBIR/STTR Portfolio Manager who is responsible for the coordination of all recommended award selections in a given technical program area. Adequate progress must be shown in the existing Phase II project including a strong explanation as to why the project warrants additional funding. The Government is under no obligation to fund any supplemental awards.
4. **Other Selection Factors.** DOE Project Officers will determine priority of funding based on critical needs of the Department and the Nation.
5. **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/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.**

The Department anticipates making award decisions by late July 2010.

## Part VI - AWARD ADMINISTRATION INFORMATION

### A. AWARD NOTICES.

#### a. Notice of Selection.

The SBIR/STTR Program will notify all applicants that request supplemental funding via email of the outcomes.

#### b. Notice of Award.

An Assistance Agreement issued by the Contracting Officer is the authorizing award document. The initial funding Assistance Agreement normally includes, either as an attachment or by reference: 1. Special Terms and Conditions; 2. General Terms and Conditions for DOE SBIR and STTR grants; 3. Application as approved by DOE/NNSA; 4. National Policy Assurances to be incorporated as award terms; 5. Budget Summary; 6. Federal Assistance Reporting Checklist and Instructions, which identifies the reporting requirements; and 7. DOE assistance regulations at 10 CFR Part 600.

### B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS.

- a. **Terms and Conditions and National Policy Requirements.** If a grant is awarded, the recipient must comply with the terms and conditions in the formal award document provided by the contracting officer at the time of award. The National Policy Assurances to be incorporated as award terms are located at the following web address [http://management.energy.gov/business\\_doe/1374.htm](http://management.energy.gov/business_doe/1374.htm).

### C. REPORTING.

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

## PART VII - QUESTIONS/AGENCY CONTACTS

### A. QUESTIONS

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

Questions regarding the content of the FOA must be submitted through the [FedConnect](http://FedConnect) portal at [www.fedconnect.net](http://www.fedconnect.net). You must register with [FedConnect](http://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 three business days, unless a similar question and answer have already been posted on the website.

### B. AGENCY CONTACTS

- Name: Carl Hebron
- E-mail: [carl.hebron@science.doe.gov](mailto:carl.hebron@science.doe.gov)
- Fax: 301-903-5488
- Phone: 301-903-1414

## **PART VIII - OTHER INFORMATION**

### **A. MODIFICATIONS**

Notices of any modifications to this FOA will be posted on [Grants.gov](http://www.Grants.gov) and the [FedConnect](http://www.FedConnect.net) portal. You can receive an email when a modification or an announcement message is posted by registering with [FedConnect](http://www.FedConnect.net) as an interested party for this FOA. It is recommended that you register as soon after release of the FOA as possible to ensure you receive timely notice of any modifications or other announcements. More information is available at <http://www.fedconnect.net> and <http://www.compusearch.com/products/fedconnect/fedconnect.asp>.

### **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 anyone 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.”

NOTE: The proprietary data legend on the first page of your project narrative must separately identify those pages of the application which contain proprietary technical data from any pages which contain other types of proprietary information as defined by the funding

opportunity notice (e.g., confidential personnel information, or proprietary commercial or financial information).

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.” Failure to follow these instructions, or a discrepancy between the pages listed on the first page of the project narrative and the pages actually marked may result in DOE’s inability to treat such information as proprietary and will delay the award process.

#### **E. EVALUATION AND ADMINISTRATION BY NON-FEDERAL PERSONNEL.**

In conducting the merit and commercialization potential review evaluations, the Government may seek the advice of qualified non-Federal personnel as reviewers or independent commercialization experts. 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 nondisclosure agreement.

#### **F. INTELLECTUAL PROPERTY DEVELOPED UNDER THIS PROGRAM.**

- a. **Proprietary Information** – Information contained in unsuccessful grant applications will remain the property of the applicant. The government will retain for three (3) years one file copy of each unsuccessful grant application. Public release of information in any grant application submitted will be subject to existing statutory and regulatory requirements, such as the Freedom of Information and Privacy Acts. If proprietary information is provided in a grant application that constitutes proprietary technical data, confidential personnel information, or proprietary commercial or financial information, it will be treated in confidence, to the extent permitted by law, provided this information is clearly marked by the applicant in accordance with paragraph D., above, and provided appropriate page numbers are inserted in the Proprietary Notice legend printed on the first page of the Project Narrative.

NOTE: The proprietary data legend on the first page of your project narrative must separately identify those pages of the application which contain proprietary technical data from any pages which contain other types of proprietary information as defined by the funding opportunity notice (e.g., confidential personnel information, or proprietary commercial or financial information).

Applications will not automatically be withheld in their entirety unless justified by the applicant. The government will limit dissemination of such information to official channels to the extent permitted by law. Any other legend may be unacceptable to the government and may constitute grounds for removing the grant application from further consideration and without assuming any liability for inadvertent disclosure.

- b. **Protection of Grant Application Information** – DOE's policy is to use data included in grant applications for evaluation purposes only and to protect, to the extent allowed by law, such information from unauthorized use or disclosure.

In addition to government personnel, scientists and engineers from outside the government may be used in the grant application evaluation process. The decision to obtain outside evaluation will take into consideration requirements for the avoidance of organizational conflicts of interest and the competitive relationship, if any, between the applicant and the prospective outside evaluator. The evaluation will be performed under an agreement with the evaluator that the information contained in the grant application will be used only for evaluation purposes and will not be further disclosed.

- c. **Rights in Data Developed Under SBIR/STTR Funding Agreements** – Rights in technical data, including software developed under the terms of any funding agreement resulting from grant applications submitted in response to this solicitation, shall remain with the recipient, except that the government shall have the limited right to use such data for government purposes and shall not release such proprietary data outside the government without permission of the recipient for a period of not less than 4 years from delivery of the last deliverable under that agreement (either Phase I, Phase II, or Federally funded SBIR Phase III). Agencies are released from obligation to protect SBIR data upon expiration of the protection period except that any such data that is also protected and referenced under a subsequent SBIR award must remain protected through the protection period of that subsequent SBIR award. However, effective at the conclusion of the 4-year period, the government shall retain a royalty-free license for government use of any technical data delivered under an SBIR/STTR award whether patented or not.
- d. **Copyrights** – With prior written permission of the cognizant DOE Contracting Officer, the recipient may copyright and publish (consistent with appropriate national security considerations, if any) material developed with DOE support. DOE receives a royalty-free license for the Federal Government and requires that each publication contain an appropriate acknowledgment and disclaimer statement.
- e. **Patents** – Small businesses may retain the principal worldwide patent rights to any invention developed with Federal support. The government receives a royalty-free license for Federal use, reserves the right to require the patent holder to license others in certain circumstances, and requires that anyone exclusively licensed to sell must normally manufacture it domestically. Information regarding patent rights in inventions supported by Federal funding can be found in the Code of Federal Regulations, 37 CFR Part 401.
- f. **Distribution of Intellectual Property and Commercialization Rights Between the Small Business and Subcontractor** – When using subcontractors, including research institutions, the small business is responsible for protecting its own interests with regard to the retention of intellectual property and commercialization rights.

**G. NOTICE OF RIGHT TO REQUEST PATENT WAIVER.**

N/A

**H. NOTICE REGARDING ELIGIBLE/INELIGIBLE ACTIVITIES.**

Eligible activities under this program include those which describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.