Solicitation Name: DOE SBIR Phase 1

Solicitation Number: DE-FOA-0003110

Proposal Manager: [Fill in]

Submission Date: October 10, 2023 11:59 PM Eastern Time

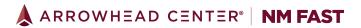
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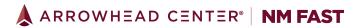
Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragrap h	Proposal Volume/ Section, Page, Paragrap h	Writing Assigned To	Notes Regarding Complianc e	Due Date	Status
	(R&R) Application for Federal Assistance [MANDATORY]			1117	111 (1 DC		
	is form first to populate data in other forms. The list of certifications and at https://energy.gov/management/office-management/operational-m						
	is and Assurances.						
Field 1.	Type of Submission Applicants should select the box for "Application" in Type of Submission. If this is a changed or revised application, it should be identified as a "Revision in Field 8 of the SF-424 (R&R) Form.						
Field 4.a.	Federal Identifier For submissions to DOE, leave this field blank.						
Field 4.b.	Agency Routing Identifier For submissions to DOE, leave this field blank.						
Field 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 8.	 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. 						



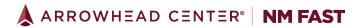
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	 Revision: Only if you have revised your application and are resubmitting to the same FOA. Resubmission, Renewal, and Continuation should not be selected for SBIR/STTR Applications. 						
	 Revision Type If Revision, mark appropriate box (es). May select more than one: E. Other If "Other" is selected, please specify in the text box provided. Identify the revision number (Example: Revision2 – this denotes you are replacing the previous version submitted.)						
	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 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.						



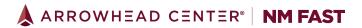
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	 A "revision" application must have the same title as the originally submitted "new" application being revised. DOE limits title character length to 81 characters, including the spaces between words and punctuation. Titles in excess of 81 characters 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. 						
Field 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. 						
Field 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						



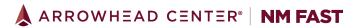
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	delegate, enter "098" for the district number. Ex ample: DC-098, PR-098.						
Field 14.	Program Director/Principal Investigator (PI) Contact Information ⁱ The PI should be entered here. Name the PI whom is responsible to the applicant small business concern for the scientific and technical direction of the project. A revision application must have the same PI as the currently funded grant.						
Field 15.	 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. 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. 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. 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.						



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Field 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."						
Field 18.	SFLLL or Other Explanatory Documentation (Optional Form) If applicable, attach the SFLLL or other explanatory document per agency instructions. ⁱⁱ						
	Performance Site Location(s) Form primary site where the work will be performed. If a portion of the projec	t will be perfo	ormed at any o	other site(s), ic	lentify the site	location(s) in	the blocks
Project/Per formance 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.ⁱⁱⁱ 						



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	ch & Related Other Project Information Form			1		1	
	uestions 1 through 6 and attach files. If the answer to question 3 is "Yes",						
	pject Narrative document and on each page that contains proprietary infor result in DOE's inability to treat such information as proprietary and ma			instructions pi	rovided in Sect	ion VIII, C. I	failure to
compry may	Are Human Subjects Involved? ^{iv}	y delay the gr	ant process.				
Field 1.	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.						
	a. If YES to Human Subjects						
	 Exemption Number Is the Project Exempt from Federal Regulations? Yes/No <i>Yes</i>: If the project is exempt from Federal regulations, check "Yes." If "Yes", check the appropriate ex emption number. <i>No</i>: 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 						



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	 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 y et 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. 						
Field 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.						
	 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. 						



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	 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. 						
Field 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 Section 7.2 of the Application Guide for additional information." 						
Field 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 ex planation 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. 						



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



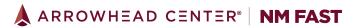
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	If this project has an actual or potential impact on the environment, has an ex emption been authorized or an environmental assessment (EA) or environmental impact statement (EIS) been performed? - Check yes or no.						
	d. If yes, please explain 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.						
Field 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 ex planation in the box provided in 5.a. Otherwise, check the No box. This field is required.						
	 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. 						
Field 6.	 Does this project involve activities outside of the United States or partnerships with International Collaborators? Indicate whether this project involves activities outside of the United States or partnerships with international collaborators. Check yes or no. This field is required. 						
	a. If yes, identify countries Enter the countries with which international cooperative activities are involved.						
	b. Optional Explanation Enter an explanation for involvement with outside entities (optional). If desired, you can provide the information in a separate						



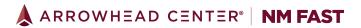
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	file, and attach by clicking Add Attachments located to the right of Item 11, Other Attachments.						
	If you have checked "Yes" to item 6, applicants must describe special resources or characteristics of the research project (e.g., human subjects, 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.						
	Project Summary/Abstract The Project Summary/Abstract must not exceed 1 page.						
Field 7.	The Project Summary/Abstract must not exceed 1 page. 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. 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						



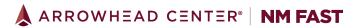
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	institutions, or any trade or product name) in the body of the summary.						
	 summary. The header must include: Company Name Project Title Principal Investigator Topic number/Subtopic letter, e.g. 8b The body must include: Statement of the problem 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 w ay 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 						



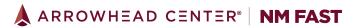
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	Congress of grants in their districts. Therefore, please provide, in clear and concise lay man's terms, a very brief summary of the project, suitable for a possible press release from a Congressional office. One suggested format is to use two sentences: 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. ^{vii}						
	Project Narrative ^{viii} The Project Narrative must not exceed 15 pages, 7,500 words.						
Field 8.	 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 letter) should be identified in a header on each page of the Project Narrative header should also include company name, project title, and topic/subtopic Example Header: XYZ Technologies, Inc. SIS: A Sensor-Based In-Line System Topic: 21/a 						



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	Sequentially number each page of the Project Narrative in the page footer.						
	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 ApproachDefine 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 w hole anticipated if the project is successful and is carried over into Phases II and III. Identify specific groups in the commercial sector as w ell as the Federal Government that would benefit from the projected results. Describe the resultant product or						



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	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.						



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	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						



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	 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 SubcontractorsInvolvement of consultants or subcontractors in the project ispermitted provided the work is performed in the United States, forexceptions, see Part III. D. If consultants and/or subcontractors are tobe used, this section of the application must identify them by name,identify whether the party is being proposed as a consultant versusas a subcontractor, and should provide Letters of Commitment(LOC) from an authorized representative of the consultants and/orsubcontractors. The LOC must provide a detailed cost estimate,including costs for labor, equipment, and materials, if any, for theconsultant or subcontractor, as well as a specific statement certifyingthat the consultant(s) or subcontractor(s) have agreed to serve in themanner and to the extent described in the Work Plan section of theapplication. Each LOC must be on official letterhead with anauthorizing representative's contact information provided andsubmitted as an "Other Attachment" to the application. If selected						



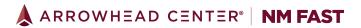
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	for a grant, the DOE contracting officer will verify the participation of any subcontractor(s) and/or consultant(s) and will require budget and budget explanations for subcontractors and verification of the rates for consultants.						
	 Phase II 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						



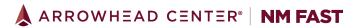
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	should also reference it in the technical proposal in the "Work Plan" Section.						
	PROMOTING INCLUSIVE AND EQUITABLE RESEARCH (PIER) PLAN REQUIREMENT (DOES NOT COUNT						
Appendix	 TOWARD THE PROJECT NARRATIVE PAGE LIMIT) All applications must provide a Promoting Inclusive and Equitable Research (PIER) Plan as an appendix to the research project narrative. The PIER plan should describe the strategies and activities of the applicant to promote diversity, equity, inclusion and/or accessibility as an integrated element of the research and development project within the proposing small business concern. Plans may include, but are not limited to: plans of your small business concern and collaborating institutions (if applicable) to recruit individuals from diverse backgrounds and/or groups historically underrepresented in the research community; plans to contribute to a research and development environment that fosters a safe, positive, accessible and inclusive workplace and/or a sense of belonging among all personnel; and/or training, mentoring and partnering with underrepresented communities. Plans may leverage existing diversity, equity, inclusion and accessibility efforts of the applicant small business concern but should not be a statement of broad principles. Provided as an appendix to the Project Narrative, the PIER Plan should describe the activities and strategies to promote diversity, equity, inclusion, and accessibility in the proposed research project: The PIER Plan should be between 1 and 3 pages in length. 						



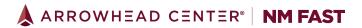
Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragrap h	Proposal Volume/ Section, Page, Paragrap h	Writing Assigned To	Notes Regarding Complianc e	Due Date	Status
	 The complexity of a PIER Plan is expected to increase with the size of the small business, duration of the project and the number of personnel to be supported. Thus, a PIER Plan for a Phase I project is expected to be focused and relatively limited. PIER Plans are to be evaluated as part of the merit review criterion: Quality and Efficacy of the Plan for Promoting Inclusive and Equitable Research. The scope should be integral to and tailored to the research project. Applicants are encouraged to focus on areas, including but not limited to: The composition of the project team and partnering institutions. The research environment - cultivating respectful, professional and accessible environments. Equitable and inclusive implementation of the research project. 						
Field 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						



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	Narrative . Bibliography and References cited count against the Phase I Project Narrative 15-page limit.						
Field 10	Facilities & Other Resources Do <u>not</u> 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.						
Field 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.						
Field 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 "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 Signed Letter of 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. 						



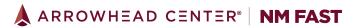
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	Level-of-Effort Worksheet may be found on the DOE SBIR/STTR Programs web site at <u>https://science.osti.gov/sbir/Applicant-Resources/Grant-Application</u> . P						
	 Responses to questions on the "SBIR/STTR Information" Form Digital Data Management Plan Requirement (Required) All SBIR and STTR applicants must select one of the following options for their Data Management Plan (DMP): Option 1) The Option 1 DMP is: "It is anticipated that all generated digital data will be protected as SBIR/STTR data and therefore will not be publicly shared during the applicable SBIR/STTR data protection period. If any data generated under this award are published, an effort will be made to also release any related digital data that is not protected SBIR/STTR data." Applications that select Option 1 must not include publication costs in their budget, as this implies that data will be shared publicly. 						
	 Please note that if you do not include a DMP with your application, Option 1 for the DMP will be assumed for your application. However, if you plan to publicly disclose generated digital data, you must provide a DMP under Option 2. Option 2) If you plan to publicly disclose technical data during the data protection period or, for data not expected to be asserted as protected SBIR/STTR rights data, please submit a DMP using the requirements below.^{ix} 1. DMPs should describe whether and how data generated in the course of the proposed research will be shared and preserved. If the plan is not to share 						



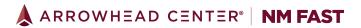
Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragrap h	Proposal Volume/ Section, Page, Paragrap h	Writing Assigned To	Notes Regarding Complianc e	Due Date	Status
	 and/or preserve certain data, then the plan must explain the basis of the decision (for example, cost/benefit considerations, other parameters of feasibility, scientific appropriateness, or limitations discussed in #4 below). At a minimum, DMPs must describe how data sharing and preservation will enable validation of results, or how results could be validated if data are not shared or preserved. 2. DMPs should provide a plan for making all research data displayed in publications resulting from the proposed research digitally open, machine-readable and digitally accessible to the public at the time of publication. This includes data that are displayed in charts, figures, images, etc. In addition, the underlying digital research data used to generate the displayed data should be made as accessible as possible to the public in accordance with the principles stated in the Office of Science Statement on Digital Data Management (http://science.energy.gov/funding_opportunities/digital-data-management/). This requirement could be met by including the data as supplementary information to the published article, or through other means. The published article should indicate how these data can be accessed. 3. DMPs should consult and reference available information about data management resources at a facility commit data management resources at a facility 						



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	 beyond what is conventionally made available to approved users should be accompanied by written approval from that facility. In determining the resources available for data management at Office of Science User Facilities, researchers should consult the published description of data management resources and practices at that facility and reference it in the DMP. 4. DMPs must protect confidentiality, personal privacy, Personally Identifiable Information, and U.S. national, homeland, and economic security; recognize proprietary interests, business confidential information, and intellectual property rights; avoid significant negative impact on innovation, and U.S. competitiveness; and otherwise be consistent with all applicable laws and regulations. There is no requirement to share proprietary data. 						
	DISCLOSURE OF FOREIGN RELATIONSHIPS (REQUIRED)All SBIR and STTR applicants must disclose their foreign relationships as required by the SBIR and STTR Extension Act of 2022. The required form that must be used to disclose these relationships is available here: https://science.osti.gov/sbir/Applicant-Resources/Grant-Application . Instructions are included on the form. Please note that even if you do not have any foreign relationships, you must complete this form to certify that such relationships do not exist. Failure to include this form may result in declination of your application without review at DOE's discretion.						



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	 Also, attach the following files in Field 12: SBA Company Registration (Required) 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 (discussed in Part III of FOA) 						
	RCH AND RELATED SENIOR/KEY PERSON: [MANDATORY] is form before the Budget form to populate data on the Budget form.						
Principal Investigato r and Other Key Personnel	The Principal Investigator (PI) is the key individual designated by the applicant to direct the project. Only one PI is acceptable per project. The PI and Key Personnel do not need to be U.S. citizens; however, all work must be performed in the United States, for exceptions, see Part III. D. See "General Requirements and Restrictions on the Principal Investigator" in Part III. H. Beginning with the PI, provide a profile for each senior/key person proposed. The form will prepopulate with the PI identified on the SF-424(R&R) form. Each senior/key person must be aware that he/she is included in the application and must agree to perform the work if awarded. A senior/key person is any individual who contributes in a substantive, measurable way to the scientific/technical development or execution of the project, whether or not a salary is proposed for this individual. Senior/key personnel should only be named in the application if the person will be an employee of the small business as of the start date of the grant. If the person will be joining the small business at a later date, please list						



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	them by the position title (e.g. Senior Engineer) only. Sub-awardees and consultants must be included if they meet this definition. For each senior/key person provide:						
	Credential In the "credential" field, enter the person's PAMS username, if known.						
	 Biographical Sketch 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 						



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	• Synergistic Activities - List no more than five (5) professional and scholarly activities related to the effort proposed.						
Current and Pending Support	Provide current and pending support for each senior/key person and attach to the "Attach Current and Pending Support" field in each profile. ^x						

5. RESEARCH AND RELATED BUDGET - Section F-K, Budget Period 1 Form xi: [MANDATORY]

You must provide a budget for the period of support requested and a cumulative budget for the total project. In accordance with the SBIR/STTR topic funding allowance, applicants may request funding for up to 12 months, but not less than 6 months. Any application that proposes less than a 6-month Phase I budget period will be revised upward to 6 months by DOE. The amount budgeted cannot exceed the Phase I maximum grant amount for the topic. In the event you choose to use your own commercialization vendor, you may exceed the topic amount by up \$6,500. Please refer to the TABA section for guidance.

Complete the Research and Related Budget form in accordance with the instructions on the form and the following instructions. The form will generate a cumulative budget for the total project period. You may request funds under any of the categories listed as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allow ability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this FOA (See Part IV). Note that foreign travel and participant/trainee costs are typically considered unallowable costs unless approved by the DOE Contracting officer.

Phase I Principal Investigator meeting: Applicants may include in their Phase I budget a registration fee (\$250) and travel expenses for the Principal Investigator and, if necessary, a registration fee (\$250) and travel expenses for a person from the small business representing the commercialization interests of the company to attend the DOE SBIR/STTR Phase I Principal Investigator Meeting. Attendance by the Principal Investigator is expected. This two-day meeting, held in the DC metro area, will provide opportunities to meet with DOE Program Managers and TABA providers, as well as learn about the DOE SBIR/STTR programs, with an emphasis on the Phase II application. The DOE SBIR/STTR Phase I Principal Investigator Meeting will be held approximately four months after the Phase I period of performance begins. Principal Investigators will be notified of the exact date and venue for the DOE SBIR/STTR Phase I Principal Investigator Meeting approximately eight weeks after the Phase I grant start date by an e-mail from the DOE contractor managing the meeting. The email will contain the URL for the DOE SBIR/STTR Phase I Principal Investigator Meeting website, where participants will be able to register, make lodging reservations, and view the agenda for the meeting.

Field A	Senior/Key Person			
Senior/Key	This section must include the names of all Senior/Key Persons at the			
	applicant organization who are involved on the project in a particular			
Person	budget year. Include all collaborating investigators, and other			



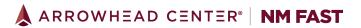
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	individuals meeting the Senior/Key Person definition if they are from the applicant organization. Details of collaborators at other institutions will be provided in the Subaward budget for each subaward/consortium organization. Personnel listed as 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.						
	 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 autopopulated 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. 						
	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.						
	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.						



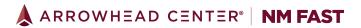
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	Acad. Months Identify the number of months devoted to the project for each Senior/Key Person (for example, calendar, academic, summer). If your institution does not use a 9-month academic year, indicate your institution's definition of academic year in the budget justification.						
	Sum. Months Identify the number of months devoted to the project for each Senior/Key Person (for ex ample, 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 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.						
	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						



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	additional Senior/Key Persons in line 9 of Section A. This attachment is required if funds are entered in line 9 of Section A. Use the same format as the budget component and include all required information.						
Field B Other Personnel	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 Postdoctoral Associates, Graduate Students, Undergraduate Students, or Secretarial/Clerical, enter the appropriate project role (for ex ample, 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. 						
Field C Equipment Description	List of items and dollar amount for each item exceeding \$5,000.						
	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. Allow able items ordinarily will be limited to research equipment and apparatus not already available for the						



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	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.						
	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 on line 11 of this section.						
Field D	Travel Phase I Principal Investigator meeting: Applicants may include in their Phase I budget a registration fee (\$250) and travel expenses for the Principal Investigator and, if necessary, a person from the small business representing the commercialization interests of the company to attend the DOE SBIR/STTR Phase I Principal 32 Investigator Meeting. Attendance by the Principal Investigator is expected. This two-day meeting, held in the DC metro area, will provide opportunities to meet with DOE Program Managers and Commercialization Assistance providers, as well as learn about the DOE SBIR/STTR programs, with an emphasis on the Phase II application. The DOE SBIR/STTR Phase I Principal Investigator Meeting will be held approximately 4 months after the Phase I period of performance begins. Principal Investigators will be notified of the exact date and venue for the DOE SBIR/STTR Phase						



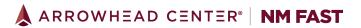
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	I Principal Investigator Meeting approximately 8 weeks after the Phase I grant start date by an e-mail from the DOE contractor managing the meeting. The email will contain the URL for the DOE SBIR/STTR Phase I Principal Investigator Meeting website, where participants will be able to register, make lodging reservations, and view the agenda for the meeting.						
	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" 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).						
Field 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 F	Materials and Supplies						



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Other Direct Costs	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.						
	Publication CostsList 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.						
	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.						
	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.						
	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.						



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	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 w arrant a categorical breakdown of costs. When this is the case, provide detailed information as part of the budget justification.						
	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.						
	 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^{xii}. Phase I SBIR/STTR applications, the DOE technical and commercialization assistance costs are authorized up to \$6,500 per year. 						
G	This represents Total Direct Costs (Sections A through F) Total funds requested for all direct costs.						



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Direct Costs							
Field H Other 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 w ages, no documentation is required.						
Field I Total Direct and Indirect 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						



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	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 Justificatio n	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						



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	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.						

6. 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.

7. **R&R SUBAWARD BUDGET ATTACHMENT(S) FORM**: [IF APPLICABLE, BUDGETS FOR SUB-AWARDEES, INCLUDING RESEARCH INSTITUTIONS]^{xiii}

You must provide a SF 424 (R&R) budget and budget justification for any Phase I sub-awardee.

Download the R&R Budget Attachment from the R&R SUB-AWARD BUDGET ATTACHMENT(S) FORM and email it to each sub-awardee that is required to submit a separate budget. After the sub-awardee has emailed its completed budget back to you, attach it to one of the blocks provided on the form. Use up to 10 letters



Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragrap	Proposal Volume/ Section, Page, Paragrap h	Writing Assigned To	Notes Regarding Complianc e	Due Date	Status	
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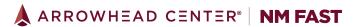
of the sub-awardee's name (plus.pdf) as the file name (e.g., ucla.pdf or energyres.pdf). You may enter the sub-awardee budget information on a separate budget extracted from the SUB-AWARD BUDGET ATTACHMENT(S) FORM.

If the project involves more sub-awardees than there are places in the SUB-AWARD BUDGET ATTACHMENT(S) FORM, the additional sub-award budgets may be saved as PDF files and appended to the Budget Justification attached to Field K.

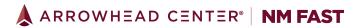
Ensure that any files received from sub-awardees are the PDF files extracted from the SUB-AWARD BUDGET ATTACHMENT(S) FORM. Errors will be created if a sub-awardee sends a prime applicant a budget form that was not extracted from the application package. Do not use a sub-award budget downloaded directly from grants.gov or any source other than the application package.

Additional budget information for any sub-awardee will likely be required if selected for award.

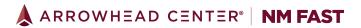
A complete subaward/consortium budget component (including the		
budget justification section) should be completed by each		
consortium grantee organization. Separate budgets are required only		
for subawardee/consortium organizations that perform a substantive		
portion of the project.		
To start the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



 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 UEI and Name of Organization fields must reflect that of the subaward/consortium grantee. The 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 subawardce 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 subawardce's name (plus.pdf) as the file name (e.g., uela.pdf or energyres.pdf). Filenames should not exceed 50 characters. Ensure that any files received from subawardces are the PDF files extracted from the SUBAWARD BUDGET ATTACHMENT(S) FORM. Errors will be created if a subawardue 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. SBIRKSTIR INFORMATION FORM: [MANDATORKY] In conjunction with the other SF424 (R&R) components, DOE SBIR/STTR grant applicants must also complete and submit the "SBIR/STTR formation" component. 	Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragrap h	Proposal Volume/ Section, Page, Paragrap h	Writing Assigned To	Notes Regarding Complianc e	Due Date	Status
	In conjunctio	 The consortium grantee should complete all the budget information as instructed in the R&R Budget component instructions. Note: Organizational UEI 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. A fee cannot be entered for a subaward/consortium budget. Fee is allowable only for the small business applicant organization budget page. 	licants must a		and submit th	ne "SBIR/STTR	2 Information	
Rield L La Certification of Small Rusiness Eligibility	component. Field 1	1a. Certification of Small Business Eligibility						



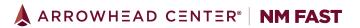
Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragrap h	Proposal Volume/ Section, Page, Paragrap h	Writing Assigned To	Notes Regarding Complianc e	Due Date	Status
	If you certify that at the time of award, your organization will meet the eligibility criteria for a small business as defined 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.						
Field 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.						
Field 3	Are you located in a HUBZone? If you are located in a HUBZone, check the "Yes" box. To find out if y our business is in a HUBZONE, use the mapping utility provided by the Small Business Administration at its web site: <u>http://www.sba.gov</u> . Otherwise, check the "No" box. A selection is required.						
Field 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 						



Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragrap h	Proposal Volume/ Section, Page, Paragrap h	Writing Assigned To	Notes Regarding Complianc e	Due Date	Status
	Attachment button to the right of this field to attach the file and complete this entry. When you click Add Attachment, browse to w here you saved the file, select the appropriate file and then click Open to complete the action.						
Field 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. 						



Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragrap h	Proposal Volume/ Section, Page, Paragrap h	Writing Assigned To	Notes Regarding Complianc e	Due Date	Status
	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 y our 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".						
Field 6	Disclosure Permission Statement If this application does not result in an award, and the Government is permitted to disclose the title of y our 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.						
Field 7	 Commercialization Plan A brief commercialization plan MUST be included in a Phase I grant application. 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. 						



Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragrap h	Proposal Volume/ Section, Page, Paragrap h	Writing Assigned To	Notes Regarding Complianc e	Due Date	Status
	 4. Company /Team: Describe the capability of y our present personnel and/or planned additions to y our 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.						
	 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. 						
Field 8	Company Commercialization History						



Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragrap h	Proposal Volume/ Section, Page, Paragrap h	Writing Assigned To	Notes Regarding Complianc e	Due Date	Status
	 If you have received SBIR/STTR Phase II awards from any Federal agency, then you must provide a company Commercialization Report. If you have received SBIR/STTR Phase II awards from the Federal Government, check the "Yes" box, and: if submitting an SBIR or Both application, attach the Company Commercialization Report (CCR) generated on SBIR.gov to Question 8, or if submitting an STTR-only application, attach the CCR from SBIR.gov to Field 12 of the Research and Related: Other Project Information Form. 						
Field 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. 						
Field 12	Provide UEI Number of non-profit research partner for STTR.						



ⁱ 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 w eek for the duration of the project for both SBIR and STTR Phase I projects. For ex ample, 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 project and no more than 19 hours per w eek spent in the employment of the small business during the conduct of the project and no more than 19 hours per w eek spent in the employment of another organization.

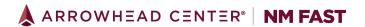
ⁱⁱ The list of Certifications and Assurances referenced in Field 18 can be found on the DOE Financial Assistance Forms Page at <u>https://energy.gov/management/office-management/operational-management/financial-assistance/financialassistance-forms</u>, under Certifications and Assurances.

ⁱⁱⁱ 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 ex ample, 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 w here 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 w hose 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.

^{iv} Applicants that plan to include human subjects as part of their research should be aware that there are requirements that must be met for this type of research to be federally funded. Please refer to the following webpage to learn about these requirements: <u>https://science.osti.gov/ber/human-subjects</u>



^v 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 w ant 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, and (3) the budget justification, and (4) letters of support. 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 <u>http://science.energy.gov/sbir/applicant-and-awardee-resources/</u>.

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.

vi Note concerning question 4.a.

DOE understands the phrase in field 4.a., "potential impact – positive or negative - on the environment", to apply if the work described in the application could potentially have any of the impacts listed in (1) through (5) of 10 CFR Part 1021, Appendix B, Conditions that are Integral Elements of the Classes of Action. See 23 Subpart D – Typical Classes of Actions, Appendix B to Subpart D of Part 1021 – Categorical Exclusions Applicable to Specific Agency Actions; B. Conditions that are Integral Elements of the Classes of Actions in Appendix B. (See <u>www.ecfr.gov</u>.)



Additionally, for actions that could have any other negative high consequence impacts to the environment or have any possibility for negative high consequence impacts to human health (e.g., use of human subjects, biosafety level 3-4 laboratory construction/operation, manufacture or use of certain nanoscale materials known to impact human health, or any activities involving transuranic or high level radioactive waste or materials or exposure to any radioactive materials beyond de minimis levels), applicants should indicate "Yes" under 4.a. and then start their explanation under 4.b. with "Negative potential impact;" followed by their explanation.

Moreover, applicants should indicate potential negative impact on the environment if: 1) there would be extraordinary circumstances (i.e., scientific or public controversy) related to the significance of environmental effects [10 CFR 1021.410(b)(2)], 2) the work is connected to other actions with potentially significant impacts [10 CFR 1021.410(b)(3)], or 3) the work is related to other nearby actions with the potential for cumulatively significant impacts [10 CFR 1021.410(b)(3)].

If question 4.a. is answered "Yes", due to actual or potential negative impact(s) on the environment, the applicant will be required to complete the form entitled "National Environmental Policy Act (NEPA) Environmental Evaluation Notification Form" (SC-CH Form 560) upon request by the DOE contracting officer.

Lastly, if question 4.a. is answered yes due to an actual or potential positive impact on the environment, applicants should indicate "Yes" under 4.a. and then start their explanation under 4.b. with "Positive potential impact;" followed by their explanation.

^{vii} Examples provided in the FOA:

- "The next generation "atom smashers" will require dipole magnets of very high magnetic field. This proposal will explore innovative block coil designs that can be used to make magnets shorter and more reliable."
- "Computer simulation is a crucial step in developing clean nuclear energy generators, but the simulation process is currently so complex and esoteric that new
- users are discouraged from entering the field. This proposal will simplify the simulation process and the software interface to encourage new investment in nuclear energy."

viii The Project Narrative is considered the main portion of the grant application and must specify clear, measurable goals and milestones that should be achieved in Phase I. Phase I applications must propose research and development required to meet the DOE objectives stated in the technical topic of the FOA and provide sufficient information to convince DOE and members of the research community who review the application that it is worthy of support under the stated evaluation criteria in Section V.

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.

^{ix} Additional DMP Guidance:

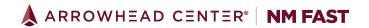
- In determining which data should be shared and preserved, researchers must consider the data needed to validate research findings as described in the Requirements noted above, and are encouraged to consider the potential benefits of their data to their own fields of research, fields other than their own, and society at large.
- DMPs should reflect relevant standards and community best practices for data and metadata, and make use of community accepted repositories whenever practicable.
- Costs associated with the scope of work and resources articulated in a DMP may be included in the proposed research budget as permitted by the applicable cost principles.
- To improve the discoverability of and attribution for datasets created and used in the course of research, the applicant is encouraged to cite publicly available datasets within the reference section of publications, and the identification of datasets with persistent identifiers such as Digital Object Identifiers (DOIs). In most cases, the Office of Science can provide DOIs free of charge for data resulting from DOE-funded research through its Office of Scientific and Technical Information (OSTI) <u>DataID Service</u>.
- The following list of elements for a DMP provides suggestions regarding the data management planning process and the structure of the DMP:
 - Data Types and Sources. A brief, high-level description of the data to be generated or used through the course of the proposed research and which of these are considered digital research data necessary to validate the research findings.
 - Content and Format. A statement of plans for data and metadata content and format including, where applicable, a description of documentation plans, annotation of relevant software, and the rationale for the selection of appropriate standards. (Existing, accepted community standards should be used where possible. Where community standards are missing or inadequate, the DMP could propose alternate strategies that facilitate sharing, and should advise the sponsoring program of any need to develop or generalize standards.)
- Sharing and Preservation. A description of the plans for data sharing and preservation. This should include, when appropriate:



- the anticipated means for sharing and the rationale for any restrictions on who may access the data and under what conditions;
- a timeline for sharing and preservation that addresses both the minimum length of time the data will be available and any anticipated delay to data access after research findings are published;
- any special requirements for data sharing, for example, proprietary software needed to access or interpret data, applicable policies, provisions, and licenses for re-use and re-distribution, and for the production of derivatives, including guidance for how data and data products should be cited;
- any resources and capabilities (equipment, connections, systems, software, expertise, etc.) requested in the research proposal that are needed to meet the stated goals for sharing and preservation. (This could reference the relevant section of the associated research proposal and budget request);
- cost/benefit considerations to support whether/where the data will be preserved after direct project funding ends and any plans for the transfer of responsibilities for sharing and preservation;
- whether, when, or under what conditions the management responsibility for the research data will be transferred to a third party (e.g. institutional, or community repository);
- any other future decision points regarding the management of the research data including plans to reevaluate the costs and benefits of data sharing and preservation.
- Protection. A statement of plans, where appropriate and necessary, to protect confidentiality, personal privacy, <u>Personally Identifiable</u> <u>Information</u>, and U.S. national, homeland, and economic security; recognize proprietary interests, business confidential information, and intellectual property rights; and avoid significant negative impact on innovation, and U.S. competitiveness.
- Rationale. A discussion of the rationale or justification for the proposed data management plan including, for example, the potential impact of the data within the immediate field and in other fields, and any broader societal impact.

* Current and Pending support is intended to allow the identification of potential duplication, over commitment, potential conflicts of interest or commitment, and all other sources of support. The PI and each senior/key person at the prime applicant and any proposed subaward must provide a list of all sponsored activities, awards, and appointments, whether paid or unpaid; provided as a gift with terms or conditions or provided as a gift without terms or conditions; full-time, parttime, or voluntary; faculty, visiting, adjunct, or honorary; cash or in-kind; foreign or domestic; governmental or private-sector; directly supporting the individual's research or indirectly supporting the individual by supporting students, research staff, space, equipment, or other research expenses. All foreign government-sponsored talent recruitment programs must be identified in current and pending support. SC requires the use of the format approved by the National Science Foundation (NSF), which may be generated by the Science Experts Network Curriculum Vita (SciENcv), a cooperative venture maintained at https://www.ncbi.nlm.nih.gov/sciencv/, and is also presently available at https://www.nsf.gov/bfa/dias/policy/nsfapprovedformats/cps.pdf. If an interagency common format for current and pending support has been promulgated, that format must be used in an application. The use of a format required by another agency is intended to reduce the administrative burden to researchers by promoting the use of common formats. For every activity, list the following items:

- The sponsor of the activity or the source of funding
- The award or other identifying number
- The title of the award or activity
- The total cost or value of the award or activity, including direct and indirect costs. For
- pending proposals, provide the total amount of requested funding.
- The award period (start date end date).
- The person-months of effort per year being dedicated to the award or activity



- Briefly describe the research being performed and explicitly identify any overlaps or
- synergies with the proposed research.

If required to identify overlap, duplication of effort, or synergistic efforts, append a description of the other award or activity to the current and pending support. Requested information may be appended to current and pending support, whether produced from

a fillable PDF or in SciENcv. SC strongly recommends the use of SciENcv to reduce administrative burden by allowing the use of digital persistent identifiers, including the Open Researcher and Contributer ID (ORCiD). Current and pending support must be attached to the Research and Related Senior/Key Person Profile (Expanded) form in an application. Details of any obligations, contractual or otherwise, to any program, entity, or organization sponsored by a foreign government must be provided on request to either the applicant institution or DOE.

^{xi} Notes Regarding Budget:

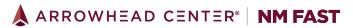
- Although there is no absolute cap on indirect costs, grant applications will be evaluated for overall economy and value to DOE.
- Tuition expenses are only allowable if requested from a subcontractor that is a University and if the amount requested for tuition is reasonable and comparable to the amount 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 http://science.energy.gov/sbir/applicant-and-awardee-resources/. Attach this form in Field 12 of the R&R Other Project Information form.

xii Commercialization Assistance (Section F, Field 8, 9, or 10 [Optional])

In accordance with the SBIR/STTR Reauthorization Act of 2011, the DOE is able to fund discretionary commercialization assistance to all DOE SBIR and STTR Phase I grantees. Grant recipients have two options for receiving commercialization assistance: (1) utilize services provided by a DOE vendor or (2) identify their own commercialization assistance provider.

If you wish to receive commercialization assistance from a DOE-funded vendor, you do not need to include this in your budget. If you are awarded a Phase I grant, you will receive notification from DOE and follow-up contact from a DOE-funded vendor on what services are available to you and how to obtain these services at no cost to your small business.

If you wish to utilize your own commercialization assistance provider, you are required to include this as "Other Direct Costs (in fields 8, 9 or 10 of Section F)" in your budget, to provide a detailed budget justification, and a letter of commitment from the provider. You may include up to \$5,000 for assistance. Please note that this commercialization assistance does not count toward the maximum grant size listed in Part II, C. For example, seeking commercialization assistance from your provider could result in an increase of \$5,000 over the maximum grant limit. That is, for a topic with a maximum grant limit of \$150,000 or \$225,000, the actual grant may increase to \$155,000 or \$230,000 respectively. Reimbursement is limited to services received that comply with 15 U.S.C. § 638(q). In the event some or the entire amount listed is not expended on a commercialization assistance services as proposed, the remaining funds cannot be budgeted to other project costs. Re-budgeting of these funds is not allowable.



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.

