

**(2) Commitments**

In creating and sustaining a common funding mechanism described in paragraph (1), the Secretary of State should promote efforts among foreign partners to—

(A) establish transparency requirements for any subsidies or other financial benefits (including revenue foregone) provided to semiconductor firms located in or outside such countries;

(B) establish consistent policies with respect to countries that—

(i) are not participating in the common funding mechanism; and

(ii) do not meet transparency requirements established under subparagraph (A);

(C) promote harmonized treatment of semiconductor and verification processes for items being exported to a country considered a national security risk by a country participating in the common funding mechanism;

(D) establish consistent policies and common external policies to address nonmarket economies as the behavior of such countries pertains to semiconductors;

(E) align policies on supply chain integrity and semiconductor security, including with respect to protection and enforcement of intellectual property rights; and

(F) promote harmonized foreign direct investment screening measures and export control policies with respect to semiconductors to align with national, multilateral, and plurilateral security priorities.

**(c) Notifications to be provided by the Fund****(1) In general**

Not later than 15 days prior to the Fund making a financial commitment associated with the provision of expenditures under subsection (a)(4)(A) in an amount in excess of \$1,000,000, the Secretary of State shall submit to the appropriate committees of Congress report in writing that contains the information required by paragraph (2).

**(2) Information required**

The information required by this subsection includes—

(A) the amount of each such expenditure;

(B) an identification of the recipient or beneficiary; and

(C) a description of the project or activity and the purpose to be achieved by an expenditure of the Fund.

**(3) Arrangements or agreements**

The Secretary of State shall notify the appropriate committees of Congress not later than 30 days after entering into a new bilateral or multilateral arrangement or agreement described in subsection (a)(4)(B).

(Pub. L. 116–283, div. H, title XCIX, §9905, Jan. 1, 2021, 134 Stat. 4854; Pub. L. 118–31, div. F, title LXVII, §6707(b)(1)(B), Dec. 22, 2023, 137 Stat. 1018.)

**Editorial Notes**

## AMENDMENTS

2023—Subsecs. (c), (d). Pub. L. 118–31 redesignated subsec. (d) as (c) and struck out former subsec. (c)

which required the Secretary of State to report to Congress annually on the implementation of this section.

**§ 4656. Advanced microelectronics research and development****(a) Subcommittee on microelectronics leadership****(1) Establishment required**

The President shall establish in the National Science and Technology Council a subcommittee on matters relating to leadership and competitiveness of the United States in microelectronics technology and innovation (in this section referred to as the “Subcommittee”).

**(2) Membership**

The Subcommittee shall be composed of the following members:

(A) The Secretary of Defense.

(B) The Secretary of Energy.

(C) The Director of the National Science Foundation.

(D) The Secretary of Commerce.

(E) The Secretary of State.

(F) The Secretary of Homeland Security.

(G) The United States Trade Representative.

(H) The Director of National Intelligence.

(I) The heads of such other departments and agencies of the Federal Government as the President determines appropriate.

**(3) Duties**

The duties of the Subcommittee are as follows:

**(A) National strategy on microelectronics research****(i) In general**

In consultation with the advisory committee established in (b), and other appropriate stakeholders in the microelectronics industry and academia, the Subcommittee shall develop a national strategy on microelectronics research, development, manufacturing, and supply chain security to—

(I) accelerate the domestic development and production of microelectronics and strengthen the domestic microelectronics workforce; and

(II) ensure that the United States is a global leader in the field of microelectronics research and development.

**(ii) Elements**

The strategy developed under this subparagraph shall address—

(I) activities that may be carried out to strengthen engagement and outreach between the Department of Defense and industry, academia, international partners of the United States, and other departments and agencies of the Federal Government on issues relating to microelectronics;

(II) priorities for research and development to accelerate the advancement and adoption of innovative microelectronics and new uses of microelectronics and components, including for technologies

based on organic and inorganic materials;

(III) the role of diplomacy and trade in maintaining the position of the United States as a global leader in the field of microelectronics;

(IV) the potential role of a Federal laboratory, center, or incubator exclusively focused on the research and development of microelectronics, as described in section 231(b)(15) of the National Defense Authorization Act for Fiscal Year 2017 (as added by section 276 of this Act) in carrying out the strategy and plan required under this subparagraph; and

(V) such other activities as the Subcommittee determines may be appropriate to overcome future challenges to the innovation, competitiveness, supply chain integrity, and workforce development of the United States in the field of microelectronics.

**(B) Fostering coordination of research and development**

The Subcommittee shall coordinate microelectronics related research, development, manufacturing, and supply chain security activities and budgets of Federal agencies and ensure such activities are consistent with the strategy required under subparagraph (A).

**(C) Reporting and updates**

**(i) Progress briefing**

Not later than one year after January 1, 2021, the President shall provide to the appropriate committees of Congress a briefing on the progress of the Subcommittee in developing the strategy required under subparagraph (A).

**(ii) Strategy update**

Not less frequently than once every 5 years, the Subcommittee shall update the strategy developed under subparagraph (A) and submit the revised strategy to the appropriate committees of Congress.

**(4) Sunset**

The Subcommittee shall terminate on the date that is 10 years after January 1, 2021.

**(b) Industrial advisory committee**

**(1) Establishment**

The Secretary of Commerce, in consultation with the Secretary of Defense, the Secretary of Energy, and the Secretary of Homeland Security, shall establish an advisory committee to be composed of not fewer than 12 members, including representatives of industry, federal laboratories, and academic institutions, who are qualified to provide advice to the United States Government on matters relating to microelectronics research, development, manufacturing, and policy.

**(2) Duties**

The advisory committee shall assess and provide guidance to the United States Government on—

(A) science and technology needs of the nation's domestic microelectronics industry;

(B) the extent to which the strategy developed under subsection (a)(3) is helping maintain United States leadership in microelectronics manufacturing;

(C) assessment of the research and development programs and activities authorized under this section; and

(D) opportunities for new public-private partnerships to advance microelectronics research, development, and domestic manufacturing.

**(3) FACA exemption**

Section 14 of the Federal Advisory Committee Act (5 U.S.C. App.)<sup>1</sup> shall not apply to the advisory committee established under this subsection.

**(c) National semiconductor technology center**

**(1) Establishment**

Subject to the availability of appropriations for such purpose, the Secretary of Commerce, in collaboration with the Secretary of Defense, shall establish a national semiconductor technology center to conduct research and prototyping of advanced semiconductor technology and grow the domestic semiconductor workforce to strengthen the economic competitiveness and security of the domestic supply chain. Such center shall be operated as a public private-sector consortium with participation from the private sector, the Department of Energy, and the National Science Foundation. The Secretary may make financial assistance awards, including construction awards, in support of the national semiconductor technology center.

**(2) Functions**

The functions of the center established under paragraph (1) shall be as follows:

(A) To conduct advanced semiconductor manufacturing, design and packaging research, and prototyping that strengthens the entire domestic ecosystem and is aligned with the strategy required under subsection (a)(3)(A) with emphasis on the following:

(i) Semiconductor advanced test, assembly, and packaging capability in the domestic ecosystem.

(ii) Materials characterization, instrumentation and testing for next generation microelectronics.

(iii) Virtualization and automation of maintenance of semiconductor machinery.

(iv) Metrology for security and supply chain verification.

(B) To establish and capitalize an investment fund, in partnership with the private sector, to support startups and collaborations between startups, academia, established companies, and new ventures, with the goal of commercializing innovations that contribute to the domestic semiconductor ecosystem, including—

(i) advanced metrology and characterization for manufacturing of microchips using 3 nanometer transistor processes or more advanced processes; and

<sup>1</sup> See References in Text note below.

(ii) metrology for security and supply chain verification.

(C) To work with the Secretary of Labor, the Director of the National Science Foundation, the Secretary of Energy, the private sector, institutions of higher education, and workforce training entities to incentivize and expand geographically diverse participation in graduate, undergraduate, and community college programs relevant to microelectronics, including through—

(i) the development and dissemination of curricula and research training experiences; and

(ii) the development of workforce training programs and apprenticeships in advanced microelectronic design, research, fabrication, and packaging capabilities.

**(d) National Advanced Packaging Manufacturing Program**

Subject to the availability of appropriations for such purpose, the Secretary of Commerce shall establish a National Advanced Packaging Manufacturing Program led by the Director of the National Institute of Standards and Technology, in coordination with the national semiconductor technology center established under subsection (c), to strengthen semiconductor advanced test, assembly, and packaging capability in the domestic ecosystem, and which shall coordinate with a Manufacturing USA institute established under subsection (f), if applicable. The Director may make financial assistance awards, including construction awards, in support of the National Advanced Packaging Manufacturing Program.

**(e) Microelectronics research at the National Institute of Standards and Technology**

Subject to the availability of appropriations for such purpose, the Director of the National Institute of Standards and Technology shall carry out a microelectronics research program to enable advances and breakthroughs in measurement science, standards, material characterization, instrumentation, testing, and manufacturing capabilities that will accelerate the underlying research and development for metrology of next generation microelectronics and ensure the competitiveness and leadership of the United States within this sector.

**(f) Creation of a Manufacturing USA institute**

Subject to the availability of appropriations for such purpose, the Director of the National Institute of Standards and Technology may establish not more than 3 Manufacturing USA Institutes described in section 278s(d) of this title that are focused on semiconductor manufacturing. The Secretary of Commerce may award financial assistance to any Manufacturing USA Institute for work relating to semiconductor manufacturing. Such institutes may emphasize the following:

(1) Research to support the virtualization and automation of maintenance of semiconductor machinery.

(2) Development of new advanced test, assembly and packaging capabilities.

(3) Developing and deploying educational and skills training curricula needed to support

the industry sector and ensure the United States can build and maintain a trusted and predictable talent pipeline.

**(g) Domestic production requirements**

The head of any executive agency receiving funding under this section shall develop policies to require domestic production, to the extent possible, for any intellectual property resulting from microelectronics research and development conducted as a result of such funding and domestic control requirements to protect any such intellectual property from foreign adversaries.

**(h) Construction projects**

Section 3212 of title 42 shall apply to a construction project that receives financial assistance under this section.

(Pub. L. 116–283, div. H, title XCIX, §9906, Jan. 1, 2021, 134 Stat. 4856; Pub. L. 117–167, div. A, §103(c), Aug. 9, 2022, 136 Stat. 1388.)

**Editorial Notes**

REFERENCES IN TEXT

Section 231(b)(15) of the National Defense Authorization Act for Fiscal Year 2017 (as added by section 276 of this Act), referred to in subsec. (a)(3)(A)(ii)(IV), is section 231(b)(15) of Pub. L. 114–328, as added by section 276 of Pub. L. 116–283, which is set out in a note under section 2302 of Title 10, Armed Forces.

Section 14 of the Federal Advisory Committee Act, referred to in subsec. (b)(3), is section 14 of Pub. L. 92–463, which was set out in the Appendix to Title 5, Government Organization and Employees, and was repealed and restated as section 1013 of Title 5 by Pub. L. 117–286, §§3(a), 7, Dec. 27, 2022, 136 Stat. 4204, 4361.

AMENDMENTS

2022—Subsec. (a)(3)(A)(ii)(II). Pub. L. 117–167, §103(c)(1)(A), inserted “, including for technologies based on organic and inorganic materials” after “components”.

Subsec. (a)(3)(A)(ii)(V). Pub. L. 117–167, §103(c)(1)(B), substituted “supply chain integrity, and workforce development” for “supply chain integrity”.

Subsec. (c)(1). Pub. L. 117–167, §103(c)(2)(A), inserted “and grow the domestic semiconductor workforce” after “prototyping of advanced semiconductor technology” and inserted at end “The Secretary may make financial assistance awards, including construction awards, in support of the national semiconductor technology center.”

Subsec. (c)(2)(B). Pub. L. 117–167, §103(c)(2)(B)(i), inserted “and capitalize” before “an investment fund” in introductory provisions.

Subsec. (c)(2)(C). Pub. L. 117–167, §103(c)(2)(B)(ii), added subpar. (C) and struck out former subpar. (C) which read as follows: “To work with the Secretary of Labor, the Director of the National Science Foundation, the Secretary of Energy, the private sector, institutions of higher education, and workforce training entities to incentivize and expand participation in graduate and undergraduate programs, and develop workforce training programs and apprenticeships, in advanced microelectronic design, research, fabrication, and packaging capabilities.”

Subsec. (d). Pub. L. 117–167, §103(c)(3), substituted “a Manufacturing USA institute” for “the Manufacturing USA institute” and inserted at end “The Director may make financial assistance awards, including construction awards, in support of the National Advanced Packaging Manufacturing Program.”

Subsec. (f). Pub. L. 117–167, §103(c)(4), substituted, in introductory provisions, “not more than 3 Manufacturing USA Institutes” for “a Manufacturing USA institute”, “are focused on semiconductor manufac-

turing. The Secretary of Commerce may award financial assistance to any Manufacturing USA Institute for work relating to semiconductor manufacturing.” for “is focused on semiconductor manufacturing.”, and “Such institutes may emphasize” for “Such institute may emphasize”.

Subsec. (h). Pub. L. 117–167, §103(c)(5), added subsec. (h).

#### § 4657. Prohibition relating to foreign entities of concern

None of the funds authorized to be appropriated to carry out this chapter may be provided to a foreign entity of concern.

(Pub. L. 116–283, div. H, title XCIX, §9907, Jan. 1, 2021, 134 Stat. 4860.)

#### Editorial Notes

##### REFERENCES IN TEXT

This chapter, referred to in text, was in the original “this subtitle” and was translated as reading “this title”, meaning title XCIX of div. H of Pub. L. 116–283, to reflect the probable intent of Congress.

#### § 4658. Defense Production Act of 1950 efforts

##### (a) In general

Not later than 180 days after January 1, 2021, the President shall submit to Congress a report on a plan of action for any use of authorities available in title III of the Defense Production Act of 1950 (50 U.S.C. 4531 et seq.) to establish or enhance a domestic production capability for microelectronics technologies and related technologies, subject to—

(1) the availability of appropriations for that purpose; and

(2) a determination made under the plan pursuant to such title III that such technologies are essential to the national defense and that domestic industrial capabilities are insufficient to meet these needs.

##### (b) Coordination

The President shall develop the plan of action required by subsection (a) in consultation with any relevant head of a Federal agency, an advisory committee established under section 708(d) of the Defense Production Act of 1950 (50 U.S.C. 4558(d)), and appropriate stakeholders in the private sector.

(Pub. L. 116–283, div. H, title XCIX, §9908, Jan. 1, 2021, 134 Stat. 4860.)

#### Editorial Notes

##### REFERENCES IN TEXT

The Defense Production Act of 1950, referred to in subsec. (a), is act Sept. 8, 1950, ch. 932, 64 Stat. 798, which is classified principally to chapter 55 (§4501 et seq.) of Title 50, War and National Defense. Title III of the Act is classified generally to subchapter II (§4531 et seq.) of chapter 55. For complete classification of this Act to the Code, see section 4501 of Title 50 and Tables.

#### § 4659. Additional authorities

##### (a) In general

In carrying out the responsibilities of the Department of Commerce under this chapter, the Secretary may—

(1) enter into agreements, including contracts, grants and cooperative agreements,

and other transactions as may be necessary and on such terms as the Secretary considers appropriate;

(2) make advance payments under agreements and other transactions authorized under paragraph (1) without regard to section 3324 of title 31;

(3) require a person or other entity to make payments to the Department of Commerce upon application and as a condition for receiving support through an award of assistance or other transaction;

(4) procure temporary and intermittent services of experts and consultants in accordance with section 3109 of title 5;

(5) notwithstanding section 3104 of title 5 or the provisions of any other law relating to the appointment, number, classification, or compensation of employees, make appointments of scientific, engineering, and professional personnel, and fix the basic pay of such personnel at a rate to be determined by the Secretary at rates not in excess of the highest total annual compensation payable at the rate determined under section 104 of title 3, except that the Secretary shall appoint not more than 25 personnel under this paragraph;

(6) with the consent of another Federal agency, enter into an agreement with that Federal agency to use, with or without reimbursement, any service, equipment, personnel, or facility of that Federal agency; and

(7) establish such rules, regulations, and procedures as the Secretary considers appropriate.

##### (b) Requirement

Any funds received from a payment made by a person or entity pursuant to subsection (a)(3) shall be credited to and merged with the account from which support to the person or entity was made<sup>1</sup>

##### (c) Lead Federal agency and cooperating agencies

###### (1) Definition

In this subsection, the term “lead agency” has the meaning given the term in section 111 of NEPA (42 U.S.C. 4336e).

###### (2) Option to serve as lead agency

With respect to a covered activity that is a major Federal action under NEPA, and with respect to which the Department of Commerce is authorized or required by law to issue an authorization or take action for or relating to that covered activity, the Department of Commerce shall have the first right to serve as the lead agency with respect to that covered activity under NEPA.

##### (d) Categorical exclusions

###### (1) Establishment of categorical exclusions

Each of the following categorical exclusions is established for the National Institute of Standards and Technology with respect to a covered activity and, beginning on October 2, 2024, is available for use by the Secretary with respect to a covered activity:

(A) Categorical exclusion 17.04.d (relating to the acquisition of machinery and equip-

<sup>1</sup> So in original. Probably should be followed by a period.