**Solicitation Name:** EPA SBIR Phase l

**Solicitation Number:** 68HERC22R0180

**Proposal Manager:** [Fill in]

**Submission Date:** 12 PM (noon) EDT on August 23, 2022

**Last Updated:** [Fill in]

**Legend:** Forms, Formatting

| Field # | RFP Requirement (Text Extract) | RFP Page, Section, Paragraph | Proposal Volume/Section, Page, Paragraph | Writing Assigned To | Notes Regarding Compliance | Due Date | Status |
| --- | --- | --- | --- | --- | --- | --- | --- |
| General Proposal RequirementsProposals shall be submitted in Portable Document Form (PDF) in response to this Phase I solicitation. Proposals shall not exceed a total of 25 pages, one side only. The 25 pages shall include the cover page, budget, and all enclosures or attachments. Pages (including enclosures or attachments such as letters of recommendation) should be of standard size (8 ½ in x 11 in; 21.6 cm x 27.9 cm) with 2.5 cm margins and type no smaller than 10-point font size. All pages shall be consecutively numbered. Proposals in excess of the 25-page limitation shall not be considered for review or award. Your entire proposal (including appendices) shall be submitted through FedConnect as ONE document in PDF. Only proposals received as a “response” to the BAA Solicitation via FedConnect as ONE PDF by the deadline identified above will be considered for award.Proposals submitted in response to this solicitation will be valid for 300 daysProposals submitted via FedConnect shall have a file name that includes the company name and topic code. An example of an acceptable file name is as follows: Topic 1A – ABC, LLC. Proposals shall be submitted via “response” in FedConnect and not through the message center (also in FedConnect). A proposal is a response to the Government’s Solicitation. Any proposal received through the message center function in FedConnect will not be evaluated for award. If an offeror is unsure or has questions on how to submit a proposal please contact the FedConnect helpdesk. It is encouraged you do not wait to the last minute to submit your proposal. There is often a small delay in your submission and it being officially “received” by the government. It is recommended to submit your proposal as far in advance of the deadline possible. Any inquiries to as the status of your submission should be made to the FedConnect helpdesk. The EPA will pull all the proposals from FedConnect that were submitted as a response and that were submitted by the deadline.  |
| 1. Cover Sheet (Appendix 1)

The offeror shall complete the Proposal Cover Sheet (Appendix 1) of this solicitation which has the relevant solicitation number and research topic codes and titles and use it as page 1 of the proposal. The offeror shall select one (and only one) research topic code on the cover sheet. It is the responsibility of offerors to select the best research topic code and title for their proposal. When downloading the solicitation, Appendix 1 may print on more than two pages, but will only count as one page. If Appendix 1 exceeds two pages, any additional pages will count toward the 25-page limitation. Offerors may reformat the forms to correct spacing and pagination errors; however, identical information shall be provided. The cover sheet shall contain the signatures of the principal investigator and the corporate/business official authorized to sign the proposal. Electronic signatures are acceptable. The total costs requested on Appendix 1 (Proposal Cover Sheet) must match the total costs proposed on Appendix 3 (SBIR Proposal Summary Budget). The amount must not exceed $100,000 on Appendix 1 and 3. If your firm intends to incur any additional costs beyond the budget limitation of $100,000, please provide a statement indicating that your firm will be responsible for any additional cost beyond the budget limits. Failure to sign the cover sheet, or provide matching costs in Appendix 1 and 3, or provide a statement of explanation in cost exceeding $100,000 will result in the proposal being found non-responsive. |
| Proposal Title | Enter the Title of your Proposed Project |  |  |   |   |  |   |
| Company Name | Enter the Name of your Company |  |  |   |   |  |   |
| Street Address | Physical location of the company including state, city, and zip +4 |  |  |   |   |  |   |
| Amount Requested | Not to exceed $100,000 |  |  |   |   |  |   |
| Website | If applicable, enter the address for your company’s website. |  |  |  |  |  |  |
| No. of Employees | Enter the number of employees your company has at the time of submission. |  |  |  |  |  |  |
| Research Topic Code and Topic Title (select only one) | Select one box from the list of research topics supplied. |  |  |  |  |  |  |
| Certification and Authorizations | Check Y (Yes) or N (No) |  |  |  |  |  |  |
| Organizational Information | Supply Organizational type, Tax Identification Number, UEI Number, and Small Business Concern (SBC) Control ID |  |  |  |  |  |  |
| Contact Information | Supply contact data for Principal Investigator and Business Representative (that person authorized to enter into contracts with other organizations) |  |  |  |  |  |  |
| Proprietary Notice | Indicate whether the proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed—in whole or in part—for any purpose other than to evaluate this proposal.If, however, a contract is awarded to this offeror as a result of—or in connection with—the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained on pages\_\_\_\_\_\_; of this proposal. |  |  |  |  |  |  |
| 1. Project Summary [One (1) page/400-word MAXIMUM]

Each proposal must include a Project Summary which will be an important document for all stages of the review process. The offeror shall complete the Project Summary form (Appendix 2) and use it as page 2 of their proposal. Offerors shall properly enter their Phase I Research Topic Code and Topic Title on both their Proposal Cover Sheet (Appendix 1) and Project Summary (Appendix 2). The Project Summary shall be limited to one page and shall not exceed 400 words. Any Project Summary over the 400-word limit will result in the proposal being found non-responsive. The Project Summary shall include the following information: Innovativeness of the proposed technology, technical feasibility, performance compared to current technologies, commercial potential (including applications and end users), and potential for environmental impact. The project summary is used extensively during the proposal evaluation process. The project summary and proposal title from Appendix 2 of the successful proposals will be published by EPA and, therefore, shall not contain proprietary information. When downloading the solicitation, Appendix 2 may print on more than two pages, but Appendix 2 will only count as one page. Offerors may reformat the forms; however, identical information shall be provided. If Appendix 2 exceeds two pages, any additional pages will count toward the 25-page limitation. |
| 1. Technical and Commercial Content: Phase I Proposal

The Phase I proposal requirements are described in this section. Begin the main body of the Phase I technical and commercial proposal on page 3, after the proposal cover sheet and project summary. Note that there are THREE attachments required as part of the complete Phase I proposal as follows: * Attachment 1: Phase I Quality Assurance Statement (See Section D)
* Attachment 2: Cost Breakdown/Proposed Budget (See Section E)
* Attachment 3: Representations and Certifications (See Section F)

The main body of the technical and commercial proposal shall contain sections that respond to each of the following requirements. These requirements also correspond to the evaluation criteria. The offeror shall have matching titles in their proposal as to those listed below in this section. Failure to address each section will result in a proposal being found non-responsive. |
| Technical Approach | Describe the approach and key objectives needed to prove technical feasibility of the proposed concept in Phase I. |  |  |  |  |  |  |
|  | Describe the key performance characteristics, including costs, necessary to meet customer needs. |  |  |  |  |  |  |
|  | Describe the technical milestones needed to achieve each objective and provide a visual timeline of these objectives and milestones for the project. Describe how success will be assessed. |  |  |  |  |  |  |
|  | Describe the potential technical challenges for bringing the technology to market and how they will be overcome. |  |  |  |  |  |  |
| Company/Team (technical) | Describe the expertise, experience, and collaborations of the company/team (including Principal Investigator (PI)) to carry out the proposed technical activities. |  |  |   |   |  |   |
| Impact/Relevance to Topic | Describe how the proposed technology address the solicitation topic and EPA priorities? |   |   |  |  |  |  |
|  | Describe the lifecycle (inputs, manufacture, use, and reuse/recycle/treatment/disposal, etc.) approach of the technology to solving the problem. |  |  |  |  |  |  |
| Innovation/IP | Describe how the proposed technology is innovative, potentially creating a new product or service. |   |   |   |  |  |  |
|  | Describe the technology’s competitive advantage, in terms of both cost and performance. |  |  |  |  |  |  |
|  | Provide evidence of interest or support from potential customers or partners. (e.g., letters of support). |  |  |  |  |  |  |
|  | Describe the likelihood the competitive advantage will be sustainable over several years. |  |  |  |  |  |  |
|  | Describe the current and planned IP associated with this technology and how it is protected. |  |  |  |  |  |  |
| Market Opportunity | Define and describe the target market for the technology— including basis of competition, size, market drivers, etc. |   |   |  |  |  |  |
|  | Describe how you validated the market opportunity by interviews with customers or end-users. |  |  |  |  |  |  |
|  | Describe and enumerate your potential end users/customers. |  |  |  |  |  |  |
|  | Describe the drivers and barriers in the target market, including regulatory. |  |  |  |  |  |  |
|  | Describe the value proposition. |  |  |  |  |  |  |
| Company/Team (Commercial) | Describe the Relevant experience of the key participants (including PI, consultants, advisors, etc.). |  |  |   |   |  |   |
|  | Describe the relevant experience of external advisors, collaborators, or board of directors. |  |  |  |  |  |  |
|  | Describe the relevant current or past experience commercializing any similar technology. |  |  |  |  |  |  |
|  | Describe the human resources available to the company and/or plan to hire as needed. |  |  |  |  |  |  |
|  | Describe the financial resources available and/or identified. |  |  |  |  |  |  |
| Commercialization Approach |  Describe the major commercialization objectives, milestones, and sources/uses of funds required to achieve first product launch. |   |   |  |  |  |  |
|  | Describe the commercialization plan for taking the technology from its current stage of development to market launch. |  |  |  |  |  |  |
|  | Provide revenue and profit estimates and supporting rationale. |  |  |  |  |  |  |
|  | Describe production and sales resources needed to implement the commercialization approach. |  |  |  |  |  |  |
|  | Describe any additional commercial prospects/applications for the technology. |  |  |  |  |  |  |
| Similar or Closely Related SBIR Awards | This required proposal information **shall** be counted toward the 25-page proposal limitation.If the small business concern has received ANY prior Phase I or Phase II award(s) from EPA or any Federal agency for similar or closely related research in the prior 5 fiscal years, submit the name of the awarding agency, date of award, funding agreement number, amount, topic or subtopic title, follow-on agreement amount, source and date of commitment and current commercialization status. Describe the technical differences and reasons why the proposed Phase I research is different from research conducted under prior SBIR awards. |  |  |   |   |  |   |
| Duplicate or Equivalent SBIR Proposals | This required proposal information **shall** be counted toward the 25-page proposal limitation.A firm may elect to submit essentially equivalent work under other federal program solicitations. In these cases, a statement shall be included in each such proposal indicating: the name and address of the agencies to which proposals were submitted or from which awards were received; date of proposal submission or date of award; title, number, and date of solicitations under which proposals were submitted or awards received; specific applicable research topics for each proposal submitted or award received; titles of research projects; name and title of project manager or principal investigator for each proposal submitted or award received. |  |  |  |  |  |  |

|  |
| --- |
| 1. Attachment 1 - Phase I Quality Assurance Statement (QAS)

In your proposal, provide a Phase I Quality Assurance Summary. The QAS does not have a page limit, however this section does count to your page limit total. The QAS is subject to EPA QA review and approval. In the event EPA QA provides comment to the proposed QAS, the offeror must address those comments and resubmit a revised QAS prior to an award being made. Offerors shall state how their proposal involves environmental data collection or processing, measurements, modeling, or the development of environmental technology (hardware-based (like a sensor or larger like an air scrubber) or software based (like an app) or via new techniques). The QAS describes the processes that will be used to assure that results of the research satisfy the intended project objectives. The EPA is particularly interested in the quality controls for data generation and acquisition, and how data validation and usability will be verified. The QAS shall briefly address each of the sections below. If a section does not apply, provide a brief justification of why.  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|   | Identify the individual who will be responsible for the quality assurance (QA) and quality control (QC) aspects of the research along with a brief description of this person’s functions, experience and authority within the organization. Describe the organization’s policy for conducting quality research. (QA is a system of management activities to ensure that a process or product is of the type and quality needed for the project. QC is a system of activities that measure the attributes and performance of a process or product against the standards defined in the project to verify that they will meet those stated requirements.) |  |  |   |   |  |   |
|  | Discuss project objectives, including quality objectives, any hypotheses to be tested, and the quantitative and/or qualitative procedures that will be used to evaluate the success of the project. Include any plans for peer or other reviews of the study design or analytical methods. |  |  |  |  |  |  |
|  | Discuss the collection of new primary data, if applicable: (Note: In this case the word “sample” is intended to mean any finite part of a statistical population whose properties are studied to gain information about the whole. If certain attributes listed below do not apply to the type of samples to be used in the research, simply explain why those attributes are not applicable.) 1. Discuss the plan for sample collection and analysis. As applicable, include sample type(s), frequency, locations, sample sizes, sampling procedures, and the criteria for determining acceptable data quality (e.g., precision, accuracy, representativeness, and completeness, comparability, or data quality objectives).
2. Describe the procedures for the handling and custody of samples including sample collection, identification, preservation, transportation, storage and how the accuracy of test measurements will be verified.
3. Describe or reference each analytical method to be used, any QA or QC checks or procedures with the associated acceptance criteria, and any procedure that will be used in the calibration and performance evaluation of the analytical instrumentation.
 |  |  |  |  |  |  |
|  | Discuss the procedures for overall data reduction, analysis, and reporting. Include a description of all statistical methods to make inferences and conclusions, acceptable error rates and any statistical software to be used. (Note: Data collected for use in method development or evaluation (Section 5), the development or refinement of models (Section 6), the development or evaluation of technology (Section 7) should be described as per the guidance in Sections 3 and/or 4.) |  |  |  |  |  |  |
|  | Discuss method development. 1. Describe the scope and application of the method, any tests (and measurements) to be conducted to support the method development, the type of instrumentation that will be used and any required instrument conditions (e.g., calibration frequency), planned QC checks and associated criteria (e.g., spikes, replicates, blanks)
2. Describe tests to verify the method’s performance.
 |  |  |  |  |  |  |
|  | Discuss development or refinement of models.1. Discuss the scope and purpose of the model, key assumptions to be made during development/refinement, requirements for code development and how the model will be documented.
2. Discuss verification techniques to ensure the source code implements the model correctly.
3. Discuss validation techniques to determine that the model (assumption and algorithms) captures the essential phenomena with adequate fidelity.
4. Discuss plans for long-term maintenance of the model and associated data.
 |  |  |  |  |  |  |
|  | Discuss development or operation of environmental technology (physical or electronic).1. Describe the overall purpose and anticipated impact of the technology.
2. Describe the technical and quality specifications of each technology component or process that is to be designed, fabricated, constructed and/or operated.
3. Discuss the procedure to be used for documenting and controlling design changes.
4. Discuss the procedure to be used for documenting the acceptability of processes and components.
5. Discuss how the technology will be benchmarked and its effectiveness determined.
6. Discuss the documentation requirements for operating instructions/guides for maintenance and use of the system(s) and/or process(s).
 |  |  |  |  |  |  |
|  | Discuss the use, source, and parameters of existing/secondary data (i.e., data previously collected for other purposes or from other sources). |  |  |  |  |  |  |
|  | Discuss the use of surveys including population parameters and question scripts. |  |  |  |  |  |  |
|  | Discuss data verification and validation processes to be used. |  |  |  |  |  |  |
|  | Discuss data management activities (e.g., record types, record-keeping procedures, data-handling procedures, and the approach used for data storage and retrieval on electronic media).Statement of laboratory competency (If applicable): More information on this policy can be found at: <https://www.epa.gov/measurements-modeling/ensuring-measurement-competency#acquisition>  |  |  |  |  |  |  |

|  |
| --- |
| 1. Attachment 2: Phase I Cost Breakdown/Proposed Budget

Complete the budget form in Appendix 3 and incorporate the budget form bearing the signature immediately after Attachment 1: Phase I Quality Assurance Statement. The completed budget form will count as one page in the 25-page limit. If budget explanation pages are included, they will count toward the 25-page limit. Technical and Business Assistance (TABA): In accordance with the 2020 SBIR/STTR Policy Directive, the EPA is able to provide discretionary commercialization assistance (also known as TABA) to SBIR Phase I awardees. The Agency may provide up to $6,500 of SBIR funds for technical assistance per Phase I award. The EPA intends to provide Phase I awardees with technical assistance through an EPA vendor. For Phase I, this assistance will be in addition to the award amount. If you wish to receive commercialization assistance from the EPA vendor, you do not need to include this in your budget. If you are awarded a Phase I contract, you will receive notification from EPA and follow-up contact from an EPA-funded vendor on what services are available to you and how to obtain these services at no cost to your small business. |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Line A - Direct Labor  | List individually all personnel included, the estimated hours to be expended and the rates of pay (salary, wages, and fringe benefits). |  |  |   |   |  |   |
| Line B - Overhead  | Specify current rate(s) and base(s). Use current rate(s) negotiated with the cognizant federal negotiating agency, if available. If no rate(s) has (have) been negotiated, a reasonable rate(s) may be requested for Phase I which will be subject to approval by EPA. Offerors may use whatever number and types of overhead rates that are in accordance with their accounting systems and approved by the cognizant federal negotiating agency, if available. |  |  |  |  |  |  |
| Line C - Other Direct Costs  | List all other direct costs which are not otherwise included in the categories described above, i.e., computer services, publication costs, subcontracts, etc. List each item of permanent equipment to be purchased, its price, and explain its relation to the project. List each item separately. |  |  |  |  |  |  |
| Line D - Travel | Address the type and extent of travel and its relation to the project. Include travel expenses for a one-day SBIR Phase I Kick-Off Meeting in Washington, DC. List purpose and individuals and or title. |  |  |  |  |  |  |
| Line E - Consultants | Indicate name, daily compensation, and estimated days of service.  |  |  |  |  |  |  |
| Line F - General and Administrative (G&A) | Same as B. Above. |  |  |  |  |  |  |
| Line G - Profit | Reasonable fee (estimated profit) will be considered under this solicitation. For guidance purposes, the amount of profit should **not exceed** 10% of total project costs. |  |  |  |  |  |  |
| Total Project Price (Total Costs + Profit) | The total costs proposed on Appendix 3 **must** match the total costs requested on Appendix 1.*If the proposed budget exceeds the maximum amount, or the amount requested in Appendix 3, a detailed explanation of funding source(s) for the additional proposed costs must be provided. Additionally, a proposal that submits a budget that exceeds the maximum amount, or the amount requested must affirmatively state they the offeror understands that no award will exceed the maximum amount or the amount requested. Offerors are further advised that if the proposed budget is less than the maximum award or the amount requested, an award would provide only the budgeted amount. The failure to explain additional cost proposed and/or acknowledgment that the offeror understands no award will exceed the maximum will result in the* ***REJECTION OF THE OFFER****.* |  |  |  |  |  |  |

|  |
| --- |
| 1. Attachment 3: Representations and Certifications

Attachment 3 (see Appendix 4) is a Representations and Certifications Package. Please fill out completely, sign, and return with the proposal. Failure to complete Appendix 4 will result in a proposal being found non-responsive.This required proposal information shall not be counted toward the 25-page proposal limitation. |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Appendix 4  | REPRESENTATIONS AND CERTIFICATIONSOfferor shall ensure that all applicable boxes are checked and filled out. |   |   |   |   |   |   |