

NIST Seeks Public Comment on CHIPS Implementation Program.

October 18, 2022

Key Points:

- NIST is soliciting input from the public to inform the design and implementation of the CHIPS incentive programs and research and development investments in Manufacturing USA institutes. Comments are due to NIST by November 14 and November 28, respectively.
- The **RFI on the incentive program** aims to account for amendments made by the CHIPS and Science Act, including changes to broaden the program's eligibility to support manufacturers of semiconductor equipment and materials and prohibit covered entities from expanding advanced semiconductor manufacturing capabilities in China.
- The **RFI on the Manufacturing USA institutes** aims to inform the design of, and requirements for, potential **Manufacturing USA** institutes to strengthen the semiconductor and microelectronics innovation ecosystem, which could include design, fabrication, advanced test, assembly and packaging capability.

On Wednesday, October 12, 2022, the National Institute of Standards and Technology (NIST) requested public comments on two initiatives being taken by the Creating Helpful Incentives to Produce (CHIPS) Act for America program: incentive program implementation and investment in manufacturing institutes.

The incentive program request builds on the previous request for information (RFI) that was issued in January 2022, which was based on the program as originally passed in the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (**P.L. 116-283**). This CHIPS Program Office is now seeking information on how to best approach amendments made in the CHIPS and Science Act.

The eight topics for questions in the incentives program RFI are:

- Use of Grants, Loans and Loan Guarantees
- Financial Assistance for Upstream Suppliers and Materials Used to Manufacture Semiconductors
- Intellectual Property

Contact Information

For support developing and crafting responses to the request for information, please contact:

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- Expansion Clawback
- Taxpayer Protections
- Opportunity and Inclusion.

This will be the first opportunity for the CHIPS Program Office to formally take public comment on issues surrounding financial assistance for upstream suppliers of materials and equipment used to manufacture semiconductors since passage of the CHIPS and Science Act this summer. In fact, one of the questions specifically refers to a number of materials including “minerals, chemicals, slurries, gases, photomasks and photoresists.” The questions in this section include:

- For this set of questions, the upstream supply chain refers to companies that provide materials (including minerals, chemicals, slurries, gases, photomasks and photoresists), equipment or other inputs (including specialized services) for the semiconductor manufacturing process. Which elements of the upstream supply chain could constrain the ability to expand domestic semiconductor production? For example, if U.S. semiconductor production were to increase by 30 percent, would suppliers be able to keep pace? Please specify categories like industrial gases, raw materials, specialty chemicals, wafers, photoresists and/or photomasks.
- The CHIPS Act of 2022 increased the eligibility for Section 9902 incentives to include facilities and equipment for the fabrication, assembly, testing, production or research and development of materials used to manufacture semiconductors. Which materials should be included in the definition of “materials used to manufacture semiconductors” and why? For each material identified, if a new facility were constructed for the production of that material, what typical percentage of that facility’s equipment and output would be expected to be used for semiconductor production, as opposed to other manufacturing processes?
- Which materials used to produce semiconductors and semiconductor manufacturing equipment are currently produced within the U.S., and which are not? Are there technological or other limitations that currently inhibit the production of such materials in the United States? Which materials and equipment, if any, have contributed to production delays or other inventory challenges? Which do you think are most likely to contribute to delays or challenges in the future?
- How are upstream suppliers concentrated geographically? Are any concentrated in a manner that could constrain the ability to expand semiconductor manufacturing?
- Which materials or equipment critical to semiconductor production are only or predominately available from a single source?
- How do upstream suppliers work with semiconductor fabrication plants (“fabs”) on new facility proposals? What types of agreements or commitments do fabs offer upstream suppliers to co-locate with new construction?
- What have been the biggest supply chain bottlenecks for U.S. semiconductor fabs over the past five years?

The five topics for questions in the manufacturing institute RFI are:

- Institute Scope
- Institute Structure and Governance
- Strategies for Driving Co-Investment and Engagement

- Education and Workforce Development
- Metrics and Success.

Of particular note, the RFI offers a list of potential technology areas that could be addressed by the Manufacturing USA semiconductor institutes. These include: chip-package architectures, assembly and test metrologies, new materials for semiconductors and, among others, environmental sustainability for semiconductor manufacturing.

In addition to the RFI on the Manufacturing USA Institutes, the CHIPS R&D Office also announced that it will hold webinars focused on the R&D programs of the CHIPS and Science Act on October 20 and November 2 and 16. Individuals can register for the webinars at the [NIST website](#).

Investments made to the development of three new Manufacturing USA Institutes will be funded under the CHIPS for America Research and Development Fund, which has been allocated \$11 billion to advance the United States' status as a leader in the field of CHIPS technology development.

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