SUPPORTING STATEMENT FOR PAPERWORK REDUCTION SUBMISSION
Grantee Reporting Requirements for National Science Foundation (NSF) Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) Program

SUPPLEMENTARY INFORMATION

Title of Collection: Grantee Reporting Requirements for NSF SBIR/STTR Program

Type of Request: Reinstatement of an information collection (3145-0252)

Section A. Justification

This request is to seek approval to <u>reinstate, with changes, the bi-annual reporting requirements for Phase II grantees</u> of the National Science Foundation (NSF) Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) program. Only minor changes were made to the reporting requirements (listed in Section A.1), and the corresponding burden estimates were adjusted accordingly. Data collected are intended to monitor project progresses and outcomes and verify that compliance requirements are met for the congressionally mandated program. The information collection was temporarily suspended while the new Technology, Innovation, and Partnerships Directorate was being staffed with employees from other Directorates within NSF.

In 1977, NSF piloted and subsequently instituted the "Small Business Innovation Applied to National Needs" program, a precursor to the SBIR program and a first of its kind within the federal government. Its program was to catalyze the innovative capabilities of small, U.S.-based firms by supporting "high-risk, potentially high-payoff" projects[1] . The current NSF SBIR/STTR program continues this legacy of supporting the translation of scientific discovery into products and services with commercial potential and/or societal benefit. Unlike foundational or basic research activities that focus on scientific and engineering discovery itself, the NSF SBIR/STTR program supports startups and small businesses that move discoveries founded from fundamental, use-inspired science and engineering out of the lab and into the marketplace at scale.

The NSF SBIR/STTR program resides in the Directorate for Technology, Innovation, and Partnerships (TIP) at NSF, the agency's first new directorate in over 30 years. NSF's TIP Directorate collaborates with NSF's other directorates and fosters partnerships to support use-inspired research and the translation of research results to the market and society. The new directorate strengthens the intense interplay between foundational and use-inspired work, enhancing the complete cycle of discovery and innovation.

The (3) focus areas of TIP are:

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[1] R. T. Tibbetts, "NSF's three-phase program helps the small-business innovator bootstrap an idea to commercial success," in IEEE Spectrum, vol. 15, no. 10, pp. 86-86, Oct. 1978, doi: 10.1109/MSPEC.1978.6367918.

1) Cultivate diverse innovation ecosystems throughout the U.S. to advance use-inspired research and innovation in key technologies to address the Nation's societal and economic challenges;

2) Advance U.S. competitiveness in critical and emerging technologies by developing and translating innovations and addressing national challenges; and

3) Grow a diverse, inclusive next-generation talent base and workforce around key technology and challenge areas, building expertise in necessary technical skills, use-inspired research and innovation, entrepreneurship, and translation.

The NSF SBIR/STTR program directly addresses the second and third focus areas of TIP; research and development (R&D) funding is made to early-stage startups and entrepreneurs to ready their technologies for the market. The program is designed to stimulate private sector technological innovation by strengthening the role of small business, increasing the commercial application of federally supported research results, and nurturing and encouraging participation by socially and economically disadvantaged and women-owned small businesses.

The NSF SBIR/STTR programs has two phases: Phase I and Phase II. Phase I is a 6-12 month experimental or theoretical investigation that allows the awardees to determine an idea or concept's scientific, technical, and commercial merit. Building upon the primary objectives of the NSF-funded Phase I effort, Phase II allows entrepreneurs to develop the proposed concept further, sustains the R&D efforts initiated in Phase I, and advances the technology and associated product or service toward commercial deployment. Phase II awards are made with an initial 24-month performance period, but certain supplemental funding opportunities can extend the timeline extended by up to three years.

The bi-annual reporting requirements are designed for the Phase II awards. The report collects information and updates, including the technical progress of the NSF-funded work. The report requests progress updates on various key metrics, including the level of efforts sustained by essential personnel and total project expenditure by period. With the information collected, a managing Program Director ensures the anticipated progress is underway and the award remains in good standing. Finally, the report ascertains that Phase II grantees meet the SBIR Policy Directive and NSF certification requirements.

A.1 Circumstances Requiring the Collection of Data

The bi-annual report was designed and specifically tailored for NSF SBIR/STTR Phase II grantees to report updates and highlights accomplishments at various time points of the Phase II projects.

The report is divided into seven (7) sections:

1. Guidance & Instructions
2. Basic Reporting Data
3. Level of Effort
4. SBIR-wide Certification
5. Cooperative Agreement
6. Technical Narrative
7. Project Milestones

As mentioned, <u>minor changes were made to the reporting instrument, and below listed these changes by report sections</u>:

1. Guidance & Instructions
   - No changes were made.

2. Basic Reporting Data
   - Four (4) data fields were added to the report:
     o Principal Investigator (PI) email address
     o PI phone number
     o Current number of full-time equivalents working at the awardee small business
     o Total other funding (in USD) received by the small business in this project period, and listed fundings by source and total amount
   - Two (2) new questions were introduced:
     o Has the company developed and/or filed any new intellectual property under the NSF funded work? (Yes/ No)
       ▪ If 'Yes', has this new intellectual property been registered in iEdison? (Yes/ No/ N/A)
     o Has the company established any new subsidiaries, affiliated companies, or joint ventures during this reporting period? (Yes/ No)
       ▪ If 'Yes', please give details

3. Level of Effort
   - A new column were added:
     o Projected Phase II total (from initial approved budget)
   - As opposed to 4 periods, up to 8 periods are now provided in the table
   - A new question was introduced:
     o Has any of the above data for earlier project periods changed from what was reported previously? (Yes/ No)
       ▪ If 'Yes', please give details.

4. SBIR-wide Certification
   - No changes were made.

5. Cooperative Agreement
   - No changes were made.

6. Technical Narrative
   - An optional narrative prompt was added.
     o (Optional) If your project or company has received media attention, has garnered other important awards or recognitions, or has any other great "wins" to share with NSF, please let us know! (suggested: 1 page)

7. Project Milestones
   - No changes were made.

Collection of these data has several purposes, including: (1) providing a source of information on the outcomes of the research investments in terms of advancements in science, technology,

and society impact in NSF-funded projects, (2) in compliance with Foundation responsibilities to monitor scientific and technical resources enabling NSF to monitor the effectiveness of NSF-sponsored project, and (3) identify outputs of projects funded under NSF awards for management and for reporting to the Administration and Congress

A.2 Purposes and Use of the Data

The objective of this data collection is threefold: 1) to ascertain that NSF SBIR/STTR Phase II grantees comply with both Small Business Administration (SBA) and NSF compliance requirements, 2) to collect data that is required by the SBA SBIR Policy Directive, and finally, 3) to allow managing Program Directors to monitor the project and ensure that the Phase II award is in good standing.

The information from the reports will be used primarily by managing Program Directors for project monitoring and effective administration. Some of the data collected will be used for SBA reports, and occasionally, the data will also be used in congressional reporting and/or testimonies.

A.3 Use of Information Technology to Reduce Burden

The data collection(s) under this clearance request will utilize electronic forms to minimize data errors and respondent burden. In some cases, Program Directors may contact the respondent for clarifications or follow-up questions and will update the data gathered from these conversations accordingly.

A.4 Efforts to Identify Duplication

The data collection does not duplicate efforts undertaken by NSF, other federal agencies, or other data collection agents.

A.5 Small Business

The **Grantee Reporting Requirements for NSF SBIR/STTR Program** collects information from small businesses. These businesses are partners to current awardees or are run/owned by current awardees. The only impact of this data collection on the business will be the time required for respondents to gather the information, complete the form, and/or engage in clarifying conversations with managing Program Directors.

A.6 Consequences of Not Collecting the Information

If the information were not collected, the NSF SBIR/STTR program would be unable to 1) verify and validate compliance requirements, 2) meet its accountability requirements or assess the degree to which projects and Phase II awards are meeting their goals over time, and 3) document progress and outcomes of the Phase II projects.

A.7 Special Circumstances Justifying Inconsistencies with Guidelines in 5 CFR 1320.6

Data collected will comply with 5 CFR 1320.6. First, a valid OMB control number will be displayed at the beginning of the electronic form. Second, as the reporting requirement is mandatory, the NSF SBIR/STTR program will communicate clearly—by ways of proposal solicitations, the NSF SBIR/STTR website, and program announcements—that such collection of information will be treated as a means for proving and satisfying a condition for the receipt of the Phase II grant.

NSF SBIR and STTR Phase II grantees will be asked to submit this report bi-annually, or occasionally at shorter intervals for data collected during the life of the award.

A.8 Federal Register Notice and Consultation Outside the Agency

The agency's notice, as required by 5 CFR 1320.8(d), to reinstate this collection was published in the *Federal Register* on March 13, 2024, at 89 FR 18443 and no comments were received.

A.9. Payments or Gifts to Respondents

Not applicable

A.10. Assurance of Confidentiality

Respondents will be informed that any information on specific individuals is maintained in accordance with the Privacy Act of 1974. Every data collection instrument will display both OMB and Privacy Act notices.

Respondents will be informed that the data collected are available to NSF officials and staff, and contractors hired to manage the data and data collection software. Data will be processed according to federal and state privacy statutes. The system will limit access to personally identifiable information to authorized users. Data submitted will be used in accordance with criteria established by NSF for monitoring research and education grants and in response to Public Law 99-383 and 42 USC 1885c.

A.11 Questions of a Sensitive Nature

In the ***Grantee Reporting Requirements for NSF SBIR/STTR Program***, information from respondents, including name, affiliated organization, phone number, and email address are requested. These data are collected to track recipients of their roles in an organization, levels of efforts, and expenditures.

Information pertaining to the number of full-time equivalent employees and other funding sources obtained from the small business during the reporting period are needed to help Program Directors monitor the potential existence of overlapping or equivalent projects funded by other entities.

Individual-level and business-level data will be provided only to managing Program Directors, NSF senior management, and supporting staff conducting analyses using the data as

authorized by NSF. Any public reporting of data will be in aggregate form, and all personal identifiers will be removed.

A.12 Estimates of Response Burden

A.12.1. Number of Respondents, Frequency of Response, and Annual Hour Burden

Table 1. Respondents, Responses, and Annual Hour Burden

Collection Title	No. of Respondents	Annual No. of Hours/Respondent	Annual Hour Burden
Grantee Reporting Requirements for NSF SBIR/STTR Program	410	18	7380
Total	410	18	7380

As shown in Table 1 above, the annual response burden for the collections under this request is 7,380 hours. For life-of-award monitoring, the data collection burden to awardees will be limited to no more than 9 hours of the respondents' time in each instance but will most likely be an average of 5-7 hours of the respondents' time in each instance. The respondents are Principal Investigators (PIs) of the awards and/or founders, co-founders, or other key personnel of the businesses.

A.12.2. Estimates of Annualized Cost to Respondents for the Hour Burdens

The following table shows the annualized estimate of costs to PI/Founder/Co-Founder/Business Partner respondents, who are generally university professors. This estimated hourly rate is based on a report from the American Association of University Professors, "The Annual Report on the Economic Status of the Profession, 2022-23", Survey Report Table 1.

According to this report, the average salary of an associate professor across all types of doctoral-granting institutions (public, private-independent, religiously affiliated) was $110,945. When divided by the number of standard annual work hours (2,080), this calculates to approximately $53 per hour.

Table 2. Annuitized Cost to Respondents

Respondent Type	No. of Respondents	Total Burden Hours	Average Hourly Rate	Estimated Annual Cost
PIs, (co-) Founders, Assignees, Business Partners	410	7380	$53	$391,140

A.13 Estimate of Total Capital and Startup Costs/Operation and Maintenance Costs to Respondents or Record Keepers

Not applicable.

A.14 Estimates of Costs to the Federal Government

On average, the managing Program Director will take about 45 minutes to review the technical narratives in a report. Each grantee is asked to submit an updated report twice a year. Reviewing the report is part of the due diligence process that each Program Director needs to perform to monitor the project(s), ensure the grantee's compliance with the requirements, and ascertain that the award is in good standing.

Task	Number of Reports	Time per Review	Review frequency	Total Time
Program Directors reviewing technical narrative in the reports	410	45 minutes	Twice per year	615 hours/year

A.15. Changes in Burden

The burden was changed from 16 hours of burden annually per respondent to 18 hours to account for the changes introduced in the modified version of the report.

A.16. Plans for Publication, Analysis, and Schedule

Not applicable.

A.17. Approval to Not Display Expiration Date

Not applicable.

A.18 Exceptions to Item 19 of OMB Form 83-I

No exceptions apply.

Part B.

Not applicable.