U.S. Department of Energy (DOE)

Instructions for Completing a DOE SBIR/STTR Phase I Grant Application*

(For Phase II application, please refer to the respective Phase II Funding Opportunity Announcement)

*The current Funding Opportunity Announcement instructions always supersede these instructions.

Updated June 2020

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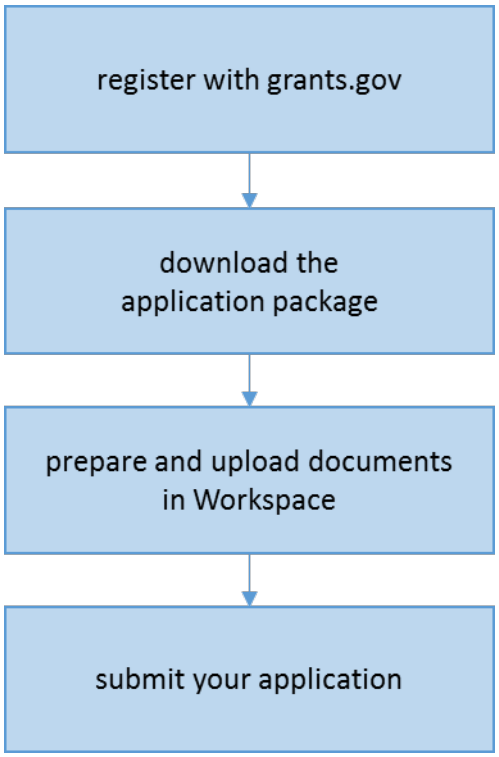
1. Overview

This guide contains instructions and other useful information for preparing an application for a Phase I grant from the U. S. Department of Energy for the following programs:

Small Business Innovation Research (SBIR)
Small Business Technology Transfer (STTR)

The flowchart below describes the steps you will take to prepare an application. The chapters in this guide will walk you through the steps for each part of the process.



Helpful guidance

- Letters of Intent: Please note that prior to submitting an application, you are required to submit a letter of intent. If you failed to submit a letter of intent by the deadline, you will be ineligible to submit an application. For more information about submitting a letter of intent, refer to the Phase I Funding Opportunity Announcement.
- Phase 0 Application Assistance Program: DOE provides a service (at no charge to applicants) to assist first time applicants in preparing high quality Phase I applications. More information about this program can be found here: https://www.dawnbreaker.com/doephase0/
- Contact us: If at any point in the application process you need assistance, please contact us by phone or email: (301) 903-5707, sbir-sttr@science.doe.gov .

1.1 Summary of Mandatory (and Optional) Documentation for a DOE SBIR or STTR Grant

Name of Document	Format	Attach to
Application for Federal Assistance, SF 424 Form	PDF	
Research and Related: Budget Form	PDF	
Additional Senior Key Persons, if applicable	PDF	Field A. 9
Additional Equipment, if applicable	PDF	Field C. 11
Budget Justification	PDF	Field K
Research and Related: Senior/Key Person Profile Form	PDF	
Biographical Sketch for each person	PDF	Appropriate Block
Current & Pending Support for each person, if applicable	PDF	Appropriate Block
Research and Related: Other Project Information Form	PDF	
Project Abstract and Summary	PDF	Field 7
Project Narrative	PDF	Field 8
Bibliography and References Cited, if applicable	PDF	Include in Project Narrative
Facilities and Other Resources, if applicable	PDF	Include in Project Narrative
Equipment, if applicable	PDF	Include in Project Narrative
Other— Data Management Plan	PDF	Field 12
Other—Level of Effort Worksheet	PDF	Field 12
Other—Letter of Commitment for consultant, sub-award, or research institution, if applicable	PDF	Field 12
Other—Letters of Support, if applicable	PDF	Field 12
Other—SBA Company Registration	PDF	Field 12
Authorization for non-DOE/NNSA FFRDCs, if applicable	PDF	Field 12
Authorization for DOE/NNSA FFRDC, if applicable and if available	PDF	Field 12
Research and Related: Sub-award Budget Form, if applicable	PDF	
Budget Justification for each Sub-award	PDF	Appropriate Block
SF-LLL, Disclosure of Lobbying Activities, if applicable	PDF	
Project/Performance Site Location(s)	PDF	
SBIR/STTR Information Form	PDF	
Phase I Commercialization Plan	PDF	Field 7
Commercialization History, if applicable	PDF	Field 8

Instructions for all the mandatory and optional forms are found in this document. The use of these forms also involves electronic submission of completed applications through the Workspace on Grants.gov. Specific Funding Opportunity Announcements (FOAs) will clearly indicate which forms and submission process an applicant should use.

All mandatory and optional forms for electronic submission listed above are available through Grants.gov and should be downloaded from will be populated into your Workspace based on the FOA being applied to. Do not use any forms or format pages from other sources; these may include extraneous headers/footers or other information that could interfere with the electronic application process.

1.2 Application Guide Format

This application guide is designed to provide explicit instructions for preparing and submitting a DOE Phase I SBIR/STTR application for federal funding and includes specific instructions for completing the application forms as well as information to electronically submit these forms through the Grants.gov Workspace web portal.

1.3 DOE SBIR/STTR Web Site

The DOE SBIR/STTR Programs' homepage (http://science.energy.gov/sbir/https://science.osti.gov/sbir/About) provides an array of helpful award information and applicants are encouraged to bookmark this site and visit it often.

1.4 Grants Policy Statements

Small Business Innovation Research (SBIR) Program and

Small Business Technology Transfer (STTR) Program

Funding Opportunity Announcement (FOA) and Other Information
The Office of Science manages the SBIR and STTR programs[1] for the Department of Energy. For information about the SBIR and STTR programs, including the FOA, click here.

Terms and Conditions
SBIR applicants whose grant applications have been approved for funding will receive a research grant from the Department. To view the General Terms and Conditions for SBIR Grants for Phase I and Phase II awards, click here.

The following rules, regulations, and guidance pertain to the overall DOE and Federal grant process.

10 CFR Part 600 - Department of Energy Financial Assistance Rules

OMB Circular A-21
Cost Principles for Educational Institutions

OMB Circular A-110
Uniform Administrative Requirements for Grants and Other Agreements with Institutions of Higher Education, Hospitals and Other Non-Profit Organizations

OMB Circular A-122
Cost Principles for Non-Profit Organizations
(Does not apply to colleges and universities.)

Federal Acquisition Regulation (FAR) Part 31

1.5 References

1.5.1 DOE SBIR/STTR Funding Opportunity Announcements

https://science.osti.gov/sbir/Funding-Opportunities

1.5.2 Contact Information for the DOE SBIR/STTR Operations Center

Phone: (301) 903-5707
Fax: (301) 903-5488
Email: sbir-sttr@science.doe.gov

1.5.3 Grants.gov User Guide

The Grants.gov User Guide is a comprehensive reference to information about Grants.gov. Applicants can access the online User Guide at the following address: https://www.grants.gov/help/html/help/index.htm?callingApp=custom#t=GetStarted%2FGetStarted.htm.

1.5.4 DOE SBIR/STTR Program Funding Resources

The following are the major research and development programs at the U. S. Department of Energy that fund the department's SBIR/STTR programs.

Electricity
The mission of the Office of Electricity Delivery and Energy Reliability is to lead national efforts to modernize the electric grid, enhance the security and reliability of the energy infrastructure, and facilitate recovery from disruptions to the energy supply.

Energy Efficiency and Renewable Energy
The Office of Energy Efficiency and Renewable Energy is working to provide a prosperous future where energy is clean, abundant, reliable, and affordable.

Environmental Management
The Office of Environmental Management (EM) works to mitigate the risks and hazards posed by the legacy of nuclear weapons production and research.

Fossil Energy
Ensuring that we can continue to rely on clean, affordable energy from our traditional fuel resources is the primary mission of DOE's Office of Fossil Energy.

Nuclear Energy
The Office of Nuclear Energy mission is to support the nation's diverse nuclear energy programs.

Science Programs

The Office of Science is the single largest supporter of basic research in the physical sciences in the United States, providing more than 40 percent of total funding for this vital area of national importance.

National Nuclear Security Administration
NNSA is a separately organized agency within the DOE responsible for the management and security of the nation's nuclear weapons, nuclear nonproliferation, and naval reactor programs. It also responds to nuclear and radiological emergencies in the United States and abroad. Additionally, NNSA federal agents provide safe and secure transportation of nuclear weapons and components and special nuclear materials along with other missions supporting the national security.

2. Application Process for Grants.gov Submission

Application submission through Grants.gov involves several steps. Access the "Get Started" tab on the Grants.gov web site (http://grants.gov). Some of the steps only need to be completed once. Others are ongoing steps that will be necessary for each application submission. Before beginning the application process, you are encouraged to review Grants.gov and all the resources available there.

2.1 Overview

The following steps must be taken in order to submit a grant application through Grants.gov. Please be sure to complete all steps to ensure that DOE receives the application in a timely manner.

1. Register your organization at Grants.gov. (This is a one-time only registration process for all Federal agencies. If your organization has already completed this step for any Federal agency submission, skip to step #2. If your organization has not completed this step, see Section 2.2 for more details.)
2. Find the respective DOE Funding Opportunity Announcement (FOA) using the Grants.gov "Search Grants" feature.
3. Once an appropriate Application Package is identified, click the "Apply" button to create a Workspace.
4. Complete the appropriate application forms in your Workspace, including all text and PDF attachments. Upload all attachments into the appropriate application component.
5. The completed application should be reviewed through your own organizational review process.
6. Coordinate with an Authorized Organization Representative (AOR) at the applicant organization to submit the application by the date specified in the FOA. (Keep a copy locally at the Applicant Organization/Institution.) An application is submitted through Workspace by clicking the Sign and Submit button on the Manage Workspace page, under the Forms tab.
7. Receive the Grants.gov tracking number. The tracking number acknowledges receipt of the application not validation and acceptance of the application.
8. After agency validation, receive the agency tracking number (accession number). Applications must be validated by Grants.gov. Applications not validated will not be processed by the SBIR/STTR Program Office.

2.1.1 Workspace Application Submission

You must apply for DOE SBIR/STTR grants using the Grants.gov application – Workspace. For more information and to learn how to use the new Workspace environment to create and submit your DOE Phase I grant application, you can find more information and instructions at the following Grants.gov link: https://www.grants.gov/web/grants/applicants/workspace-overview.html.

2.2 Registration Processes

2.2.1 Grants.gov Registration

Grants.gov requires a **one-time** registration *by the applicant organization.* Principal Investigators do not have to individually register in Grants.gov unless they also serve as the Authorized Organization Representative (AOR) for their institution/organization. For those applicant organizations still needing to register with Grants.gov, registration information can be found at Grants.gov/GetStarted (https://www.grants.gov/web/grants/applicants/apply-for-grants.html). While Grants.gov registration is a one-time only registration process, it does involve several steps and will take some time. Applicant organizations needing to complete this process are encouraged to **start early** allowing **several weeks** to complete all the steps before actually submitting an application through Grants.gov.

The AOR is an individual authorized to act for the applicant organization and to assume the obligations imposed by the Federal laws, requirements, and conditions for a grant or grant application, including the applicable Federal regulations. This individual has the authority to sign grant applications and required certifications and/or assurances that are necessary to fulfill the requirements of the application process. Once this individual is registered, the organization can then apply for any government funding opportunity listed in Grants.gov.

Questions regarding Grants.gov registration should be directed to the Grants.gov Contact Center at telephone: 1-800-518-4726 or by email at support@grants.gov. The Contact Center is available 24 hours a day, seven (7) days a week.

IMPORTANT NOTICE: When you have completed the Grants.gov registration 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).

2.2.2 Required Registrations

There are several one-time actions you must complete in order to submit an application in response to this Announcement (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the System for Award Management (SAM), and register with Grants.gov). Those applicants not registered with SAM and/or Grants.gov must understand that it may take up to **44 days** to complete these requirements. It is suggested that you begin the registration process well before 44 days.

Applicants must obtain a DUNS number at http://fedgov.dnb.com/webform.

Applicants must register with the System for Award Management (SAM) at http://www.sam.gov/. If you had an active registration in the Central Contractor Registry (CCR), you should have an active registration in SAM. More information about SAM registration for applicants is found at: https://www.sam.gov/SAM/transcript/Quick_Guide_for_Grants_Registrations.pdf

Read the instructions below about registering to apply for SC funds. Applicants should read the registration instructions carefully and prepare the information requested before beginning the registration process. Reviewing and assembling the required information before beginning the registration process will alleviate last-minute searches for required information.

Organizations must have a Data Universal Numbering System (DUNS) Number, active System for Award Management (SAM) registration, and Grants.gov account to apply for grants. If individual applicants are eligible to apply for this funding opportunity, then you may begin with step 3, Create a Grants.gov Account, listed below.

Creating a Grants.gov account can be completed online in minutes, but DUNS and SAM registrations may take several weeks. Therefore, an organization's registration should be done in sufficient time to ensure it does not impact the entity's ability to meet required application submission deadlines.

Complete organization instructions can be found on Grants.gov here:
https://www.grants.gov/web/grants/applicants/organization-registration.html

1) *Obtain a DUNS Number*: All entities applying for funding, including renewal funding, must have a DUNS Number from Dun & Bradstreet (D&B). Applicants must enter the DUNS Number in the data entry field labeled "Organizational DUNS" on the SF-424 form. For more detailed instructions for obtaining a DUNS Number, refer to:
https://www.grants.gov/web/grants/applicants/organization-registration/step-1-obtain-duns-number.html

2) *Register with SAM*: All organizations applying online through Grants.gov must register with SAM at https://www.sam.gov. Failure to register with SAM will prevent your organization from applying through Grants.gov. SAM registration must be renewed annually. For more detailed instructions for registering with SAM, refer to:
https://www.grants.gov/web/grants/applicants/organization-registration/step-2-register-with-sam.html

3) *Create a Grants.gov Account*: The next step is to register an account with Grants.gov. Follow the on-screen instructions or refer to the detailed instructions here:
https://www.grants.gov/web/grants/applicants/registration.html

4) *Add a Profile to a Grants.gov Account*: A profile in Grants.gov corresponds to a single applicant organization the user represents (i.e., an applicant) or an individual applicant. If you work for or consult with multiple organizations and have a profile for each, you may log in to one Grants.gov account to access all of your grant applications. To add an organizational profile to your Grants.gov account, enter the DUNS Number for the organization in the DUNS field while adding a profile. For more detailed instructions about creating a profile on Grants.gov, refer to: https://www.grants.gov/web/grants/applicants/registration/add-profile.html

5) *EBiz POC Authorized Profile Roles*: After you register with Grants.gov and create an Organization Applicant Profile, the organization applicant's request for Grants.gov roles and access is sent to the EBiz POC. The EBiz POC will then log in to Grants.gov and authorize the appropriate roles, which may include the AOR (Authorized Organization Representative) role, thereby giving you permission to complete and submit applications on behalf of the organization. You will be able to submit your application online any time after you have been assigned the AOR role. For more detailed instructions about creating a profile on Grants.gov, refer to: https://www.grants.gov/web/grants/applicants/registration/authorize-roles.html

6) *Track Role Status*: To track your role request, refer to:
https://www.grants.gov/web/grants/applicants/registration/track-role-status.html

b. *Electronic Signature*: When applications are submitted through Grants.gov, the name of the organization applicant with the AOR role that submitted the application is inserted into the signature line of the application, serving as the electronic signature. The EBiz POC must authorize people who are able to make legally binding commitments on behalf of the organization as a user with the AOR role; this step is often missed and it is crucial for valid and timely submissions.

2.2.3 DOE Office of Science Portfolio Analysis and Management System (PAMS)

After you submit your application through Grants.gov, the application will automatically transfer into the Portfolio Analysis and Management System (PAMS) for processing by the DOE Office of Science. Many functions for grants and cooperative agreements can be done in PAMS, which is available at https://pamspublic.science.energy.gov.

You will want to "register to" your application: a process of linking yourself to the application after it has been submitted through grants.gov and processed by DOE.

You must register in PAMS to submit a pre-application or a letter of intent.

You may use the Internet Explorer, Firefox, Google Chrome, or Safari browsers to access PAMS.

Notifications sent from the PAMS system will come from the PAMS email address <PAMS.Autoreply@science.doe.gov>. Please make sure your email server/software allows delivery of emails from the PAMS email address to yours.

Registering to PAMS is a two-step process; once you create an individual account, you must associate yourself with ("register to") your institution. Detailed steps are listed below.

1. Create PAMS Account:

   To register, click the "Create New PAMS Account" link on the website https://pamspublic.science.energy.gov/.

   - Click the "Create New PAMS Account" link, then the "No, I have never had an account" link, and then the "Create Account" button.
   - You will be prompted to enter your name and email address, create a username and password, and select a security question and answer. Once you have done this, click the "Save and Continue" button.
   - On the next page, enter the required information (at least one phone number and your mailing address) and any optional information you wish to provide (e.g., FAX number, website, mailstop code, additional email addresses or phone numbers, Division/Department). Click the "Create Account" button.
   - Read the user agreement and click the "Accept" button to indicate that you understand your responsibilities and agree to comply with the rules of behavior for PAMS.
   - PAMS will take you to the "Having Trouble Logging In?" page. (If you have been an Office of Science merit reviewer or if you have previously submitted an application, you may already be linked to an institution in PAMS. If this happens, you will be taken to the PAMS home page.)

2. Register to your institution (Note: institution is how PAMS refers to your business entity):

   - Click the link labeled "Option 2: I know my institution and I am here to register to the institution." (Note: If you previously created a PAMS account but did not register to an institution at that time, you must click the Institutions tab and click the "Register to Institution" link.)

- PAMS will take you to the "Register to Institution" page.
- Type a word or phrase from your institution name in the field labeled, "Institution Name like," choose the radio button next to the item that best describes your role in the system, and click the "Search" button. A "like" search in PAMS returns results that contain the word or phrase you enter; you do not need to enter the exact name of the institution, but you should enter a word or phrase contained within the institution name. (If your institution has a frequently used acronym, such as ANL for Argonne National Laboratory or UCLA for the Regents of the University of California, Los Angeles, you may find it easiest to search for the acronym under "Institution Name like." Many institutions with acronyms are listed in PAMS with their acronyms in parentheses after their names.)
- Find your institution in the list that is returned by the search and click the "Actions" link in the Options column next to the institution name to obtain a dropdown list. Select "Add me to this institution" from the dropdown. PAMS will take you to the "Institutions – List" page.
- If you do not see your institution in the initial search results, you can search again by clicking the "Cancel" button, clicking the Option 2 link, and repeating the search.
- If, after searching, you think your institution is not currently in the database, click the "Cannot Find My Institution" button and enter the requested institution information into PAMS. Click the "Create Institution" button. PAMS will add the institution to the system; associate your profile with the new institution, and return you to the "Institutions – List" page when you are finished.

For help with PAMS, click the "PAMS User Guide" link on the PAMS website, https://pamspublic.science.energy.gov/. You may also contact the PAMS Help Desk, which can be reached Monday through Friday, 9AM – 5:30 PM Eastern Time.

Telephone: (855) 818-1846 (toll free) or (301) 903-9610, Email: sc.pams-helpdesk@science.doe.gov. All submission and inquiries about the current Funding Opportunity Announcement should reference FOA number, i.e., DE-FOA-XXXXXXX.

You're encouraged to register in all required systems as soon as possible. You are also encouraged to submit Letters of Intent, and applications well before the prescribed deadlines.

2.3 Software Requirements

2.3.1 Adobe Reader™

In order to access, complete and submit applications, applicants need to download and install Adobe Reader. For minimum system requirements and download instructions, please see the Grants.gov User Guide.

2.3.2 Creating PDFs for Text Attachments

DOE *prefers* all text attachments to be submitted as PDF files.

Designed to maximize system-conducted validations, multiple separate attachments are required for a complete application. When the application is received by the agency, all submitted forms and all separate attachments are combined into a single document and used by agency staff and peer reviewers.

Applicants should prepare text attachments using any word processing program and then convert those files to PDF before attaching the files to the appropriate component in the application package. (The PDF format is used to preserve document formatting.) However, before attaching your PDF file to a Grants.gov form field, please review it to ensure that it was correctly converted. Save all files with descriptive file names of 50 characters or less and be sure to only use standard characters in file names: A through Z, a through z, 0 through 9, and underscore (_). Do not

use any special characters (example: "&", "-", "*", "%", "/", and "#") or spacing in the file name, and for word separation use underscore (example: "My_Attached_File.pdf") in naming the attachments.

Depending upon the version of Adobe Acrobat (and possibly other tools), the signature may need to be "off" when you create the originals. If this is the case for the version you are using, please go to the security options menu selection in Adobe to ensure the signature option is "off." If you do not have the originals, copy the content of the signed documents and create a new document. Save this document without signing it.

Applicants should not submit protected PDF documents. Protected documents prevent DOE from opening and processing the document. Security settings vary by PDF tool, but please ensure security settings are not marked. The applicant needs to look at the Document Security tab under Document Properties (directly from the tab) and set the security parameters to ensure open access so DOE can process the content. For instance, do not password protect the document and do not mark Content Extraction or Copying, Document Assembly, etc. as "Not Allowed."

If you are having trouble fixing the PDF settings, simply cut and paste from the PDF document into a Microsoft Word document and then reconvert (in some cases it may be better to use another PDF converter).

It is recommended that, as much as possible, applicants avoid scanning text documents to produce the required PDFs. Instead, DOE recommends producing the documents electronically using text or word-processing software and then converting documents to PDF. Scanning paper documents, without the proper Optical Character Recognition (OCR) process, will hamper automated processing of your application for DOE analysis and reporting.

DISCLAIMER: References to software packages or Internet services neither constitute nor should be inferred to be an endorsement or recommendation of any product, service, or enterprise by the DOE or any other agency of the United States Government, or any employee of the United States Government. No warranties are stated or implied.

2.3.3 Finding a Funding Opportunity Announcement (FOA) for Grants.gov Submission

Implementation of the mandatory forms and electronic submission through Grants.gov will be announced through specific FOAs posted on Grants.gov under "Search Grants" and "Apply for Grants" (a.k.a. "Get Started").

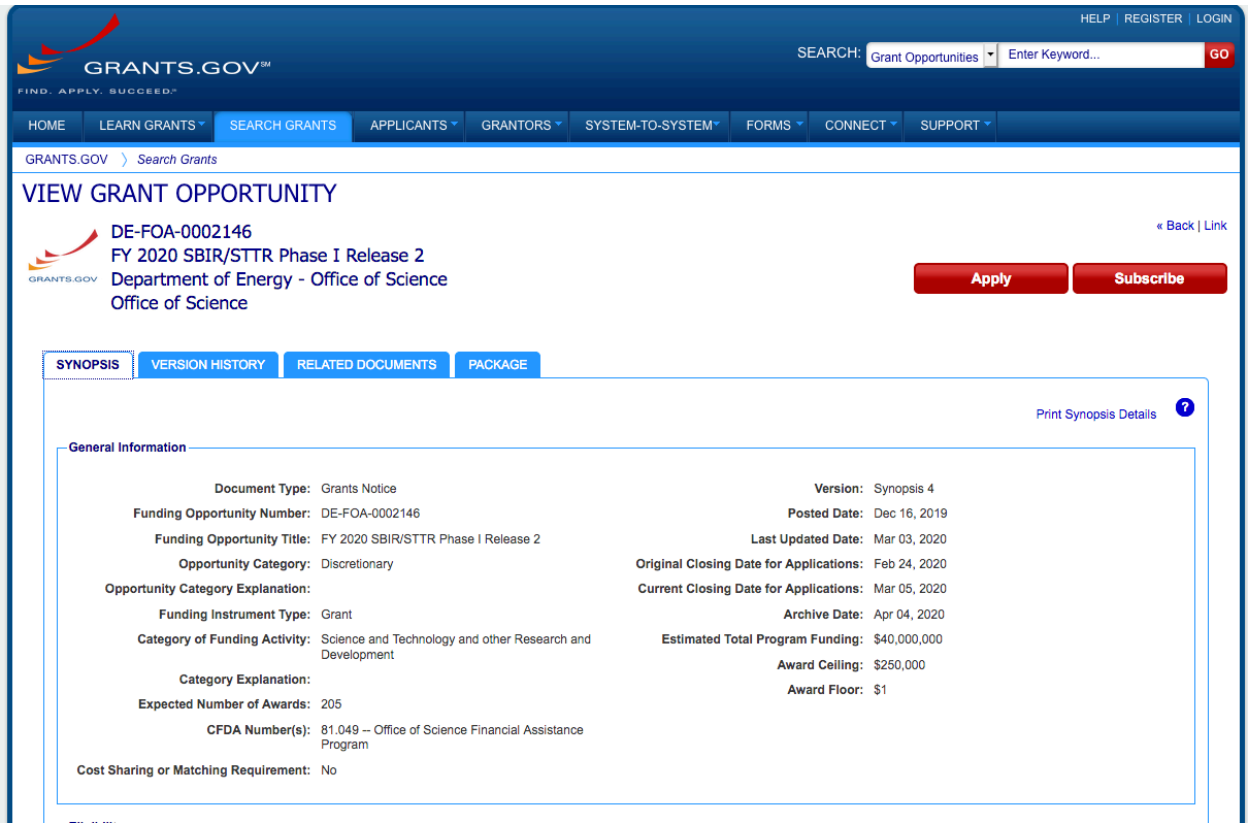
There are several ways a prospective applicant can find an FOA on Grants.gov.

Using "Search Grants" Feature

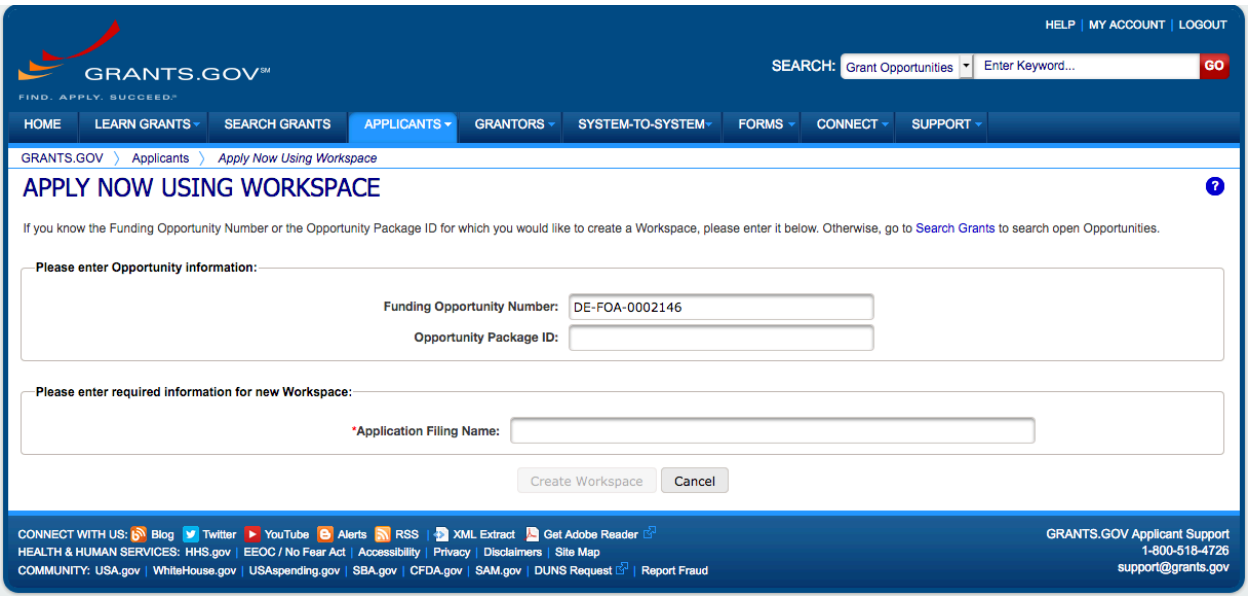
Grants.gov Search provides general search capabilities. You may search by clicking on the Search Grants link. This takes you to a screen providing options for: 1) Basic Search; 2) Browse by Funding Instrument Type; 3) Browse by Eligibility; 4) Browse by Category; and 5) Browse by Agency. To perform a basic search for a grant, complete the "Keyword Search"; the "Search by Funding Opportunity Number"; OR the "Search by CFDA Number" field; and then click the Search button below.

Access Search Tips for helpful search strategies, or click the "?" button in the upper right corner of Grants.gov to get help with the Search screen.

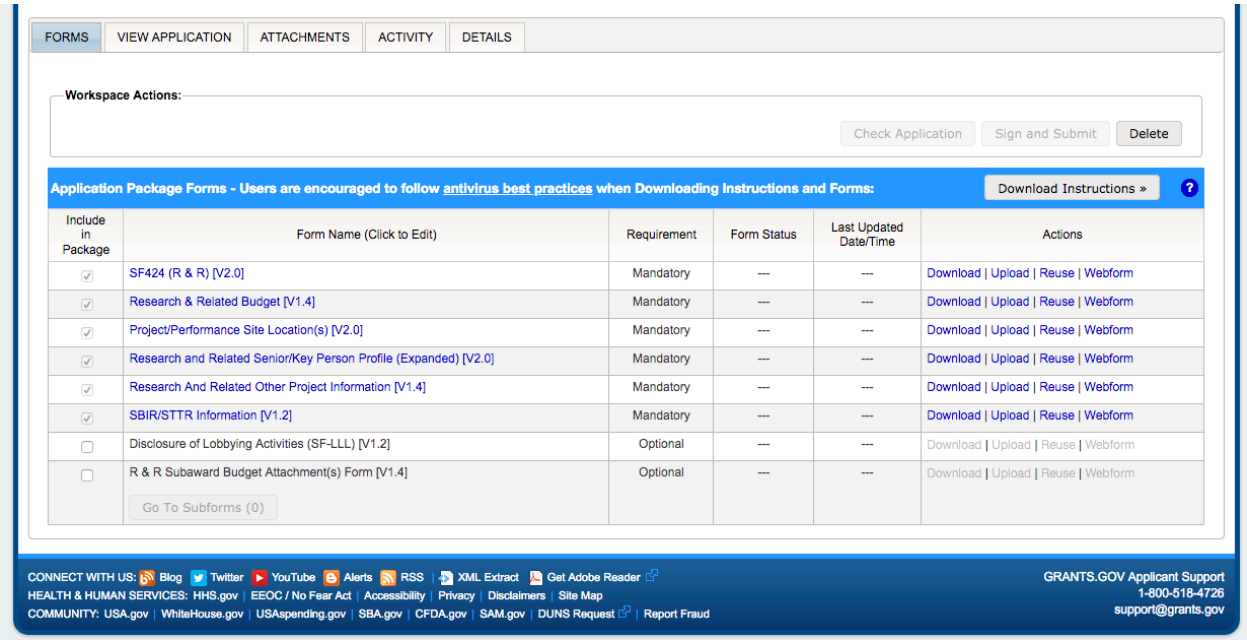
Once you find an opportunity for which you wish to apply, you may initiate the application process by selecting the "Apply" link that appears on the View Grant Opportunity page.



If you searched only on a specific opportunity number, only one announcement is provided in the chart. Click the corresponding **apply** link to populate the actual application form pages and instruction material into your Workspace. The following screen will appear:



Provide an Application Filing Name and press the "Create Workspace" button to populate your Workspace with the relevant forms.



2.4 Format Specifications for Text (PDF) Attachments

The project narrative describing your technology must not exceed 15 pages and 7,500 words of text. For details relating to the contents of your Project Narrative see Section 4.4 (Research & Related Other Project Information Form).

DOE requires all text attachments to the Adobe application forms be submitted as PDFs and that all text attachments conform to the agency-specific formatting requirements noted below. Failure to follow these requirements may lead to rejection of the application during agency validation or delay in the review process.

Text attachments should be generated using word processing software and then converted to PDF using PDF generating software. Avoid scanning text attachments to convert to PDF since that causes problems for the agency handling the application.

When attaching a PDF document to the actual forms, please note you are attaching an actual document, not just pointing to the location of an externally stored document. Therefore, if you revise the document after it has been attached, you must delete the previous attachment and then reattach the revised document to the application form. Use the View Attachment button to determine if the correct version has been attached.

* FOA instructions always supersede these instructions.

2.5 Similar, Essentially Identical, or Identical Applications

Submissions of identical applications to more than one DOE SBIR/STTR Technical Topics are not allowed.

Submissions of identical applications to more than one DOE SBIR/STTR Technical Topics are not allowed, and the DOE will not accept similar grant applications with essentially the same research focus from the same applicant organization. This includes derivative or multiple applications that propose to develop a single product, process or service that, with non-substantive modifications, can be applied to a variety of purposes. Likewise, identical or essentially identical grant applications submitted by different applicant organizations will not be accepted. Applicant organizations should ascertain and assure that the materials they are submitting on behalf of the principal investigator are the original work of the principal investigator and have not been used elsewhere in the preparation and submission of a similar grant application. Applications to the DOE are grouped by scientific Technical Topic/Subtopic for review by individual peer reviewers. The DOE Technical Topic Managers can thus easily identify multiple grant applications for essentially the same project. In these cases, application processing may be delayed or the application(s) may not be reviewed.

2.6 Multiple Applications

Applicant small businesses are limited to submitting a total of 10 different grant applications under this FOA and each application must be uniquely responsive to the topic and subtopic to which it is submitted. If more than 10 applications are received under this FOA, only the last 10 applications received will be accepted for evaluation.

2.7 After You Submit Your Application via Grants.gov

The Authorized Organization Representative (AOR) can use Grants.gov to check the status of an application at any time. Note that Grants.gov requires a tracking number. To check the status of an application, go to https://www.grants.gov/web/grants/applicants/track-my-application.html. Alternatively you can login from the home page of Grants.gov with your username and password and check your application status there.

After an application is submitted, the Authorized Organization Representative (AOR) will receive a series of four emails. 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

If the AOR/SO has not received a confirmation message from Grants.gov following submission, please contact:

Grants.gov Contact Center
Telephone: 1-800-518-4726
Email: support@grants.gov

Once agency validation is completed, an agency notification (not Grants.gov) will be emailed to the PI and AOR/SO named in the application.

This email notification will inform the PI and AOR/SO that the application has been received and processed by the agency and will indicate whether any errors or warnings resulted during the validation process.

Be sure to check the Changed/Corrected application box in the Type of Submission field of the SF424 (R&R) cover form. Once that box is checked you will notice that Grants.gov will require data in the Federal Identifier field. If you are submitting a new project application, (including corrected submissions for new applications) simply enter “N/A” in this field.

If there were no validation errors, this email notification will also inform the PI and AOR/SO of an agency accession number, which represents the “agency tracking number.” This number replaces the Grants.gov tracking number that

was assigned when the application was first submitted. The Grants.gov system will indicate that the agency tracking number has been assigned, and will reflect both numbers.

2.8 Application Assistance

2.8.1 Assistance with Grants.gov Registration or Submissions

If help is needed with the Grants.gov registration process or with the technical aspects of submitting an application through the Grants.gov system, check first the resources available at Grants.gov (http://grants.gov/).

Grants.gov customer support is also provided by the following office:

Grants.gov Program Management Office
200 Independence Avenue, SW
HHH Building, Room 739F
Washington, DC 20201

Grants.gov Helpdesk: support@grants.gov

Grants.gov Contact Center Phone Number: 1-800-518-4726

The Contact Center is available 24 hours a day, seven (7) days a week (except federal holidays.)

Before Submission

Please click on the link below for more application-relevant information.

1. About Grants.gov
2. Grants.gov FAQs
3. Grants.gov Website Support/Getting Help
4. If I have a question that I don't see in Frequently Asked Questions, what should I do?
5. Grants.gov Software/Technical/Downloads
6. Grants.gov forms downloads

2.8.2 Assistance with the DOE SBIR/STTR Programs or Preparing Your Applications

For questions about the SBIR/STTR programs or preparing an application, please contact us:

- DOE SBIR/STTR Help Desk: 301-903-5707
- DOE SBIR/STTR Email: SBIR-STTR@science.doe.gov

3. Using the Grant Application Package

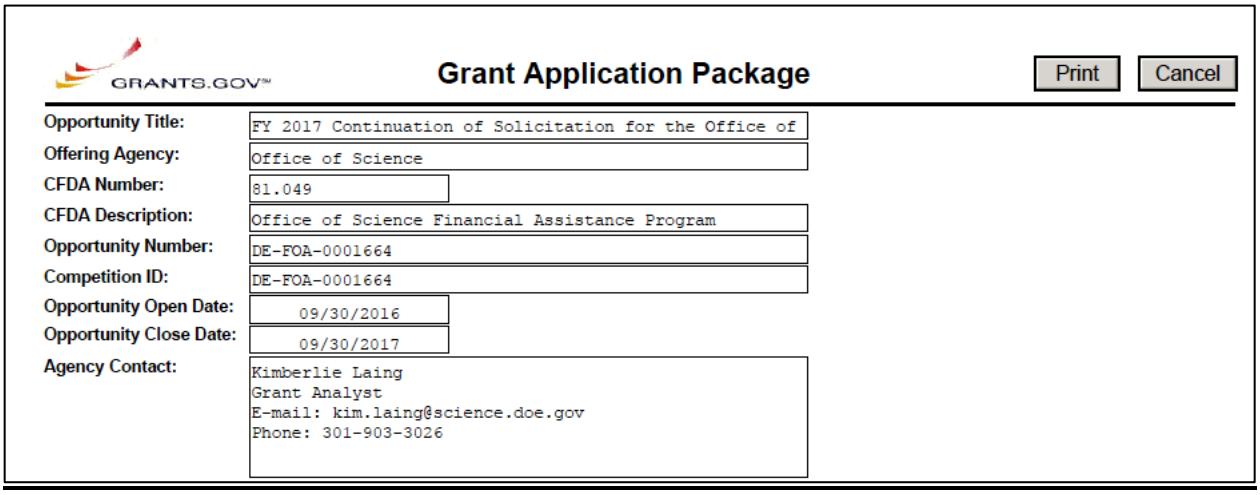
This section describes the steps an applicant takes once the appropriate FOA has been located and the corresponding grant application package has been successfully populated in your Workspace. You can find more information and instructions on creating a Workspace at the following link.

https://www.grants.gov/web/grants/applicants/workspace-overview.html

3.1 Verify Grant Information

When you select a funding opportunity in Grants.gov Search Grants, verify that the information shown in the Grant Application Package screen corresponds to the funding opportunity for which you wish to apply. Grants.gov auto-populates the following information:

- Opportunity Title
- Offering Agency
- CFDA Number
- CFDA Description
- Opportunity Number
- Competition ID
- Opportunity Open Date
- Opportunity Close Date
- Agency Contact



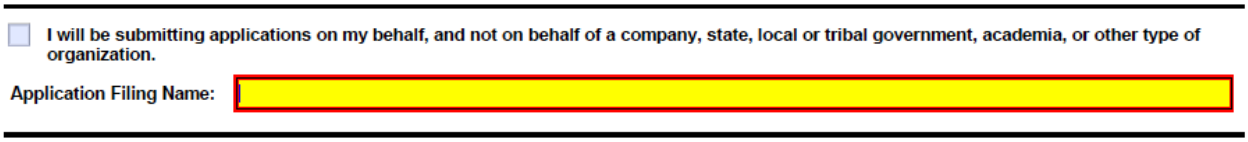
GRANTS.GOV™ **Grant Application Package** Print Cancel

Opportunity Title:	FY 2017 Continuation of Solicitation for the Office of
Offering Agency:	Office of Science
CFDA Number:	81.049
CFDA Description:	Office of Science Financial Assistance Program
Opportunity Number:	DE-FOA-0001664
Competition ID:	DE-FOA-0001664
Opportunity Open Date:	09/30/2016
Opportunity Close Date:	09/30/2017
Agency Contact:	Kimberlie Laing Grant Analyst E-mail: kim.laing@science.doe.gov Phone: 301-903-3026

CFDA Number Field: The CFDA number assigned will be 81.049.

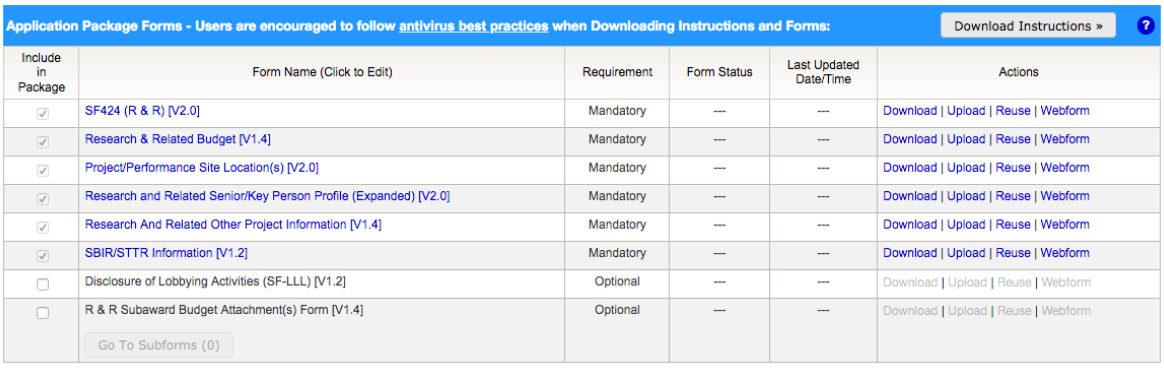
3.2 Enter the Name for the Application

Enter a name for the application in the Application Filing Name field (this is a required field). This name is for use solely by the applicant for tracking the application through the Grants.gov submission process. It is not used by the receiving agency.



3.3 Open and Complete All Mandatory Documents

Open and complete all of the documents listed in the Mandatory Documents box. **Complete the component titled SF424 (R&R) first.** Data entered in this component populates other mandatory and optional forms where applicable.



Application Package Forms - Users are encouraged to follow antivirus best practices when Downloading Instructions and Forms: Download Instructions »

Include in Package	Form Name (Click to Edit)	Requirement	Form Status	Last Updated Date/Time	Actions
☑	SF424 (R & R) [V2.0]	Mandatory	---	---	Download | Upload | Reuse | Webform
☑	Research & Related Budget [V1.4]	Mandatory	---	---	Download | Upload | Reuse | Webform
☑	Project/Performance Site Location(s) [V2.0]	Mandatory	---	---	Download | Upload | Reuse | Webform
☑	Research and Related Senior/Key Person Profile (Expanded) [V2.0]	Mandatory	---	---	Download | Upload | Reuse | Webform
☑	Research And Related Other Project Information [V1.4]	Mandatory	---	---	Download | Upload | Reuse | Webform
☑	SBIR/STTR Information [V1.2]	Mandatory	---	---	Download | Upload | Reuse | Webform
☐	Disclosure of Lobbying Activities (SF-LLL) [V1.2]	Optional	---	---	Download | Upload | Reuse | Webform
☐	R & R Subaward Budget Attachment(s) Form [V1.4] Go To Subforms (0)	Optional	---	---	Download | Upload | Reuse | Webform

3.4 Open and Complete Optional Documents

These documents can be used to provide additional information for the application. Information on these documents is found later in these instructions.

3.5 Submitting the Application via Grants.gov

The Authorized Organization Representative (AOR) registered in Grants.gov is the only official with the authority to actually submit applications through Grants.gov. Therefore, PIs will need to work closely with their AOR to determine that all the necessary steps have been accomplished prior to submitting an application. This includes any internal review process required by the applicant organization.

Before starting the final submission step, **applicants are encouraged to save a copy of the final application locally**. Once you have properly completed all required documents and attached any required or optional documentation, and checked each form for errors, click on the **Check Application** button on the main Workspace screen to ensure that you have successfully completed all required data fields. If any of the required fields are not completed you will receive an error notice which will indicate where revision is needed within your package. Correct any errors or if none is found, save the application package. **Please be aware that the "Check Application" feature only identifies missing information or attachments that are required on the standard Grants.gov forms.** Additional requirements are identified in the FOA and may not be identified during this Grants.gov check. Please refer to the current FOA to identify all requirements prior to submitting your application.

The Sign & Submit button will now become active and clicking this button will begin the application submission process. Only after the package has been saved with no errors will the Sign & Submit button become active. Only an AOR will be able to perform the submit action.

A confirmation screen will appear once the submission is complete and a Grants.gov Tracking Number will be provided on this screen. Applicants should record this number so that they may refer to it should they need to contact Grants.gov Customer Support.

For additional information, access https://www.grants.gov/web/grants/applicants/apply-for-grants.html.

4. Completing the Required Phase I Grant Application Forms

4.1 Overview

This section contains all of the instructions you will need to complete the SF424 (R&R) and related forms. The table below summarizes are the mandatory and optional documentation. Conformance to all instructions is required and strictly enforced. DOE may withdraw any applications from the review process that are not consistent with these instructions.

As you navigate through the forms, required fields are highlighted in yellow and outlined in red on the downloaded PDF and marked with a red asterisk on the online webform version. Optional fields and completed fields are displayed in white. Data entered into a specific field is not accepted until you have navigated to the next field. If you enter invalid or incomplete information in a field, you will receive an error message.

For those forms that are more than one page scroll down (using the scroll bar on the right hand side of the screen) to navigate to a subsequent page. Once all data have been entered, scroll up using the scroll bar to return to the Grant Application Package Screen.

Table 1 Summary of Mandatory (and Optional) Documentation for a DOE SBIR or STTR Grant

Name of Document	Format	Attach
SF424 Research & Related (R&R) Application for Federal Assistance	PDF	
• SFLLL Disclosure of Lobbying Activities, if applicable (Optional)	PDF	Field 18
Project/Performance Site Location(s)	PDF	
R&R Other Project Information	PDF	
• Project Summary/Abstract	PDF	Attach to Field 7 of R&R Other Project Information
• Project Narrative	PDF	Attach to Field 8 of R&R Other Project Information
• Bibliography and References Cited	PDF	Include in Project Narrative
• Facilities and Other Resources	PDF	Include in Project Narrative

• Equipment	PDF	Include in Project Narrative
• Other - Letter of commitment for consultant, sub-award, or research institution, if applicable	PDF	Attach to Field 12 of R&R Other Project Information
• Other – Level-of Effort Worksheet	PDF	Attach to Field 12 of R&R Other Project Information
• Other - Data Management Plan	PDF	Attach to Field 12 of R&R Other Project Information
• Other – National Laboratory Certification, if applicable	PDF	Attach to Field 12 of R&R Other Project Information
• Other—SBA Company Registration	PDF	Attach to Field 12 of R&R Other Project Information
R&R Senior/Key Person Profile (Expanded)	PDF	
• Biographical Sketch for each person	PDF	Attach to appropriate block
• Current & Pending Support for each person, if applicable	PDF	Attach to appropriate block
Research and Related Budget	PDF	
• Additional Senior Key Persons, if applicable	PDF	Attach to Field A.9
• Additional Equipment, if applicable	PDF	Attach to Field C.11
• Budget Justification	PDF	Attach to Field K
Research and Related: Sub-award Budget Form, if applicable	PDF	
Budget Justification for each Sub-award	PDF	Attach to appropriate block
SBIR/STTR Information	PDF	
• Phase I Commercialization Plan (See Question 7)	PDF	Attach to Field 7 of SBIR/STTR Info.
• Commercialization History, if applicable (See Question 8)	PDF	Attach to Field 8 of SBIR/STTR Info.

4.2 Application for Federal Assistance SF 424 (R&R)

View Burden Statement

OMB Number: 4040-0001
Expiration Date: 12/31/2022

APPLICATION FOR FEDERAL ASSISTANCE
SF 424 (R&R)

3. DATE RECEIVED BY STATE | **State Application Identifier**

1. TYPE OF SUBMISSION
☐ Pre-application ☐ Application ☐ Changed/Corrected Application

4. a. Federal Identifier
b. Agency Routing Identifier
c. Previous Grants.gov Tracking ID

2. DATE SUBMITTED | **Applicant Identifier**

5. APPLICANT INFORMATION **Organizational DUNS:** 000000000INDV

Legal Name:
Department: Division:
Street1:
Street2:
City: County / Parish:
State: Province:
Country: USA: UNITED STATES ZIP / Postal Code:

Person to be contacted on matters involving this application
Prefix: First Name: Middle Name:
Last Name: Suffix:
Position/Title:
Street1:
Street2:
City: County / Parish:
State: Province:
Country: USA: UNITED STATES ZIP / Postal Code:
Phone Number: Fax Number:
Email:

6. EMPLOYER IDENTIFICATION *(EIN) or (TIN):*

7. TYPE OF APPLICANT: Please select one of the following
Other (Specify):
Small Business Organization Type ☐ Women Owned ☐ Socially and Economically Disadvantaged

8. TYPE OF APPLICATION:
☐ New ☐ Resubmission
☐ Renewal ☐ Continuation ☐ Revision

If Revision, mark appropriate box(es).
☐ A. Increase Award ☐ B. Decrease Award ☐ C. Increase Duration ☐ D. Decrease Duration
☐ E. Other (specify):

Is this application being submitted to other agencies? Yes ☐ No ☐ What other Agencies?

9. NAME OF FEDERAL AGENCY: Office of Science

10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: 81.049
TITLE: Office of Science Financial Assistance Program

11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:

12. PROPOSED PROJECT:
Start Date Ending Date

13. CONGRESSIONAL DISTRICT OF APPLICANT

1. Type of Submission

Applicants should select "Application" for Type of Submission. A changed or revised application should be identified as a "Revision in Field 8 of the SF-424 (R&R) Form.

2. Date Submitted and Applicant Identifier

Enter the date the application is submitted to DOE (or state, if applicable). The Applicant Identifier field should be left blank.

3. Date Received by State and State Application Identifier

For submissions to DOE, leave these fields blank.

4.a. Federal Identifier

For submissions to DOE, leave these fields blank.

4.b. Agency Routing Identifier

For submissions to DOE, leave these fields blank.

5. Applicant Information

This information is for the Applicant Organization, not a specific individual.

The small business concern is ALWAYS the applicant organization for an SBIR or STTR award (e.g., ABC Incorporated).

Field Name	Instructions
Organizational DUNS	Enter the DUNS number of the applicant organization. This field is required.
Legal Name	Enter the legal name of the applicant which will undertake the assistance activity, enter the complete address of the applicant (including county/parish and country), and name, telephone number, e-mail, and fax of the person to contact on matters related to this application.
Department	Enter the name of the primary organizational department, service, laboratory, or equivalent level within the organization that will undertake the assistance activity.
Division	Enter the name of the primary organizational division, office, or major subdivision which will undertake the assistance activity.
Street1	Enter the first line of the street address for the applicant in "Street1" field. This field is required.
Street2	Enter the second line of the street address for the applicant in "Street2" field. This field is optional.
City	Enter the city for address of applicant. This field is required.
County/Parish	Enter the county or parish for address of applicant.
State	Enter the state where the applicant is located. This field is required if the applicant is located in the United States.
Province	Enter the province.
Country	Select the country for the applicant address. For SBIR/STTR applications, the small business concern must be located in the United States.
ZIP Code	Enter the nine-digit postal code (e.g., ZIP code) of applicant. This field is required if the applicant is located in the United States. This field is required if a State is selected; optional for Province.

Person to be contacted on matters involving this application:

This information is for the Administrative or Business Official, not the PI. This person is the individual to be notified if additional information is needed and/or if an award is made.

Field Name	Instructions
Prefix	Enter the prefix (e.g., Mr., Mrs., Rev.) for the person to contact on matters related to this application.
First Name	Enter the first (given) name of the person to contact on matters related to this application. This field is required.
Middle Name	Enter the middle name of the person to contact on matters related to this application.
Last Name	Enter the last (family) name of the person to contact on matters related to this application. This field is required.
Suffix	Enter the suffix (e.g., Jr., Sr., Ph.D.) for the person to contact on matters related to this application.
Phone Number	Enter the daytime phone number for the person to contact on matters related to this application. This field is required.
Fax Number	Enter the fax number for the person to contact on matters related to this application.
Email	Enter the email address for the person to contact on matters related to this application. Provide only one email address. This is a required field.

6. Employer Identification

Enter either TIN or EIN as assigned by the Internal Revenue Service. This field is required.

If you have a 12-digit EIN established for grant awards from DOE, enter all 12digits (e.g., 1123456789A1). For SBIR/STTR applications, the small business concern must be located in the United States.

7. Type of Applicant

This information is for the Applicant Organization, not a specific individual AOR or PI.

Field Name	Instructions
Type of Applicant	Select from the menu or enter the appropriate letter in the space provided. If Small Business is selected as Type of Applicant, then note if the organization is "Woman-owned" and/or "Socially and Economically Disadvantaged." For SBIR/STTR applicant organizations, select R. Sm*all Business.* The applicant organization must certify that it will qualify as a small business concern at the time of award.
Other (Specify)	Complete only if "Other" is selected as the Type of Applicant.
Woman Owned	Check if you are a woman-owned small business: a small business that is at least 51% owned by a woman or women, who also control and operate it.
Socially and Economically Disadvantaged	Check if you are a socially and economically disadvantaged small business, as determined by the US Small Business Administration pursuant to Section 8(a) of the Small Business Act U.S.C. 637(a).

8. Type of Application

Field Name	Instructions
Type of Application	Select the type from the following list. Check only one. This field is required. New: An application that is being submitted to an agency for the first time. Revision: Only if you have revised your application and are resubmitting to the same FOA. Resubmission, Renewal, and Continuation should not be selected for SBIR/STTR Applications. .
If Revision, mark appropriate box(es)	If Revision, mark appropriate box(es). May select more than one: E. Other If "Other" is selected, please specify in the text box provided.
Other	Identify the revision number (Example: Revision2 – this denotes you are replacing the previous version submitted.)
Is this application being submitted to other agencies?	Check applicable box. This field is required. In the field "Is this application being submitted to other agencies?," please check the box "Yes" if one or more of the specific aims submitted in your application are also contained in a similar, identical, or essentially identical application submitted to another Federal agency. Indicate the agency or agencies to which the application has been submitted.

Field Name	Instructions
What Other Agencies?	Enter Agency name.

9. Name of Federal Agency

Name the Federal agency from which assistance is being requested with this application. This information is pre-populated by Grants.gov.

10. Catalog of Federal Domestic Assistance (CFDA) Number and Title (CFDA)

Use the Catalog of Federal Domestic Assistance number and title of the program under which assistance is requested. This information is pre-populated by Grants.gov.

11. Descriptive Title of Applicant's Project

This field is required. Identify the Technical Topic and Subtopic in the title field, e.g., 08b (leading zero for topics 1-9 and the lowercase letter of the subtopic) along with your project specific title. This is a title created by the applicant, which identifies their application submission. This is NOT the topic and/or subtopic title. The project title must be the same as submitted in your LOI; applications not meeting this requirement may be administratively declined.

A "new" application must have a different title from any other DOE application with the same PI.

A "revision" application must have the same title as the originally submitted "new" application being revised.

DOE limits title character length to 81 characters, including the spaces between words and punctuation. Titles in excess of 81 characters will be truncated. Be sure to only use standard characters in the descriptive title: A through Z, a through z, 0 through 9, and underscore (_).

An SBIR/STTR Phase II application should have the same title as the previously awarded Phase I grant.

12. Proposed Project

Start Date: Enter the proposed start date of the project. See Part II.f. of the Funding Opportunity Announcement. Though this date is approximate, this field is required.

Ending Date: Enter the proposed ending date of the project. Though this date is approximate, this field is required.

Phase I: Routinely, SBIR and STTR Phase I awards do not exceed twelve (12) months.

Phase II: Routinely, SBIR and STTR Phase II awards do not exceed two years.

Deviations from the stated project duration guidelines above will not be acceptable.

13. Congressional District of Applicant

Enter the Congressional District in the format: 2 character State Abbreviation – 3 character District Number. Examples: CA-005 for California's 5th district, CA-012 for California's 12th district.

To locate your congressional district, visit the Grants.gov web site.

For States and U.S. territories with only a single congressional district enter "001" for the district code. For jurisdictions with no representative, enter "099". For jurisdictions with a nonvoting delegate, enter "098" for the district number. Example: DC-098, PR-098.

SF 424 (R&R) APPLICATION FOR FEDERAL ASSISTANCE **Page 2**

14. PROJECT DIRECTOR/PRINCIPAL INVESTIGATOR CONTACT INFORMATION

Prefix: First Name: Middle Name:
Last Name: Suffix:
Position/Title:
Organization Name:
Department: Division:
Street1:
Street2:
City: County / Parish:
State: Province:
Country: USA: UNITED STATES ZIP / Postal Code:
Phone Number: Fax Number:
Email:

15. ESTIMATED PROJECT FUNDING

a. Total Federal Funds Requested
b. Total Non-Federal Funds
c. Total Federal & Non-Federal Funds
d. Estimated Program Income

16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?

a. YES ☐ THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON:

DATE:

b. NO ☐ PROGRAM IS NOT COVERED BY E.O. 12372; OR

☐ PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW

17. By signing this application, I certify (1) to the statements contained in the list of certifications* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances * and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious. or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 18, Section 1001)

☐ **I agree**

**The list of certifications and assurances, or an Internet site where you may obtain this list, is contained in the announcement or agency specific instructions.*

18. SFLLL (Disclosure of Lobbying Activities) or other Explanatory Documentation

Add Attachment | Delete Attachment | View Attachment

19. Authorized Representative

Prefix: First Name: Middle Name:
Last Name: Suffix:
Position/Title:
Organization:
Department: Division:
Street1:
Street2:
City: County / Parish:
State: Province:
Country: USA: UNITED STATES ZIP / Postal Code:
Phone Number: Fax Number:
Email:

Signature of Authorized Representative: Completed on submission to Grants.gov

Date Signed: Completed on submission to Grants.gov

20. Pre-application Add Attachment | Delete Attachment | View Attachment

21. Cover Letter Attachment Add Attachment | Delete Attachment | View Attachment

14. Program Director/Principal Investigator (PI) Contact Information

The PI should be entered here.

Name the PI whom is responsible to the applicant small business concern for the scientific and technical direction of the project. A revision application must have the same PI as the currently funded grant.

Field Name	Instructions
Prefix	The Project Director/Principal Investigator (PI) is the individual responsible for the overall scientific and technical direction of the project. Enter the prefix of the PI.
First Name	Enter the first name of the PI. This field is required.
Middle Name	Enter the middle name of the PI.
Last Name	Enter the last name of the PI. This field is required.
Suffix	Enter the suffix of the PI.
Position/Title	Enter the Position/title of the PI.
Organization Name	Enter the organization name of the PI.
Department	Enter the department of the PI.
Division	Enter the division of the PI.
Street1	Enter first line of the street address for the PI in the “Street1” field. This field is required.
Street2	Enter the second line of the street address for the PI in the “Street2” field. This field is optional.
City	Enter the city for address of the PI. This field is required.
County/Parish	Enter the county or parish for address of the PI.
State	Enter the state where the PI is located. This field is required if the PI is located in the United States.
Province	Enter the Province for PI.
Country	Select the country for the PI address.

Field Name	Instructions
ZIP/Postal Code	Enter the nine-digit Postal Code (e.g., ZIP Code) of the PI. This field is required if the PI is located in the United States.
Phone Number	Enter the daytime phone number for the PI. This field is required.
Fax Number	Enter the fax number for the PI.
Email	Enter the email address for the PI. This field is required.

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. DOE's evaluation of the grant application is critically dependent on the qualifications of the PI. Any changes in the PI that are made after award selection are strongly discouraged and must be pre-approved by DOE. Requests for PI changes will be closely scrutinized and may cause delays in grant execution.

In addition, the PI is required to devote to the project a considerable part of his or her time. “Considerable” means a minimum average of 3 hours per week for the duration of the project for both SBIR and STTR Phase I projects. For example, a 9-month project, lasting 39 weeks, would require a commitment of 117 hours. Applicants must state the duration of the project in weeks, if the project is to be completed in less than 9 months, in order to make it 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 will be delayed while the applicant corrects the error. 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 they are legally empowered to work in the U.S. at the time that an award is made and throughout its duration.

Additional PI Restrictions when submitting to SBIR Program Only – 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 applicant 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.

Additional PI Restrictions when submitting to STTR Program Only – 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 applicant 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, then the PI’s primary employment (at least 20 hours per week) must be with the research institution in order to qualify under STTR. The PI’s research institution must provide at least 30% of the research effort.

PI Restrictions when submitting to both SBIR and STTR Programs – Applicants submitting to both programs must adhere to the PI restrictions set forth. Therefore, if the PI is employed by the small business, the applicant is eligible to submit to both programs. However, in cases where the PI is employed by the research institution, the application will only be considered under the STTR Program.

15. Estimated Project Funding

Field Name	Instructions
a. Total Federal Funds Requested	(This information comes from Fields I and J of the R&R Related Budget Form. See Section 4.6.3). Enter the Federal funds requested (Field I, Total Direct and Indirect Costs) plus Fee (Field J). Please refer to the Topics document for maximum funding limits by topic and subtopic.
b. Total Non-Federal Funds	Enter total non-Federal funds proposed for the entire project period. For applications to DOE, enter "0" in this field unless cost sharing is a requirement for the specific announcement.
c. Total Federal & Non-Federal Funds	Enter total estimated funds for the entire project period, including both Federal and non-Federal funds. This is required information. For DOE, this field will be the same as item 15a unless cost sharing is entered in 15b.
d. Estimated Program Income	Enter amount from Field J of the R&R Related Budget Form. For DOE, profit or fee is not "program income" and shall not be included in field 15.d. of the SF 424 (R&R) application.

16. Is Application Subject to Review by State Executive Order 12372 Process?

For DOE submissions, using the SF424 (R&R), applicants should check "No, Program is not covered by E.O. 12372."

17. Certification

Check "I agree" to provide the required certifications and assurances. This field is required.

The applicant organization is responsible for verifying its eligibility and the accuracy, validity, and conformity with the most current institutional guidelines of all the administrative, fiscal, and scientific information in the application, including the Facilities and Administrative rate. Deliberate withholding, falsification, or misrepresentation of information could result in administrative actions, such as withdrawal of an application, suspension and/or termination of an award, debarment of individuals, as well as possible criminal penalties. The signer further certifies that the applicant organization will be accountable both for the appropriate use of any funds awarded and for the performance of the grant-supported project or activities resulting from this application. The grantee institution may be liable for the reimbursement of funds associated with any inappropriate or fraudulent conduct of the project activity.

18. SFLLL or Other Explanatory Documentation (Optional Form)

If applicable, attach the SFLLL or other explanatory document per agency instructions. The list of Certifications and Assurances referenced in Field 18 can be found on the DOE Financial Assistance Forms Page at https://energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms, under Certifications and Assurances.

If unable to certify compliance in Item 17 (above), attach an explanation. Additionally, as applicable, attach the SFLLL (Standard Form LLL, Disclosure of Lobbying Activities) or other documents in this item. A fillable version of the SFLLL form is available at http://www.whitehouse.gov/omb/assets/omb/grants/sflllin.pdf.

19. Authorized Representative

This is the individual with the organizational authority to sign for an application; otherwise known as the Authorized Organization Representative or the Signing Official.

Field Name	Instructions
Prefix	Enter the prefix (Mr., Mrs., Rev.) for the name of the Authorized Representative.
First Name	Enter the first (given) name of the Authorized Representative. This field is required.
Middle Name	Enter the middle name of the Authorized Representative.
Last Name	Enter the last (family) name of the Authorized Representative. This field is required.
Suffix	Enter the suffix (e.g., Jr., Sr., or Ph.D.) for the name of the Authorized Representative.
Position/Title	Enter the title of the Authorized Representative. This field is required.
Organization	Enter the name of the organization for the Authorized Representative. This field is required.
Department	Enter the name of the primary organizational department, service, laboratory, or equivalent level within the organization of the Authorized Representative.
Division	Enter the name of the primary organizational division, office, or major subdivision of the Authorized Representative.
Street1	Enter the first line of the street address for the Authorized Representative in the “Street1” field. This field is required.
Street2	Enter the second line of the street address for the Authorized Representative in the “Street2” field. This field is optional.
City	City for address of the Authorized Representative. This field is required.
County/Parish	Enter the county or parish for address of the Authorized Representative.
State	Enter the State where the Authorized Representative is located. This field is required if the Authorized Representative is located in the United States.

Field Name	Instructions
Province	Enter the Province for the Authorized Representative.
Country	Select the country for the Authorized Representative address.
ZIP/Postal Code	Enter the nine-digit Postal Code (e.g., ZIP Code) of the Authorized Representative. This field is required if the Authorized Representative is located in the United States.
Phone Number	Enter the daytime phone number for the Authorized Representative. This field is required.
Fax Number	Enter the fax number for the Authorized Representative.
Email	Enter the email address for the Authorized Representative. This field is required.
Signature of Authorized Representative	It is the organization's responsibility to assure that only properly authorized individuals sign in this capacity and/or submits the application to Grants.gov. If this application is submitted through Grants.gov, leave blank. If a hard copy is submitted, the AOR must sign this block.
Date Signed	If this application is submitted through Grants.gov, the system will generate this date. If submitting a hard copy, enter the date the AOR signed the application.

20. Pre-Application

DOE SBIR/STTR does not require pre-applications.

21. Cover Letter

DOE SBIR/STTR does not require a cover letter.

4.3 Project/Performance Site Location(s) Form

View Burden Statement

OMB Number: 4040-0010
Expiration Date: 12/31/2022

Project/Performance Site Location(s)

Project/Performance Site Primary Location

☐ I am submitting an application as an individual, and not on behalf of a company, state, local or tribal government, academia, or other type of organization.

Organization Name:

DUNS Number:

* Street1:

Street2:

* City: County:

* State:

Province:

* Country: USA: UNITED STATES

* ZIP / Postal Code: * Project/ Performance Site Congressional District:

Project/Performance Site Location 1

☐ I am submitting an application as an individual, and not on behalf of a company, state, local or tribal government, academia, or other type of organization.

Organization Name:

DUNS Number:

* Street1:

Street2:

* City: County:

* State:

Province:

* Country: USA: UNITED STATES

* ZIP / Postal Code: * Project/ Performance Site Congressional District:

Delete Entry Next Site

Additional Location(s) Add Attachment Delete Attachment View Attachment

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.

Project/Performance Site Primary Location

Generally, the Primary Location should be that of the applicant organization or identified as off-site in accordance with the conditions of the applicant organization's negotiated Facilities and Administrative (F&A) agreement. This information must agree with the F&A information on the Checklist Form Page of the application. If there is more than one performance site, including any Department of Veterans Affairs (VA) facilities and foreign sites, list them in the fields provided for Location 1 - # below.

Do not check the "I am submitting an application as an individual, and not on behalf of a company, state, local or tribal government, academia, or other type of organization" box.

For SBIR/STTR applications, one of the performance sites indicated must be that of the applicant small business concern.

For Phase I, the research or R&D project activity must be performed in the United States. However, based on a rare and unique circumstance, for example, if a supply or material or the study design is not available in the United States, DOE may allow that particular portion of the research or R&D work to be performed or obtained in a foreign country. Investigators must thoroughly justify the use of these sites in the application. These rare and unique situations will be considered on a case-by-case basis, and they should be discussed with DOE SBIR/STTR program staff prior to submission of the application. Approval by the DOE for such specific condition(s) must be in writing prior to issuance of an award and must be facilitated by the DOE SBIR/STTR program staff. Whenever possible, non-SBIR/STTR funds should be used for other work outside of the United States that is necessary to the overall completion of the project.

The research and analytical work performed by the grantee organization should be conducted in research space occupied by, available to, and under the control of the SBIR/STTR grantee for the conduct of its portion of the proposed project. However, when required by the project activity, access to special facilities or equipment in another organization is permitted, as in cases where the SBIR/STTR awardee has entered into a sub-contractual agreement with another institution for a specific, limited portion of the research project.

Whenever a proposed SBIR/STTR project is to be conducted in facilities other than those of the applicant organization, the awarding component may request that the small business concern provide a letter from the organization stating that leasing/rental arrangements have been negotiated for appropriate research space. This letter must be signed by an authorized official of the organization whose facilities are to be used for the SBIR/STTR project and must certify that the small business concern (grantee organization) will have access to and control over the research space. In addition, the letter must include a description of the facilities and, if appropriate, equipment that will be leased/rented to the grantee organization.

Field Name	Instructions
Organization Name	Indicate the organization name of the primary site where the work will be performed.
DUNS Number	Enter the DUNS number associated with the organization where the project will be performed.
Street1	Enter first line of the street address of the primary performance site location. This field is required.
Street2	Enter second line of the street address of the primary performance site location, if applicable.
City	Enter the city for address of the primary performance site location. This field is required.
County/Parish	Enter the county or parish of the primary performance site location.

Field Name	Instructions
State	Select the state of the primary performance site location. This field is not active until USA has been selected for the country. This field is required if the performance site location is in the United States.
Province	Enter the province of the primary performance site location.
Country	Select the country of the primary performance site location. This field is required.
ZIP Code	Enter the nine-digit postal code (e.g., ZIP code) of the performance site location. This field is required if the performance site location is in the United States.
Project/Performance Site Congressional District	Enter the Congressional District in the format: 2 character State Abbreviation – 3 character District Number. Examples: CA-005 for California's 5th district, CA-012 for California's 12th district. If all districts in a state are affected, enter "all" for the district number. Example MD-all for all congressional districts in Maryland. If nationwide (all districts in all states), enter US-all. To locate your congressional district, visit the Grants.gov web site. Note it is likely this field will be identical to the "Congressional District of Applicant" field provided elsewhere in the application. For States and U.S. territories with only a single congressional district, enter "001" for the district code. For jurisdictions with no representative, enter "099". For jurisdictions with a nonvoting delegate, enter "098" for the district number. Example: DC-098, PR-098.

Project/Performance Site Location 1

Field Name	Instructions
Organization Name	Enter the name of organization of the performance site location.
DUNS Number	Enter the DUNS number associated with the organization where the project will be performed.
Street1	Enter first line of the street address of the performance site location. This field is required.
Street2	Enter second line of the street address of the performance site location, if applicable.
City	Enter the city of the performance site location. This field is required.

Field Name	Instructions
County/Parish	Enter the county or parish of the performance site location.
State	Select the state where the performance site is located. This field is not active until USA has been selected for the country. This field is required if the performance site location is in the United States.
Province	Enter the province of the performance site location.
Country	Select the country for the performance site location. This field is required.
ZIP Code	Enter the nine-digit postal code (e.g., ZIP code) of the performance site location. This field is required if the performance site location is in the United States.
Project/Performance Site Congressional District	Enter the Congressional District in the format: 2 character State Abbreviation – 3 character District Number. Examples: CA-005 for California's 5th district, CA-012 for California's 12th district. If all districts in a state are affected, enter "all" for the district number. Example MD-all for all congressional districts in Maryland. If nationwide (all districts in all states), enter US-all. If the program/project is outside the US, enter 00-0000. To locate your congressional district, visit the Grants.gov web site. Note it is likely this field will be identical to the "Congressional District of Applicant" field provided elsewhere in the application. For States and U.S. territories with only a single congressional district, enter "001" for the district code. For jurisdictions with no representative, enter "099". For jurisdictions with a nonvoting delegate, enter "098" for the district number. Example: DC-098, PR-098.

For additional performance site locations, click Next Site to display the fields for Project/Performance Site Locations 3 through 30.

If you need to add more than thirty locations, enter the information in a separate file. In the Additional Locations section at the bottom of the form, click Add Attachment, select the file, and then click Open.

4.4 Research & Related Other Project Information Form

RESEARCH & RELATED Other Project Information

OMB Number: 4040-0001
Expiration Date: 12/31/2022

1. Are Human Subjects Involved? ☐ Yes ☐ No
   1.a. If YES to Human Subjects
   Is the Project Exempt from Federal regulations? ☐ Yes ☐ No
   If yes, check appropriate exemption number. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8
   If no, is the IRB review Pending? ☐ Yes ☐ No
   IRB Approval Date:
   Human Subject Assurance Number:
2. Are Vertebrate Animals Used? ☐ Yes ☐ No
   2.a. If YES to Vertebrate Animals
   Is the IACUC review Pending? ☐ Yes ☐ No
   IACUC Approval Date:
   Animal Welfare Assurance Number:
3. Is proprietary/privileged information included in the application? ☐ Yes ☐ No
4.a. Does this Project Have an Actual or Potential Impact - positive or negative - on the environment? ☐ Yes ☐ No
4.b. If yes, please explain:
4.c. If this project has an actual or potential impact on the environment, has an exemption been authorized or an environmental assessment (EA) or environmental impact statement (EIS) been performed? ☐ Yes ☐ No
4.d. If yes, please explain:
5. Is the research performance site designated, or eligible to be designated, as a historic place? ☐ Yes ☐ No
5.a. If yes, please explain:
6. Does this project involve activities outside of the United States or partnerships with international collaborators? ☐ Yes ☐ No
6.a. If yes, identify countries:
6.b. Optional Explanation:
7. Project Summary/Abstract Add Attachment Delete Attachment View Attachment
8. Project Narrative Add Attachment Delete Attachment View Attachment
9. Bibliography & References Cited Add Attachment Delete Attachment View Attachment
10. Facilities & Other Resources Add Attachment Delete Attachment View Attachment
11. Equipment Add Attachment Delete Attachment View Attachment
12. Other Attachments Add Attachments Delete Attachments View Attachments

1. Are Human Subjects Involved?

Generally, all R/R&D DOE SBIR/STTR project work will not require the involvement of human subjects. However, if activities involving human subjects are planned at any time during the proposed project at any performance site, check "Yes." Check "Yes" even if the proposed project is exempt from Regulations for the Protection of Human Subjects. If activities involving human subjects are not planned at any time during the proposed project at any performance site, select no and skip the rest of block 1. This field is required.

1.a. If YES to Human Subjects

Exemption Number

Is the Project Exempt from Federal Regulations? Yes/No

Yes: If the project is exempt from Federal regulations, check "Yes." If "Yes", check the appropriate exemption number.

No: If the project is not exempt from Federal regulations, check "No."

If "Yes", check appropriate exemption number 1, 2, 3, 4, 5, 6, 7, 8

Select the appropriate exemption number from 1, 2, 3, 4, 5, 6, 7, 8.

If human subject activities are exempt from Federal regulations, provide the exemption numbers corresponding to one or more of the exemption categories. The eight categories of research that qualify for exemption from coverage by the regulations are defined in the Common Rule for the Protection of Human Subjects.

If no, is the IRB review pending? Yes/No

If IRB review is pending, check "Yes." If IRB review is not pending, check No.

IRB Approval Date

Enter the latest Institutional Review Board (IRB) approval date (if available). Leave blank if pending.

Applicants should check "Yes" to the question "Is the IRB review pending?" even if the IRB review/approval process has not yet begun at the time of submission. Also, note that an IRB Approval Date is not required at the time of submission. This may be requested later in the pre-award cycle as a Just-in-Time requirement.

Human Subject Assurance Number

Enter the approved Federal Wide Assurance (FWA) that the applicant has on file with the Office for Human Research Protections, if available. If the applicant has a FWA number, enter the 8-digit number. Do not enter the FWA before the number.

2. Are Vertebrate Animals Used?

If activities involving vertebrate animals are planned at any time during the proposed project at any performance site, check yes. If no, skip the rest of block 2.

Note that the generation of custom antibodies constitutes an activity involving vertebrate animals.

2.a. If YES to Vertebrate Animals

Generally, all R/R&D DOE SBIR/STTR project work will not require the involvement of vertebrate animals.

Is the IACUC review Pending?

Indicate if an Institutional Animal Care and Use Committee (IACUC) review is pending.

Yes: Indicate if an Institutional Animal Care and Use Committee (IACUC) review is pending.

No: Indicate if an Institutional Animal Care and User Committee (IACUC) review is pending. Click No, if no review is pending.

IACUC Approval Date

Enter the latest IACUC approval date (if available). Leave blank if pending.

Animal Welfare Assurance Number

Enter the Federally approved assurance number, if available.

3. Is proprietary/privileged information included in the application?

If the answer to question 3 is "Yes", you must identify proprietary information with a legend on the first page of your project narrative, and any other documents that contain proprietary information (see below), and on each page that contains proprietary information in accordance with instructions provided in Part VIII, Sections D and F of the DOE FOA. Please refer to Section 7.2 of this Guide for additional information.

An application may include technical data and other data, including trade secrets and commercial or financial information that are privileged or confidential, which the applicant does not want disclosed to the public or used by

the Government for any purpose other than application and program evaluation as permitted by statute. Only the following documents may contain proprietary information: (1) the commercialization plan, (2) the project narrative, (3) the budget justification, (4) letters of support, and (5) commercialization history.

To protect such data, any of the above listed documents that are uploaded as part of your application must be marked in the following manner utilizing the three (3) step process outlined below:

1. The Cover Page of the document must contain the notice below (please cut and paste):

"Pages [_____] of this document may contain trade secrets or commercial or financial information that is privileged or confidential and is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance or loan agreement between the submitter and the Government. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source."

"Proprietary Data Legend
Lines, paragraphs, tables, charts, and other graphics containing trade secrets, commercial, and/or financial information are marked with brackets [ ]."

Alternatively you may select: "highlighted" or "underlined text" or "a vertical line in the side margin │" in place of "brackets [ ]."

To see examples of proper IP markings, please visit the SBIR/STTR Programs web site at https://science.osti.gov/sbir/Applicant-Resources/Protecting-your-Trade-Secrets

To further protect such data, each page containing trade secrets or commercial or financial information that is privileged or confidential must be specifically identified and marked with the following (please cut and paste):

"May contain trade secrets or commercial or financial information that is privileged or confidential and exempt from public disclosure."

Do not include this statement on pages that do not contain proprietary information.

In addition, each line or paragraph containing trade secrets or commercial or financial information that is privileged, must be marked with brackets or other clear identification, such as highlighting.

Please ensure this information is consistent with question number three (3) of the Research and Related form.

4. Environmental Questions

Most DOE research grants are not expected to individually or cumulatively have a significant effect on the environment. However, if an applicant expects that the proposed project will have an actual or potential impact on the environment or if any part of the proposed research and/or project includes one or more of the following categorical exclusions listed below, the box marked "Yes" should be checked and an explanation provided in field 4.b.

1. The potential environmental impacts of the proposed research may be of greater scope or size than other actions included within a category.
2. The proposed research threatens to violate a Federal, State, or local law established for the protection of the environment or for public health and safety.
3. Potential effects of the proposed research are unique or highly uncertain.

4. Use of especially hazardous substances or processes is proposed for which adequate and accepted controls and safeguards are unknown or not available.
5. The proposed research may overload existing waste treatment plants due to new loads (volume, chemicals, toxicity, additional hazardous wasted, etc.)
6. The proposed research may have a possible impact on endangered or threatened species.
7. The proposed research may introduce new sources of hazardous/toxic wastes or require storage of wastes pending new technology for safe disposal.
8. The proposed research may introduce new sources of radiation or radioactive materials.
9. Substantial and reasonable controversy exists about the environmental effects of the proposed research.

4.a. Does this project have an actual or potential impact on the environment?

Indicate if this project has an actual or potential impact on the environment? Click No here if this is not the case. This field is required.

4.b. If yes, please explain

Explanation of the actual or potential impact on the environment. Please note: If you have trouble entering information into this field, please save your form, exit the application package and re-open the form. You should now be able to enter this information.

4.c. If this project has an actual or potential impact on the environment, has an exemption been authorized or an Environmental Assessment (EA) or an Environmental Impact Statement (EIS) been performed?

If this project has an actual or potential impact on the environment, has an exemption been authorized or an environmental assessment (EA) or environmental impact statement (EIS) been performed? - Check yes or no.

4.d. If yes, please explain

Enter additional details about the EA or EIS. If desired, you can provide the information in a separate file, and attach by clicking Add Attachments located to the right of Step 11 - Other Attachments.

5. Is the research performance site designated, or eligible to be designated, as a historic place? Yes/No

If any research performance site is designated, or eligible to be designated, as a historic place, if Yes, check the Yes box and then provide an explanation in the box provided in 5.a. Otherwise, check the No box. This field is required.

5.a. If yes, please explain:

If you checked the Yes box indicating any performance sire is designated, or eligible to be designated, as a historic place, provide the explanation here.

6. Does this project involve activities outside of the United States or partnerships with International Collaborators?

Indicate whether this project involve activities outside of the United States or partnerships with international collaborators. Check yes or no. This field is required.

6.a. If yes, identify countries

Enter the countries with which international cooperative activities are involved.

6.b. Optional Explanation

Enter an explanation for involvement with outside entities (optional). If desired, you can provide the information in a separate file, and attach by clicking Add Attachments located to the right of Item 11, Other Attachments.

If you have checked “Yes” to item 6, applicants must describe special resources or characteristics of the research project (e.g., human subjects, animals, equipment, and techniques), whether similar research is being done in the United States and whether there is a need for additional research in this area. Provide this information in a separate

file, attaching it as Item 12, Other Attachments. In the body of the text, begin the section with a heading indicating "Foreign Justification." When saving this file, please name it "Foreign Justification" as well.

7. Project Summary/Abstract

The Project Summary/Abstract must contain a summary of the proposed activity suitable for dissemination to the public. This document must not include any proprietary or sensitive business information as DOE may make it available to the public. The Project Summary/Abstract must not exceed 1 page. Save this information in a file named "Summary.pdf," and click on "Add Attachment" to attach it.

The purpose of the Project Summary/Abstract is to communicate the overall sense of the combined Phase I and Phase II project, not every step of the work plan or every accomplishment.

Statements of future applications or benefits belong in the section on Commercial Applications and Other Benefits. Do not use acronyms, abbreviations, first-person references, or any proper names (including the name of the small business, any subcontractors or institutions, or any trade or product name) in the body of the summary.

The header must include:

- Company Name
- Project Title
- Principal Investigator
- Topic number/Subtopic letter, e.g. 08b

The body must include:

- Statement of the problem or situation that is being addressed in your application. Describe the problem or situation being addressed—be sure that the DOE interest in the problem is clear, but not in such a way that implies that any services or products are being provided for the direct benefit of DOE rather than for the advancement of a public purpose. (Typically one to three sentences).
- General statement of how this problem is being addressed. This is the overall objective of the Phase I project. How is this problem being addressed? What is the overall project approach? (Ideally, two to four sentences).
- What is to be done in Phase I? (Typically three to four sentences).
- Commercial Applications and Other Benefits (limited to the space provided). Summarize the future applications or public benefits if the project is carried over into Phase II or Phase III and beyond. Do not repeat information already provided above.
- Key Words - Provide listing of key words that describe this effort.
- Summary for Members of Congress: (layman's terms, two sentences, maximum 50 words). DOE notifies members of Congress of grants in their districts. Therefore, please provide, in clear and concise layman's terms, a very brief summary of the project, suitable for a possible press release from a Congressional office. One suggested format is to use two sentences: The first sentence should state the problem being addressed so that the research need is clear, and the second sentence should state what is being done to address that problem.

The attachment must be in PDF format.

8. Project Narrative

Provide the Project Narrative in accordance with the announcement and/or DOE-specific instructions below. Please click the Add Attachment button to the right of this field to complete this entry.

The project narrative describing your technology must not exceed 15 pages, 7,500 words of text, including the cover page, and should be in a single PDF file with the exception of the budget justification, level-of-effort worksheet, and project summary, which must be attached separately as directed in Grants.gov. All grant applications must be submitted in response to a specific technical topic and subtopic announced in this notice. This information (topic number and subtopic letter) should be identified in a header on each page of the Project Narrative as well as on the SF 424 R&R in field 11 preceding the applicant's project title.

The Project Narrative header should also include company name, project title, and topic number and subtopic letter.

Example Header:

XYZ Technologies, Inc. SIS: A Sensor-Based In-Line System Topic: 21/a

Sequentially number each page of the Project Narrative in the page footer.

Grant applications, submitted to DOE under SBIR/STTR programs, must provide sufficient information to convince DOE, and members of the research community who review the grant application, that the application is responsive to the topic and subtopic under which it is submitted, that the proposed work represents a sound approach to the investigation of an important scientific or engineering question, and that it is worthy of support under the stated criteria. The Phase I grant application should describe self-contained research that will contribute to proving scientific or technical feasibility of the approach or concept. It should be written with the care and thoroughness accorded papers for publication--direct, concise, informative, and free from grammatical, typographical, and spelling errors. Illustrations and charts should be clearly labeled and correctly referenced in the text. Promotional and non-project-related discussion detracts from the professional quality of the proposal. The work proposed for Phase I, assuming that it proceeds successfully, should be suitable in nature for subsequent progression to Phases II and III.

Technical reviewers will base their conclusions only on information contained in the grant application. Do not assume that reviewers are acquainted with the small business, key individuals, or any theory or experiments referred to, but not described. (This includes material in refereed professional journals--those in which the articles have been subjected to peer review, and material referenced on the internet). Relevant journal articles should be summarized in the grant application. Information provided via internet links will not be reviewed.

Specifically excluded from this funding notice are grant applications principally for literature surveys, for compilations of the work of others, for technical assessments, or for technical status surveys. If any of these types of tasks are included in the work plan, the grant (if awarded) may be reduced in proportion to that effort. In addition, grant applications primarily for the development of already proven concepts will be declined, because such efforts are considered the responsibility of the private sector.

Full narrative descriptions of the DOE SBIR/STTR Topics are provided via the DOE SBIR/STTR web site under the following link, https://science.osti.gov/sbir/Funding-Opportunities. Each Topic is subdivided into Subtopics, designated by the letters a, b, c, d, etc. A grant application must respond to a specific Topic and, within it, to only one subtopic. NOTE: The topic numbers change for each FOA release. Be sure to identify the correct topic number and subtopic letter on the SF 424 R&R in field 11. The application will be evaluated under the topic number identified. The DOE will not be responsible for reassigning applications to the correct topic number if identified incorrectly.

Using the outline below, the Project Narrative must include ALL of the following:

- Cover page – Provide company-specific and project information including company name and address, principal investigator, project title, topic number, and subtopic letter.

- Proprietary Data Legend (Proprietary Application Information – Trade Secrets, Commercial, or Financial Information) – If applicable. If your application contains trade secrets or commercial or financial information, you must include the Notice of Restriction on Disclosure and Use of Data on the first page of your Project Narrative in accordance with guidance under Part VIII, D. Proprietary Application Information - Trade Secrets, Commercial or Financial Information of the current FOA.

- Identification and Significance of the Problem or Opportunity, and Technical Approach – Define the specific technical problem or opportunity addressed by your application. Provide enough background information so that the importance of the problem/opportunity is clear. Indicate the overall technical approach to the problem/opportunity and the part that the proposed research plays in providing needed results.

- Anticipated Public Benefits – Discuss the technical, economic, social, and other benefits to the public as a whole anticipated if the project is successful and is carried over into Phases II and III. Identify specific groups in the commercial sector as well as the Federal Government that would benefit from the projected results. Describe the resultant product or process, the likelihood that it could lead to a marketable product, and the significance of the market.

- Technical Objectives - State the specific technical objectives for the Phase I research and development.

- Work Plan – This section should be a substantial part of the application. Provide an explicit, detailed description of the Phase I research approach and work to be performed. Indicate what will be done, the qualifications of the team (principal investigator, key personnel, subcontractors and consultants) to execute the project, where it will be done, and how the work will be carried out.

- Link the Work Plan to the Technical Objectives of the proposed project. Discuss methods planned to achieve each objective or task explicitly and in detail. Be sure to address how the research or research and development effort could lead to a product, process, or service if funded beyond Phase I. Show how the management direction and control of the project will be assured. Regardless of the proportion of the work or funding of each of the performers under the grant, the applicant is to be the primary grantee with overall responsibility for its performance.

- Performance Schedule - The Phase I budget period may be less than, but no longer than 12 months. Briefly describe the important milestones to be achieved and the estimated amount of time for completing each task described in the Work Plan. Please be aware that your Phase II application will be due approximately 9.5 months after the project start date. Critical milestones that will be important to include in your Phase II application should be completed in the first 9 months of your project.

- Facilities/Equipment - Describe available equipment and physical facilities necessary to carry out the Phase I effort. Equipment is defined as an article of tangible, nonexpendable, personal property, including exempt property, charged directly to the grant, having a useful life of more than one year and an acquisition cost of $5,000 per unit or more. Items of equipment to be leased or purchased must be described and justified in this section. Title to equipment purchased under this grant lies with the government. It may be transferred to the grantee where such transfer would be more cost effective than recovery of the property by the government. Grantees wishing to obtain title should contact their contract specialist prior to project completion for the procedure to follow to make such a request. If the equipment, instrumentation, and facilities are not the property of the applicant and are not to be purchased or leased, the source must be

identified and their availability and expected costs specifically confirmed in this section. A principal of the organization that owns or operates the facilities/equipment must provide written verification regarding the availability and cost of facilities/equipment and any associated technician cost. Small businesses may get credit for obtaining this equipment as an in-kind Phase II commercial contribution.

American-Made - To the extent possible in keeping with the overall purposes of the program, only American-made equipment and products should be purchased with the funds provided by the financial assistance under DOE Phase I grants.

- Research Institution (RI) - If the grant application contains formal collaboration with an RI (required for STTR, optional for SBIR), (1) identify the name and address of the institution, the name, phone number, and email address of the certifying official from the RI, and the total dollar amount of the subcontract; (2) describe in detail the work to be done by this RI in the Work Plan section; and (3) provide a detailed cost estimate including costs for labor, equipment, and materials, if any, as well as a specific statement certifying that they have agreed to serve in the manner and to the extent described in the Work Plan section of the grant application" from RIs.
  The RI will be considered a subcontractor to the applicant. The RI must provide a Letter of Commitment (LOC) on official letterhead from an authorized representative of the RI which commits the institution to participate in the project as described in the application. The LOC should be attached as an "Other Attachment" in field 12, on the Research & Related Other Project Information form. If selected for a grant, participation of the RI will be verified by the DOE contracting officer.

- Other Consultants and Subcontractors - Involvement of consultants or subcontractors in the project is permitted provided the work is performed in the United States, for exceptions, see section III D. If consultants and/or subcontractors are to be used, this section of the application must identify them by name, identify whether the party is being proposed as a consultant versus as a subcontractor, and should provide Letters of Commitment (LOC) from an authorized representative of the consultants and/or subcontractors. The LOC must provide a detailed cost estimate, including costs for labor, equipment, and materials, if any, for the consultant or subcontractor, as well as a specific statement certifying that the consultant(s) or subcontractor(s) have agreed to serve in the manner and to the extent described in the Work Plan section of the application. Each LOC must be on official letterhead with an authorizing representative's contact information provided and submitted as an "Other Attachment" to the application. If selected for a grant, the DOE contracting officer will verify the participation of any subcontractor(s) and/or consultant(s) and will require budget and budget explanations for subcontractors and verification of the rates for consultants.

- Phase II Funding Commitment (Commercial Contribution) [OPTIONAL] - While not a requirement to obtain Phase I funding, applicants are strongly encouraged to submit commitments from the private sector or from non-SBIR/STTR funding sources, which will be considered as part of the evaluation criterion on "Impact". Add as an attachment in field 12, "Other Attachments", on this form.

- Phase III Follow-On Funding Commitment [OPTIONAL] - Applicants are encouraged to submit a Phase III follow-on funding commitment which will be considered as part of the evaluation criterion on Impact. The commitment must be signed by a person with the authority to make it, indicate when the funds will be made available, and contain specific technical objectives which will make the commitment exercisable by the applicant. If the commitment is firm regardless of achievement of technical objectives, it should state so. The commitment may include: (1) third party financing; (2) self-financing (in which case the applicant must demonstrate the ability to provide the Phase III funding); (3) state or local government financing; or (4) federal funding. In-kind contributions are allowed; however, the applicant or donor must estimate the dollar value of any in-kind contribution. The Phase III funding cannot be contingent on obtaining a patent because of the length of time this process requires. The Phase III Commitment must be submitted with the Phase I

application as a separate attachment. Add as an attachment in field 12, "Other Attachments", on this form. You should also reference it in the technical proposal in the "Work Plan" Section.

9. Bibliography & References Cited

Provide a bibliography of any references cited in the Project Narrative. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Include only bibliographic citations. Applicants should be especially careful to follow scholarly practices in providing citations for source materials relied upon when preparing any section of the application. Do not attach a file in this field. Include this information, if any, in the Phase I Project Narrative. Bibliography and References cited count against the Phase I Project Narrative 15-page limit.

10. Facilities & Other Resources

Do not attach a file in this field. Include this information, if any, in the Project Narrative. Facilities and Other Resources information counts against the Phase I Project Narrative 15-page limit.

11. Equipment

Do not attach a file in this field. Include this information, if any, in the Project Narrative. Equipment information counts against the Phase I Project Narrative 15-page limit.

12. Other Attachments

Note: Field 12 will hold more than one attachment. If you need to elaborate on your responses to questions 1 – 6 on the "R&R Other Project Information" form, provide the information in a single file named "projinfo.pdf." Click on "Add Attachments" in Field 12 to attach file.

The following documents can be attached to Field 12 (see the current FOA for details):

- Digital Data Management Plan (Required. See FOA for details)
- SBA Company Registration (Required)
- Authorization for non-DOE/NNSA FFRDCs, if applicable
- Authorization for DOE/NNSA FFRDCs, if applicable, if available
- Signed Letter of Funding Commitment, if applicable
- Phase III Follow-On Funding Commitment, if applicable
- Signed Letter of Commitment (LOC) from research institution, as applicable. LOC must include name and address of institution, dollar amount of subcontract, and certifying official's name, phone number and email address.
- LOC from consultants, subcontractors or other third parties.
- Level-of-Effort Worksheet may be found on the DOE SBIR/STTR Programs web site at https://science.osti.gov/sbir/Applicant-Resources/Grant-Application.
- Responses to questions on the "SBIR/STTR Information" Form

4.5 R&R Senior/Key Person Profile (Expanded) Form

OMB Number: 4040-0001
Expiration Date: 12/31/2022

RESEARCH & RELATED Senior/Key Person Profile (Expanded)

PROFILE - Project Director/Principal Investigator

Prefix: * First Name: Middle Name:
* Last Name: Suffix:
Position/Title: Department:
Organization Name: Division:
* Street1:
Street2:
* City: County/ Parish:
* State: Province:
* Country: USA: UNITED STATES * Zip / Postal Code:
* Phone Number: Fax Number:
* E-Mail:

Credential, e.g., agency login:

*** Project Role:** PD/PI **Other Project Role Category:**

Degree Type:
Degree Year:

***Attach Biographical Sketch** Add Attachment Delete Attachment View Attachment
Attach Current & Pending Support Add Attachment Delete Attachment View Attachment

PROFILE - Senior/Key Person 1

Prefix: * First Name: Middle Name:
* Last Name: Suffix:
Position/Title: Department:
Organization Name: Division:
* Street1:
Street2:
* City: County/ Parish:
* State: Province:
* Country: USA: UNITED STATES * Zip / Postal Code:
* Phone Number: Fax Number:
* E-Mail:

Credential, e.g., agency login:

*** Project Role:** **Other Project Role Category:**

Degree Type:
Degree Year:

Attach Biographical Sketch Add Attachment Delete Attachment View Attachment
Attach Current & Pending Support Add Attachment Delete Attachment View Attachment

Delete Entry Next Person

To ensure proper performance of this form; after adding 20 additional Senior/ Key Persons; please save your application, close the Adobe Reader, and reopen it.

Complete this form before the Budget form to populate data on the Budget form. The PI is the key individual designated by the applicant to direct the project. Only one PI is acceptable per project. The PI does not need to be a U.S, citizen; however, all work must be performed in the United States. Non-U.S. citizens are eligible to perform work on SBIR/STTR projects provided they are legally empowered to work in the U.S. and perform the project work in the U. S. at the time that an award is made and throughout its duration. That is, a foreign national working on an SBIR/STTR project must NOT be an illegal alien and must be an immigrant alien or a foreign national visiting the U.S. on an approved VISA. Foreign nationals who have applied for and received a "green card" are considered permanent residents.

This component provides the ability to collect structured data for up to 40 Senior/Key Persons. Beginning with the PI, provide a profile for each Senior/Key Person proposed. The information for the PI continues to be pre-populated from the SF424 (R&R) Cover form. Unless otherwise specified in an agency announcement, Senior/Key Personnel are defined as all individuals who contribute in a substantive, meaningful way to the scientific development or execution of the project, whether or not salaries are requested. Consultants and Subawardees should be included if they meet this definition. Each Senior/Key Person must be aware that he/she is included in the grant application and must agree to perform the work if selected for award.

When completing the detailed budget component for the prime organization or a sub-award or consortium organization, the project roles listed in the budget component should be consistent with those used in the Senior/Key Person component.

Profile – Principal Investigator (PI) and Senior Key Personnel

Field Name	Instructions
Prefix	This field is automatically populated from the SF424 (R&R). It is the prefix (e.g., Mr., Mrs., Rev.) for the name of the PI.
First Name	This field is automatically populated from the SF424 (R&R). It is the first (given) name of the PI. This field is required.
Middle Name	This field is automatically populated from the SF424 (R&R). It is the middle name of the PI.
Last Name	This field is automatically populated from the SF424 (R&R). It is the last (family) name of the PI. This field is required.
Suffix	This field is automatically populated from the SF424 (R&R). It is the suffix (e.g., Jr., Sr., PhD) for the name of the PI.
Position/Title	This field is automatically populated from the SF424 (R&R). It is the title of the PI.
Department	This field is automatically populated from the SF424 (R&R). It is the name of primary organizational department, service, laboratory, or equivalent level within the organization of the PI and other Senior Key Personnel.

Field Name	Instructions
Organization Name	This field is automatically populated from the SF424 (R&R). It is the name of the organization of the PI and other Senior Key Personnel.
Division	This field is automatically populated from the SF424 (R&R). It is the name of primary organizational division, office, or major subdivision of the PI and other Senior Key Personnel.
Street1	This field is automatically populated from the SF424 (R&R). It is the first line of the street address of the PI and other Senior Key Personnel. This field is required.
Street2	This field is automatically populated from the SF424 (R&R). It is the second line of the street address of the PI and other Senior Key Personnel, if applicable. This field is optional.
City	This field is automatically populated from the SF424 (R&R). It is the city for the address of the PI and other Senior Key Personnel.
County/Parish	This field is automatically populated from the SF424 (R&R). It is the county or parish for the address of the PI and other Senior Key Personnel.
State	This field is automatically populated from the SF424 (R&R). It is the state where the PI is located. This field is required if the PI and other Senior Key Personnel is located in the United States.
Province	This field is automatically populated from the SF424 (R&R). It is the province where the PI and other Senior Key Personnel is located.
Country	This field is automatically populated from the SF424 (R&R). It is the country for the PI and other Senior Key Personnel address.
ZIP Code	This field is automatically populated from the SF424 (R&R). The nine-digit Postal Code (e.g., ZIP Code) of the PI and other Senior Key Personnel. T his field is required if the PI is located in the United States.
Phone Number	This field is automatically populated from the SF424 (R&R). It is the daytime phone number for the PI and other Senior Key Personnel. This field is required.
Fax Number	This field is automatically populated from the SF424 (R&R). It is the fax number for the PI and other Senior Key Personnel.

Field Name	Instructions
Email	This field is automatically populated from the SF424 (R&R). It is the email address for the PI and other Senior Key Personnel. This field is required for the PI.
Credential, e.g., agency login	If you are submitting to an agency (e.g., DOE) where you have an established personal profile, enter the agency ID. If not, leave blank.
Project Role	Select one. Use "Other" if a category is not listed in the pick list. Select Program Director/Principal Investigator for the PI.
Other Project Role Category	Complete if you selected “Other Professional” or “Other” as a project role; e.g., Engineer, Chemist.
Degree Type	Enter the highest academic or professional degree or other credentials (e.g., RN). This is optional information.
Degree Year	Enter the year the highest degree or other credential was obtained. This is optional information.
Attach Biographical Sketch	Provide a biographical sketch for the PI and other Key Personnel as noted. Recommended information includes: Education and Training, Research and Professional Experience, Collaborators and Affiliations (for conflicts of interest), Publications and Synergistic Activities. Save the information in a single file and attach. This is required information. Biographical sketches should follow the format described below under Profile – Senior/Key Person(s).
Attach Current & Pending Support	Provide a list of all current and pending support (both Federal and non-Federal) for ongoing projects and pending applications.

Profile – Senior/Key Person(s)

The remaining Senior/Key Person Profiles should be listed in alphabetical order. While alphabetical order is preferred, it is not required. However, be aware that these profiles will appear in the application in the order provided by the applicant. Therefore, peer reviewers will see them in the order presented. Those with a postdoctoral role should be included if they meet the definition of Senior/Key Personnel. Also, use this section to list any Other Significant Contributors (OSCs). OSCs should be listed after all Senior/Key Persons. OSCs are individuals who have committed to contribute to the scientific development or execution of the project, but are not committing any specified measurable effort (in person months) to the project. These individuals are typically presented at “effort of zero person months” or “as needed” (individuals with measurable effort cannot be listed as Other Significant Contributors). Consultants should be included if they meet this definition.

Complete a biographical sketch for each senior/key person and attach to the “Attach Biographical Sketch” field in each profile. The biographical sketch(es) provided must be current and accurate as of the application submittal date. The biographical information for each person must not exceed 2 pages 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, in chronological order, list any 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, and year of publication. Though not used for application evaluation purposes, provide a website address if available electronically.
- Patents, copyrights, and software systems developed may be provided in addition to or substituted for publications
- Synergistic Activities - List no more than five (5) professional and scholarly activities related to the effort proposed.

Personally Identifiable Information: Do not include sensitive and protected personally identifiable information including social security numbers, birthdates, citizenship, marital status, or home addresses. Do not include information that a merit reviewer should not make use of.

Should the level of involvement change for an individual listed as an OSC, the individual should be redesignated as "Senior/Key Personnel." This change should be made before any compensation is charged to the project.

After providing data for each individual Senior/Key Person, click the Next Person button at the bottom of the form to enter data for the next Senior/Key Person. Continue in this manner until data has been provided for up to 40 Senior/Key Persons. To ensure proper performance of this form, after adding 20 additional Senior/Key Persons please save your application, close the Adobe reader, and reopen it. For applications involving more than 40 Senior/Key Persons, the "Additional Senior/Key Person Profiles" fields will become available once data for the first 40 Senior/Key Persons has been provided.

4.6 R&R Budget Form

Complete the R&R Budget component following the instructions provided. You must complete a separate detailed budget for each year of support requested. The form will generate a cumulative budget for the total project period. You must complete all the required information (i.e., those fields that are highlighted in yellow, and outlined in red on the PDF or marked with an asterisk on the webform) before the Next Period button is activated. If no funds are requested for a required field, enter "0."

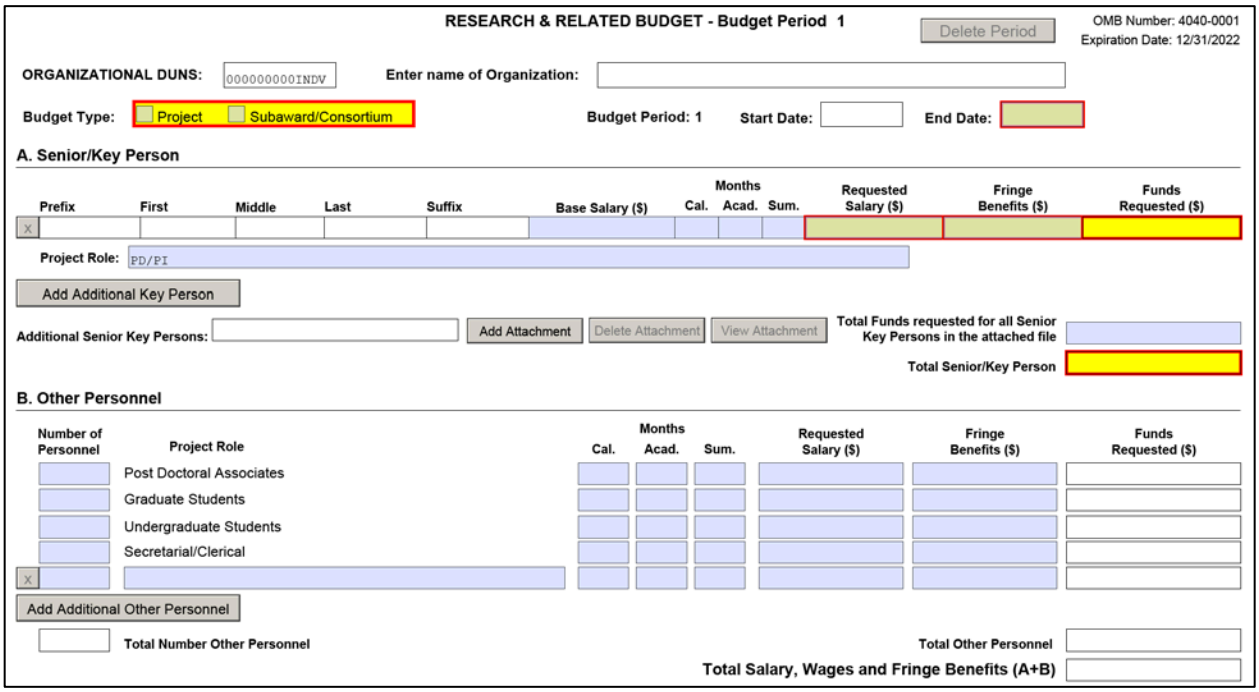
While the dollar fields allow cents to be entered, all dollar fields must be presented in whole numbers. Please round to the nearest whole number.

Although the Grants.gov budget forms requests person-months as a metric for determining percent of effort, the SBIR/STTR program requires that you provide hours and rates for all key personnel participating on the grant. You must complete the form in full. For example, in the past, companies have failed to complete the column(s) for the number of person-months to be devoted to the project. Incomplete budgets and budget justifications will create delays if the applicant is selected for award.

A separate budget form must be completed by the applicant and each subawardee for the 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 (for Phase II ONLY). You may request funds under any of the categories (other than "Participant/Trainee Support Costs") listed as long as the item and amount are necessary to perform the proposed work, meets all the criteria for allowability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this announcement.

If funds are being requested for more than one budget period (for Phase II ONLY), click the **Next Period** button to navigate to screens for the next budget period.

4.6.1 R&R Budget - Section A and B, Budget Period 1 Form


RESEARCH & RELATED BUDGET - Budget Period 1
Delete Period
OMB Number: 4040-0001
Expiration Date: 12/31/2022
ORGANIZATIONAL DUNS: 000000000INDV
Enter name of Organization:
Budget Type: Project Subaward/Consortium
Budget Period: 1
Start Date:
End Date:
A. Senior/Key Person
Prefix First Middle Last Suffix Base Salary ($) Months Cal. Acad. Sum. Requested Salary ($) Fringe Benefits ($) Funds Requested ($)
Project Role: PD/PI
Add Additional Key Person
Additional Senior Key Persons:
Add Attachment
Delete Attachment
View Attachment
Total Funds requested for all Senior Key Persons in the attached file
Total Senior/Key Person
B. Other Personnel
Number of Personnel Project Role Months Cal. Acad. Sum. Requested Salary ($) Fringe Benefits ($) Funds Requested ($)
Post Doctoral Associates
Graduate Students
Undergraduate Students
Secretarial/Clerical
Add Additional Other Personnel
Total Number Other Personnel
Total Other Personnel
Total Salary, Wages and Fringe Benefits (A+B)

Organizational DUNS

Enter the DUNS or DUNS+4 number of the applicant organization. For project applicant, this field is pre-populated from the R&R SF424 Cover Page. For subaward applicants, this field is a required enterable field.

Budget Type

Project, Subaward/Consortium: Check the appropriate block.

Project: The budget requested for the primary applicant organization.

Subaward/Consortium: The budget requested for subawardee/consortium organization(s). Note, separate budgets are required only for subawardee/consortium organizations that perform a substantive portion of the project.

If creating a Subaward Budget, use the R&R Subaward Budget Attachment and attach as a separate file on the R&R Budget Attachment(s) form.

Enter name of Organization

Pre-populated from the R&R SF424. Enter the name of the organization.

Start Date

Pre-populated from the R&R SF424. Enter the requested/proposed start date of each budget period. This field is required.

End Date

Enter the requested/proposed end date of each budget period. This field is required.

Budget Period

Identify the specific budget period (for example, 1, 2, 3, 4, 5). Only one (1) budget period should be submitted for Phase I applications and two (2) budget periods are required for Phase II. If submitting through Grants.gov, the system will automatically generate a cumulative budget for the total project period. This is a required field.

A. Senior/Key Person

This section must include the names of all Senior/Key Persons at the applicant organization who are involved on the project in a particular budget year. Include all collaborating investigators, and other individuals meeting the Senior/Key Person definition if they are from the applicant organization. Details of collaborators at other institutions will be provided in the Subaward budget for each subaward/consortium organization. Personnel listed as Other Significant Contributors who are not committing any specific measurable effort to the project should not be included in the Personnel section of the budget since no associated salary and/or fringe benefits should be requested for their contribution. Consultant costs must be included in F.3 Consultant Services.

Field Name	Instructions
Prefix	Pre-populated from the R&R SF424. Enter the prefix (e.g., Mr., Mrs., Rev.) for the name of each Senior/Key Person.
First Name	Pre-populated from the R&R SF424. Enter the first (given) name of each Senior/Key Person. This field is required.
Middle Name	Pre-populated from the R&R SF424. Enter the middle name of each Senior/Key Person, if applicable.
Last Name	Pre-populated from the R&R SF424. Enter the last (family) name of each Senior/Key Person. This field is required.
Suffix	Pre-populated from the R&R SF424. Enter the suffix (e.g., Jr., Sr., and PhD) of each Senior/Key Person.
Project Role	Identify the project role of each Senior/Key person in this section. This section could also include such roles as Co-PI, Postdoctoral Associates, and Other Professionals. The role of the PI is auto-populated in the 01 year budget only. Do not change or edit this field for the PI. For future year budgets, use consistent terminology. The role of “Co-PI” is not currently used by DOE. Do not assign any individual this role. If applicants wish to use the role of “Co-Investigator” or some other similar role, select “Other” for the Project Role field and then insert the appropriate role descriptor in the Other Project Role Category field.

Field Name	Instructions
Base Salary ($)	Enter the annual compensation paid by the employer for each Senior/Key Person. This includes all activities such as research, teaching, patient care, or other. You may choose to leave this column blank. STTR: If the PI is an employee of the Research Institution (RI), the PI salary should be entered on the RI subaward budget page.
Cal. Months	Identify the number of months devoted to the project for each Senior/Key Person (i.e., calendar, academic, summer). NOTE: Key Personnel hours and rates are required as part of the budget justification. STTR: If the PI is an employee of the Research Institution (RI), the PI months devoted should be entered on the RI subaward budget page.
Acad. Months	Identify the number of months devoted to the project for each Senior/Key Person (for example, calendar, academic, summer). If your institution does not use a 9-month academic year, indicate your institution's definition of academic year in the budget justification. STTR: If the PI is an employee of the Research Institution (RI), the PI months devoted should be entered on the RI subaward budget page.
Sum. Months	Identify the number of months devoted to the project for each Senior/Key Person (for example, calendar, academic, summer). If your institution does not use a 3-month summer period, indicate your institution's definition of summer in the budget justification. STTR: If the PI is an employee of the Research Institution (RI), the PI months devoted should be entered on the RI subaward budget page.
Requested Salary ($)	Regardless of the number of months being devoted to the project, indicate only the amount of salary being requested for this budget period for each Senior/Key Person. This field is required. STTR: The PI may be paid by either the research institution (RI) or the small business, but not both. If the PI is an employee of the small business, enter the PI's salary on the small business budget. If the PI is an employee of the RI, enter the PI's salary on the RI's subaward budget.
Fringe Benefits ($)	Enter applicable fringe benefits, if any, for each Senior/Key Person.
Funds Requested ($)	Enter the requested salary and fringe benefits for each Senior/Key Person. This field is required.

Field Name	Instructions
Total Funds requested for all Senior/Key Persons in the attached file	Enter the total funds requested for all Senior/Key persons. This is required information.
Total Senior/Key Persons	The total funds requested for all Senior/Key Persons.
Additional Senior/Key Persons	If funds are requested for more than eight Senior/Key Persons, include all pertinent budget information as identified in this section and attach as a file here. Enter the total funds requested for all additional Senior/Key Persons in the appropriate field of Section A. Use the same format as the budget component and include all required information.

B. Other Personnel

Field Name	Instructions
Number of Personnel	For each project role category, identify the number of personnel proposed. List any additional project role(s) in the blank(s) provided, e.g., Engineer, IT Professionals, etc. For all Postdoctoral Associates and Graduate Students not already named in Section A. Senior/Key Person, individually list names, roles (e.g., Post Doctorate or Graduate Student), associated months, and salary & fringe benefits requested in the Budget Justification.
Project Role	If Project Role is other than Post Doctoral Associates, Graduate Students, Undergraduate Students, or Secretarial/Clerical, enter the appropriate project role (for example, Engineer, IT Professional, etc.) in the blanks. Do not include consultants in this section. Consultants are included below in Section F. Other Direct Costs 3. Consultant Services.
Cal. Months	Identify the number of months devoted to the project in the applicable box for each project role category (i.e., calendar, academic, summer).
Acad. Months	Identify the number of months devoted to the project in the applicable box for each project role category (i.e., calendar, academic, summer). If your institution does not use a 9-month academic year, indicate your institution's definition of academic year in the budget justification.

Field Name	Instructions
Sum. Months	Identify the number of months devoted to the project in the applicable box for each project role category (i.e., calendar, academic, summer). If your institution does not use a 3-month summer period, indicate your institution's definition of summer in the budget justification.
Requested Salary ($)	Regardless of the number of months being devoted to the project, indicate only the amount of salary/wages being requested for each project role.
Fringe Benefits ($)	Enter applicable fringe benefits, if any, for this project role category.
Funds Requested	Enter requested salary/wages & fringe benefits for each project role.
Total Number of Other Personnel	This total will auto-calculate. Total Salary, Wages and Fringe Benefits (A+B)
Total Other Personnel	Total funds requested for all other Personnel
Total Salary, Wages and Fringe Benefits (A+B)	Total Funds requested for all Senior/Key Persons and all Other Personnel. This total will auto-calculate.

4.6.2 R&R Budget – Section C, D, & E, Budget Period 1 Form

C. Equipment Description

List items and dollar amount for each item exceeding $5,000

Equipment item	Funds Requested ($)
X	

Add Additional Equipment

Additional Equipment: Add Attachment | Delete Attachment | View Attachment

Total funds requested for all equipment listed in the attached file

Total Equipment

D. Travel **Funds Requested ($)**

1. Domestic Travel Costs (Incl. Canada, Mexico and U.S. Possessions)
2. Foreign Travel Costs

Total Travel Cost

E. Participant/Trainee Support Costs **Funds Requested ($)**

1. Tuition/Fees/Health Insurance
2. Stipends
3. Travel
4. Subsistence
5. Other

Number of Participants/Trainees **Total Participant/Trainee Support Costs**

C. Equipment Description

List of items and dollar amount for each item exceeding $5,000.

Field Name	Instructions
Equipment item	Equipment is defined as an item of property that has an acquisition cost of $5,000 or more (unless the organization has established lower levels) and an expected service life of more than one year. List each item of equipment separately and justify each in the budget justification section. Allowable items ordinarily will be limited to research equipment and apparatus not already available for the conduct of the work. General-purpose equipment, such as a personal computer, is not eligible for support unless primarily or exclusively used in the actual conduct of scientific research.
Funds Requested	List the estimated cost of each item of equipment including shipping and any maintenance costs and agreements. This is required information.
Total funds requested for all equipment listed in the attached file	Total funds requested for all equipment listed in the attached file. Dollar amount for each item should exceed $5,000.

Field Name	Instructions
Total Equipment	Total Funds requested for all equipment.
Additional Equipment	If the space provided cannot accommodate all the equipment proposed, attach a file in the block provided. List each additional item and the funds requested. For all additional items in the attached file, list the total funds requested in the appropriate field.

D. Travel

Field Name	Instructions
Domestic Travel Costs (Incl. Canada, Mexico, and US Possessions)	Identify the total funds requested for domestic travel. Domestic travel includes Canada, Mexico, and US possessions. In the budget justification section, include the purpose, destination, dates of travel (if known), and number of individuals for each trip. If the dates of travel are not known, specify estimated length of trip (e.g., 3 days). See "Notes Regarding Budget" below for more information.
Foreign Travel Costs	Except in rare and unique circumstances, Foreign Travel Costs are not allowable costs in performance of SBIR/STTR awards. Enter the total funds requested for foreign travel. Foreign travel includes any travel outside of North America and/or US possessions. In the budget justification section, include the purpose, destination, dates of travel (if known) and number of individuals for each trip. If the dates of travel are not known, specify estimated length of trip (e.g., 3 days).
Total Travel Cost	Total funds requested for all travel. See "Notes Regarding Budget" below for more information.

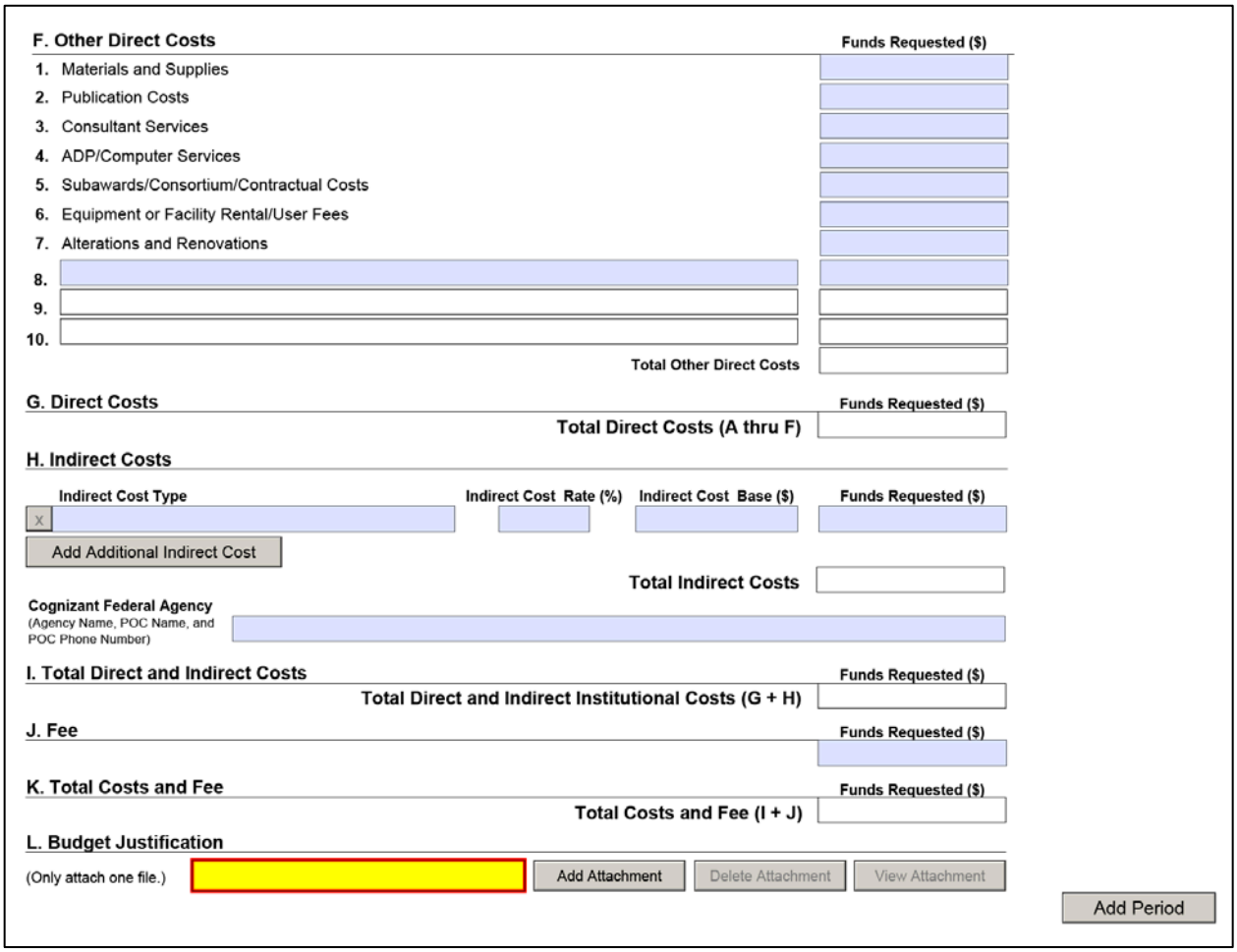
E. Participant/Trainee Support Costs

Unless specifically stated otherwise in an announcement, DOE applicants should leave blank Section E. Note: Tuition remission for graduate students should continue to be included in Section F. Other Direct Costs when applicable.

Field Name	Instructions
Tuition/Fees/Health Insurance	List total funds requested for Participant/Trainee tuition / fees / health insurance. See "Notes Regarding Budget" below for more information.
Stipends	List total funds requested for Participant/Trainee stipends.
Travel	List total funds requested for Participant/Trainee travel. See "Notes Regarding Budget" below for more information.

Field Name	Instructions
Subsistence	List total funds requested for Participant/Trainee subsistence.
Other	Describe any other participant trainee funds requested. List total funds requested for any other Participant/Trainee costs described.
Number of Participants/Trainees	List total number of proposed Participants/Trainees
Total Participant/Trainee Support Costs	Total funds requested for all trainee costs

4.6.3 R&R Related Budget – Section F-K, Budget Period 1 Form


F. Other Direct Costs — Funds Requested ($)
1. Materials and Supplies
2. Publication Costs
3. Consultant Services
4. ADP/Computer Services
5. Subawards/Consortium/Contractual Costs
6. Equipment or Facility Rental/User Fees
7. Alterations and Renovations
8.
9.
10.
Total Other Direct Costs

G. Direct Costs — Funds Requested ($)
Total Direct Costs (A thru F)

H. Indirect Costs
Indirect Cost Type | Indirect Cost Rate (%) | Indirect Cost Base ($) | Funds Requested ($)
Add Additional Indirect Cost
Total Indirect Costs

Cognizant Federal Agency (Agency Name, POC Name, and POC Phone Number)

I. Total Direct and Indirect Costs — Funds Requested ($)
Total Direct and Indirect Institutional Costs (G + H)

J. Fee — Funds Requested ($)

K. Total Costs and Fee — Funds Requested ($)
Total Costs and Fee (I + J)

L. Budget Justification
(Only attach one file.) Add Attachment Delete Attachment View Attachment

Add Period

F. Other Direct Costs

Field Name	Instructions
1. Materials and Supplies	List total funds requested for materials and supplies. In the budget justification, indicate general categories such as glassware, chemicals, animal costs, including an amount for each category.
2. Publication Costs	List the total publication funds requested. The proposal budget may request funds for the costs of documenting, preparing, publishing, or otherwise making available to others the findings and products of the work conducted under the award. In the budget justification include supporting information.
3. Consultant Services	List the total costs for all consultant services. In the budget justification, identify each consultant, the services he/she will perform, total number of days, travel costs, and the total estimated costs. In the budget justification also provide the names and organizational affiliations of all consultants, other than those involved in consortium/contractual arrangements. Include consultant physicians in connection with patient care and persons who are confirmed to serve on external monitoring boards or advisory committees to the project. Describe the services to be performed.
4. ADP/Computer Services	List total funds requested for ADP/computer services. The cost of computer services, including computer-based retrieval of scientific, technical and education information may be requested. In the budget justification, include the established computer service rates at the proposing organization if applicable.
5. Subawards/Consortium/ Contractual Costs	List total funds requested for 1) all subaward/consortium organization(s) proposed for the project and 2) any other contractual costs proposed for the project. This line item should include both direct and indirect costs for all subaward/consortium organizations. Contractual costs for support services, such as the laboratory testing of biological materials, clinical services, or data processing, are occasionally sufficiently high to warrant a categorical breakdown of costs. When this is the case, provide detailed information as part of the budget justification.
6. Equipment or Facility Rental/User Fees	List total funds requested for equipment or facility rental/user fees. In the budget justification, identify each rental user fee and justify.

Field Name	Instructions
7. Alterations and Renovations	List total funds requested for alterations and renovations. In the budget justification, itemize by category and justify the costs of alterations and renovations including repairs, painting, removal or installation of partitions, shielding, or air conditioning. Where applicable, provide the square footage and costs. Under certain circumstances, the public policy requirements that apply to construction activities may also apply to minor Alterations and Renovations (A&R) activities. When requesting minor A&R costs under this policy, please provide detailed information on the planned A&R in the budget justification.
8-10 Other	Add text to describe any "other" direct costs not requested above. Use the budget justification to further itemize and justify. List total funds requested for items 8-10 "Other." Use lines 8-10 for such costs as tuition remission, and non-DOE technical and commercialization assistance. Phase I SBIR/STTR applications, the DOE technical and commercialization assistance costs are authorized up to $6,500 per year. See current FOA for details.
Total Other Direct Costs	Total funds requested for all other direct costs.

G. Total Direct Costs (A through F)

Total funds requested for all direct costs.

H. Indirect Costs

Indirect costs are defined as costs that are incurred by a grantee for common or joint objectives and that, therefore, cannot be identified specifically with a particular project or program. If the applicant small business concern has a currently effective negotiated indirect cost rate with a Federal agency, that rate should be used when calculating proposed indirect costs. If applicable, indicate your organization's most recent indirect cost rate established with the DOE or with another Federal agency. If your applicant organization is in the process of negotiating or renegotiating a rate, use that rate in the application.

If the applicant organization does not have a current negotiated rate, it should develop a provisional rate for application purposes. If the applicant organization has a current negotiated rate with another Federal agency, the negotiated rate must be adjusted to treat any independent research and development (IR&D) costs in accordance with DOE acquisition policy.

PLEASE NOTE: If the applicant organization proposes indirect costs plus fringe benefits that does not exceed 50% of direct salaries and wages, no documentation is required.

Field Name	Instructions
Indirect Cost Type	Indicate the type of cost (e.g., Salary & Wages, Modified Total Direct Costs, or Other [explain]). Also, indicate if Off-site. If more than one rate/base is involved, use separate lines for each. If you do not have a current indirect rate(s) approved by a Federal agency, indicate, "None--will negotiate" and include information for a proposed rate. Use the budget justification if additional space is needed.
Indirect Cost Rate (%)	Indicate the most recent indirect cost rate(s) (also known as Facilities & Administrative Costs [F&A]) established with the cognizant Federal office, or in the case of for-profit organizations, the rate(s) established with the appropriate agency. If you have a cognizant/oversight agency and are selected for an award, you must submit your indirect rate proposal to that office for approval. If you do not have a cognizant/oversight agency, contact the awarding agency. If this field does not allow a figure greater than 100% to be entered, use two lines to show the entire calculation. This field should be entered using a rate such as "55.5." If your organization does not have a current indirect cost rate established with a Federal Government Agency, an indirect cost rate proposal will need to be submitted to the DOE awarding office.
Indirect Cost Base ($)	Enter the amount of the base for each indirect cost type.
Funds Requested	Enter funds requested for each indirect cost type.
Total Indirect Costs	Total funds requested for indirect costs. PLEASE NOTE: If the applicant organization proposes indirect costs plus fringe benefits that does not exceed 50% of direct salaries and wages, no documentation is required.
Cognizant Federal Agency	Enter the name of the cognizant Federal Agency, name and phone number of the individual responsible for negotiating your rate. If no cognizant agency is known, enter "None."

I. Total Direct and Indirect Institutional Costs (G + H)

Total funds requested for direct and indirect costs.

Ensure that the direct costs and the indirect costs (G+H) on Section F-K EQUAL the Total Direct and Indirect Costs (G+H) on the Cumulative Budget page.

J. Fee

A reasonable fee, not to exceed 7% of total costs (direct and indirect) for each Phase (I and II) of the project, is available to small business concerns receiving awards under the SBIR/STTR program. The fee is intended to be a

reasonable profit factor available to for-profit organizations, consistent with normal profit margins provided to profit-making firms for research and development work.

The basis and the amount requested for the fee must be explained in the budget justification. The amount requested for the fee should be based on the following guidelines: (1) it must be consistent with that paid under contracts by the DOE for similar research conducted under similar conditions of risk; (2) it must take into account the complexity and innovativeness of the research to be conducted under the SBIR/STTR project; and (3) it must recognize the extent of the expenditures for the grant project for equipment and for performance by other than the grantee organization through consultant and subaward agreements.

The fee is not a direct or indirect "cost" item and may be used by the small business concern for any purpose, including additional effort under the SBIR/STTR award. The fee applies solely to the small business concern receiving the award and not to any other participant in the project. However, the grantee may pay a profit/fee to a contractor providing routine goods or non-R&D services in accordance with normal commercial practice.

Note: The electronic system automatically rounds up. If you get an error “The fee must be less than 7%,” try using 6.99% as the rate.

K. Total Costs and Fee (I +J)

Total of all direct and indirect costs and fee.

Ensure that the direct costs and the indirect costs (I+J) on Section F-K EQUAL the Total Direct and Indirect Costs (I+J) on the Cumulative Budget page.

L. Budget Justification

Provide the required supporting information for all proposed costs (see R&R Budget instructions). Attach a single budget justification file that includes the hourly rate and number of proposed hours for the principal investigator and senior/key persons for the entire project period in Field L. The file automatically carries over to each budget year. Please note, if your application is selected for an award, additional budget information will most likely be required.

Use the budget justification to provide the additional information requested in each budget category identified above and any other information the applicant wishes to submit to support the budget request. The following budget categories must be justified, where applicable: equipment, travel, participant/trainee support and other direct cost categories. Only one file may be attached.

Use this section to also list the names, role (e.g., PostDoc or Graduate Student), associated months, salary and fringe benefits for all Postdoctoral Associates and Graduate Students included in Budget Section B. Other Personnel.

Include a justification for any significant increases or decreases from the initial year budget. Also, justify budgets with more than a standard escalation from the initial to the future year(s) of support.

If the application includes a sub-award/consortium budget, a separate budget justification is submitted for that budget.

4.6.4 R&R Budget – Cumulative Budget Form

All values on this form are calculated automatically. They present the summations of the amounts that you have entered previously, under Sections A through K, for each of the individual budget periods. Therefore, no data entry is allowed or required, in order to complete this “Cumulative Budget” section.

If any of the amounts displayed on this form appears to be incorrect, you may correct it by adjusting one or more of the values that contribute to that total. To make any such adjustments, you will need to revisit the appropriate budget period form(s), to enter corrected values.

RESEARCH & RELATED BUDGET - Cumulative Budget

	Totals ($)	
Section A, Senior/Key Person		
Section B, Other Personnel		
Total Number Other Personnel		
Total Salary, Wages and Fringe Benefits (A+B)		
Section C, Equipment		
Section D, Travel		
1. Domestic		
2. Foreign		
Section E, Participant/Trainee Support Costs		
1. Tuition/Fees/Health Insurance		
2. Stipends		
3. Travel		
4. Subsistence		
5. Other		
6. Number of Participants/Trainees		
Section F, Other Direct Costs		
1. Materials and Supplies		
2. Publication Costs		
3. Consultant Services		
4. ADP/Computer Services		
5. Subawards/Consortium/Contractual Costs		
6. Equipment or Facility Rental/User Fees		
7. Alterations and Renovations		
8. Other 1		
9. Other 2		
10. Other 3		
Section G, Direct Costs (A thru F)		
Section H, Indirect Costs		
Section I, Total Direct and Indirect Costs (G + H)		
Section J, Fee		

Notes Regarding Budget:

- Although there is no absolute cap on indirect costs, grant applications will be evaluated for overall economy and value to DOE.
- Tuition expenses are only allowable if requested from a subcontractor that is a University and if the amount requested for tuition is reasonable and comparable to the amount a student would be paid for performing research during the grant period.

- Travel funds must be justified and directly related to the needs of the project, e.g., travel to DOE Headquarters to meet with the DOE Program Manager. Travel expenses for technical conferences are not permitted unless the purpose of attending the conference directly relates to the project (e.g., to present research results of the project). Foreign travel is not normally an appropriate expense. Funds to cover travel expenses outside of the U.S. is considered an unallowable cost unless written approval has been obtained from the Contracting Officer.
- 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 https://science.osti.gov/sbir/Applicant-Resources/Grant-Application Attach this form in Field 12 of the R&R Other Project Information form.

4.7 Special Instructions for Preparing Applications with a Subaward/Consortium

SBIR

In an SBIR Phase I, a minimum of two-thirds or 67% of the research or analytical effort must be carried out by the small business concern. The total amount of all consultant and contractual arrangements to third parties for portions of the scientific and technical effort generally may not exceed 33% of the total amount requested (direct, F&A/indirect, and fee).

In an SBIR Phase II, a minimum of one-half or 50% of the research or analytical effort must be carried out by the small business concern. The total amount of consultant and contractual arrangements to third parties for portions of the scientific and technical effort generally may not exceed 50% of the total Phase II amount requested (direct, F&A/indirect, and fee).

The basis for determining the percentage of work to be performed by each of the cooperative parties in Phase I or Phase II will be the total of the requested costs attributable to each party.

STTR

In both STTR Phase I and Phase II, at least 40% of the work must be performed by the small business concern and at least 30% of the work must be performed by the single partnering research institution. The basis for determining the percentage of work to be performed by each of the cooperative parties will be the total of the requested costs (direct, F&A/indirect, and fee) attributable to each party.

In addition, a small business concern must negotiate a written agreement between the small business and the research institution allocating intellectual property rights to carry out follow-on research, development or commercialization. This agreement is required to receive support under the STTR program but is NOT required to be submitted with the application. A copy of the Agreement must be furnished upon request of the DOE Contract Specialist.

A small business concern may subcontract a portion of its STTR award to a Federally Funded Research and Development Center (FFRDC), either in its capacity as the Research Institution or as a participant in the STTR project in another capacity. However, STTR funds may not be used to pay for federal laboratory resources other than FFRDCs, and no STTR funds may be used to pay for subcontracting any portion of the STTR award back to the issuing agency or to any other Federal government unit unless a waiver is granted by the Small Business Administration.

OMB Number: 4040-0001
Expiration Date: 12/31/2022

R&R SUBAWARD BUDGET ATTACHMENT(S) FORM

Workspace Use Only

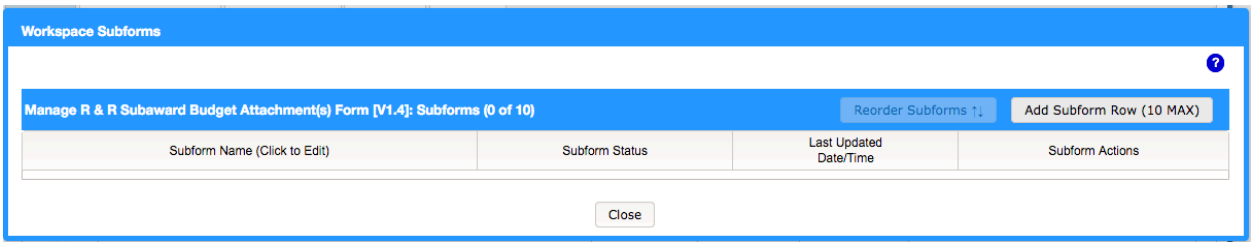
When the Workspace feature is used to complete application packages, subforms are added and managed using online Workspace functionality. This Workspace variation of the R&R Subaward Budget Attachment(s) form displays subform names as specified by the applicant:

1) R&R Subaward Budget 1	
2) R&R Subaward Budget 2	
3) R&R Subaward Budget 3	
4) R&R Subaward Budget 4	
5) R&R Subaward Budget 5	
6) R&R Subaward Budget 6	
7) R&R Subaward Budget 7	
8) R&R Subaward Budget 8	
9) R&R Subaward Budget 9	
10) R&R Subaward Budget 10	

A complete subaward/consortium budget component (including the budget justification section) should be completed by each consortium grantee organization. Separate budgets are required only for subawardee/consortium organizations that perform a substantive portion of the project.

To start the process, the applicant organization should:

- Select the Subaward Budget Attachment Form from the Optional Documents in the Grant Application Package in Workspace by checking the box on the left.
- Click the Go To Subforms button under the form. A dialog window will open. Click on Add Subform Row button. Another dialog window will open requesting a Subform Name. Provide a name and click Save.



- The subform will now be accessible from the Go To Subforms button and can either be downloaded as a PDF or completed as a webform.
- Email the downloaded PDF form to the consortium grantee or have them access it through your Workspace. Note: consortium grantees must have installed a compatible version of Adobe Reader before they can complete the form. The consortium grantee should complete all the budget information as instructed in the

R&R Budget component instructions. Note: Organizational DUNS and Name of Organization fields must reflect that of the subaward/consortium grantee.

- The consortium grantee must complete the budget component, including the budget justification section. If they completed the PDF version, have them email it back to you, otherwise have them complete it via Webform in your Workspace. After the subawardee has either e-mailed its completed budget back to you or completed it within Workspace, attach it to one of the blocks provided on the form. Use up to 10 letters of the subawardee's name (plus.pdf) as the file name (e.g., ucla.pdf or energyres.pdf). Filenames should not exceed 50 characters.
- Ensure that any files received from subawardees are the PDF files extracted from the SUBAWARD BUDGET ATTACHMENT(S) FORM. Errors will be created if a subawardee sends a prime applicant a budget form that was not extracted from the application package. Do not use a sub-award budget downloaded directly from grants.gov or any source other than the application package.
- A fee cannot be entered for a subaward/consortium budget. Fee is allowable only for the small business applicant organization budget page.
- STTR: If more than one Subaward is included in the STTR application, identify the single, partnering research institution on the RI Subaward budget justification page.

4.8 SBIR/STTR Information Form

In conjunction with the other SF424 (R&R) components, DOE SBIR/STTR grant applicants must also complete and submit the "SBIR/STTR Information" component.

SBIR/STTR Information

OMB Number: 4040-0001
Expiration Date: 12/31/2022

*** Agency to which you are applying (select only one)**

☐ DOE ☐ HHS ☐ USDA ☐ Other:

*** SBC Control ID:** *(This 9 digit code is obtained from the Small Business Administration)*

*** Program Type (select only one)**

☐ SBIR ☐ STTR
☐ Both *(See agency-specific instructions to determine whether a particular agency allows a single submission for both SBIR and STTR)*

*** Application Type (select only one)**

☐ Phase I ☐ Phase II ☐ Fast-Track ☐ Direct Phase II ☐ Phase IIA ☐ Phase IIB
☐ Commercialization Readiness Program *(See agency-specific instructions to determine application type participation.)*

Phase I Letter of Intent Number:

*** Agency Topic/Subtopic:**

Questions 1-7 must be completed by all SBIR and STTR Applicants:

☐ Yes ☐ No	* 1a. Do you certify that at the time of award your organization will meet the eligibility criteria for a small business as defined in the funding opportunity announcement?
	* 1b. Anticipated Number of personnel to be employed at your organization at the time of award.
☐ Yes ☐ No	* 1c. Is your small business majority owned by venture capital operating companies, hedge funds, or private equity firms?
☐ Yes ☐ No	* 1d. Is your small business a Faculty or Student-Owned entity?
☐ Yes ☐ No	* 2. Does this application include subcontracts with Federal laboratories or any other Federal Government agencies? * If yes, insert the names of the Federal laboratories/agencies:
☐ Yes ☐ No	* 3. Are you located in a HUBZone? To find out if your business is in a HUBZone, use the mapping utility provided by the Small Business Administration at its web site: http://www.sba.gov
☐ Yes ☐ No	* 4. Will all research and development on the project be performed in its entirety in the United States? If no, provide an explanation in an attached file. * Explanation: Add Attachment Delete Attachment View Attachment
☐ Yes ☐ No	* 5. Has the applicant and/or Program Director/Principal Investigator submitted proposals for essentially equivalent work under other Federal program solicitations or received other Federal awards for essentially equivalent work? * If yes, insert the names of the other Federal agencies:
☐ Yes ☐ No	* 6. Disclosure Permission Statement: If this application does not result in an award, is the Government permitted to disclose the title of your proposed project, and the name, address, telephone number and email address of the official signing for the applicant organization to state-level economic development organizations that may be interested in contacting you for further information (e.g., possible collaborations, investment)?
	* 7. Commercialization Plan: The following applications require a Commercialization Plan: Phase I (DOE only), Phase II (all agencies), Phase I/II Fast-Track (all agencies). Include a Commercialization Plan in accordance with the agency announcement and/or agency-specific instructions. * Attach File: Add Attachment Delete Attachment View Attachment

Agency to which you are applying (select only one)

Check the DOE box.

SBC Control ID

Enter the nine digit code from your SBA company registration.

Program Type (select only one): SBIR / STTR / Both

If you are applying under the SBIR program, check the "SBIR" box. If you are applying under the STTR program, check the "STTR" box. If you are applying under both STTR & SBIR programs, check the "Both" box. A selection is required.

Application Type (select only one): Phase I / Phase II

Check the Phase I box.

Agency Topic/Subtopic

Enter the two digit Topic number and subtopic letter (eg: 08c).

1a. Certification of Small Business Eligibility

If you certify that at the time of award, your organization will meet the eligibility criteria for a small business as defined in the FOA, check the "Yes" box. Otherwise, check the "No" box. A selection is required.

1b. Anticipated Number of personnel to be employed at your organization at the time of award.

Enter the number of personnel anticipated to be employed by the small business at the time of award.

2. Does this application include subcontracts with Federal laboratories or any other Federal government agencies?

If this application includes subcontracts with Federal laboratories or any other Federal Government agencies, check the "Yes" box and insert the name of the Federal laboratories/agencies in the space provided. Otherwise, check the "No" box. A selection is required.

3. Are you located in a HUBZone?

If you are located in a HUBZone, check the "Yes" box. To find out if your business is in a HUBZONE, use the mapping utility provided by the Small Business Administration at its web site: http://www.sba.gov. Otherwise, check the "No" box. A selection is required.

4. Will all research and development on the project be performed in its entirety in the United States?

If all research and development on the project will be performed in its entirety in the United States, check the "Yes" box. Otherwise, check the "No" box and use the Add Attachment button below, to attach an explanation. A selection is required.

If you have answered "No" to question 4 above, please prepare an explanation of the research and development that is being performed outside the United States, in a separate file. Then use the Add Attachment button to the right of this field to attach the file and complete this entry. When you click Add Attachment, browse to where you saved the file, select the appropriate file and then click Open to complete the action.

5. Has the applicant and/or Program Director/Principal Investigator submitted proposals for essentially equivalent work under other Federal program solicitations or received other Federal awards for essentially equivalent work?

If the applicant and/or PI has submitted proposals for essentially equivalent work under other Federal program solicitations or received other Federal awards for essentially equivalent work, check the "Yes" box and insert the names of the other Federal agencies in the space provided. Otherwise, check the "No" box. A selection is required.

Please respond to question five (5) and include the following:

- Name, address, and point of contact including telephone number of the agency(s) to which a proposal or grant application was submitted, or will be submitted, or from which an award is expected or has been received.
- Date of submission or the date of award.
- Title of the grant application.
- Name and title of the project manager or Principal Investigator for each proposal or grant application submitted or award received.
- Number and date of the funding opportunity notice under which the application was submitted or award was received.
- Title of the specific research topic to which the application was submitted or award was received.

In the event that a proposal or grant application is selected for award by more than one agency, a negotiation will be conducted among the parties to avoid duplication of effort.

If you need to elaborate on your response to this question, please provide the information in a single PDF file and attached it to field 12 of the "Research and Related Other Project Information Form".

6. Disclosure Permission Statement

If this application does not result in an award, and the Government is permitted to disclose the title of your proposed project, and the name, address, telephone number, and e-mail address of the official signing for the applicant organization, to organizations that may be interested in contacting you for further information (e.g., possible collaborations, investment), check the "Yes" box. Otherwise check the "No" box. A selection is required.

Your response will not affect any peer review or funding decisions.

7. Commercialization Plan

A brief commercialization plan (4 pages maximum) MUST be included in a Phase I grant application. If the Commercialization Plan is not included at the time of application submission, your application will be administratively declined without review. The Commercialization Plan will be evaluated under the "Impact" criterion and should address the following elements:

Project Title

You MUST include the following statement after your project title:
"(COMPANY NAME HERE) estimates cumulative sales revenues of $_____ and cumulative licensing revenues of $_____ during the first 10 years of commercialization."

Market Opportunity: Describe the market opportunity being addressed.

Intellectual Property (IP): Describe the status of patents, trade secrets, and other steps you plan to take to protect your IP for commercialization.

Company/Team: Describe the capability of your present personnel and/or planned additions to your staff that will enable you to successfully commercialize your innovation.

Although Phase I applications must only address the elements listed above, Applicants are encouraged to review the example of a Phase I Commercialization Plan on the DOE SBIR/STTR website, under "Application Resources" on the DOE SBIR/STTR website at https://science.osti.gov/sbir/Applicant-Resources/Grant-Application.

At this time, Question 7 of the SBIR/STTR Information Form will accept the Commercialization Plan attachment for a Phase I grant application submission after selecting DOE as agency and Phase I as application type.

Question 8, Company Commercialization History

If you have received SBIR/STTR Phase II awards from any Federal agency, then you must provide your company Commercialization History. Accordingly, such small business concerns shall submit, for each SBIR Phase II award, the name of the awarding agency, the date of the award, the funding agreement number, the funding amount, the topic and/or subtopic title, the amount of follow-on funding, the source and the date that the follow-on funding was provided, and the current commercialization status.

If you have received SBIR/STTR Phase II awards from any Federal agency, then you must provide your company Commercialization History. To assist applicants in providing a Commercialization History, an MS Excel template can be found on the DOE SBIR/STTR Programs Office web site at https://science.osti.gov/sbir/Applicant-Resources/Grant-Application. Please create a document entitled, "Commercialization History" and attach this file in Question 8 of the SBIR/STTR Information Form.

Applicants are encouraged to seek commitment(s) of funds and/or resources from an investor or partner organization for commercialization of the product(s) or service(s) resulting from the SBIR/STTR grant.

Your Phase III funding may be from any of a number of different sources including, but not limited to: SBIR/STTR firm itself; private investors or "angels"; venture capital firms; investment companies; joint ventures; R&D limited partnerships; strategic alliances; research contracts; sales of prototypes (built as part of this project); public offering; state finance programs; non SBIR-funded R&D or production commitments from a Federal agency with the intention that the results will be used by the United States government; or other industrial firms.

SBIR/STTR Information

SBIR-Specific Questions:

Questions 8 and 9 apply only to SBIR applications. If you are submitting ONLY an STTR application, leave questions 8 and 9 blank and proceed to question 10.

☐ Yes ☐ No	* 8. Have you received SBIR Phase II awards from the Federal Government? If yes, provide a company commercialization history in accordance with agency-specific instructions using this attachment. * Attach File: [ ] Add Attachment Delete Attachment View Attachment
☐ Yes ☐ No	* 9. Will the Project Director/Principal Investigator have his/her primary employment with the small business at the time of award?

STTR-Specific Questions:

Questions 10 - 12 apply only to STTR applications. If you are submitting ONLY an SBIR application, leave questions 10 - 12 blank.

☐ Yes ☐ No	* 10. Please indicate whether the answer to BOTH of the following questions is TRUE: (1) Does the Project Director/Principal Investigator have a formal appointment or commitment either with the small business directly (as an employee or a contractor) OR as an employee of the Research Institution, which in turn has made a commitment to the small business through the STTR application process; AND (2) Will the Project Director/Principal Investigator devote at least 10% effort to the proposed project?
☐ Yes ☐ No	* 11. In the joint research and development proposed in this project, does the small business perform at least 40% of the work and the research institution named in the application perform at least 30% of the work?
	* 12. Provide DUNS Number of non-profit research partner for STTR. [ ]

SBIR-Specific Questions:

8. Have you received SBIR/STTR Phase II awards from the Federal Government? If yes, provide a commercialization history in accordance with agency-specific instructions

As discussed above, if you have received SBIR/STTR Phase II awards from the Federal Government, check the "Yes" box and attach the Company Commercialization History file in Question 8 of the SBIR/STTR Information Form. Otherwise check the "No" box.

If the applicant small business has received any SBIR/STTR Phase II awards issued by DOE or any other Federal Government agency, the commercialization history must document the extent to which the company was able to secure Phase III funding to develop concepts resulting from previous Phase II SBIR/STTR awards, and for each Phase II award the history must include at a minimum: (1) name of awarding agency; (2) award number and date; (3) amount of award; (4) title of project; (5) source, date, and amount of Phase III funding agreement; and (6) commercialization status of each Phase II award. For more information and a Commercialization History template, please visit the DOE SBIR/STTR web site at https://science.osti.gov/sbir/Applicant-Resources/Grant-Application.

9. Will the Principal Investigator have his/her primary employment with the small business at the time of award?

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. If the PI will have his/her primary employment with the small business at the time of award, check the "Yes" box. Otherwise, check the "No" box.

A selection is required for SBIR applications only.

STTR-Specific Questions:

10. Does the Principal Investigator have a formal appointment or commitment either with the small business directly (as an employee or contractor) OR as an employee of the Research Institution, which in turn has made a commitment to the small business through the STTR application process, AND will the Principal Investigator devote at a considerable part of his or her time to the proposed project? "Considerable" means at least 117 hours for both SBIR and STTR Phase I projects, or a minimum of three (3) hours per week for the duration of the project and 520 hours for both SBIR and STTR Phase II projects, or a minimum of five (5) hours per week for the duration of the project.

Check the "Yes" box only if both of the following conditions is true:

- The PI's primary employment is with either the small business or the research institution.
- The small business will provide technical control and oversight of the project.

Check the "No" box if either of these two conditions (or both) is false.

11. In the joint research and development proposed in this project, does the small business perform a minimum of 40% of the work and the research institution named in the application perform a minimum of 30% of the work?

If in the joint research and development proposed in this project, the small business performs a minimum of 40% of the work and the research institution named in the application performs a minimum of 30% of the work, check the "Yes" box. Otherwise, check the "No" box.

12. Provide DUNS Number of non-profit research partner for STTR.

5. Certifications & Award Terms and Conditions

Prior to receiving an award you will be required to sign either an SBIR or STTR Certification. These certifications verify that you are and eligible small business and that you will comply with either the SBIR or STTR requirements associated with the award. You may wish to review these statements at time of application to ensure that you understand the eligibility and award requirements. The SBIR and STTR certifications are provided below.

If selected for an award, applicants to special collaborative topics and STTR applicants will be required to sign and submit one or more of the following certifications. The DOE Contract Specialist will provide forms during award negotiation. (The following links are provided for information purposes only. Changes and updates to the forms may be made by the DOE prior to award negotiation.)

- Property and Commercialization Rights Agreement Certificate
- DOE STTR Model Agreement for Property and Commercialization Rights

In addition, you may wish to review detailed awards terms and conditions associated with your SBIR or STTR or grants. A recent copy of the award terms and conditions are available online at:
https://science.osti.gov/~/media/sbir/pdf/files/manageapp/general_terms_and_conditions.pdf

5.1 Small Business Concern SBIR Verification Statement

Grant Application Number: _____
Organization: _____

Principal Investigator (PI): _____

The Small Business Innovation Research (SBIR) program legislation requires that the applicant small business concern (SBC) be eligible at the time of the award. As the responsible Federal staff for administering DOE grants funds, Grants Management Officials of the DOE must verify eligibility prior to issuing a Notice of Award. If the SBC is affiliated with any other organization (domestic or foreign), see www.sba.gov/size.

If an application is selected for funding under the SBIR program, no award will be issued until the DOE receives and accepts the following information, which may be provided in a format of your choosing or by completing a checklist as in the example below:

1. ☐ The above-named organization is a for-profit United States SBC that is at least 51% owned and controlled by one or more *individuals* who are citizens of, or permanent resident aliens in, the United States, or in the case of a publicly-owned business, at least 51% of its voting stock is owned by United States citizens or lawfully admitted permanent resident aliens.

   or

   The above-named organization is a for-profit business concern that is at least 51% owned and controlled by another (one) for-profit business concern that is at least 51% owned and controlled by one or more *individuals* who are citizens of, or permanent resident aliens in, the United States.

   Complete the following part of (1) if relevant: If the above-named applicant organization has been determined by the Small Business Administration (SBA) to be "other than small" for a size standard of not more than 500 employees or for purposes of the SBIR program:

   Have you been recertified by SBA? ☐ Yes ☐ No
   If not recertified, have you requested a recertification by SBA for eligibility under the SBIR program? ☐ Yes ☐ No
2. ☐ The above-named organization is independently owned and operated, is not dominant in the field of operation in which it is proposing, has its principal place of business located in the United States, has, including its affiliates, 500 or fewer employees, is not involved in a merger/acquisition that is near complete, and meets the other regulatory requirements found in Title 13, Code of Federal Regulations (CFR), Part 121. (Note that the SBA considers "agreements to merge (including agreements in principle) to have present effect on the power to control a concern" [Section 121.103(d)(1) of 13 CFR 121]).
3. ☐ The *research space* occupied by the above-named organization is available to and under the control of the above-named organization *for the conduct of its portion of the proposed project*.
4. ☐ All research on the above-referenced grant will be *performed in its entirety* in the United States.
5. ☐ The above-named PI's *primary employment* is with the above-named organization and more than one-half of the above-named PD's/PI's time will be in the employ of the above-named organization at the time of award and for the duration of the project.
6. ☐ It is understood that the DOE will not support any *market research* under its SBIR program (see "Definitions" or literature searches that will lead to a new or expanded statement of work, and that if an award is made, any such costs, if requested in the application, will be removed prior to award.
7. ☐ It is understood that if this project is funded, drawing DOE award funds serves as certification that the above-named organization has in place written policies and procedures for financial and business management systems that comply with 10 CFR 600.311.

My signature is verification that the statements checked (☐) above are true and complete. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties (U.S. Code, Title 18, Section 1001).

_____ _____

(Official Authorized to Sign for the Organization) (Date)

5.2 Small Business Concern STTR Verification Statement

Grant Application Number: _____
Organization: _____
Principal Investigator (PI): _____

The Small Business Technology Transfer (STTR) program legislation requires that the applicant small business concern (SBC) be eligible at the time of the award. As the responsible Federal staff for administering DOE grant funds, Grants Management Officials must verify eligibility prior to issuing a Notice of Award. If the SBC is affiliated with any other organization (domestic or foreign), see www.sba.gov/size.

If an application is selected for funding under the STTR program, no award will be issued until the DOE receives and accepts the following information, which may be provided in a format of your choosing or by completing a checklist as in the example below:

1. ☐ The above-named organization is a for-profit United States SBC that is at least 51% owned and controlled by one or more *individuals* who are citizens of, or permanent resident aliens in, the United States, or in the case of a publicly-owned business, at least 51% of its voting stock is owned by United States citizens or lawfully admitted permanent resident aliens.

or

Complete the following part of (1) if relevant: If the above-named applicant organization has been determined by the Small Business Administration (SBA) to be "other than small" for a size standard of not more than 500 employees or for purposes of the STTR program:

Have you been recertified by SBA? ☐ Yes ☐ No
If not recertified, have you requested a recertification by SBA for eligibility under the STTR program? ☐ Yes ☐ No

2. ☐ The above-named organization is independently owned and operated, is not dominant in the field of operation in which it is proposing, has its principal place of business located in the United States, has, including its affiliates, 500 or fewer employees, is not involved in a merger/acquisition that is near complete, and meets the other regulatory requirements found in Title 13, Code of Federal Regulations (CFR), Part 121. (Note that the SBA considers "agreements to merge (including agreements in principle) to have present effect on the power to control a concern" [Section 121.103(d)(1) of 13 CFR 121]).

☐ The *research space* occupied by the above-named organization is available to and under the control of the above-named organization *for the conduct of its portion of the proposed project*.☐ All research on the above-referenced grant will be *performed in its entirety* in the United States, unless otherwise approved by the Grants Management Officer prior to issuance of an award.☐ The above-named PI's primary employment is with the above-named organization and more than one-half of the above-named PI's time will be in the employ of the above-named organization at the time of award and for the duration of the project, unless otherwise approved by the DOE Grants Management Officer prior to issuance of an award. For Multiple PI projects, the Contact PI meets the primary employment requirement.

Or, if the PI is employed by the Research Institution

3. ☐ The above-named PI has a formal appointment with or commitment to the above-named organization, which is characterized by an official relationship between the organization and the PI, whose effort on this project will not be less than 10% of his/her total professional effort.
4. ☐ It is understood that the DOE will not support any *market research* under its STTR program (see "Definitions") or literature searches that will lead to a new or expanded statement of work, and that if an award is made, any such costs, if requested in the application, will be removed prior to award.
5. ☐ In conducting the joint research and development proposed in this project, the above-named applicant SBC will conduct not less than 40% of the work and the single "partnering" research institution named in the application will perform not less than 30% of the work.
6. ☐ It is understood that if this project is funded, drawing DOE award funds serves as certification that the above-named organization has in place written policies and procedures for financial and business management systems that comply with 10 CFR 00.311.

My signature is verification that the statements checked (☐) above are true and complete. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties (U.S. Code, Title 18, Section 1001).

_____ _____

(Official Authorized to Sign for the Organization) (Date)

5.3 Other Certifications

If selected for an award, applicants will be required to sign and submit one or more of the following certifications. The DOE Contract Specialist will provide forms during award negotiation. (The following links are provided for information purposes only. Changes and updates to the forms may be made by the DOE prior to award negotiation.)

- Property and Commercialization Rights Agreement Certificate
- DOE STTR Model Agreement for Property and Commercialization Rights

6. Protection of Information Contained in Your Application

6.1 Government Use of Information under the Privacy Act

The Privacy Act of 1974 (5 U.S.C. 552a) is a records management statute and regulates the collection, maintenance, use, and dissemination of personal information by Federal agencies. In accordance with the Act, the DOE is required to provide the following notification to each individual whom it asks to supply information.

The DOE maintains applications and grant records pursuant to its statutory authority for awarding grants. The purpose of the information collection is to aid in the review, award, and administration of DOE programs. Provision of information is voluntary; however, a lack of sufficient information may hinder the ability of the DOE to review applications, monitor grantee performance, or perform overall management of grant programs. Please be aware that no individual will be denied any right, benefit, or privilege provided by law because of refusal to disclose this section of the Social Security Number. All analyses conducted on the date of birth, gender, race, and/or ethnic origin data will report aggregate statistical findings only and will not identify individuals. If you decline to provide this information, it will in no way affect consideration of your application.

The Privacy Act authorizes discretionary disclosure of this information within the DOE and outside the agency to the public, as required by the Freedom of Information Act and the associated DOE regulations (10 CFR 1004), including the Congress acting within its legislative authority, the National Archives, the General Accounting Office, the Bureau of Census, law enforcement agencies, and pursuant to a court order. Information also may be disclosed outside the Department, if necessary, for the following purposes:

1. To a Congressional office at the request of the record subject;
2. To the Department of Justice as required for litigation;
3. To the cognizant audit agency for auditing;
4. To qualified experts not within the definition of Department employees as prescribed in Department Regulations for opinions as part of the application review/award process;
5. For an authorized research purpose under specified conditions;
6. To contractors for the purpose of processing, maintaining, and refining records in the system. Contractors will be required to maintain Privacy Act safeguards with respect to such records;
7. To a Federal agency, in response to its request, in connection with the letting of a contract, or the issuance of a license, grant, or other benefit by the requesting agency, to the extent that the records are relevant and necessary to the requesting agency's decision on the matter; and
8. To the applicant organization in connection with the review of an application or performance or administration under the terms and conditions of the award, or in connection with problems that might arise in performance or administration if an award is made.

6.2 Information Available to the General Public

The DOE makes information about awarded grants available to the public, including the title of the project, the grantee institution, the PI, and the amount of the award. The Project Summary/Abstract of a funded research grant application is sent to members of Congress and the States Governors. DOE also routinely places information about awarded grants, including project title, name of the PI, and project description (abstract) on the DOE SBIR/STTR web site at https://science.osti.gov/sbir.

Freedom of Information Act Requirements

The Freedom of Information Act and implementing DOE regulations (10 CFR Part 100) require the release of certain information about grants upon request, regardless of the intended use of the information. Generally not available for release to the public are: grant progress reports, prospective awardee applications for which awards have not been made; evaluative portions of site visit reports; and summary statements of findings and recommendations of review groups. Trade secrets and commercial, financial, or otherwise proprietary information may be withheld from disclosure. Information, which, if disclosed, would be a clearly unwarranted invasion of personal privacy, may also be withheld from disclosure. Although the PI and/or SBC will be consulted about any such release, the DOE will make the final determination. If a requested document contains both disclosable and nondisclosable information, the nondisclosable information will be redacted and the balance of the document will be released.

7. Reference Material

7.1 Definitions: Applicant Organization Types

Applicant: The organizational entity that, at the time of award, will qualify as a Small Business Concern (SBC) and that submits a grant application for a funding agreement under the SBIR or STTR program

Federal: A cabinet-level department or independent agency of the Executive Branch of the Federal Government or any component part of such a department or agency that may be assigned the responsibility for carrying out a grant-supported program.

State: Any agency or instrumentality of a state government of any of the United States or its territories

Local: Any agency or instrumentality of a political subdivision of government below the State level

Nonprofit: An institution, corporation, or other legal entity no part of whose net earnings may lawfully inure to the benefit of any private shareholder or individual.

For Profit: An institution, corporation, or other legal entity, which is organized for the profit or benefit of its shareholders or other owners. A “for profit” organization is considered to be a small business if it is independently owned and operated, if it is not dominant in the field in which research is proposed, and if it employs no more than 500 persons. Also, see definition for Small Business Concern.

Small Business Concern: A small business concern is one that, at the time of award of Phase I and Phase II, meets **all** of the following criteria:

1. Is independently owned and operated, is not dominant in the field of operation in which it is proposing, has its principal place of business located in the United States, and is organized for profit.
2. Is at least 51% owned and controlled by either: (a) one or more natural persons (individuals who are citizens of, or permanent resident aliens in, the United States); or (b) another for-profit business concern that is itself at least 51% owned and controlled by one or more natural persons (individuals who are citizens of, or permanent resident aliens in, the United States)(See 13 CFR 121.105 (defining “business concern”)).
3. Has, including its affiliates, *a number of employees not exceeding 500*, and meets the other regulatory requirements found in 13 CFR Part 121. Business concerns, other than investment companies licensed, or state development companies qualifying under the Small Business Investment Act of 1958, 15 U.S.C. 661, et seq., are affiliates of one another when either directly or indirectly, (a) one concern controls or has the power to control the other; or (b) a third-party/parties controls or has the power to control both.

Control can be exercised through common ownership, common management, and contractual relationships. The term "affiliates" is defined in greater detail in 13 CFR Part 121, as is the process for calculating "number of employees."

Business concerns include, but are not limited to, any individual (sole proprietorship), partnership, corporation, joint venture, association, or cooperative. Further information may be obtained by contacting the Small Business Administration Size District Office at http://www.sba.gov/size/.

Socially and Economically Disadvantaged Small Business Concern: A socially and economically disadvantaged small business concern is one that is at least 51% owned by:

(a) an Indian tribe or a native Hawaiian organization, or

(b) one or more socially and economically disadvantaged individuals; and whose management and daily business operations are controlled by one or more socially and economically disadvantaged individuals

Women-Owned Small Business Concern: A small business concern that is at least 51% owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" in this context means being actively involved in the day-to-day management.

7.2 Other Definitions

Collaborator: An individual involved with the PI in the scientific development or execution of the project. These individuals would typically devote a specific percent of effort to the project and are identified as Senior/Key Personnel. The collaborator may be employed by, or affiliated with, either the grantee organization or an organization participating in the project under a consortium or contractual agreement.

Commercialization: The process of developing markets and producing and delivering products for profit (whether by the originating party or by others). As used here, commercialization includes both government and private sector markets.

Consortium Agreement: A formalized agreement whereby a research project is carried out by the grantee and one or more other organizations that are separate legal entities. Under the agreement, the grantee must perform a substantive role in the conduct of the planned research and not merely serve as a conduit of funds to another party or parties. These agreements typically involve a specific percent of effort from the consortium organization's PI and a categorical breakdown of costs, such as personnel, supplies, and other allowable expenses, including Facilities and Administrative costs.

Consultant: An individual who provides professional advice or services for a fee, but normally not as an employee of the engaging party. To prevent apparent or actual conflicts of interest, grantees and consultants must establish written guidelines indicating the conditions of payment of consulting fees. Consultants may also include firms that provide paid professional advice or services.

Consulting Fees: The fee paid by a research institution to a salaried member of its faculty is allowable only in unusual cases and only if both of the following conditions exist: (1) the consultation crosses departmental lines or involves a separate operation; and (2) the work performed by the consultant is in addition to his or her regular workload.

Contract: An award instrument establishing a binding legal procurement relationship between a funding agency and the recipient, obligating the latter to furnish an end product or service and binding the agency to provide payment therefore.

Cooperative Agreement: A financial assistance instrument under which substantial Federal scientific and/or programmatic involvement is anticipated between the Federal agency and the recipient during the performance of the contemplated project or activity. "Substantial involvement" means that the recipient can expect Federal programmatic collaboration or participation in carrying out the effort under the award.

Employee: A person listed on the budget form (Section A—Key/Senior Person or Section B—Other Personnel) as an employee of the small business concern is required to either (a) be paid using a W-2 form or (b) possess an Internal Revenue Service determination that the person is an employee using Form SS-8. Persons paid by a 1099 (and not possessing an employee determination using Form SS-8) are to be treated as independent contractors and should be listed on the budget form in Section F—Other Direct Costs.

Employees: The number of employees of a firm is its average number of persons employed for each pay period over the firm's latest 12 months. Any person on the payroll must be included as one employee regardless of hours worked or temporary status. The number of employees of a firm in business under 12 months is based on the average for each pay period it has been in business.

Equipment: An article of tangible, nonexpendable, personal property that has a useful life of more than one year and an acquisition cost of $5,000 or more, or the capitalization threshold established by the organization, whichever is less.

Essentially Equivalent Work: This term is meant to identify "scientific overlap," which occurs when (1) substantially the same research is proposed for funding in more than one contract proposal or grant application submitted to the same Federal agency; or (2) substantially the same research is submitted to two or more different Federal agencies for review and funding consideration; or (3) a specific research objective and the research design for accomplishing that objective are the same or closely related in two or more proposals or awards, regardless of the funding source.

Facilities and Administrative (Indirect) Costs: Facilities and Administrative (F&A) Costs are defined as costs that are incurred by a grantee for common or joint objectives and that, therefore, cannot be identified specifically with a particular project or program.

Feasibility: The extent to which a study or project may be done practically and successfully.

Foreign Component: A component of a grant to a domestic organization that provides support to any significant element or segment to be performed outside the United States (including the involvement of human subjects or laboratory animals; extensive foreign travel for the purpose of data collection, surveying, sampling, and similar activities; and any activity of the recipient that may involve the population, environment, resources, or affairs of a foreign country), either by the recipient's project staff or individuals employed by a foreign organization (for example, under a contract or a consortium agreement). Foreign travel for consultation is not considered a foreign component.

Full-Time Appointment: The number of days per week and/or months per year representing full-time effort at the applicant/grantee organization, as specified in organizational policy. The organization's policy must be applied consistently regardless of the source of support.

Grant: A financial assistance mechanism providing money, property, or both to an eligible entity to carry out an approved project or activity.

Grantee: For purposes of the SBIR and STTR programs, "grantee" means the organization awarded a grant by DOE that is responsible and accountable for the use of the funds provided and for the performance of the grant-supported project or activity. The grantee is the entity legally responsible and accountable to DOE for the performance and financial aspects of the grant-supported project or activity.

Historically Underutilized Business Zone (HUBZone): A small business concern meeting the following criteria:

1. Located in a "historically underutilized business zone" or HUBZone area located in one or more of the following:
    a. A qualified census tract (as defined in section 42(d)(5)(C)(i)(I) of the Internal Revenue Code of 1986; or
    b. A qualified "non-metropolitan county" (as defined in section 143(k)(2)(B) of the Internal Revenue Code of 1986) with a median household income of less than 80 percent of the state median household income or with an unemployment rate of not less than 140 percent of the statewide average, based on U.S. Department of Labor recent data; or

c. Lands within the boundaries of Federally recognized Indian reservations.

2. Owned and controlled by one or more U.S. Citizens.

3. At least 35% of its employees must reside in a HUBZone.

Innovation: Something new or improved, including research for (1) development of new technologies, (2) refinement of existing technologies, or (3) development of new applications for existing technologies. For the purposes of DOE programs, an example of "innovation" would be new science, engineering, or technical products for improved value, efficiency, or costs.

Institutional Base Salary: The annual compensation paid by an organization for an employee's appointment, whether that individual's time is spent on research, teaching, patient care, or other activities. Base salary excludes any income that an individual may be permitted to earn outside of duties to the applicant/grantee organization. Base salary may not be increased as a result of replacing institutional salary funds with DOE grant funds.

Intellectual Property: The separate and distinct types of intangible property that are referred to collectively as "intellectual property," including but not limited to: patents, trademarks, copyrights, trade secrets, SBIR/STTR technical data (as defined in this section), ideas, designs, know-how, business, technical and research methods, and other types of intangible business assets, and including all types of intangible assets either proposed or generated by an SBC as a result of its participation in the SBIR program.

Joint Venture: An association of concerns with interests in any degree or proportion by way of contract, express or implied, consorting to engage in and carry out a single specific business venture for joint profit, for which purpose they combine their efforts, property, money, skill, or knowledge, but not on a continuing or permanent basis for conducting business generally. A joint venture is viewed as a business entity in determining power to control its management.

Market Research: For purposes of the SBIR/STTR programs, "market research" is defined as the systematic gathering, editing, recording, computing, ad analyzing of data about problems related to the sale and distribution of the subject of the research project. It includes various types of research, such as the size of potential market and potential sales volume, the identification of consumers most apt to purchase the product(s), and the advertising media most likely to stimulate their purchases. However, "market research" does NOT include activities under a research plan or protocol that require a survey of the public as part of the objective of the project to determine the impact of the subject of the research on the behavior of individuals.

Other Significant Contributors: Individuals who have committed to contribute to the scientific development or execution of the project, but are not committing any specified measurable effort (e.g., person months) to the projects. These individuals are typically presented at "zero percent" effort or "as needed." Individuals with measurable effort may not be listed as Other Significant Contributors. Consultants should be included if they meet this definition.

Person Months: The metric for expressing the effort (amount of time) that PIs , faculty and other Senior/Key Personnel devote to a specific project. The effort is based on the type of appointment of the individual with an organization, e.g., calendar year (CY), academic year (AY), and/or summer term (SM); and the organization's definition of such. The effort is expressed as a percentage of the total institutional appointment.

Postdoctoral Scholar: An individual who has received a doctoral degree (or equivalent) and is engaged in a temporary and defined period of mentored advanced training to enhance the professional skills and research independence needed to pursue his or her chosen career path.

Principal Investigator (PI): The individual designated by the applicant organization to have the appropriate level of authority and responsibility to direct the project or program to be supported by the award.

Program Income: Gross income earned by the applicant organization that is directly generated by a supported activity or earned as a result of the award.

Examples of program income include:

- Fees earned from services performed under the grant, such as those resulting from laboratory drug testing;
- Rental or usage fees, such as those earned from fees charged for use of computer equipment purchased with grant funds;
- Third party patient reimbursement for hospital or other medical services, such as insurance payments for patients when such reimbursement occurs because of the grant-supported activity;
- Funds generated by the sale of commodities, such as tissue cultures, cell lines, or research animals;
- Patent or copyright royalties (exempt from reporting requirements); and
- Registration fees generated from grant-supported conferences.

Prototype: A model of something that is to be further developed and includes designs, protocols, questionnaires, software, and devices.

Research or Research and Development (R/R&D): Any activity that is:

- A systematic, intensive study directed toward greater knowledge or understanding of the subject studied; or
- A systematic study directed specifically toward applying new knowledge to meet a recognized need; or
- A systematic application of knowledge toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.

Research Institution: A United States research organization that is:

- A nonprofit college or university or
- A nonprofit research institution, including nonprofit medical and surgical hospitals. (A "nonprofit institution" is defined as an organization that is owned and operated exclusively for scientific or educational purposes, no part of the net earnings of which inures to the benefit of any private shareholder or individual.) or
- A contractor-operated, Federally funded Research and Development Center (FFRDC), as identified by the National Science Foundation in accordance with the Government-wide Federal Acquisition Regulation issued in accordance with section 35(c)(1) of the Office of Federal Procurement Policy Act (or any successor legislation thereto).

(Laboratories staffed by Federal employees do not meet the definition of "research institution" for purposes of the STTR program.)

SBIR/STTR Technical Data: All data generated during the performance of an SBIR/STTR award.

SBIR/STTR Technical Data Rights: The rights a small business concern obtains in data generated during the performance of any SBIR/STTR Phase I, Phase II, or Phase III award that an awardee delivers to the Government during or upon completion of a Federally-funded project, and to which the Government receives a license.

Senior/Key Personnel: The PI *and other individuals* who contribute to the scientific development or execution of the project in a substantive, measurable way, whether or not salaries or compensation are requested under the grant.

Typically these individuals have doctoral or other professional degrees, although individuals at the masters or baccalaureate level should be included if their involvement meets the definition of Senior/Key Personnel. Consultants and those with a postdoctoral role should also be included if the meet the definition of Senior/Key Personnel. Senior/Key Personnel must devote measurable effort to the project whether or not salaries or compensation are requested – "zero percent" effort or "as needed" are not acceptable levels for those designated as Senior/Key Personnel.

Socially and Economically Disadvantaged Individual: A member of any of the following groups: Black Americans; Hispanic Americans; Native Americans; Asian-Pacific Americans; Subcontinent Asian Americans; other groups designated from time to time by the Small Business Administration (SBA) to be socially disadvantaged; or any other individual found to be socially and economically disadvantaged by SBA pursuant to Section 8(a) of the Small Business Act, 15 U.S.C. 637(a).

Socially and Economically Disadvantaged Small Business

A socially and economically disadvantaged small business is one:

a. that is at least 51% owned by (i) an Indian tribe or a native Hawaiian organization, or (ii) one or more socially and economically disadvantaged individuals; and,

b. whose management and daily business operations are controlled by one or more socially and economically disadvantaged individuals. A socially and economically disadvantaged individual is defined as a member of any of the following groups: African Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, other groups designated from time to time by the Small Business Administration (SBA) to be socially disadvantaged, or any other individual found to be socially and economically disadvantaged by SBA pursuant to section 8(a) of the Small Business Act, 15 U.S.C. 637(a).

Summary Statement: The official agency record of the evaluation and recommendations made by peer review groups. It contains the essentially unedited, verbatim critiques of two or more individuals assigned to review the grant application.

United States: The 50 states, District of Columbia territories and possessions of the Federal Government, the Commonwealth of Puerto Rico, , the Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau. .

7.3 Useful Websites and Documents

7.3.1 DOE SBIR/STTR Website

The DOE SBIR/STTR Programs' homepage (https://science.osti.gov/sbir) provides an array of helpful award information and applicants are encouraged to bookmark this site and visit it often. Information on the lasts Funding Opportunity Annoucements can be found here: https://science.osti.gov/sbir/Funding-Opportunities

7.3.2 Grants.gov User Guide

The Grants.gov User Guide is a comprehensive reference to information about Grants.gov. Applicants can access the online User Guide at the following address:
https://www.grants.gov/help/html/help/index.htm?callingApp=custom#t=GetStarted%2FGetStarted.htm.

7.3.3 Rules and Regulations Governing DOE and Federal Grants

10 CFR Part 600 - Department of Energy Financial Assistance Rules

OMB Circular A-21
Cost Principles for Educational Institutions

OMB Circular A-110
Uniform Administrative Requirements for Grants and Other Agreements with Institutions of Higher Education, Hospitals and Other Non-Profit Organizations

OMB Circular A-122
Cost Principles for Non-Profit Organizations
(Does not apply to colleges and universities.)

Federal Acquisition Regulation (FAR) Part 31

7.3.4 Small Business Administration

The Small Business Administration (SBA) had primary oversight responsibility for the federal SBIR and STTR programs. General information about the SBIR and STTR programs, the SBIR/STTR Policy Directive, and information about the agencies that participate in the programs may be found at their website: https://www.sbir.gov/ .

7.3.5 DOE R&D Program Offices

The following are the major research and development programs at the U. S. Department of Energy that fund the department's SBIR/STTR programs.

Electricity
The mission of the Office of Electricity Delivery and Energy Reliability is to lead national efforts to modernize the electric grid, enhance the security and reliability of the energy infrastructure, and facilitate recovery from disruptions to the energy supply.

Energy Efficiency & Renewable Energy
The Office of Energy Efficiency and Renewable Energy is working to provide a prosperous future where energy is clean, abundant, reliable, and affordable.

Environmental Management
The Office of Environmental Management (EM) works to mitigate the risks and hazards posed by the legacy of nuclear weapons production and research.

Fossil Energy
Ensuring that we can continue to rely on clean, affordable energy from our traditional fuel resources is the primary mission of DOE's Office of Fossil Energy.

Nuclear Energy
The Office of Nuclear Energy mission is to support the nation's diverse nuclear energy programs.

Science Programs
The Office of Science is the single largest supporter of basic research in the physical sciences in the United States, providing more than 40 percent of total funding for this vital area of national importance.

National Nuclear Security Administration
NNSA is a separately organized agency within the DOE responsible for the management and security of the nation's nuclear weapons, nuclear nonproliferation, and naval reactor programs. It also responds to nuclear and

radiological emergencies in the United States and abroad. Additionally, NNSA federal agents provide safe and secure transportation of nuclear weapons and components and special nuclear materials along with other missions supporting the national security.