SBIR

FY 2020 Small Business Innovation Research Phase II

Notice of Funding Opportunity (NOFO)

This NOFO is open only to those small business concerns that were awarded a SBIR Phase I grant in response to the FY2019 Phase I NOFO NOAA-OAR-OAR-TPO-2019-2005899

Funding Opportunity Number:	NOAA-OAR-OAR-TPO-2020-2006595
Assistance Listings or Catalog of Federal Domestic Assistance (CFDA) Number:	11.021 NOAA Small Business Innovation Research (SBIR) Program
Opening Date:	July 31, 2020
Closing Date:	October 14, 2020

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
http://www.techpartnerships.noaa.gov

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U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
FY 2020 SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROGRAM – Phase II
NOTICE OF FUNDING OPPORTUNITY (NOFO)

1.0 PROGRAM DESCRIPTION AND FEDERAL AWARD INFORMATION

1.1 Introduction

The U.S. Department of Commerce (DOC) National Oceanic and Atmospheric Administration (NOAA) invites small businesses to submit research proposals under this NOFO. The Small Business Innovation Research (SBIR) Program is not a substitute for existing unsolicited proposal mechanisms. Unsolicited proposals are not accepted under the SBIR program.

Only Fiscal Year (FY) 2020 Phase II applications may be submitted in response to this NOFO. **Phase I applications are not being accepted at this time**. Only FY 2019 NOAA SBIR Phase I awardees in response to NOFO number NOAA-OAR-OAR TPO-2019-2005899 with project start dates of January 1, 2020 and project end dates of no later than September 30, 2020 are eligible to submit a Phase II application in response to this NOFO.

The Small Business Innovation Research (SBIR) program was originally established in 1982 by the Small Business Innovation Development Act (P.L. 97-219), codified at 15 U.S.C. § 638. It was then expanded and extended by the Small Business Research and Development (R&D) Enhancement Act of 1992 (P.L. 102-564), and received subsequent reauthorization and extensions, the most recent of which extends the SBIR program through 2022. (P.L. 114-328).

Eleven federal agencies set aside a portion of their extramural R&D budget each year to fund research proposals from small science and technology-based firms. The goals of the SBIR program are to: stimulate technological innovation; strengthen the role of small business in meeting Federal R&D needs; foster and encourage participation by socially and economically disadvantaged Small Business Concerns and by women-owned SBCs, in technological innovation; and increase private sector commercialization of innovations derived from federal research and development funding. The NOAA SBIR Program identifies and solicits proposals in subtopics that fall within NOAA's mission.

NOAA is not obligated to make any awards under this NOFO, and all awards are subject to the availability of funds. NOAA is not responsible for any costs expended by the applicant in the development of the proposal and prior to award of any finance assistance award.

1.2 Three-Phase Program

The SBIR statute (15 U.S.C. § 638) requires the Department of Commerce to establish a three-phase SBIR program by reserving a percentage of its extramural R&D budget to be awarded to small business concerns for innovation research. SBIR policy is provided by the Small Business Administration (SBA) through the SBIR Policy Directive found on http://www.sbir.gov. The NOAA specific program authority will vary depending on the nature of the proposed project. A list of the most prevalent assistance authorities are 15 U.S.C. 1540; 16 U.S.C. 661 et seq.; 16 U.S.C. 1456c; 15 U.S.C. 2901 et. seq.; 33 U.S.C. 883a-d; 33 USC 893a; 33 U.S.C. 1442; 49 U.S.C. 44720(b).

The funding vehicle for this announcement is through a grant. This NOFO is for Phase II applications only. Unsolicited proposals will not be accepted through the SBIR Program. NOAA has the unilateral right to select SBIR research topics and awardees in both Phase I and Phase II and award several or no financial assistance awards under a given subtopic.

1.2.01 Phase I – Feasibility Research

This NOFO does not request proposals for Phase I; however, a description of Phase I is provided here. The purpose of Phase I is to determine the scientific, technical, and commercial merit and feasibility of the proposed research and the quality of performance of the small business concern receiving an award. Therefore, the Phase I proposal should concentrate on research that will significantly contribute to proving the feasibility of the proposed research, a prerequisite to further support in Phase II. Applicants are encouraged to consider, and discuss in their proposal, whether the research or research and development (R&D) being proposed to NOAA also has private sector potential, either for the proposed application or as a basis for other applications. Only DOC NOAA SBIR Phase I awardees from the previous year will be eligible to submit a Phase II application.

1.2.02 Phase II – Research and Development (R&D)

This NOFO requests proposals for Phase II from FY 2019 Phase I NOAA SBIR awardees only. Phase II is the R&D or prototype development phase. To apply for a Phase II award, each Phase I awardee will be required to submit a comprehensive application outlining the proposed research and a detailed plan to commercialize the final product.

Phase II awards shall be for no more than $400,000. The period of performance for the

Phase II award will depend upon the scope of the research but is typically no more than 24 months. For planning purposes, NOAA anticipates making Phase II awards with grant start dates of February 1, 2021. This date should be used by all applicants as a proposed start date.

1.2.03 Phase III – Commercialization

Under Phase III, the small business entity obtains funding from either, the private sector, a non-SBIR Government source, or both, to develop the prototype into a viable product or non- R&D service for sale in the domestic or international marketplace. SBIR Phase III refers to work that derives from, extends, or completes an effort made under prior SBIR funding agreements but is funded by sources other than the SBIR Program. Phase III work is typically oriented towards commercialization of SBIR research or technology and may be for products, production, services, Research / Research and Development (R/R&D) or a combination thereof.

1.3 Manufacturing-Related Priority

Executive Order (EO) 13329 "Encouraging Innovation in Manufacturing" requires SBIR agencies, to the extent permitted by law and in a manner consistent with the mission of that department or agency, to give high priority within the SBIR programs to manufacturing-related R&D. "Manufacturing-related" is defined as "relating to manufacturing processes, equipment and systems; or manufacturing workforce skills and protection."

The NOAA SBIR Program solicits manufacturing-related projects through many of the programs subtopics. Further, NOAA encourages innovation in manufacturing by giving high priority, where feasible, to projects that can help the manufacturing sector through technological innovation in a manner consistent with NOAA's mission

1.4 Energy Efficiency and Renewable Energy Priority

The Energy Independence and Security Act of 2007 (P.L. 110-140) directs SBIR Programs to give high priority to small business concerns that participate in or conduct energy efficiency or renewable energy system R&D projects.

The NOAA SBIR Program solicits energy efficiency or renewable energy system R&D projects through many of the program subtopics. Further, NOAA encourages innovation in energy efficiency or renewable energy system R&D by giving high priority, where feasible, to projects that conduct energy efficiency or renewable

energy system R&D through technological innovation in a manner consistent with NOAA's mission. This prioritization will not interfere with the core project selection criteria: scientific and technical merit and the potential for commercial success.

1.5 SBIR Applicant Eligibility and Limitation

1.5.01 Applicant Qualification

Each applicant must qualify as a small business concern for research or research and development (R/R&D) purposes, as defined in Section 1.7 of this NOFO, at the time of the award and at any other time set forth in the SBA's regulations at 13 CFR 121.701-121.705. Each awardee, at the time of the award (but not at the time of the application), must submit a certification (See Appendix A) stating that it meets the size, ownership, and other requirements of the SBIR Program and at any other time set forth in SBA's regulations at 13 CFR 121.701-705 in order to qualify for the award.

Eligible applicants include only those small business concerns as described above that were awarded a NOAA SBIR Phase I grant in response to NOFO number NOAA-OAR-OAR TPO-2019-2005899 that had a performance period start date of January 1, 2020 and an end date no later than September 30, 2020. No other small business concerns are eligible to submit an application in response to this NOFO.

For Phase II, a minimum of one-half of the research and/or analytical effort must be performed by the applicant. The total cost for all consultant fees, facility leases, usage fees, and other contract/subcontract/subaward or purchase agreements may not exceed one-half of the total award.

For Phase II, the primary employment of the principal investigator (PI) must be with the small business concern (SBC) at the time of the award and during the conduct of the proposed project. Primary employment means that more than one-half of the principal investigator's time is spent in the employ of the SBC (as an employee and not a contractor or consultant). Primary employment with an SBC precludes full-time employment with another organization.

For Phase II, all work must be performed by the SBC and its subcontractors in the United States. "United States" means the fifty states, the territories and possessions of the United States, the Commonwealth of Puerto Rico, the District of Columbia, The Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau. In rare and unique circumstances, a waiver to the requirement that all work be performed in the United States may be requested. For example, where a supply/material or other item or project requirement is not available in the United States, NOAA may allow that particular portion of the R&D work to be performed or obtained in a country outside of the United States.

If a waiver is requested, it must be submitted to the NOAA SBIR Program Manager. The waiver request must be submitted in writing and must include specific information about where work performed or supplies received from outside the United States are being considered and a detailed rationale explaining steps taken to locate potential United States sources; if any United States sources were located and any potential concerns for use of those sources; and any potential cost differences between United States sources and foreign sources, if applicable. This waiver request shall be submitted via email to the NOAA SBIR Program Manager (listed in section 1.6) at least fourteen calendar days prior to the NOFO closing date of October 14, 2020. It is in the firm's best interest to submit these waiver requests as soon as they are known. Waivers are only approved in rare and unique circumstances.

Venture Capital Participation: NOAA elects not to use the authority that would allow venture capital operating companies (VCOCs), hedge funds, or private equity firms to participate in the SBIR Program.

NOAA may not enter into, or continue, an existing CRADA with an awardee under this program.

Each applicant will be required to provide certain information via www.sbir.gov as well as other information required by the SBIR Policy Directive *(see* Appendices V-VI), found at https://www.sbir.gov/sites/default/files/SBIR-STTR_Policy_Directive_2019.pdf. Each SBC applying for an award is required to update the appropriate information in SBIR.gov for any of its existing and prior SBIR awards.

1.5.02 Company Registry Requirements

SBA maintains and manages a Company Registry at http://www.sbir.gov/registration to track ownership and affiliation requirements for all companies applying to the SBIR Program. **Each Phase II applicant must register in the Company Registry prior to submitting an application. The applicant must save its information from the registration in a .pdf document and append this document to the SF-424 form as described at the end of Section 8.1 of this NOFO.** All applicants are required to report and/or update their registration information in the SBA Company Registry prior to each SBIR application submission or if any information changes prior to an award.

1.5.03 Performance Benchmark Ratings Requirements

Performance benchmark rating requirements are only applicable to Phase I; however, information is provided here for future reference.

All Phase I applicants with a current Small Business Administration (SBA) assessment of

their *Phase I to Phase II Transition Rate* must, at the time of the application under a Phase I NOFO, have satisfied the requirements of that Performance Benchmark to be eligible for a new Phase I award. NOAA will not consider (and will automatically disqualify) proposals from firms that are currently ineligible for Phase I awards as a result of failing to meet the benchmark rate at the last assessment.

The *Phase I to Phase II* ***Transition Rate*** requirement applies only to SBIR Phase I applicants that have received more than 20 (21 or more) Phase I awards over the past five (5) fiscal years (excluding the most recent year). For these applicants, the ratio of the number of Phase II awards (awarded during the past five (5) fiscal years) to the number of Phase I awards (awarded during the past five (5) years excluding the most recent year) must be at least 0.25. On June 1st of each year, the SBA assesses the Performance Benchmark rates for all applicable SBIR and Small Business Technology Transfer (STTR) awardees in the Company Registry. STTR is another program that expands funding opportunities in the federal innovation research and development arena. *See* https://www.sbir.gov/about/about-sttr. Performance Benchmark rates are based on a company's total SBIR/STTR awards, across all the participating federal agencies. Companies that fail to meet the Performance Benchmark requirements are not eligible to submit a Phase I proposal for a period of one year from the assessment: from June 1st through May 31st. Note that this does not affect a company's eligibility for Phase II or Phase III awards.

All applicants should verify their *Transition Rate* eligibility for Phase I awards. When logged in to the Company Registry at https://www.sbir.gov/registration, awardees can view their last assessed *Transition Rate* by clicking on the "Performance Benchmark" side-bar. These company-specific rates appear under the heading "At Last Assessment." A thumbs-up/thumbs-down indicator shows whether or not the company passed the benchmark rates at the last assessment. If at any time, a company believes the award information on SBIR.gov is not correct, it should notify SBA using the *dispute* link provided. If a company's dispute of the data used for the rates is under review, it will see "TBD" under the "At Last Assessment" heading. Companies with less than the threshold number of awards (21 Phase I awards for the Transition Rate) will see "N/A" displayed because the requirement did not apply to them.

Under the heading "Current (On-Going)", the page displays a running calculation of the benchmark rates using the next years' time periods (each period moved up by one year) and current data in the system. Companies should monitor these rates to anticipate their standing for each upcoming June 1 Assessment

General information on the Performance Benchmark requirements is available at

https://www.sbir.gov/performance-benchmarks

1.6 Contact with NOAA

For general programmatic, electronic submission, or grants questions, please contact the appropriate individual listed below:

Subject Area	Point of Contact
Programmatic Questions	Richard Fulton NOAA SBIR Program Manager Phone: (301) 628-1067 Richard.Fulton@noaa.gov Janet Johnson Russell NOAA SBIR Program Officer Phone: 301-628-1062 Janet.J.Russell@noaa.gov
Electronic Application Submission through https://www.grants.gov/	Grants.gov Phone: 1-800-518-4726 Email: support@grants.gov
Grant Administrative Rules and Regulations	Lamar Revis Phone: (301) 628-1308 Email: Lamar.Revis@noaa.gov

1.7 Definitions

Except as specifically noted by citation or reference, all definitions below are excerpted from the SBA SBIR Policy Directive, available at

Applicant – The organizational entity that qualifies as a Small Business Concern (SBC) at all pertinent times and that submits a grant application for financial assistance under the SBIR Program.

Application – Also referred to as a "proposal"

Authorized Organizational Representative - The individual(s), named by the applicant/recipient organization, who is legally authorized to act for the applicant/recipient and to assume the obligations imposed by the federal laws, regulations, requirements, and conditions that apply to grant applications or awards.

Awardee - The organizational entity that receives an SBIR Phase I, Phase II or Phase III award.

Commercialization - The process of developing products, processes, technologies, or services and the production and delivery (whether by the originating party or others) of the products, processes, technologies, or services for sale to or use by the Federal government or commercial markets. *As used here, commercialization includes both Government and private sector markets.*

Essentially Equivalent Work - Work that is substantially the same research, which is proposed for funding in more than one contract proposal or grant application submitted to the same Federal agency or submitted to two or more different Federal agencies for review and funding consideration; or work where a specific research objective and the research design for accomplishing the objective are the same or closely related to another proposal or award, regardless of the funding source.

Feasibility - The practical extent to which a project can be performed successfully.

Funding Agreement - Any contract, grant, or cooperative agreement entered into between any Federal agency and any SBC for the performance of experimental, developmental, or research work, including products or services, funded in whole or in part by the Federal Government.

Funding Agreement Officer. Per the SBIR Policy Directive, a funding agreement officer is defined as a federal contracting officer, a grants officer, or a cooperative agreement officer.

Grant. A financial assistance mechanism providing money, property, or both to an eligible entity to carry out an approved project or activity authorized by law of the United States (31 U.S.C. 6101(3)). A grant is used whenever the Federal agency anticipates no substantial programmatic involvement with the awardee during performance.

Innovation. Something new or improved, having marketable potential, including: (1)

development of new technologies: (2) refinement of existing technologies: or (3) development of new applications for existing technologies

Joint Venture – See 13 C.F.R. § 121.103(h).

National Environmental Policy Act (NEPA) The National Environmental Policy Act, or NEPA, is a United States environmental law that promotes the enhancement of the environment and was enacted as law on January 1, 1970 (P.L. 91-190). All NOAA SBIR Phase I and Phase II awards must go through an agency internal NEPA assessment before a full award is made. The purpose is to capture any details of the project that may potentially or inadvertently pollute/affect the environment.

Principal Investigator (PI)/Project Manager (PM) The one individual designated by the applicant to provide the scientific and technical direction to a project supported by a funding agreement

Project Narrative – This is the main document outlining the detailed innovative solution by the applicant. Under this NOFO, it is interchangeable with the "Technical Proposal"

Proposal – Also referred to as an "application."

Research or Research and Development (R/R&D) - Any activity that is:
(1) a systematic, intensive study directed toward greater knowledge or understanding of the subject studied;
(2) a systematic study directed specifically toward applying new knowledge to meet a recognized need; or
(3) a systematic application of knowledge toward the production of useful materials, devices, services, or methods, and includes design, development, and improvement of prototypes and new processes to meet specific requirements.

SBIR Policy Directive – As mandated by the SBIR legislation, the Small Business Administration (SBA) authors this policy that outlines how the SBIR program is run in each participating agency. The link to this policy can be found at www.sbir.gov.

SBIR Technical Data - All data generated during the performance of an SBIR award.

SBIR Technical Data Rights - The rights an SBIR awardee obtains in data generated during the performance of any SBIR Phase I, Phase II, or Phase III award that an awardee delivers to the Government during or upon completion of a Federally-funded project,

and to which the Government receives a license.

Small Business Concern (SBC) – A concern that meets the requirements set forth in 13 C.F.R. § 121.702 (available at http://www.gpo.gov/fdsys/granule/CFR-2011-title13-vol1.CFR-2011-title13-vol1-sec121-702).

Socially and Economically Disadvantaged SBC (SDB) - See 13 C.F.R. Part 124, Subpart B.

Socially and Economically Disadvantaged Individual - See 13 C.F.R. §§ 124.103 and 124.104.

Subaward – See 2 C.F.R. § 200.92.

Technical Proposal – See "Project Narrative" above

Women-Owned Small Business (WOSB) - An SBC that is at least 51% owned by one or more women, or in the case of any publicly owned business, at least 51% of the stock is owned by women, and women control the management and daily business operations.

1.8 Fraud, Waste, and Abuse

All applicants must complete the DOC Office of Inspector General (OIG) mandatory training and sign and submit the certification of completion form along with their application. The link to the Fraud, Waste, and Abuse training slides is located here: http://www.techpartnerships.noaa.gov/SBIR.aspx. Certification can be found at the end of the training module. All applicants must print, sign, and submit certification of completion as an attachment (as per end of Section 8.1).

As defined in the SBIR Policy Directive section 9(f), fraud includes any false representation about a material fact or any intentional deception designed to deprive the United States unlawfully of something of value or to secure from the United States a benefit, privilege, allowance, or consideration to which an individual or business is not entitled. Waste includes extravagant, careless, or needless expenditure of Government funds, or the consumption of Government property, that results from deficient practices, systems, controls, or decisions. Abuse includes any intentional or improper use of Government resources, such as misuse of rank, position, or authority or resources. Examples of fraud, waste, and abuse relating to the SBIR Program include, but are not limited to:

(i) misrepresentations or material, factual omissions to obtain, or otherwise receive funding under, an SBIR award;

(ii) misrepresentations of the use of funds expended, work done, results

achieved, or compliance with program requirements under an SBIR award;

(iii) misuse or conversion of SBIR award funds, including any use of award funds while not in full compliance with SBIR Program requirements, or failure to pay taxes due on misused or converted SBIR award funds;

(iv) fabrication, falsification, or plagiarism in applying for, carrying out, or reporting results from an SBIR award;

(v) failure to comply with applicable federal costs principles governing an award;

(vi) extravagant, careless, or needless spending;

(vii) self-dealing, such as making a sub-award to an entity in which the PI has a financial interest;

(viii) acceptance by agency personnel of bribes or gifts in exchange for grant or contract awards or other conflicts of interest that prevents the Government from getting the best value; and

(ix) the lack of monitoring, or follow-up if questions arise, by agency personnel to ensure that awardee meets all required eligibility requirements, provides all required certifications, performs in accordance with the terms and conditions of the award, and performs all work proposed in the application.

Report any allegations of fraud, waste and abuse using the online Department of Commerce Office of Inspector General Complaint Form, available at https://www.oig.doc.gov/Pages/Hotline.aspx or send an e-mail to: Hotline@oig.doc.gov.

Note: Because the Internet is not secure, it is possible, though unlikely, that e-mail complaints may be read by persons other than your intended source. If you are concerned about this, you may choose to call or mail. Contact information for the Office of Inspector General is available at: https://www.oig.doc.gov/pages/Contact-Us.aspx. Please do not include Personally Identifiable Information (PII) through the website or via e-mail. PII is considered to be items containing Social Security numbers, dates of birth, credit card and passport numbers, or other personally identifying information that could adversely affect an individual. Web submissions and e-mails containing such information will be blocked by our system administrator and will not be processed by our Complaint Department. Should you desire to provide this information, please contact the Hotline by telephone at the numbers listed below.

Phone:
Toll Free 800-424-5197

In the DC metro area 202-482-2495
TTD Toll Free 855-860-6950
TTD in the DC metro area 202-482-5923

Mail:
Office of Inspector General
Complaint Intake Unit, Mail Stop 7886
1401 Constitution Avenue, N.W.
Washington, DC 20230

Fax:
855-569-9235

1.9 Other Information

1.9.01 Personal and Business Information

The applicant acknowledges and understands that information and data contained in applications for financial assistance, as well as information and data contained in financial, performance and other reports submitted by applicants, may be used by the Department of Commerce in conducting reviews and evaluations of its financial assistance programs. For this purpose, applicant information and data may be accessed, reviewed and evaluated by Department of Commerce employees, other Federal employees, and also by Federal agents and contractors, and/or by non-Federal personnel, all of whom enter into appropriate conflict of interest and confidentiality agreements covering the use of such information. As may be provided in the terms and conditions of a specific financial assistance award, applicants are expected to support program reviews and evaluations by submitting required financial and performance information and data in an accurate and timely manner, and by cooperating with Department of Commerce and external program evaluators. In accordance with 2 C.F.R. § 200.303(e), applicants are reminded that they must take reasonable measures to safeguard protected personally identifiable information and other confidential or sensitive personal or business information created or obtained in connection with a Department of Commerce financial assistance award.

In addition, Department of Commerce regulations implementing the Freedom of Information Act (FOIA), 5 U.S.C. Sec. 552, are found at 15 C.F.R. Part 4, Public Information. These regulations set forth rules for the Department regarding making requested materials, information, and records publicly available under the FOIA. Applications submitted in response to this Notice of Funding Opportunity may be subject to requests for release under the Act. In the event that an application contains information or data that the applicant deems to be confidential commercial information

that should be exempt from disclosure under FOIA, that information should be identified, bracketed, and marked as Privileged, Confidential, Commercial or Financial Information. In accordance with 15 CFR § 4.9, the Department of Commerce will protect from disclosure confidential business information contained in financial assistance applications and other documentation provided by applicants to the extent permitted by law.

2.0 CERTIFICATIONS

2.1 Funding Agreement Certifications

Awardees will be required to certify size, ownership, and other SBIR Program requirements at the time of award and during the funding agreement life cycle using the "SBIR Funding Agreement Certification (At Time of Award)" and the "SBIR Funding Agreement Certification (Life-Cycle Certification)", which are provided in Appendix A and Appendix B of this NOFO, respectively. Awardees must submit Life-Cycle Certification both prior to receiving more than 50% of the total award amount and prior to final payment or disbursement to verify compliance with specific SBIR/STTR program requirements.

2.2 Research Activities Involving Human Subjects, Human Tissue, Data or Recordings Involving Human Subjects

2.2.01 Protection of Human Subjects

Any application that includes participation in research involving human subjects, human tissue/cells, data or recordings involving human subjects must meet the requirements of the Common Rule for the Protection of Human Subjects ("Common Rule"), codified for the Department of Commerce (DOC) at 15 C.F.R. Part 27. Inaddition, any such proposal that includes research on these topics must be in compliance with any statutory requirements imposed upon the Department of Health and Human Services (DHHS) and other Federal agencies regarding these topics, all regulatory policies and guidance adopted by DHHS, the Food and Drug Administration, and other Federal agencies on these topics, and all Executive Orders and Presidential statements of policy on these topics.

NOAA reserves the right to make an independent determination of whether an applicant's research involves human subjects. If NOAA determines that your research project involves human subjects, you will be required to provide additional information for review and approval. If an award is issued, no research activities involving human subjects shall be initiated or costs incurred under the award until the NOAA Grants Officer issues written approval. Retroactive approvals are not permitted.

NOAA will accept applications that include research activities involving human subjects that have been or will be approved by an Institutional Review Board (IRB) currently registered with the Office for Human Research Protections (OHRP) within the DHHS and that will be performed by entities possessing a currently valid Federal wide Assurance (FWA) on file from OHRP that is appropriately linked to the cognizant IRB for the protocol. Information regarding how to apply for an FWA and register an IRB with OHRP can be found at http://www.hhs.gov/ohrp/assurances/index.html.

Generally, NOAA does not fund research involving human subjects in foreign countries. NOAA will consider, however, the use of preexisting tissue, cells, or data from a foreign source on a limited basis if all of the following criteria are satisfied:

1. the scientific source is considered unique,
2. an equivalent source is unavailable within the United States,
3. an alternative approach is not scientifically of equivalent merit, and
4. the specific use qualifies for an exemption under the Common Rule.

Any award issued by NOAA is required to adhere to all Presidential policies, statutes, guidelines, and regulations regarding the use of human embryonic stem cells. The DOC follows the NIH Guidelines by supporting and conducting research using only human embryonic stem cell lines that have been approved by NIH in accordance with the NIH Guidelines. Detailed information regarding NIH Guidelines for stem cells is located on the NIH Stem Cell Information website: http://stemcells.nih.gov. The DOC will not support or conduct any type of research that the NIH Guidelines prohibit NIH from funding. The DOC will review research using human embryonic stem cell lines that it supports and conducts in accordance with the Common Rule and NOAA implementing procedures, as appropriate.

Any request to support or conduct research using human embryonic stem cell lines not currently approved by the NIH, will require that the owner, deriver, or licensee of the human embryonic stem cell line apply for and receive approval of the registration of the cell line through the established NIH application procedures: http://hescregapp.od.nih.gov/NIH_Form_2890_Login.htm. Due to the timing uncertainty associated with establishing an embryonic stem cell line in the NIH registry, the use of existing human embryonic stem cell lines in the NIH Embryonic Stem Cell Registry may be preferred by applicants or current award recipients. The NIH Embryonic Stem Cell Registry is located at: http://grants.nih.gov/stem_cells/registry/current.htm.

An applicant or current award recipient proposing to use a registered embryonic stem cell line will be required to document an executed agreement for access to the cell line

with the provider of the cell line and acceptance of any established restrictions for use of the cell line, as may be noted in the NIH Embryonic Stem Cell Registry.

If the proposal includes exempt and/or non-exempt research activities involving human subjects the following information is required in the application:

(1) The name(s) of the institution(s) where the research will be conducted;
(2) The name(s) and institution(s) of the cognizant IRB(s), and the IRB registration number(s);
(3) The FWA number of the applicant linked to the cognizant IRB(s);
(4) The FWAs associated with all organizations engaged in the planned research activity linked to the cognizant IRB;
(5) If the IRB review(s) is pending, the estimated start date for research involving human subjects;
(6) The IRB approval date (if currently approved for exempt or non-exempt research);
(7) If any FWAs or IRB registrations are being applied for, that should be clearly stated.

Additional documentation may be requested, as warranted, during review of the proposal, but may include the following for research activities involving human subjects that are planned in the first year of the award:

(1) A signed (by the study principal investigator) copy of each applicable final IRB-approved protocol;
(2) A signed and dated approval letter from the cognizant IRB(s) that includes the name of the institution housing each applicable IRB, provides the start and end dates for the approval of the research activities, and any IRB-required interim reporting or continuing review requirements;
(3) A copy of any IRB-required application information, such as documentation of approval of special clearances (i.e. biohazard, HIPAA, etc.) conflict-of-interest letters, or special training requirements;
(4) A brief description of what portions of the IRB submitted protocol are specifically included in the proposal submitted to NOAA, if the protocol includes tasks not applicable to the proposal, or if the protocol is supported by multiple funding sources. For protocols with multiple funding sources, NOAA will not approve the study without a non-duplication-of-funding letter indicating that no other federal funds will be used to support the tasks proposed under the proposed research or ongoing project;
(5) If a new protocol will only be submitted to an IRB if an award from NOAA is issued, a draft of the proposed protocol may be requested;
(6) Any additional clarifying documentation that NOAA may request during review

of proposals to perform the NOAA administrative review of research involving human subjects. (*See* 15 C.F.C. § 27.112 (Review by Institution))

2.2.02 IRB Education Documentation

A signed and dated letter is required from the Organizational Official who is authorized to enter into commitments on behalf of the organization documenting that appropriate IRB education has been received by the Organizational Official, the IRB Coordinator or such person that coordinates the IRB documents and materials if such a person exists, the IRB Chairperson, all IRB members, and all key personnel associated with the application. The NOAA requirement of documentation of education is consistent with NIH notice OD-00-039 (June 5, 2000). Although NOAA will not endorse an educational curriculum, there are several curricula that are available to organizations and investigators that may be found at: http://grants.nih.gov/grants/guide/notice-files/NOT-OD-00-039.html

2.3 Research Project Involving Live Vertebrate Animals

Any proposal that includes research involving live vertebrate animals must be in compliance with the "U.S. Government Principles for Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training" (Principles). The Principles and guidance on these Principles are available in the National Research Council's "Guide for the Care and Use of Laboratory Animals,'' which can be obtained from National Academy Press, 500 5th Street, N.W., Department 285, Washington, DC 20055, or as a free PDF online at http://www.nap.edu/catalog/12910/guide-for-thecare-and-use-of-laboratory-animals-eighth. In addition, such proposals must meet the requirements of the Animal Welfare Act (AWA) (7 U.S.C. § 2131 et seq.), the AWA rules (9 C.F.R. Parts 1, 2, and 3), and if appropriate, the Good Laboratory Practice for Nonclinical Laboratory Studies (21 C.F.R Part 58). These regulations do not apply to proposed research using preexisting images of animals or to research plans that do not include live animals that are being cared for, euthanized, or used by the project participants to accomplish research goals, teaching, or testing. These regulations also do not apply to obtaining animal materials from commercial processors of animal products or to animal cell lines or tissues from tissue banks.

NOAA reserves the right to make an independent determination of whether your

research involves live vertebrate animals. If NOAA determines that your research project involves live vertebrate animals, you will be required to provide additional information for review and approval. If an award is issued, no research activities involving live vertebrate animals subjects shall be initiated or costs incurred under the award until the NOAA Grants Officer issues written approval.

If the proposal includes research activities involving live vertebrate animals, the following information is required in the proposal:

(1) The name(s) of the institution(s) where the animal research will be conducted;
(2) The assurance type and number, as applicable, for the cognizant Institutional Animal Care and Use Committee (IACUC) where the research activity is located. [For example: Animal Welfare Assurance from the Office of Laboratory Animal Welfare (OLAW) should be indicated by the OLAW assurance number, i.e. A-1234; a USDA Animal Welfare Act certification should be indicated by the certification number i.e. 12-R-3456; and an Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC) should be indicated by AAALAC.]
(3) The IACUC approval date (if currently approved);
(4) If the review by the cognizant IACUC is pending, the estimated start date for research involving vertebrate animals;
(5) If any assurances or IACUCs need to be obtained or established, that should be clearly stated.

Additional documentation will be requested, as warranted, during review of the proposal, but may include the following for research activities involving live vertebrate animals that are planned in the first year of the award:

(1) A signed (by the Principal Investigator) copy of the IACUC approved Animal Study Proposal (ASP);
(2) Documentation of the IACUC approval indicating the approval and expiration dates of the ASP; and
(3) If applicable, a non-duplication-of-funding letter if the ASP is funded from several sources.
(4) If a new ASP will only be submitted to an IACUC if an award from NOAA issued, a draft of the proposed ASP may be requested.
(5) Any additional clarifying documentation that NOAA may request during review of proposals to perform the NOAA administrative review of research involving live vertebrate animals.

2.4 Certifications Regarding Federal Felony and Federal Criminal Tax Convictions, Unpaid Federal Tax Assessments and Delinquent Federal Tax Returns

In accordance with Federal appropriations law, an authorized representative of the selected applicant(s) may be required to provide certain pre-award certifications regarding federal felony and federal criminal tax convictions, unpaid federal tax assessments, and delinquent federal tax returns. As with NOAA's typical grants process, forms will be sent out to "selected for award" applicants during negotiation with the Grants Officer.

3.0 APPLICATION PREPARATION INSTRUCTIONS AND REQUIREMENTS

3.1 Phase II Application Requirements

NOAA reserves the right not to forward an application for technical review if NOAA determines the application has insufficient scientific and technical information or is missing any of the required forms and documents listed in Section 8.1. Applications that do not pass the screening criteria (outlined in Section 4.2) will be rejected without further consideration.

Applicants should utilize the SBIR forms in Appendix C and D to ensure that eligibility requirements are met and that all required information is submitted, respectively.

A proposal must be self-contained and written with all the care and thoroughness of a scientific paper submitted for publication. It should indicate a thorough knowledge of the current status of research in the subtopic area addressed by the proposal. Each proposal should be checked carefully by the applicant to ensure inclusion of all essential material needed for a complete evaluation. The proposal will be peer reviewed as a scientific paper. All units of measurement should be in the metric system.

The applicant must provide sufficient information to demonstrate that the proposed work represents a sound approach to the investigation of an important scientific or engineering innovation worthy of support. The proposal must not only be responsive to the specific NOAA program interests described in the original Phase I subtopic, but also serve as the basis for technological innovation leading to new commercial products, processes, or services that benefit the public.

The proposal should be direct, concise, and informative. Promotional and other material not related to the project should be omitted.

As required by the SBIR Policy Directive, NOAA will notify the various applicants whether they have been recommended for a potential award within 90 calendar days of

the closing date of this NOFO. If selected for potential award and approved by the Grants Officer, the applicant can anticipate receiving an actual award within 180 calendar days of the closing date of the NOFO. The SBC applicant shall not proceed with work until an official award is received and accepted.

All applicants are required to provide information for SBA's database (www.sbir.gov). The following are examples of the data to be entered by applicants into the SBA database:

- Any business concern or subsidiary established for the commercial application of a product or service for which an SBIR award is made.
- Revenue from the sale of new products or services resulting from the research conducted under each Phase II award.
- Additional investment from any source, other than Phase I or Phase II awards, to further the research and development conducted under each Phase II award.
- Updated information in the SBA database on sbir.gov for any prior award received by the SBC. The SBC may apportion sales or additional investment information relating to more than one Phase II award among those awards, if it notes the apportionment for each award.

All awardees are required to update appropriate information on the award in the database upon completion of the last program objective under the funding agreement and is requested to voluntarily update the information in the database annually thereafter for a minimum period of five (5) years.

3.2 Phase II Project Narrative (Technical Content)

A complete application must include a Project Narrative (also called the Technical Proposal) as described below and all other forms and documents listed in Section 8.1 "Required Application Forms and Documents" of this NOFO. Pages should be of standard size (8 1/2" x 11"; 21.6 cm x 27.9 cm) with margins of 2.5 cm and type at least 10-point font. All units of measurement should be presented in metric units. The document should be converted into the Adobe Portable Document Format (PDF) prior to submission to NOAA.

Please review Section 8.1 for the entire list of required application forms and documents to submit as part of a complete application package.

The following sections are required in the Project Narrative. All headings and sections must be included. There is no total page limit. If a particular section does not apply, please include in the heading, followed by N/A.

1. **Title page.** This is one full page long and must identify all of the following information: Project title, company name, company representative, and principal investigator by full name, title, organization, telephone number, mailing address, e-mail address, the NOAA SBIR Phase II NOFO identification number, the total requested funds, the proposed project period of performance, and the application submission date.

2. **Project abstract and summary of potential commercial application of the research results**. The applicant must submit a one page project abstract (limited to 200 words) and summary of potential commercial application of the research results (limited to 100 words). Please include key project identifying information (e.g., the project title, company name, principal investigator's name) at the top of this page. In the event that the application is funded, this abstract and summary of potential commercial applications will be published on the NOAA SBIR and SBIR.gov websites and provided to the SBA and therefore should not contain proprietary information.

3. **Identification and Significance of the Problem or Opportunity.** Make a clear statement of the specific research problem or opportunity addressed, its innovativeness, commercial potential, and explanation of importance.

4. **Phase I Summary.** This summarizes Phase I activities and key results and findings related to this specific application. The summary should demonstrate that the Phase I project was successful in achieving the objectives identified in the funded Phase I application. If any objectives were not achieved, please explain why. No specific format requirements except that it must only be two pages maximum.

5. **Phase II Technical Objectives.** State the specific objectives of the Phase II research or research and development efforts.

6. **Phase II Work Plan**. Include a detailed description of the Phase II research and development plan. The plan should indicate what will be done, where it will be done, and how the research will be carried out. The method(s) planned to achieve each objective or task should be discussed in sufficient detail.

7. **Related Research or Research and Development (R/R&D).** Describe significant R/R&D that is directly related to the application, including any conducted by the principal investigator or by the proposing SBC. Describe how it relates to the proposed effort, and describe any planned coordination with outside sources. The applicant must persuade evaluators of his or her awareness of

key, recent R/R&D conducted by others in the specific topic area.

8. **Key Individuals and Bibliography of Related Work.** Identify key individuals involved in Phase II, including their related education, experience, current and previous position titles and employers, and publications.

9. **Relationship with Future R/R&D.** Discuss the significance of the Phase I effort in providing a foundation for the Phase II R/R&D effort. Also state the anticipated results and products of the proposed approach if Phase II of the project is successful.

10. **Facilities and Equipment.** A detailed description, availability, and location of instrumentation and physical facilities proposed for Phase II should be provided.

11. **Consultants, Contracts, and Subawards.** The purpose of this section is to show, if applicable, that any third-party research assistance would materially benefit the proposed effort and that arrangements for such assistance are in place at time of application submission. It is important that these individuals be clearly identified as consultants or subcontractors. This should match and be reflected in the budget tables and budget narrative sections.

Outside involvement in the project is encouraged where it strengthens the conduct of the research. Outside involvement is not a requirement of this NOFO and is limited to no more than half of the research and/or analytical effort in Phase II (also see Section 1.5.01).

No individual or entity may serve as consultant, contractor, or subrecipient if they (a) had any role in suggesting, developing, or reviewing the NOAA subtopic; or (b) have been the recipient of any NOAA information on the subtopic not available to the public.

The following definitions apply to this NOFO:

- Consultant - A person outside the firm, named in the application as contributing to the research, must provide a signed statement confirming his/her availability, role in the project, and agreed consulting rate for participation in the project.
- Contract - Similarly, where a contract is involved in the research, the contractor institution must furnish a signed statement by an appropriate official describing the programmatic arrangements and

confirming its agreed participation in the research, with its proposed budget for this participation.

- Subawards - As the funding instrument used in this program is financial assistance, an awardee might pass through funds to another organization to carry out part of the Federally-supported project. A "subaward" relationship fits the circumstances more appropriately than a contract to carry out part of the Federally-supported project. *See* 2 CFR §§ 200.92 (subaward), 200.93 (subrecipient), and 200.330 (Subrecipient and contractor determinations), respectively.

The applicant must also include Letters of Commitment in the application package from any participating consultants, subawards, or subcontractors signed by an appropriate official of that institution describing the programmatic arrangements and confirming its agreed participation in the research, with its proposed budget and budget justification for this participation.

12. **Potential Commercial Applications.** A major program goal is to provide opportunities for small businesses to convert research into technological innovation in the private sector. All proposed research should have some potential commercial outcome. Describe in detail the commercial potential of the proposed research, and how commercialization would be pursued and potentially used by the private sector and/or state or Federal Governments. Include any optional letters of support and relevant supporting material such as references to journal articles, literature, or government publications. Provide any indicators of commercial potential, and address the following:
    - Market opportunity – Describe the current and anticipated target market and the size of the market and include a brief profile of the potential customer(s).
    - Technology and competition – Describe the competitive landscape and the value proposition and competitive advantage of the product or service enabled by the proposed innovation. Also include what critical milestones must be met to get the product or process to market and the resources required to address the business opportunity.
    - Finances – Describe your strategy for financing the innovation beyond the SBIR award. Describe the existence of any outside, non-SBIR funding or partnering commitments including any Phase II funding commitments from private sector or non-SBIR funding sources and/or the existence of Phase III follow-on commitments for the subject research.

13. **Cooperative Research and Development Agreements (CRADA).** State if the applicant is a current CRADA partner with NOAA, or with any other Federal agency, naming the agency, title of the CRADA, and any relationship with the proposed work. An Agency may NOT enter into, or continue, a CRADA with an awardee under this NOFO on the subtopic of the award.

14. **Guest Researcher.** State if the applicant or any of its consultants or subcontractors is a guest researcher at NOAA, naming the sponsoring laboratory.

15. **Cost Sharing.** Cost sharing is not required and is not considered during the evaluation process for Phase II applications. If cost sharing is a proposed part of this application, please describe.

16. **Commercialization Assistance Program (NOAA-CAP).** NOAA provides a program for commercialization assistance for all Phase II awardees. State in this section of your application if you as the applicant are opting in or out of this program. If the applicant chooses to opt-out, the applicant will need to provide, in this section, a request for authority to procure those services separately from the NOAA SBIR Program Office. The applicant must demonstrate how the individual or entity that they selected for this type of work can provide adequate commercialization assistance services. If approved to not use NOAA's program, additional negotiations and decisions may be required prior to award.

17. **Similar Applications or Awards.**

    If an application submitted in response to this NOFO is substantially the same as another application that has been funded, is now being funded, or is pending with another Federal Agency, the applicant must provide the following information:

    a) Names and addresses of agencies to which an application was submitted or from which an award was received.
    b) Date of application submission or date of award.
    c) Title, number, and date of NOFO(s) or solicitation(s) under which an application was submitted or award received.
    d) Specific applicable research topic(s) for each application submitted or award received.
    e) Title of research projects for each application submitted or award received.
    f) Name and title of principal investigator or project manager for each

application submitted or award received.

If no equivalent application is under consideration or award for equivalent work received, a statement affirming that fact **must** be included in this section of the technical content area of the application.

WARNING -- While it is permissible to submit identical or near-identical applications containing a significant amount of essentially equivalent work for consideration under multiple Federal program funding announcements, it is unlawful to enter into a new funding agreement for essentially equivalent work to another SBIR award, current or expired (see 15 U.S.C. § 638(bb)(3)). If there is any question concerning this, it must be disclosed to NOAA before award.

4.0 METHOD OF SELECTION AND EVALUATION CRITERIA

4.1 Evaluation and Selection Process

All applications will be independently evaluated and ranked on a competitive basis. A proposal will not be deemed acceptable if it represents presently available technology. Applications will be evaluated based only on information provided in the application. Applications will be initially screened to determine responsiveness, eligibility, and completeness (see Sections 4.2 and 8.1). Applications passing these initial screenings will be technically evaluated in accordance with the evaluation criteria (see Section 4.3). Each application will be judged on its own merit. NOAA is under no obligation to fund any application or any specific number of applications in a given topic. NOAA may elect to fund several or none of the applications for the same topic or subtopic. If an application is submitted for a subtopic that requires a license to use a NOAA-owned invention covered by a patent or patent application and such NOAA-owned invention has become unavailable for licensing prior to the close of this NOFO in the field of use relevant to the subtopic, NOAA has the sole discretion to deem such application ineligible under the subtopic.

4.2 Phase II Screening Criteria

Please carefully read the entire NOFO and review the following Phase II Screening Criteria to ensure that your application meets NOAA requirements. Phase II applications that do not satisfy all the screening criteria will not be reviewed and will be eliminated from consideration for award. The applicant will be notified in this case. However, NOAA, in its sole discretion, may continue the review process for an application that is missing minor non-substantive information, the absence of which may easily be

rectified. The screening criteria are:

(a) The proposing firm must qualify as a small business, in accordance with the definition of a Small Business Concern in Section 1.7.
(b) The Phase II proposal must meet all of the requirements stated in Section 3 "APPLICATION PREPARATION INSTRUCTIONS AND REQUIREMENTS"
(c) The Phase II proposal must be limited to one subtopic, clearly address research for that subtopic, and directly relate to the applicant's Phase I SBIR project in response to NOFO number NOAA-OAR-OAR TPO-2019-2005899.
(d) Phase II proposal budgets must not exceed $400,000.
(e) The project duration for the Phase II research and development must not exceed twenty-four months.
(f) The proposing firm must carry out a minimum of half of expenditures under each Phase II project.
(g) All work must be performed by the small business concern and its subawardees/subcontractors in the United States, unless a waiver has been granted in advance by the SBIR Program Manager and Grants Officer (see Section 1.5).
(h) The proposal must contain information sufficient to be peer reviewed as research.
(i) the primary employment of the principal investigator (PI) must be with the SBC at the time of the award and during the conduct of the proposed project.

4.3 Phase II Evaluation Criteria

Phase II proposals that comply with the screening criteria will go through the following evaluation process:

The proposals will be evaluated by at least three internal NOAA and/or external scientists or engineers via peer review in accordance with the following criteria:

(1) The technical approach, connection to NOAA's mission, and anticipated commercial benefits that may be derived from the research (25 points).
(2) The adequacy of the proposed effort and its relationship to the fulfillment of requirements of the research subtopic (15 points).
(3) The level of innovation the proposed effort offers to the research subtopic (20 points).
(4) Consideration of a proposal's commercial potential as evidenced by the SBC's Commercialization Plan (25 points).
(5) Qualifications of the proposed principal/key investigators, supporting staff,

and consultants (15 points).

Technical reviewers will base their rankings on information contained in the proposal as well as the applicants Phase I final report. Applicants should assume that reviewers are not acquainted with any experiments referred to, key individuals, or the firm. No technical clarifications may be made after proposal submission. As a reminder proposals will not be deemed acceptable if they represent presently available technology.

4.4 Phase II Award Selections

Final award recommendation decisions will be made by NOAA's Selecting Official based upon rankings assigned by the evaluation panel and upon consideration of the following selection factors:

(1) rankings assigned by the evaluation panel;
(2) diversity across the sub-topics and project types;
(3) diversity across participants;
    - geographically
    - by type of institutions
    - by type of partners
    - by researchers
(4) applicants prior award performance;
(5) partnerships and/or participation of targeted groups;
(6) possible duplication of other federally-funded research, and;
(7) availability of funding

In the event of a "tie" between applications, manufacturing-related projects as well as those regarding energy efficiency and renewable energy systems will receive priority in the award selection process. Subsequent to the assessment and prior to award, NOAA may ask for supplemental information and may negotiate the scope and amount of the award. The final approval of selected applications and issuance of awards will be made by the NOAA Grants Officer. The award decisions of the NOAA Grants Officer are final.

4.5 Federal Awarding Agency Review of Risk Posed By Applicants

After applications are proposed for funding by the selecting official, the NOAA Grants Management Division (GMD) performs administrative reviews, including an assessment of risk posed by the applicant under 2 C.F.R. 200.205. These may include assessments of the applicant's financial stability, quality of management

systems, history of performance, and the ability to effectively implement statutory, regulatory, or other requirements imposed on the applicant. Specific award conditions that address any risks determined to exist may be applied. Applicants may submit comments to the Federal Awardee Performance and Integrity Information System (FAPIIS) about any information included in the system about their organization for consideration by the awarding agency.

In addition, prior to making an award, NOAA GMD will review and consider the publicly available information about that applicant in the Federal Awardee Performance and Integrity Information System (FAPIIS). An applicant may, at its option, review and comment on information about itself previously entered into FAPIIS by a Federal awarding agency. As part of its review of risk posed by applicants, NOAA GMD will consider any comments made by the applicant in FAPIIS in making its determination about the applicant's integrity, business ethics, and record of performance under Federal awards.

Upon completion of the pre-award risk assessment, the NOAA Grants Officer will make a responsibility determination concerning whether the applicant is qualified to receive the subject award and, if so, whether appropriate special conditions that correspond to the degree of risk posed by the applicant should be applied to an award.

4.6 Release of Application Review Information

After final award decisions have been announced, the reviewers' technical evaluations of applications that passed the screening criteria will be provided to the applicant with written notification of award/non-award. The identity of the reviewers will not be disclosed.

5.0 CONSIDERATIONS

5.1 Awards

Phase II awards shall be for no more than $400,000. The proposed R&D activity period of performance in Phase II will depend upon the scope of the research but may not exceed 24 months. One year after the completion of the Phase II R&D period of performance, NOAA will contact each awardee to request the voluntary submission of a commercialization report. This report should provide a description of the company's efforts to further develop, commercialize, and derive revenues from the technology resulting from this SBIR award.

For planning purposes, Phase II projects are tentatively planned to be awarded in January 2021 with a February 1, 2021 project start date. Please use this start date in your application and for your planning schedules.

Historically it is anticipated that approximately two-thirds of the FY 2019 Phase I awardees will receive follow-on Phase II awards, subject to the availability of funds. To provide for an in-depth review of the Phase I final report and the Phase II proposal and commercialization plan, Phase II awards will be made approximately four to five months after the completion of Phase I. Funding for the program listed in this NOFO is contingent upon the availability of appropriations.

In no event will NOAA or the Department of Commerce be responsible for application preparation costs. This NOFO does not obligate NOAA or the Department of Commerce to make any awards under Phase II. Furthermore, NOAA will not fund any costs incurred by the applicants before awards are made. Publication of this NOFO does not oblige NOAA or the Department of Commerce to award any specific project or to obligate any available funds.

5.2 Reporting Requirements

Phase II awardees will be required to submit the Department of Commerce-required Research Performance Progress Report (RPPR, OMB Number: 0690-0032). The RPPR form can be found here:
http://www.osec.doc.gov/oam/grants_management/policy/documents/RPPR%20Fillable%20Final%20-%20OMB%200690-0032%20Expires%2008.31.2021%20v2.pdf

Associated documentation regarding the RPPR can be found here:
http://www.osec.doc.gov/oam/grants_management/policy/documents/RPPR%20Instructions%20and%20Privacy%20Statement.pdf

Additionally, the NOAA SBIR Program Office will distribute a progress reporting guidance document once the awards are made, which will further explain the RPPR and specific requirements for reporting.

Phase II awardees will be required to submit semi-annual reports and a one final report. The final report shall be comprehensive and discuss all the objectives or tasks, results, and conclusions based on the original proposal.

The acceptance of each progress report will be contingent upon appropriate alignment with the solicited and proposed milestones. Consideration will be given to changes from

the solicited and proposed milestones if results from experimentation warrant a deviation from plan. Inclusion of proprietary information within the progress reports and final report may be necessary in order to effectively communicate progress and gain appropriate consultation from NOAA experts regarding next steps. All such proprietary information will be marked according to instructions provided in Section 5.4.02.(d)(1).

All final reports must carry an acknowledgement on the cover page such as: *"This material is based upon work supported by the National Oceanic and Atmospheric Administration (NOAA) under grant number_____. Any opinions, findings, conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of NOAA."*

To help assess the effectiveness of our program in meeting programmatic and SBIR objectives, NOAA may periodically request information from small businesses about progress taken towards commercialization of the technology after the completion of Phase I and II awards.

5.3 Payment Schedule

The NOAA grant will include an award term with electronic payment system information. Pursuant to 2 C.F.R. § 200.305 awardees are to be paid in advance, provided they maintain or demonstrate the willingness to maintain: written procedures that minimize the time elapsing between the transfer of funds and disbursement by the awardee and financial management systems that meet the standards for fund control and accountability as established in 2 C.F.R. § 200.302. Advances of funds to a awardee shall be limited to the minimum amounts needed and be timed to be in accordance with the actual, immediate cash requirements of the small business in carrying out the purpose of the approved program or project.

The Department of Commerce policy requires that in the usual case, non-Federal entities time advance payment requests so that Federal funds are on hand for a maximum of three calendar days before being disbursed by the non-Federal entity for eligible award costs. In no case should advances exceed the amount of cash required for a 30-day period.

Unless otherwise provided for in the grant terms, payments from DOC to awardees under this NOFO will be made using the Department of Treasury's Automated Standard Application for Payment (ASAP) system. Under the ASAP system, payments are made through preauthorized electronic funds transfers directly to the awardee's bank

account, in accordance with the requirements of the Debt Collection Improvement Act of 1996. To receive payments under ASAP, awardees are required to enroll with the Department of Treasury, Financial Management Service, Regional Financial Centers, which allows them to use the on-line and Voice Response System (VRS) method of withdrawing funds from their ASAP established accounts. The following information will be required to make withdrawals under ASAP:

1. ASAP account number – the Federal award identification number found on the coversheet of the award;
2. Agency Location Code (ALC); and
3. Region Code.

Awardees enrolled in the ASAP system do not need to submit a Form SF-270 (Request for Advance or Reimbursement), for payments relating to their award. Awards paid under the ASAP system will contain a specific award condition, clause, or provision describing enrollment requirements and any controls or withdrawal limits set in the ASAP system.

When the Form SF-270 (Request for Advance or Reimbursement) or successor form is used to request payment, the awardee must submit the request no more frequently than monthly, and advances must be approved for periods to cover only expenses reasonably anticipated over the next 30 calendar days.

The Federal award identification number must be included on all payment-related correspondence, information, and forms.

Awardees receiving advance award payments must adhere to the depository requirements set forth in 2 C.F.R. §§ 200.305(b)(7) through (b)(9). Interest amounts up to $500 per fiscal year may be retained by the awardee for administrative expenses.

5.4 Innovations, Inventions and Patents

5.4.01 Proprietary Information

Information contained in unsuccessful applications will remain the property of the applicant. To the extent permitted by Federal law, funded proposals will not be made available to the public, except for the Project Abstract information (section 3.2.2), a required document submitted as an attachment.

Applicants are discouraged from submitting proprietary information unless the information is deemed essential for proper evaluation of the application. If proprietary information is provided in an application, which constitutes a trade secret, proprietary

commercial or financial information, confidential personal information or data affecting the national security, it will be treated in confidence, to the extent permitted by law. This information must be clearly marked by the applicant with the term "confidential proprietary information" and the following legend must appear on the title page of the proposal:

> *"This proposal contains information that shall not be disclosed outside the Federal Government and shall not be duplicated, used, or disclosed in whole or in part for any purpose other than evaluation of this proposal, unless otherwise authorized by law. If an award is made to this applicant as a result of or in connection with the submission of this proposal, the Government shall have the right to duplicate, use, or disclose the proprietary information to the extent provided in the resulting award and pursuant to applicable law. This restriction does not limit the Government's right to use information contained in the proposal if it is obtained from another source without restriction. The information subject to this restriction is contained on pages_____of this proposal."*

Any other legend may be unacceptable to the Government and may constitute grounds for removing the application from further consideration, without assuming any liability for inadvertent disclosure. The Government will limit dissemination of such information to within official channels. Information contained in unsuccessful proposals will remain the property of the applicant. The Government may, however, retain copies of all proposals. Public release of information in any proposal submitted will be subject to existing statutory and regulatory requirements. These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by existing statute or Executive order relating to (1) classified information, (2) communications to Congress, (3) the reporting to an Inspector General of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, or (4) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive orders and statutory provisions are incorporated into this agreement and are controlling.

Examples of laws that restrict the government to protect confidential/proprietary information about business operations and trade secrets possessed by any company or participant include: Freedom of Information Act (FOIA) – 5. U.S.C. § 552(b); Economic Espionage Act – 18 U.S.C. § 1832; and Trade Secrets Act – 18 U.S.C. § 1905.

In view of the above, applicants are cautioned that proposals are likely to be less

competitive if significant details are omitted due to the applicant's reluctance to reveal confidential/proprietary information.

5.4.02 Rights in Data Developed Under SBIR Funding Agreements

In lieu of the Department of Commerce Financial Assistance Standard Terms and Conditions (dated October 9, 2018), available at https://go.usa.gov/xPV5K, Section C.03, Intellectual Property Rights, the following terms and conditions will apply to and be included in all SBIR awards issues under this NOFO:

(a) ***Definitions***. As used in regards to this NOFO and awards made pursuant to this NOFO:

"**Computer database**" or "**database**" means a collection of recorded information in a form capable of, and for the purpose of, being stored in, processed, and operated on by a computer. The term does not include computer software.

"**Computer software**" (1) means: (i) computer programs that comprise a series of instructions, rules routines, or statements, regardless of the media in which recorded, that allow or cause a computer to perform a specific operation or series of operations; and (ii) recorded information comprising source code listings, design details, algorithms, processes, flow charts, formulas, and related material that would enable the computer program to be produced, created, or compiled; and (2) does not include computer databases or computer software documentation.

"**Computer software documentation**" means owner's manuals, user's manuals, installation instructions, operating instructions, and other similar items, regardless of storage medium, that explain the capabilities of the computer software or provide instructions for using the software.

"**Data**" means recorded information, regardless of form or the media on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to contract administration, such as financial, administrative, cost or pricing or management information.

*"***Form, fit, and function data**" means data relating to items, components, or processes that are sufficient to enable physical and functional interchangeability as well as data identifying source, size, configuration, mating and attachment characteristics, functional characteristics, and performance requirements. For computer software it means data identifying source, functional characteristics, and performance requirements but

specifically excludes the source code, algorithms, processes, formulas, and flow charts of the software.

"Limited rights data" means data (other than computer software) developed at private expense that embody trade secrets or are commercial or financial and confidential or privileged.

"**Restricted computer software**" means computer software developed at private expense and that is a trade secret; is commercial or financial and confidential or privileged; or is copyrighted computer software; including modifications of the computer software.

"**SBIR data**" means data first produced by an Awardee that is a small business concern in performance of a small business innovation research award issued under the authority of 15 U.S.C. § 638, which data are not generally known, and which data without obligation as to its confidentiality have not been made available to others by the Awardee or are not already available to the Government.

"**SBIR rights**" means the rights in SBIR data set forth in the SBIR Rights Notice of paragraph (d) of this clause.

"**Technical data**" means recorded information (regardless of the form or method of the recording) of a scientific or technical nature (including computer databases and computer software documentation). This term does not include computer software or financial, administrative, cost or pricing, or management data or other information incidental to contract administration. (*See* 41 U.S.C. § 403(8)).

"**Unlimited rights**" means the right of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose whatsoever, and to have or permit others to do so.

(b) Allocation of rights.

(1) Except as provided in paragraph (c) section regarding copyright, the Government shall have unlimited rights in—

(i) Data specifically identified in this award as data to be delivered without restriction;

(ii) Form, fit, and function data delivered under this award;

(iii) Data delivered under this award (except for restricted computer software)

that constitute manuals or instructional and training material for installation, operation, or routine maintenance and repair of items, components, or processes delivered or furnished for use under this award; and
(iv) All other data delivered under this award unless provided otherwise for SBIR data in accordance with paragraph (d) of this clause or for limited rights data or restricted computer software in accordance with paragraph (f) of this clause.

(2) The Awardee shall have the right to—
(i) Assert copyright in data first produced in the performance of this award to the extent provided in paragraph (c)(1) of this clause;
(ii) Protect SBIR rights in SBIR data delivered under this award in the manner and to the extent provided in paragraph (d) of this clause;
(iii) Substantiate use of, add, or correct SBIR rights or copyright notices and to take other appropriate action, in accordance with paragraph (e) of this clause; and
(iv) Withhold from delivery those data that are limited rights data or restricted computer software to the extent provided in paragraph (f) of this clause.

(c) Copyright.

(1) *Data first produced in the performance of this award*.
(i) Except as otherwise specifically provided in this award, the Awardee may assert copyright subsisting in any data first produced in the performance of this award.
(ii) When asserting copyright, the Awardee shall affix the applicable copyright notice of 17 U.S.C. § 401 or § 402 and an acknowledgment of Government sponsorship (including award number).
(iii) For data other than computer software, the Awardee grants to the Government, and others acting on its behalf, a paid-up nonexclusive, irrevocable, worldwide license to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government. For computer software, the Awardee grants to the Government, and others acting on its behalf, a paid-up, nonexclusive, irrevocable, worldwide license in such copyrighted computer software to reproduce, prepare derivative works, and perform publicly and display publicly, by or on behalf of the Government.

(2) *Data not first produced in the performance of this award.* The Awardee shall not, without prior written permission of the Grants Officer, incorporate in data delivered under this award any data that are not first produced in the performance of this award

unless the Awardee: (i) identifies such data; and (ii) grants to the Government, or acquires on its behalf, a license of the same scope as set forth in subparagraph (c)(1) of this clause.

(3) *Removal of copyright notices*. The Government will not remove any copyright notices placed on data pursuant to this paragraph (c), and will include such notices on all reproductions of the data.

(d) Rights to SBIR data

(1) The Awardee is authorized to affix the following "SBIR Rights Notice" to SBIR data delivered under this award and the Government will treat the data, subject to the provisions of paragraphs (e) and (f) of this clause, in accordance with such Notice:

SBIR Rights Notice

These SBIR data are furnished with SBIR rights under Award No._____(and contract or subaward, if appropriate). For a period of twenty (20) years, unless extended, after acceptance of all items to be delivered under this award, the Government will use these data for Government purposes only, and they shall not be disclosed outside the Government (including disclosure for procurement purposes) during such period without permission of the Awardee, except that, subject to the foregoing use and disclosure prohibitions, these data may be disclosed for use by support contractors and/or subrecipients. After the protection period, the Government has a royalty free license to use, and to authorize others to use on its behalf, these data for Government purposes, and is relieved of all disclosure prohibitions and assumes no liability for unauthorized use of these data by third parties, except that any such data that is also protected and referenced under a subsequent SBIR award shall remain protected through the protection period of that subsequent SBIR award. This Notice shall be affixed to any reproductions of these data, in whole or in part.

(End of notice)

(2) The Government's sole obligation with respect to any SBIR data shall be as set forth the paragraph above (d(1)). The twenty (20) year period of protection applies for Phases I, II and III.

(e) Omitted or incorrect markings

(1) Data delivered to the Government without any notice authorized by paragraph (d) of this clause shall be deemed to have been furnished with unlimited rights. The Government assumes no liability for the disclosure, use, or reproduction of such data.

(2) If the unmarked data has not been disclosed without restriction outside the Government, the Awardee may request, within six months (or a longer time approved by the Grants Officer in writing for good cause shown) after delivery of the data, permission to have authorized notices placed on data at the Awardees' expense, and the Grants Officer may agree to do so if the Awardee—

(i) Identifies the data to which the omitted notice is to be applied;
(ii) Demonstrates that the omission of the notice was inadvertent;
(iii) Establishes that the use of the proposed notice is authorized; and
(iv) Acknowledges that the Government has no liability with respect to the disclosure or use of any such data made prior to the addition of the notice or resulting from the omission of the notice.

(3) If the data has been marked with an incorrect notice the Grants Officer may—

(i) Permit correction, at the Awardee's expense, if the Awardee identifies the data and demonstrates that the correct notice is authorized, or
(ii) Correct any incorrect notices.

(f) ***Protection of limited rights data and restricted computer software*****.** The Awardee may withhold from delivery qualifying limited rights data and restricted computer software that are not identified in paragraphs (b)(1)(i), (ii), and (iii) of this clause. As a condition to this withholding the Awardee shall identify the data being withheld and furnish form, fit, and function data instead.

(g) ***Contracting and Subawards*****.** The Awardee shall obtain from its contractors and subawardees all data and rights therein necessary to fulfill the Awardee's obligations to the Government under this award. If a contractor or subawardee refuses to accept terms affording the Government those rights, the Awardee shall promptly notify the Grants Officer of the refusal and not proceed with the contract or subaward without further authorization in writing from the Grants Officer.

(h) ***Relationship to patents***. Nothing contained in this subsection shall imply a licenseto the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government.

5.4.03 NOAA-Owned Inventions

Awardees will not have any automatic rights to make, use or sell products or services incorporating NOAA-owned inventions, unless otherwise noted. For any SBIR award for a subtopic that requires a license to use a NOAA-owned invention covered by a patent or patent application, the SBIR awardee will be required to contact NOAA's Technology

Partnerships Office for a patent license for research or for commercial use.

Such awardees will be granted a non-exclusive research license and will be given the opportunity to negotiate a non-exclusive or an exclusive commercialization license to the NOAA-owned invention, in accordance with the Federal patent licensing regulations, set forth in 37 C.F.R. Part 404, and to the extent that such NOAA-owned invention is available for licensing and has not otherwise been exclusively licensed to another party.

5.4.04 Patent Rights

Normally, small business concerns may retain worldwide patent rights to any invention developed with Federal support. The specific requirements governing the development, reporting, and disposition of rights to inventions and patents resulting from Federal awards are described in more detail in 37 C.F.R. Part 401, which implements 35 U.S.C. 202 through 204 and includes standard patent rights clauses in 37 C.F.R. § 401.14, which will be incorporated by reference into all awards.

5.4.05 Invention Reporting

SBIR awardees must report inventions to the NOAA SBIR Program within two months of the inventor's report to the awardee. The reporting of patents and other patent obligations shall be completed in accordance with award agreement. Inventions must also be reported through the iEdison Invention Reporting System at www.iedison.gov.

5.5 Cost Sharing

Cost sharing is permitted for applications under this program NOFO; however, cost sharing is not required and will not be considered in evaluation of applications.

5.6 Profit or Fee

As specified in the SBIR Policy Directive, awarding agencies must provide for a reasonable fee or profit on SBIR funding agreements, consistent with normal profit margins provided to profit-making firms for R/R&D work. For this NOFO, a reasonable profit or fee not to exceed 7% of the sum of the direct and indirect costs is allowed. This profit is outlined as a separate "Other Cost."

5.7 Joint Ventures or Limited Partnerships

See 13 C.F.R. § 121.103(h). Joint ventures and limited partnerships are eligible under the

Federal SBIR Program, provided the entity created qualifies as a small business as defined in this NOFO. However, NOAA has elected to not permit awards to a small business concern that is majority-owned by venture capital operating company(s), hedge funds(s), or private equity firm(s). The awardee may enter into contracts, subawards, or other agreements with universities or other non-profit organizations provided they still meet the requirements outlined in Section 1.7

5.8 Research and Analytical Work

For Phase II, a minimum of one-half of the research and/or analytical effort, per Section 1.5.01, must be performed by the applicant. The total cost for all consultant fees, facility leases, usage fees, and other subcontract/subaward or purchase agreements may not exceed one-half of the total award.

5.9 Awardee Commitments

Upon award of a funding agreement, the awardee will be required to review and accept the terms and conditions of the award, including making certain legal commitments through acceptance of numerous Specific Award Conditions (SACs) in the funding agreement. Awards also will be governed by the NOAA Finance Assistance Standard Terms and Conditions (October 9, 2018), Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at 2 C.F.R. Part 200, adopted by the Commerce Department through 2 C.F.R. § 1327.101; when applicable, 48 C.F.R. Subpart 31.2, Contracts with Commercial Organizations; and the Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements, 79 FR 78390 (December 30, 2014).

Section 5.10 describes the types of terms and conditions to which the awardee would commit. This list is not a complete list of terms and conditions to be included in Phase II funding agreements and is not the specific wording of such terms and conditions.

5.10 Summary Statements

The following statements apply to Phase I and Phase II awards and are examples of some of the topic areas that will be addressed in the award terms and conditions.

(1) Access to Records. Government officials have the right of timely and unrestricted access to records of awardees, including access to personnel for discussion related to the records. *See* 2 C.F.R. § 200.336.
(2) Termination. Awards may be terminated (a) by the NOAA Grants Officer, if an awardee materially fails to comply with the terms and conditions of an award, or

for cause; (b) by the NOAA Grants Officer with the consent of the awardee, in which case the two parties shall agree upon the termination conditions, including the effective date and, in the case of partial termination, the portion to be terminated; (c) by the awardee upon sending to the NOAA Grants Officer written notification setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated. *See* 2 C.F.R. §§ 200.338-342.

(3) Non-Discrimination. The awardee will be required to comply with statutory and other non-discrimination requirements. No person in the United States shall, on the ground of race, color, national origin, handicap, age, religion, or sex, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance. *See* Department of Commerce Financial Assistance Standard Terms and Conditions, available at https://go.usa.gov/xXRxK, Section G.02.

(4) Audit Requirements. Government officials may conduct an audit of an award at any time. Unless otherwise specified in the award, for-profit organizations that expend $750,000 or more in federal funds during their fiscal year must have an audit conducted for that year in accordance with the DOC Financial Assistance Standard Terms and Conditions. *See* Department of Commerce Financial Assistance Standard Terms and Conditions, Section D.01(c).

(5) Codes of Conduct. Codes of Conduct. Pursuant to the certification in Form SF-424B, paragraph 3, the awardee must maintain written standards of conduct to establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain in the administration of the award. *See* Department of Commerce Financial Assistance Standard Terms and Conditions, Section F.

5.11 Additional Information

(1) If there is any inconsistency between the information contained herein and the terms of any resulting SBIR funding agreement, the terms of the funding agreement are controlling.

(2) Before award of a SBIR funding agreement, the Government may request that the applicant submit certain organization, management, personnel, and financial information to assure responsibility of the applicant.

(3) The Government is not responsible for any funds expended by the applicant before award of any funding agreement.

(4) This program NOFO is not an offer by the Government and does not obligate the Government to make any specific number of awards. Also, awards under the

SBIR Program are contingent upon the availability of funds.

(5) The SBIR Program is not a substitute for existing unsolicited application mechanisms. Unsolicited applications will not be accepted under the SBIR Program in either Phase I or Phase II.

(6) If an award is made pursuant to an application submitted under this SBIR Program NOFO, a representative of the awardee will be required to certify that the concern has not previously been, nor is currently being, paid for essentially equivalent work by any Federal agency.

(7) The responsibility for the performance of the principal investigator, and other employees or consultants who carry out the proposed work, including those of subrecipients or contractors, lies with the management of the organization receiving an award.

(8) NOAA is committed to the goal of commercialization of the results of SBIR projects and may provide discretionary technical and commercialization assistance to awardees as allowed by legislation.

a. Commercialization Assistance Program (CAP): NOAA is committed to providing awardees with assistance in commercialization planning of products, services, or technologies developed under Phase II awards. The NOAA CAP may cover assistance in such areas as assessing small business commercialization needs; planning, developing, and assisting in the preparation of a Phase II commercialization plan; identifying markets and developing entry strategies; and helping determine key requirements and traits for market viable products or services.

   The CAP is a mentoring and training program that includes one-on-one business counseling organized around topics that will contribute to the development of a strategic action plan, business plan, or a licensing or go-to-market strategy. Additionally, the CAP seeks to provide robust strategic and technical assistance to program participants seeking to commercialize their SBIR products initially funded by the NOAA SBIR Program.

   NOAA has set aside funds for Phase II awardees interested in this assistance. The SBIR Phase II awardee has the option to not participate in this assistance effort that is available to them. More information on the CAP will be provided to Phase II awardees.

   Applicants may also contact independent state, regional, or area specific resources, for example, economic development agencies for additional assistance and resources.

5.12 Technical Assistance for Application Preparation and Project Conduct

Applicants may wish to contact the National Institute of Standards and Technology (NIST) Hollings Manufacturing Extension Partnership (MEP), a nationwide network of locally managed extension centers whose sole purpose is to provide small and medium sized manufacturers with the help they need to succeed. The centers provide guidance to high-technology companies seeking resources and teaming relationships. To be referred to an MEP center for technical assistance, call 1-800-MEP-4-MFG (1-800-637-4634) or visit MEP's website at http://www.nist.gov/mep**.**

MEP Centers are also prepared to provide referrals to state and local organizations offering resources and technical assistance to all NOAA SBIR applicants after awards have been announced.

5.13 NOAA Grants Management Office Statements

DEPARTMENT OF COMMERCE PRE-AWARD NOTIFICATION REQUIREMENTS FOR GRANTS AND COOPERATIVE AGREEMENTS. The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements contained in the Federal Register notice of December 30, 2014 (79 FR 78390) are applicable to this NOFO and may be accessed online at https://www.federalregister.gov/documents/2014/12/30/2014-30297/department-of-commerce-pre-award-notification-requirements-for-grants-and-cooperative-agreements.

UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS. Through 2 C.F.R. § 1327.101, the Department of Commerce adopted Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at 2 C.F.R. Part 200, which apply to awards in this program. Refer to http://go.usa.gov/SBYh and http://go.usa.gov/SBg4.

DOC TERMS AND CONDITIONS. Successful applicants who accept a NOAA award under this NOFO will be bound by Department of Commerce Financial Assistance Standard Terms and Conditions. This document will be provided in the award package and can be found at https://go.usa.gov/xXRxK.

UNPAID OR DELINQUENT TAX LIABILITY. In accordance with Section 523 of Division B and Sections 744 and 745 of Division E of the Consolidated and Further Continuing

Appropriations Act, 2015 (Pub. L. 113-235) or a future public law, an authorized representative of the selected non-Federal entity(s) will be required to provide certain pre-award representations regarding federal felony and federal criminal tax convictions, unpaid federal tax assessments, and delinquent federal tax returns. The form must be completed and submitted with grant applications for: (a) all for-profit and non-profit organization applicants (Part I, and if required, Part II); and (b) all non-Federal entity applicants anticipating receipt of $5 million or more in the current Federal Fiscal Year appropriated funding (Part II only). The form can be found at https://www.osec.doc.gov/oam/grants_management/policy/documents/FAM%202015-01.pdf.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA). NOAA must analyze the potential environmental impacts, as required by the National Environmental Policy Act (NEPA), for applicant projects or proposals that are seeking NOAA federal funding opportunities. Detailed information on NOAA compliance with NEPA can be found at the following NOAA NEPA website: http://www.nepa.noaa.gov/, including our NOAA Administrative Order 216-6 for NEPA, http://www.nepa.noaa.gov/NAO216_6.pdf, and the Council on Environmental Quality implementation regulations, https://www.whitehouse.gov/ceq/. Consequently, as part of an applicant's package, and under their description of their program activities, applicants are required to provide detailed information on the activities to be conducted, locations, sites, species and habitat to be affected, possible construction activities, and any environmental concerns that may exist (e.g., the use and disposal of hazardous or toxic chemicals, introduction of non-indigenous species, impacts to endangered and threatened species, aquaculture projects, and impacts to coral reef systems). In addition to providing specific information that will serve as the basis for any required impact analyses, applicants may also be requested to assist NOAA in drafting an environmental assessment, if NOAA determines an assessment is required. Applicants will also be required to cooperate with NOAA in identifying feasible measures to reduce or avoid any identified adverse environmental impacts of their proposal. Failure to do so shall be grounds for not selecting an application. In some cases if additional information is required after an application is selected, funds can be withheld by the Grants Officer under a special award condition requiring the recipient to submit additional environmental compliance information sufficient to enable NOAA to make an assessment on any impacts that a project may have on the environment.

MINORITY SERVING INSTITUTIONS - The Department of Commerce/National Oceanic and Atmospheric Administration (DOC/NOAA) is strongly committed to increasing the participation of Minority Serving Institutions (MSIs), i.e., Historically Black Colleges and Universities, Hispanic-serving institutions, Tribal colleges and universities, Alaskan Native and Native Hawaiian institutions, and institutions that work in underserved communities.

FREEDOM OF INFORMATION ACT (FOIA) - In the event that an application contains information or data that you do not want disclosed prior to award for purposes other than the evaluation of the application, mark each page containing such information or data with the words "Privileged, Confidential, Commercial, or Financial Information - Limited Use" at the top of the page to assist NOAA in making disclosure determinations. DOC regulations implementing the Freedom of Information Act (FOIA), 5 U.S.C 552, are found at 15 C.F.R. Part 4, which sets forth rules for DOC to make requested materials, information, and records publicly available under FOIA. The contents of funded applications may be subject to requests for release under the FOIA. Based on the information provided by the applicant, the confidentiality of the content of funded applications will be maintained to the maximum extent permitted by law.

SUBAWARD REPORTING: The Federal Funding Accountability and Transparency Act, 31 U.S.C. 6101 note, includes a requirement for awardees of applicable Federal grants to report information about first-tier subawards and executive compensation under Federal assistance awards. All awardees of applicable grants and cooperative agreements are required to report to the Federal Sub-award Reporting System (FSRS) available at https://www.fsrs.gov/ on all sub-awards over $25,000. Refer to 2 CFR Parts 170.

NON-FEDERAL ENTITY: For the purpose of this NOFO, the terms “awardees,” “applicants,” and or “recipients” are used to describe the various audience of this announcement. However, all “awardees” or “recipients” of this SBIR NOFO grant will be referred to as “Non-Federal Entities” on all future correspondence and communications.

6.0 SUBMISSION OF APPLICATIONS

Applicants are encouraged to review NOAA’s web site titled “How to apply for financial assistance” at https://www.noaa.gov/organization/acquisition-grants/how-to-apply for important information on the overall process for applying for grants at NOAA.

6.1 Deadline for Applications

Phase II applications must be received no later than 11:59 p.m. Eastern Time Wednesday October 14, 2020. Only electronic applications submitted via https://www.grants.gov/ (also referred to as “Grants.gov”) will be accepted. Applications not received by the specified due date and time, as recorded by https://www.grants.gov/, or that do not adhere to the other requirements of this NOFO (*see* Section 4.2 Screening Criteria and Section 8.1 Required Forms and

Documents) will not be considered.

Applicants are cautioned to be careful of unforeseen delays that can cause late submission and arrival of applications, with the result that they will not be forwarded by https://www.grants.gov/ to NOAA for evaluation. NOAA strongly recommends that applicants do not wait until the last minute to submit an application. NOAA will not make allowance for any late submissions. To avoid any potential processing backlogs due to last minute registrations, applicants are highly encouraged to begin their https://www.grants.gov/ registration process early. No extensions will be granted.

When developing your application submission timeline, please keep in mind that (1) all applicants are required to have a current registration in the System for Award Management (SAM.gov); (2) the free annual registration process in the electronic System for Award Management (SAM.gov) (*see* Section 6.3(2)) of this NOFO) may take between three and five business days or as long as a month or more; (3) applicants are required to have a current registration in https://www.grants.gov/; and (4) applicants will receive a series of e-mail messages from https://www.grants.gov/ over a period of up to two business days before learning whether a Federal agency's electronic system has received its application. Please note that a federal assistance award cannot be issued if the designated recipient's registration in the System for Award Management (SAM.gov) is not current at the time of the award.

Applicants will find instructions on registering with SAM.gov at: **http://www.grants.gov/web/grants/applicants/organization- registration.html**.

6.2 Application Package

The standard application package, consisting of the standard forms, i.e., SF-424, Application for Federal Assistance, SF- 424A, Budget Information – Non-Construction Programs – If applicable, when applying for a Multi-Year award (2-5 years), the applicant must submit a line item budget (SF-424A) and corresponding budget narrative for each of the funding periods anticipated, SF-424B, Assurances – Non-Construction Programs, SF-424C – Budget Information – Construction Programs, SF-424D – Assurances – Construction Programs, SF-LLL, Disclosure of Lobbying Activities and the CD-511, Certification Regarding Lobbying is available at https://www.grants.gov.

6.3 Application Submission

Applications must be submitted electronically through https://www.grants.gov/

under announcement NOAA-OAR-OAR-TPO-2020-2006595. Paper applications or applications submitted by e-mail or other electronic means will not be accepted.

Please see Section 8.1 for a complete list of required forms and documents. Supplementary material, revisions, substitutions, audio or video tapes, or computer storage media or devices will **not** be accepted. Applicants may submit revisions to their original applications through https://www.grants.gov/ only if done before the due date in Section 6.1. The last application received in https://www.grants.gov/ will be used for evaluation.

Applications must be submitted via https://www.grants.gov/,.

(1) Applicants should carefully follow specific https://www.grants.gov/ instructions to ensure the attachments will be accepted by the system. A receipt from https://www.grants.gov/ indicating an application is received does not provide information about whether attachments have been received. For further information or questions regarding the electronic application process for this announcement, contact Janet Russell by phone at (301)628-1062 or by email at Janet.J.Russell@noaa.gov.

(2) Applicants are strongly encouraged to start early and not wait until the approaching due date before logging on and reviewing the instructions for submitting an application through https://www.grants.gov/. The registration process must be completed before a new registrant can apply. If all goes well, the registration process takes three (3) to five (5) business days. If problems are encountered, the registration process can take up to two (2) weeks or more. Applicants must have a valid unique entity identifier number and must maintain a current registration in the Federal government's primary registrant database, the System for Award Management (https://sam.gov/SAM/), as explained on the https://www.grants.gov/ web site. See also Section 8.3 of this NOFO. After registering, it may take several days or longer from the initial log-on before a new system user can submit an application. Only authorized individuals(s) will be able to submit an application, and the system may need time to process a submitted application. Applicants should save and print the proof of submission they receive from https://www.grants.gov/. If problems occur while using https://www.grants.gov/, the applicant is advised to (a) print any error message received and (b) call them directly for immediate assistance. If calling from within the United States or from a U.S. territory, please call 800-518-4726. If calling from a place other than the United States or a U.S. territory, please call 606-545-5035. Assistance from the Help Desk will be available around the clock every day, with the exception of Federal holidays. Help Desk assistance will resume at 7:00 a.m. Eastern Time the day after Federal holidays. For assistance

using https://www.grants.gov/, you may also contact support@grants.gov.

(3) To find instructions on submitting an application, applicants should refer to the "Applicants" tab in the banner just below the top of the https://www.grants.gov/ home page. Clicking on the "Applicants" tab produces two exceptionally useful sources of information, Applicant Actions and Applicant Resources, which applicants are advised to review.

(4) Applicants will receive a series of e-mail messages over a period of up to two business days before learning whether a Federal agency's electronic system has received its application. Closely following the detailed information in these subcategories will increase the likelihood of acceptance of the application by the Federal agency's electronic system.

(5) Applicants should pay close attention to the guidance under "Applicant FAQs," as it contains information important to successful submission, including essential details on the naming conventions for attachments to applications.

(6) The Grants.gov Online Users Guide available at the Grants.gov site (https://www.grants.gov/help/html/help/index.htm?callingApp=custom#t=GetStarted%2FGetStarted.htm) provides vital information on checking the status of applications. See especially the "Check My Application Status" option, found by clicking first on Applicants, and then by clicking on Applicant Actions. The application must be both received and validated by Grants.gov. The application is "received" when Grants.gov provides the applicant a confirmation of receipt and an application tracking number. If an applicant does not see this confirmation and tracking number, the application has not been received. After the application has been received, it must still be validated. During this process, it may be "validated" or "rejected with errors." To know whether the application was rejected with errors and the reasons why, the applicant must log in to Grants.gov, select "Applicants" from the top navigation, and select "Track my application" from the drop-down list. If the status is "rejected with errors," the applicant may still seek to correct the errors and resubmit your application before the deadline. If the applicant does not correct the errors, the application will not be forwarded to NOAA by Grants.gov.

NOAA uses the Tracking Numbers assigned by Grants.gov and does not issue Agency Tracking Numbers.

Any amendments to this NOFO will be announced through Grants.gov. Applicants can sign up for Grants.gov NOFO amendment notifications.

7.0 SCIENTIFIC AND TECHNICAL INFORMATION SOURCES

Background information related to NOAA's mission and the SBIR research topic areas may be found on the following sources:

- https://www.commerce.gov/about/strategic-plan
- http://www.noaa.gov
- http://techpartnerships.noaa.gov
- https://techpartnerships.noaa.gov/SBIR
- https://library.noaa.gov/
- https://uas.noaa.gov/
- https://oceanservice.noaa.gov/facts/ofs.html

8.0 SUBMISSION FORMS AND CERTIFICATIONS

8.1 Required Application Forms and Documents

Applicants should review the following list carefully to ensure the application includes all required forms and documents. **Failure to include any of the applicable listed forms and/or documents will result in rejection of the application without consideration.** Guidelines provided below are based on frequently asked questions and are not intended to be comprehensive. All documents and forms listed below must be fully completed and included in the application package as separate component Adobe PDF files where possible.

A complete application contains the following forms and documents. These component documents should each be uploaded into grants.gov as separate documents or attachments.

1. **SBIR Cover Page.** A completed SBIR Cover Page Form is a required pre-formatted document. This form is included in the Appendix C of this NOFO.

2. **Project Narrative (Technical Proposal).** Read Section 3.2 of this NOFO very carefully, and in its entirety, for directions on completing the required components of this section of the application.

3. **SF-424, Application for Federal Assistance.** Item 12 in this form should list the NOFO number NOAA-OAR-TPO-2020-2006595. The response to #19 should be 'no' – the NOAA SBIR Program is not covered by that Executive Order. For SF-424, Item 21, the list of certifications and assurances is contained in the SF-424B, which is item 3 in this list of Required Forms and Documents.

4. **SF-424A, Budget Information – Non-Construction Programs**. The budget should

reflect all anticipated expenses for the project.

In Section A, the Grant Program Function or Activity on Line 1 under Column (a) should be entered as "NOAA Small Business Innovation Research (SBIR) Program". The Catalog of Federal Domestic Assistance Number on Line 1 under Column (b) should be entered as "11.021"

In Section B, Acceptable fees (see Section 5.6 of this NOFO) should be included in "Other (h)". These sections of the SF-424A should reflect funds for the entirety of the award: Section A; Section B; Section C; and Section D. Section E is not relevant to this program and therefore should be left blank.

5. **Budget Narrative.** In addition to other mandatory budget information, a separate Budget Narrative is required. Instructions for developing the required budget Narrative is available at https://www.noaa.gov/organization/acquisition-grants/how-to-apply under the section titled "Financial Assistance Budget Guidelines".

   There is no set format for the budget narrative; however, it should provide a detailed breakdown in narrative and tabular form of costs under each applicable object class category as reflected on the SF-424A (personnel, fringe benefits, equipment, travel, supplies, other direct costs and indirect costs), and a written justification that includes the necessity and the basis for the cost. Proposed funding levels must be consistent with the project scope, and only allowable costs that fall within the spending limitations specified in Section 1.2.02 "Phase II – Research and Development" of this NOFO should be included in the budget. The proposed budget should reflect planned costs, but the awardee must charge actual costs to the award consistent with cost principles applicable to the type of awardee in accordance with the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at 2 C.F.R. Part 200, which apply to awards in this program. More information is available at http://go.usa.gov/SBYh and http://go.usa.gov/SBg4.

6. **SF-424B, Assurances - Non-Construction Programs**.

7. **CD-511, Certification Regarding Lobbying**. Enter "2020-NOAA-SBIR-02" in the Award Number Field. Enter the title of the application used in field 15 of the SF-424, or an abbreviation of that title, in the Project Name field.

8. **SF-LLL, Disclosure of Lobbying Activities** (if applicable).

9. **SBA Company Registry Form.** SBA maintains and manages a Company Registry at http://www.sbir.gov/registration to track ownership and affiliation requirements for all companies applying to the SBIR Program. The SBIR Policy Directive requires each Phase II applicant to register in the Company Registry prior to submitting an application. The applicant must save its information from the registration in a .pdf document. Attach this document to the SF-424 as described at the end of this section.

10. **Research & Related Personal Data**. Complete and print the form available at https://www.grants.gov/web/grants/forms/r-r-family.html#sortby=1. Attach this document to the SF-424 as described at the end of Section 8.1.

11. **Compliance with SBIR Program Requirements, Applicant Fraud Awareness Training - Certificate of Training Completion**. Complete the training at: https://techpartnerships.noaa.gov/SBIR. After completion, print and fill out the last page of the training presentation. Attach this document to the SF-424 as described at the end of Section 8.1.

12. **Commercialization Plan.** The commercialization plan shall provide information to NOAA regarding how the potential awardee will convert their research into commercial applications.

    A major objective of the SBIR program is to encourage high quality research that meets government and industry needs. Additionally, it requires a demonstration on the potential return to the Nation on its economic investment in R&D which includes new products, services, sales, investment, and job growth.

    The commercialization plan should clearly demonstrate items such as, but not limited to:
    - Economic Impact and public benefit
    - Number and record of past performance for SBIR and STTR awards;
    - Existence of outside non-SBIR funding or partnering commitments; and/or
    - The presence of other relevant supporting material contained in the proposal that indicates the commercial potential of the idea.

    NOAA requires the submission of a brief Commercialization Plan indicating how the Phase II research results are to be carried out in Phase III with private (or non-SBIR) funding and other evidence of commercial potential.

The Commercialization Plan should provide information directly related to bringing to market the anticipated research results. It should include concise paragraphs on each of the following areas:

1. Company - A brief description of your company, including its principal field(s) of interest, present size (annual sales level and number of employees), and any current products that have had significant sales, and any growth in the company that can be attributed to the SBIR program.
2. Commercial Applications - Potential commercial applications of the research results.
3. Patent Success - Do you have or intend to file one or more patents or copyrights as a result of this SBIR project?
4. Innovation - What is particularly innovative about the anticipated technology or products?
5. Markets - What are the anticipated specific markets for the resulting technology, their estimated size, and your estimated market share 5 years after the first sale?
6. Competition - Who are the major competitors in these markets, present or anticipated?
7. Advantages - What significant advantages do you anticipate your technology will have over the competition?
8. Marketing Plan - Briefly describe the approach and steps you plan to take in commercializing the research results from the end of Phase II to market sales, as you see them at this time.

Items (3) through (8) above are part of the standard application form package in Grants.gov and are completed through the download application process**. Items (1), (2), and (9) through (13) must be completed and attached by clicking on "Add Attachments" found in item 15 of the SF-424, Application for Federal Assistance. This will create a zip file that allows for transmittal of the documents electronically via Grants.gov**. Applicants should carefully follow specific Grants.gov instructions at https://www.grants.gov/ to ensure the attachments will be accepted by the system. **A receipt from Grants.gov indicating an application is received does not provide information about whether attachments have been received.**

8.2 Verifying the Submission and Tracking the Application

Applicants are urged to use Grants.gov's Download Submitted Applications feature to check that all required attachments were contained in their submission. Go to the

*Grants.gov Online Users Guide available at the Grants.gov site (**https://www.grants.gov/help/html/help/index.htm?callingApp=custom#t=GetStarted%2FGetStarted.htm**), choose Applicants, then Applicant Actions, then select the "Check My Application Status" option, click on the* Download Submitted Applications feature, and follow the directions.

Applicants can track their submission in the Grants.gov system by following the procedures at the Grants.gov site (**http://go.usa.gov/cjamz**). It can take up to two business days for an application to fully move through the Grants.gov system to NOAA.

8.3 Unique Entity Identifier and System for Award Management (SAM)

To enable the use of a universal identifier and to enhance the quality of information available to the public as required by the Federal Funding Accountability and Transparency Act, 31 U.S.C. 6101 note, to the extent applicable, any proposal awarded in response to this announcement will be required to use the System for Award Management (SAM), which may be accessed online at https://sam.gov/SAM/ . Applicants are also required to use the Dun and Bradstreet Universal Numbering System (DUNS), as identified in OMB guidance published at 2 CFR Parts 25, which may be accessed at https://www.govinfo.gov/app/details/CFR-2012-title2-vol1/CFR-2012-title2-vol1-part25-appA

NOAA will not make a Federal award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements and, if an applicant has not fully complied with the requirements by the time that NOAA is ready to make a Federal award pursuant to this NOFO, NOAA may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant.

Appendices – CERTIFICATIONS, SBIR COVER PAGE and CHECKLIST

A. SBIR Funding Agreement Certification (At Time of Award)

All small businesses that are selected for award of an SBIR funding agreement must complete this certification at the time of award and any other time set forth in the funding agreement that is prior to performance of work under this award. This includes checking all of the boxes and having an authorized officer of the awardee sign and date the certification each time it is requested.

Please read carefully the following certification statements. The Federal government relies on the information to determine whether the business is eligible for a Small Business Innovation Research (SBIR) Program award. A similar certification will be used to ensure continued compliance with specific program requirements during the life of the funding agreement. The definitions for the terms used in this certification are set forth in the Small Business Act, SBA regulations (13 C.F.R. Part 121), the SBIR Policy Directive and also any statutory and regulatory provisions referenced in those authorities.

If the funding agreement officer believes that the business may not meet certain eligibility requirements at the time of award, they are required to file a size protest with the U.S. Small Business Administration (SBA), who will determine eligibility. At that time, SBA will request further clarification and supporting documentation in order to assist in the verification of any of the information provided as part of a protest. If the funding agreement officer believes, after award, that the business is not meeting certain funding agreement requirements, the agency may request further clarification and supporting documentation in order to assist in the verification of any of the information provided.

Even if correct information has been included in other materials submitted to the Federal government, any action taken with respect to this certification does not affect the Government's right to pursue criminal, civil or administrative remedies for incorrect or incomplete information given in the certification. Each person signing this certification may be prosecuted if they have provided false information.

The undersigned has reviewed, verified and certifies that (all questions must be responded to by checking the appropriate box):

(1) The business concern meets the ownership and control requirements set forth in 13 C.F.R. § 121.702.

☐ Yes ☐No

(2) If a corporation, all corporate documents (articles of incorporation and any amendments, articles of conversion, by-laws and amendments, shareholder meeting minutes showing officer elections, organizational meeting minutes, all issued stock certificates, stock ledger, buy-sell agreements, stock transfer agreements, voting agreements, and documents relating to stock options, including the right to convert non-voting stock or debentures into voting stock) evidence that it meets the ownership and control requirements set forth in 13 C.F.R. § 121.702.
□ Yes ☐No ☐N/A Explain why N/A:

_____

(3) If a partnership, the partnership agreement evidences that it meets the ownership and control requirements set forth in 13 C.F.R. § 121.702.
□ Yes ☐No ☐N/A Explain why N/A:

_____

(4) If a limited liability company, the articles of organization and any amendments, and operating agreement and amendments, evidence that it meets the ownership and control requirements set forth in 13 C.F.R. § 121.702.
□ Yes ☐No ☐N/A Explain why N/A:

_____

(5) The birth certificates, naturalization papers, or passports show that any individuals it relies upon to meet the eligibility requirements are U.S. citizens or permanent resident aliens in the United States.
□ Yes ☐No ☐N/A Explain why N/A:

_____

(6) It has no more than 500 employees, including the employees of its affiliates.
□ Yes ☐No

(7) SBA has not issued a size determination currently in effect finding that this business concern exceeds the 500 employee size standard.
□ Yes ☐No

(8) During the performance of the award, the principal investigator will spend more than one half of his/her time as an employee of the awardee or has requested and received a written deviation from this requirement from the funding agreement officer.
□ Yes ☐No ☐Deviation approved in writing by funding agreement officer:_____%

(9) All, essentially equivalent work, or a portion of the work proposed under this project (check the applicable line):
☐ Has not been submitted for funding by another Federal agency.
☐ Has been submitted for funding by another Federal agency but has not been funded under any other Federal grant, contract, subcontract or other transaction.
☐ A portion has been funded by another grant, contract, or subcontract as described in detail in the application and approved in writing by the funding agreement officer.

(10) During the performance of award, it will perform the applicable percentage of work unless a deviation from this requirement is approved in writing by the funding agreement officer (check the applicable line and fill in if needed):
☐ SBIR Phase I: at least two-thirds (66 2/3%) of the research.
☐ SBIR Phase II: at least half (50%) of the research.
☐ Deviation approved in writing by the funding agreement officer:_____%

(11) During performance of award, the research/research and development will be performed in the United States unless a deviation is approved in writing by the funding agreement officer.
☐ Yes ☐No ☐Waiver has been granted

(12) During performance of award, the research/research and development will be performed at my facilities with my employees, except as otherwise indicated in the SBIR application and approved in the funding agreement.
☐ Yes ☐No

(13) It has registered itself on SBA's database as majority-owned by venture capital operating companies, hedge funds or private equity firms.
☐ Yes ☐No ☐N/A Explain why N/A:

_____

(14) It is a Covered Small Business Concern (a small business concern that:
(a) was not majority-owned by multiple venture capital operating companies (VCOCs), hedge funds, or private equity firms on the date on which it submitted an application in response to an SBIR NOFO; and (b) on the date of the SBIR award, which is made more than 9 months after the closing date of the NOFO, is majority-owned by multiple venture capital operating companies, hedge funds, or private equity firms).
☐ Yes ☐No

☐ It will notify the Federal agency immediately if all or a portion of the work proposed is subsequently funded by another Federal agency.

☐ I understand that the information submitted may be given to Federal, State and local agencies for determining violations of law and other purposes.

☐ I am an officer of the business concern authorized to represent it and sign this certification on its behalf. By signing this certification, I am representing on my own behalf, and on behalf of the business concern that the information provided in this certification, the application, and all other information submitted in connection with this application, is true and correct as of the date of submission. I acknowledge that any intentional or negligent misrepresentation of the information contained in this certification may result in criminal, civil or administrative sanctions, including but not limited to: (1) fines, restitution and/or imprisonment under 18 U.S.C. § 1001; (2) treble damages and civil penalties under the False Claims Act (31 U.S.C. § 3729 *et seq.*); (3) double damages and civil penalties under the Program Fraud Civil Remedies Act (31 U.S.C. § 3801 *et seq.*); (4) civil recovery of award funds, (5) suspension and/or debarment from all Federal procurement and nonprocurement transactions (FAR Subpart 9.4 or 2 C.F.R. Part 180); and (6) other administrative penalties including termination of SBIR/STTR awards.

Signature _____ ***Date*** ____/___/____

Print Name (First, Middle, Last)

_____

Title

_____

Business Name

_____

B. SBIR Funding Agreement Certification (Life-Cycle Certification)

All SBIR Phase II awardees must complete this certification at all times set forth in the funding agreement (see §8(h) of the SBIR Policy Directive). This includes checking all of the boxes and having an authorized officer of the awardee sign and date the certification each time it is requested.

Please read carefully the following certification statements. The Federal government relies on the information to ensure compliance with specific program requirements during the life of the funding agreement. The definitions for the terms used in this certification are set forth in the Small Business Act, the SBIR Policy Directive, and also any statutory and regulatory provisions referenced in those authorities.

If the funding agreement officer believes that the business is not meeting certain funding agreement requirements, the agency may request further clarification and supporting documentation in order to assist in the verification of any of the information provided. Even if correct information has been included in other materials submitted to the Federal government, any action taken with respect to this certification does not affect the Government's right to pursue criminal, civil, or administrative remedies for incorrect or incomplete information given in the certification. Each person signing this certification may be prosecuted if they have provided false information.

The undersigned has reviewed, verified and certifies that (all boxes must be checked):

(1) The principal investigator spent more than one half of his/her time as an employee of the awardee or the awardee has requested and received a written deviation from this requirement from the funding officer.
☐ Yes ☐No ☐Deviation approved in writing by funding agreement officer:_____%

(2) All, essentially equivalent work, or a portion of the work performed under this project (check applicable line):
☐ Has not been submitted for funding by another Federal agency.
☐ Has been submitted for funding by another Federal agency but has not been funded under any other Federal grant, contract, subcontract or other transaction.
☐ A portion has been funded by another grant, contract, or subcontract as described in detail in the application and approved in writing by the funding agreement officer.

(3) Upon completion of the award it will have performed the applicable percentage or work, unless a deviation from this requirement is approved in writing by the funding agreement officer (check the applicable line and fill in if needed):
☐ SBIR Phase I: at least two-thirds (66 2/3%) of the research.
☐ SBIR Phase II: at least half (50%) of the research.
☐ Deviation approved in writing by the funding agreement officer:_____%

(4) The work is completed and it has performed the applicable percentage of work, unless a deviation from this requirement is approved in writing by the funding agreement officer (check the applicable line and fill in if needed):
☐ SBIR Phase I: at least two-thirds (66 2/3%) of the research.
☐ SBIR Phase II: at least half (50%) of the research.
☐ Deviation approved in writing by the funding agreement officer:_____%
☐ N/A because work is not completed.

(5) The research/research and development is performed in the United States unless a deviation is approved in writing by the funding agreement officer.
☐ Yes ☐No ☐Waiver has been granted

(6) The research/research and development is performed at my facilities with my employees, except as otherwise indicated in the SBIR application and approved in the funding agreement.
☐ Yes ☐No

☐ It will notify the Federal agency immediately if all or a portion of the work authorized and funded under this award is subsequently funded by another Federal agency.

☐ I understand that the information submitted may be given to Federal, State and local agencies for determining violations of law and other purposes.

☐ I am an officer of the business concern authorized to represent it and sign this certification on its behalf. By signing this certification, I am representing on my own behalf, and on behalf of the business concern, that the information provided in this certification, the application, and all other information submitted in connection with the award, is true and correct as the date of submission. I acknowledge that any intentional or negligent misrepresentation of the information contained in this certification may result in criminal, civil or administrative sanctions, including but not limited to: (1) fines, restitution and/or imprisonment under 18 U.S.C. § 1001; (2) treble damages and civil penalties under the False Claims Act (31 U.S.C. § 3729 *et seq.*); (3) double damages and civil penalties under the Program Fraud Civil Remedies Act (31 U.S.C. § 3801 *et seq.*); (4) civil recovery of award funds, (5) suspension and/or debarment from all Federal procurement and nonprocurement transactions (FAR Subpart 9.4

or 2 C.F.R. Part 180); and (6) other administrative penalties including termination of SBIR/STTR awards.

Signature _____ ***Date*** ____/___/____

Print Name (First, Middle, Last)

_____

Title

_____

Business Name

_____

C. NOAA SBIR Phase II Cover Page

NOFO No.: NOAA-OAR-OAR-TPO-2020-2006595 Closing Date: October 14, 2020

Name of Submitting Firm:

Address of Firm (including Zip Code +4):

Title of Proposed Project:

Requested Amount: Proposed Duration: NOFO Subtopic No.:

NOFO Subtopic Title:

THE ABOVE ORGANIZATION CERTIFIES THAT:

1. It is a small business firm as defined in this NOFO. Yes ☐ No ☐
2. The primary employment of the principal investigator will be with the firm at the time of award and during the conduct of the research. Yes ☐ No ☐
3. A minimum of one half of research will be performed by this firm in Phase II. Yes ☐ No ☐
4. It qualifies as a minority and disadvantaged small business as defined in this NOFO. Yes ☐ No ☐
5. It qualifies as a woman-owned small business as defined in this NOFO. Yes ☐ No ☐
6. It will permit the government to disclose contact information of the corporate official of your concern, if your proposal does not result in an award, to appropriate local and State-level economic development organizations that may be interested in contacting you for further information. Yes ☐ No ☐
7. It authorizes contact information and project title to be provided to the NIST Manufacturing Extension Partnership (MEP) Program after awards have been announced. Yes ☐ No ☐
8. This firm and/or Principal Investigator ☐ has / ☐ has not submitted proposals for essentially equivalent work under other federal program NOFOs, or ☐ has / ☐ has not received other federal awards for essentially equivalent work.
9. The applicant and/or any of its principals ☐ are / ☐ are not presently debarred, suspended, proposed for debarment, or declared ineligible for procurement and nonprocurement transactions (FAR subpart 9.4 or 2 C.F.R. Part 180) by any Federal agency; and ☐ have / ☐ have not within a three-year period preceding this application, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract or financial assistance award; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and ☐ are / ☐ are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses.
10. It is a veteran-owned small business concern. Yes ☐ No ☐

    10a. It is a service-disabled veteran-owned small business concern. Yes ☐ No ☐
11. It is a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office of ownership or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR Part 126 Yes ☐ No ☐

12. Does this application include subcontracts with Federal Laboratories or any Federal Agencies? If yes, insert the names of the Federal Laboratories/Agencies. Yes ☐ No ☐

13. Is your small business majority owned by Venture Capital operating companies, Hedge Funds, or Private Equity Funds? Yes ☐ No ☐

13. The company is registered in SAM.gov and the Representations and Certifications are completed. The NAICS code 541715 is included in the registration. Yes ☐ No ☐

14. The company has completed the Fraud, Waste, and Abuse training available on Yes ☐ No ☐

http://techpartnerships.noaa.gov/SBIR.aspx and attached the completed certification page.

PRINCIPAL INVESTIGATOR

Name:	Title:	Day Telephone No.:
Signature & Date:	**Email:**	**Fax No.:**

CORPORATE OFFICIAL (BUSINESS)

Name:	Title:	Day Telephone No.:
Signature & Date:	**Email:**	**Fax No.:**

OTHER INFORMATION

Year Firm Founded ☐ Number of Employees: Avg. Previous 12 mos. ☐ Currently ☐

Has a proposal for essentially equivalent work been submitted to another agency? Yes ☐ No ☐

If yes, what Agency? ☐

Is your company registered in SAM? ☐ Yes ☐ No

Taxpayer Identification Number: ☐

Data Universal Numbering System (DUNS) Number: ☐

PROPRIETARY NOTICE

This proposal contains information that shall not be disclosed outside the Federal Government and shall not be duplicated, used, or disclosed in whole or in part for any purpose other than evaluation of this proposal, unless otherwise authorized by law. If an award is made to this applicant as a result of or in connection with the submission of this proposal, the Government shall have the right to duplicate, use, or disclose the proprietary information to the extent provided in the resulting award and pursuant to applicable law. This restriction does not limit the Government's right to use information contained in the proposal if it is obtained from another source without restriction. The information subject to this restriction is contained on pages _____ of this proposal.

D. SBIR Phase II Application Checklist

Please review this checklist carefully to ensure that your proposal meets NOAA submission requirements. Failure to meet these requirements may result in your application being rejected without consideration.

_____ **1.** **SBIR Cover Page.** A completed SBIR Cover Page Form. This form is located in Appendix C of this NOFO and is a required preformatted document. Attach this document to the SF-424 as described at the end of Section 8.1.

_____ **2.** **Project Narrative (Technical Proposal).** Read Section 3.2 of this NOFO very carefully, and in its entirety, for directions on completing the required components of this section of the application.

_____ **3.** **SF-424, Application for Federal Assistance.** See Section 8.1 and https://www.grants.gov

_____ **4.** **SF-424A, Budget Information – Non-Construction Programs**. The budget should reflect all anticipated expenses for the project. See Section 8.1 and https:///www.grants.gov

_____ **5.** **Budget Narrative.** In addition to other mandatory budget information, a separate Budget Narrative is required. Instructions for developing the budget Narrative is available at https://www.noaa.gov/organization/acquisition-grants/how-to-apply under the section titled "Financial Assistance Budget Guidelines".

_____ **6.** **SF-424B, Assurances - Non-Construction Programs**. See https://www.grants.gov

_____ **7.** **CD-511, Certification Regarding Lobbying**. See Section 8.1 and https://www.grants.gov

_____ **8.** **SF-LLL, Disclosure of Lobbying Activities** (if applicable). See Section 8.1 and https://www.grants.gov

_____ **9.** **SBA Company Registry Form.** Register at http://www.sbir.gov/registration. SBIR applicants must attach this document to the SF-424 as described at the end of Section 8.1. See Section 1.5.02.

_____ **10.** **Research & Related Personal Data**. Complete and print the form available at https://www.grants.gov/web/grants/forms/r-r-family.html#sortby=1. Attach this document to the SF-424 as described at the end of Section 8.1.

_____ **11.** **Compliance with SBIR Program Requirements, Applicant Fraud Awareness Training - Certificate of Training Completion**. Complete the training at: https://techpartnerships.noaa.gov/SBIR. See Section 1.8. After completion, print and fill out the last page of the training presentation. Attach this document to the SF-424 as described at the end of Section 8.1.

_____ **12.** **Letters of Commitment**. This includes, but is not limited to, contractors, consultants, subcontracts, facilities use, and suppliers. See Section 3.2.11.

_____ **13.** **Commercialization Plan.** The commercialization plan shall provide information to NOAA regarding how the potential awardee will convert their research into commercial applications. See Section 8.1.

_____ **14.** The Phase II applicant was a **FY 2019 Phase I NOAA SBIR grant recipient** with a start date of 1/1/2020.

_____ **15.** The **Principal Investigator** will be employed by the company at the time of award and for the duration of the award. See Section 1.5.01.

_____ **16.** All **work will be performed in the United States**, unless a waiver has been submitted and granted in advance by the Grants Officer. All supplies, materials, and equipment must be American made unless a waiver has been granted by the Grants Officer. See Section 1.5.01.

_____ **17.** A **minimum of one-half of the research** and/or analytical effort must be performed by the applicant. The total cost for all consultant fees, facility leases, usage fees, and other contract/subcontract/subaward or purchase agreements may not exceed one-half of the total award. See Section 1.5.01.

_____ **18.** Applicant is registered in the **System for Award Management (SAM)**, located at https://sam.gov/SAM/. See Section 6.3(2). Please be aware that this registration could take a week or more to process, so applicants are encouraged to register early.