DEPARTMENT OF COMMERCE

National Institute of Standards and Technology

[Docket Number 21006-0213]

Implementation of the CHIPS Incentives Program

AGENCY: National Institute of Standards and Technology (NIST), Commerce.

ACTION: Notice; Request for Information.

SUMMARY: The CHIPS Program Office (CPO) within the National Institute of Standards and Technology (NIST) is seeking further information in order to inform the design and implementation of the CHIPS incentive programs, based on amendments to the CHIPS program resulting from the CHIPS Act of 2022. This Request for Information (RFI) follows the "Incentives, Infrastructure, and Research and Development Needs to Support a Strong Domestic Semiconductor Industry" RFI issued by the U.S. Department of Commerce (the Department) on January 24, 2022, prior to enactment of the CHIPS Act of 2022. On September 6, 2022, the Department released "A Strategy for the CHIPS for America Fund," describing the Department's implementation strategy for the funds Congress appropriated to catalyze long-term growth in the domestic semiconductor industry. This strategy was informed in part by the information received in response to the January 2022 RFI. Responses to this RFI, considered alongside responses to the prior RFI, will further inform the planning of the CPO for the implementation of these programs.

DATES: Comments must be received by 5:00 PM Eastern time on [INSERT DATE 30

DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Written comments in response to this RFI should be submitted in accordance with the instructions in the ADDRESSES and SUPPLEMENTARY INFORMATION sections below.

ADDRESSES: To respond to this RFI, please submit electronic public comments via the Federal e-Rulemaking Portal.

1. Go to www.regulations.gov and enter DOC-2022-0001 in the search field,
2. Click the "Comment Now!" icon, complete the required fields, and
3. Enter or attach your comments.

Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered.

Information submitted in response to this request may contain business proprietary information, which will not be published and will be protected from disclosure, provided the submitters follow the instructions in SUPPLEMENTARY INFORMATION for submitting confidential business information.

Comments containing references, studies, research, and other empirical data that are not widely published should include electronic copies of the referenced materials.

For Public Meetings/Webcast:

The CPO may hold future workshops to explore in more detail questions raised in the RFI. Notice and details about any potential future workshop dates, registration deadlines, and other related information will be announced at www.chips.gov.

FOR FURTHER INFORMATION CONTACT: For questions about this Notice, please contact Sam Marullo at 202-482-3844 or email RFI@chips.gov. Please direct media inquiries to the CHIPS Press Team at press@chips.gov.

SUPPLEMENTARY INFORMATION:

Background

The CPO is currently working to implement programs authorized by Title XCIX of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, 15 U.S.C. 4651 *et seq.*, as amended by sections 103 and 105 of the CHIPS Act of 2022, with the goal of releasing an initial funding document for the semiconductor incentives program within six months of the passage of the CHIPS Act of 2022.

The Department of Commerce published an RFI in January 2022 seeking to inform the planning of the CHIPS Programs.[1] However, the CHIPS Act of 2022 subsequently amended the authorizing legislation for these programs in several areas, including:

- Permitting incentives in the form of loans, loan guarantees, or other transactions,
- Expanding eligibility for CHIPS incentives to include facilities and equipment for the fabrication, assembly, testing, production, or research and development of materials used to manufacture semiconductors and semiconductor manufacturing equipment,
- Requiring applicants to provide plans to identify and mitigate relevant semiconductor supply chain security risks and policies and procedures to combat cloning, counterfeiting, and relabeling,
- Establishing an expansion clawback that prohibits CHIPS incentive recipients from investing in certain projects in countries of concern,
- Creating taxpayer protections to prevent recipients from spending CHIPS funds on stock buybacks or dividends, and
- Directing analyses of certain diversity, equity, and inclusion elements of the CHIPS programs.

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[1] *Incentives, Infrastructure, and Research and Development Needs to Support a Strong Domestic Semiconductor Industry, 87 FR 3497* (January 24, 2022), https://www.federalregister.gov/d/2022-01305.

The CPO is issuing this RFI to inform its consideration and implementation of these amended sections.

Specific Requests for Information

The following statements and questions cover the major topic areas about which the CPO seeks comment. They are not intended to limit the topics that may be addressed. Responses may include any topic believed to inform U.S. Government efforts in developing recommendations for supporting the growth and sustainment of a robust domestic semiconductor manufacturing sector to meet the current and future needs of the public and private sectors, regardless of whether the topic is included in this document.

Respondents are encouraged to respond to any or all of the following questions and topic areas, and may address related topics. Your comments should indicate which questions or topics you are addressing. Responses may include estimates, which should be designated as such. Your responses may include supporting data and examples. If your response relies on publications or studies, please attach them. Respondents may organize their submissions in response to this RFI in any manner.

The CPO is requesting information related to the following topics:

Use of grants, loans, and loan guarantees

1. The Department may allocate up to $6 billion out of the $39 billion of total incentives to support loans and loan guarantees to covered entities. This $6 billion has a significant multiplier effect: the principal amount of financing available through loans and loan guarantees could be leveraged to support up to $75 billion in loans and loan

guarantees. This leverage will help the CPO achieve the needed scale of investment by facilitating additional private capital and providing access to debt for companies with reasonable prospects for repayment. Applicants will be encouraged to consider loans or loan guarantees as part of their federal assistance application package. Which types of companies in the supply chain would benefit most from the use of the loans or loan guarantees to supplement or in lieu of CHIPS grants?

2. How should CHIPS financial assistance (grants, loans and/or loan guarantees) be designed to be additive to, rather than a substitute for, private sector equity or debt capital?

3. What information is available on how foreign and domestic companies engaged in semiconductor manufacturing or suppliers to that industry evaluate whether to invest in a discrete project – for example, through internal rates of return (IRR)? Do evaluations and IRRs differ by producer, project, technology, or segment of industry?

4. What debt/equity ratios have semiconductor manufacturers or suppliers used in previous projects that are individually financed?

5. Does the industry, including foreign and domestic firms, finance semiconductor manufacturing or supplier investments on a limited recourse or nonrecourse project finance basis? What proportion of investments are financed this way?

6. How does access to debt and capital markets differ for companies across the semiconductor sector? Which parts of the sector struggle to access debt and equity capital?

Financial assistance for upstream suppliers and materials used to manufacture semiconductors

7. For purposes of this set of questions, the upstream supply chain refers to companies that provide materials (including minerals, chemicals, slurries, gases,

photomasks, 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%, would suppliers be able to keep pace? Please specify in terms of categories like industrial gases, raw materials, specialty chemicals, wafers, photoresists, and/or photomasks.

8. 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?

9. 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 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?

10. How are upstream suppliers concentrated geographically? Are any concentrated in a manner that could constrain the ability to expand semiconductor manufacturing?

11. Which materials or equipment critical to semiconductor production are only or predominately available from a single source?

12. How do upstream suppliers work with fabs on new facility proposals? What types of agreements or commitments do fabs offer upstream suppliers to co-locate with new

construction?

13. What have been the biggest supply chain bottlenecks for U.S. semiconductor fabs over the past five years?

Intellectual property

14. The CHIPS Act of 2022 requires that applicants submit "policies and procedures to combat cloning, counterfeiting, and relabeling of semiconductors." Are there standard policies and procedures that companies or industry groups use to achieve this goal? Which industry or publicly defined standards should be used to measure the effectiveness of efforts to combat cloning, counterfeiting, or relabeling?

Expansion clawback

15. The Secretary has authority, in consultation with the Secretary of Defense and the Director of National Intelligence, to define the terms "semiconductor manufacturing" and "semiconductor manufacturing capacity." To ensure effective limits on manufacturing in foreign countries of concern – while balancing the interests of potential eligible CHIPS applicants that may have existing legacy facilities – what types of activities would need to be included under the scope of these terms? How do industry members define the terms in trade usage?

16. What considerations are relevant in determining what memory, analog, packaging, and other technologies should be considered equivalent to 28 nm logic chips?

17. Given the complexities in chipmakers determining where their product might eventually reach its end-use, how can the CPO best enforce the requirement that a proposed investment "predominately serve[s] the market" of the foreign country?

Taxpayer protections

18. The CPO has committed to prioritizing companies that are dedicated to making investments in manufacturing, innovation, and workers. Are there types of investments and/or pre-commitments that data suggest have been most effective in promoting inclusive economic growth for workers and communities?

19. The CPO intends to preference companies which commit not to engage in stock buybacks with non-CHIPS funds. What terms and length should the CPO seek in such a commitment and should the commitment extend to any forms of capital distribution beyond buybacks? What types of existing buyback programs or programs tailored to prevent dilution from the award of employee stock compensation exist within the industry?

20. Should the CPO consider companies' existing capital allocation strategies in formulating the standards it will apply to its evaluation of stock buybacks and the payment of dividends, and if so, how?

Opportunity and Inclusion

21. What are the primary barriers to entry for individuals from underserved communities seeking employment in the industry, including economically disadvantaged individuals, women, people of color, veterans, disabled individuals, people without college degrees, and people in rural communities? Do the barriers differ by job type? By community? By geography?

22. What policies have been successful in ensuring that job opportunities are good quality and available to and filled by a diverse pool of workers? Does industry currently offer wrap-around services to employees: childcare, paid leave, transportation, etc.? Why or why not?

23. What actions can industry take to promote diversity, equity, and inclusion in the projects that receive CHIPS incentives? What actions is industry already taking to

promote diversity, equity, and inclusion? In responding, please consider inclusion broadly, such as women, people of color, veterans, disabled individuals, people without college degrees, and people in rural communities.

24. What policies have proven effective in providing opportunities for small and underrepresented businesses including minority-owned, women-owned and veteran-owned businesses and rural businesses. Which tactics are most effective in creating opportunities in fab constriction? The production supply chain? R&D?

25. What actions can the CPO take to ensure that the implementation of the CHIPS incentive programs is equitable and inclusive?

Other

26. What other information should inform the CPO's implementation of the CHIPS incentive programs?

27. What data will be important for the agency to collect to build evidence on the effectiveness of the CHIPS program? What are potential data sources?

Requirements for Written Comments

Anyone submitting business confidential information should clearly identify the business confidential portion at the time of submission, file a statement justifying nondisclosure and referring to the specific legal authority claimed, and provide a non-confidential version of the submission. Users submitting a form that contains business confidential information will need to submit a non-confidential version of the same form that does not contain the confidential business information. The non-confidential version of the submission will be placed in the public file on https://www.regulations.gov. For comments submitted electronically containing business confidential information, the file name of the business confidential version should begin with the characters "BC." Any

page containing business confidential information must be clearly marked "BUSINESS CONFIDENTIAL" on the top of that page. The non-confidential version must be clearly marked "PUBLIC." The file name of the non-confidential version should begin with the character "P." The "BC" and "P" should be followed by the name of the person or entity submitting the comments.

All relevant non-confidential comments, including attachments and other supporting materials, received in response to the RFI will generally be made publicly available on www.regulations.gov.

Alicia Chambers,
NIST Executive Secretariat.

[FR Doc. 2022-22158 Filed: 10/11/2022 8:45 am; Publication Date: 10/12/2022]