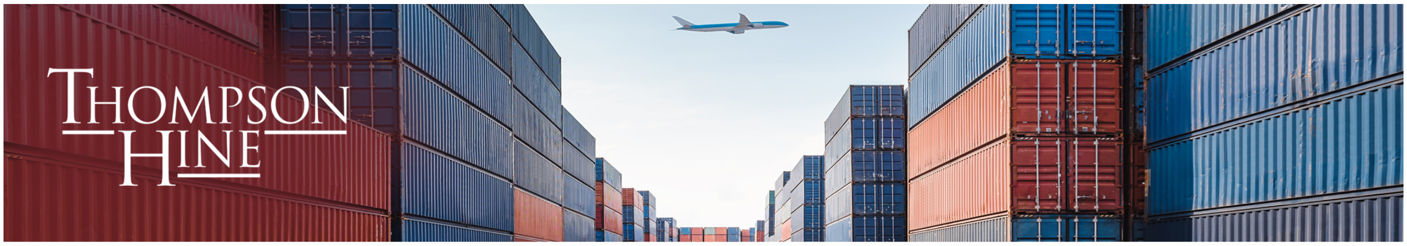

GLOBAL SUPPLY CHAIN SERVICES UPDATE

May 2024

CHIPS Incentives Program – Notice of Funding Opportunity for Small Business Innovation Research Program for CHIPS for America: CHIPS Metrology

Key Notes

- On April 16, 2024, the National Institute of Standards and Technology (NIST), part of the Department of Commerce, announced the launch of a new funding opportunity called the Small Business Innovation Research (SBIR) Program[1] for CHIPS for America – CHIPS Metrology.
- This new Notice of Funding Opportunity (NOFO) is aimed at enhancing small businesses' capabilities in semiconductor metrology, the science of measurement crucial to semiconductor manufacturing.
- NIST plans to allocate approximately $54 million across various projects that support the development of critically needed measurement services, tools, and innovative manufacturing metrologies.
- The Department of Commerce will accept applications through 11:59 p.m. Eastern Time, June 14, 2024. Applications received after this deadline will not be reviewed or considered.

Overview

CHIPS for America is integral to the national strategy to restore and enhance the U.S. semiconductor industry's competitiveness. The CHIPS Metrology program under this new initiative is designed to accelerate the development of technologies critical to semiconductor research and manufacturing.

Focus of the CHIPS Metrology SBIR Initiative:

- **Enhance U.S. Technological Leadership:** By advancing metrology techniques, the initiative aims to overcome current limitations in semiconductor manufacturing, thus enhancing the performance and reliability of U.S.-manufactured semiconductors.
- **Support Small Business Innovation:** The focus on small businesses is designed to leverage their agility and innovative capacities to address specific technical challenges in semiconductor metrology. This approach not only boosts technological advancements but also supports small business growth within the national economy.
- **Foster Economic and National Security:** By developing domestic capabilities in advanced semiconductor manufacturing, the initiative contributes to broader economic resilience and national security, reducing dependency on foreign semiconductor technology.

[1] 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 2025 (P.L. 117-183).

Approximately $54 million (about 24 awards) is anticipated to be distributed among selected small businesses that demonstrate potential to contribute significantly to advancements in semiconductor metrology.

Scope of the Program

The NOFO invites applications for two categories of projects: “Open Topics” and “Closed Topics.”

- **Open Topics** are intended for exploratory or pioneering ideas that have the potential to substantially advance the metrology field (see Section 9.01 of the NOFO).
- **Closed Topics** are specified projects that continue existing research and development efforts that have shown promising preliminary results (see Section 9.02 of the NOFO).

Through targeted investments in metrology capabilities, NIST is working to:

- Advance U.S. leadership in documentary standards development.
- Develop and deploy critically needed measurement services.
- Develop and deploy innovative manufacturing metrologies.
- Develop and deploy novel assurance and provenance technologies.
- Establish advanced metrology R&D testbeds.
- Build and sustain collaborative partnerships with industry.

The CHIPS Metrology SBIR program is organized into three phases:

- **Phase I – Feasibility Research**: This phase assesses the technical feasibility and commercial potential of the proposed research. Funding can reach up to $283,500 for a six-month period, with an option to request additional funds for technical and business assistance.
- **Phase II – Research and Development**: Projects that show promise in Phase I move to Phase II, where the focus shifts to detailed development and planning for commercialization. Funding for this phase can be up to $1,910,000 over 24 months, with extra funds available for continued support.

  Technical and Business Assistance (TABA): Additional funding support is available for both Phase I and Phase II to assist with overcoming technical challenges and market barriers.
- **Phase III – Commercialization**: This final phase advances the project towards market readiness, funded by non-SBIR sources. It builds directly on the results of the previous phases to produce final products or services.

Security Requirements

The CHIPS Metrology SBIR initiative mandates rigorous security protocols to protect the integrity of federally funded research and development, ensuring these efforts align with national security and intellectual property protections. Some considerations to highlight include:

- **Foreign Relationships/Affiliations Disclosures**. All applicants must complete a certification that discloses the ownership, financial ties, technology licensing or intellectual property sales, and other affiliations, as specified in 15 U.S.C. § 638(g)(13), to the People’s Republic of China, the Democratic People’s Republic of Korea, the Russian Federation, the Islamic Republic of Iran, and/or any other country determined to be a country of concern by the Secretary of State prior to award, and as required during the life of the funding agreement. The Required Disclosures of Foreign Affiliations or Relationships to Foreign Countries is available in Appendix C of the NOFO.[2]
- **Foreign Entities of Concern**. Pursuant to 15 U.S.C. § 4657, none of the funds awarded under the NOFO may be provided to a “foreign entity of concern,” as defined in 15 U.S.C. § 4651 and implemented by the final rule entitled Preventing the Improper Use of CHIPS Act Funding, 88 FR 65600 (Sept. 25, 2023), codified at 15 C.F.R. 231.104. Foreign entities of concern are also ineligible to participate in an award under the new NOFO as unfunded collaborators.
- **Cybersecurity Training Requirements**. Phase I and II awardees must complete specified cybersecurity training sessions and submit completion certificates to the NIST SBIR Program Office. Training focuses on best practices for securing sensitive information and technologies against cyber threats.

[2] A fillable version of Appendix C is available at http://www.nist.gov/sbir.

- **Funding Agreement Certification**. 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 and SBIR Funding Agreement Certification – Life-Cycle Certification, which are provided in Appendix B of the NOFO.
- **Research Security Review**. Prior to awarding funds, NIST conducts a thorough security review of applications to assess risks, using established guidelines like NIST IR 8484.

Application Process

For FY 2024, the Fast-Track Application process requires applicants to submit combined Phase I and II applications to speed up the development process; no separate NOFO will be issued for Phase II. Each application must include a detailed Technical Proposal narrative addressing either an Open or Closed CHIPS Metrology Topic, clearly outlining the development pathway for a commercial product or service. This narrative should be as thorough as a scientific paper, highlighting the project's commercial potential, technological innovation, and its expected impact on the microelectronics industry.

Submissions must adhere to all administrative procedures and include all required forms, and applicants need to complete the Company Commercialization Report (CCR) on SBIR.gov, updating it annually for at least five years. The Technical Proposal should not exceed 15 pages and must clearly articulate the objectives for both phases, a detailed work plan, key personnel information, and potential commercial applications. For those with successful Phase I projects, applications for Phase II funding under Closed Topics should demonstrate alignment with those topics' specific requirements. All applications will undergo a merit review focusing on compliance, impact, and feasibility, and applicants are urged to ensure accuracy and completeness to avoid processing delays or rejections.

Additional Guidance

Preparing applications will require cross-disciplinary teamwork. Legal counsel may assist applicant teams with several key aspects of this process, including:

- **Regulatory Guidance:** Help applicants understand and adhere to the specific regulations and funding criteria set out in the NOFO.
- **Security Compliance:** Assist with detailed disclosures related to foreign affiliations as required under 15 U.S.C. § 638(g)(13) and ensure compliance with restrictions on funding foreign entities of concern under 15 U.S.C. § 4657.
- **Intellectual Property and Cybersecurity:** Advise on protecting intellectual property and securing sensitive information, including completing required cybersecurity training and certifications.
- **Contractual and Funding Agreements:** Provide assistance in drafting and reviewing the technical proposal and funding agreements to ensure compliance with federal guidelines and the terms of the NOFO.
- **Submission Accuracy:** Help ensure that applications are complete, accurate, and adhere to administrative procedures to avoid processing delays or rejections.

FOR MORE INFORMATION

For additional information, see our previous client update, "CHIPS Incentives Program – Notice of Funding Opportunity for Facilities for Semiconductor Materials and Manufacturing Equipment."

If you have any questions, please contact:

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