Secretary of Commerce, shall ensure any partner government maintains export control licensing policies on semiconductor technology substantively equivalent to the United States with respect to restrictions on such exports to the People's Republic of China.

(b) Common funding mechanism for development and adoption of measurably secure semiconductors and measurably secure semiconductors supply chains

(1) In general

The Secretary of State, in consultation with the Secretary of Commerce, the Secretary of Defense, the Secretary of Homeland Security, the Secretary of the Treasury, the Secretary of Energy, and the Director of National Intelligence, is authorized to establish a common funding mechanism, in coordination with foreign partners, that uses amounts from the Fund to support the development and adoption of secure semiconductors and secure semiconductors supply chains, including for use in research and development collaborations among partner countries participating in the common funding mechanism. In establishing and sustaining a common funding mechanism, the Secretary of State should leverage United States funding in order to secure contributions and commitments from trusted foreign partners, including cost sharing and other cooperative measures leading to the development and adoption of secure semiconductors and secure microelectronic supply chains.

(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 semiconductors 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 semiconductors 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 semiconductors 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) Annual report to Congress

Not later than one year after January 1, 2021, and annually thereafter for each fiscal year during which amounts in the Fund are available under subsection (a)(4), the Secretary of State shall submit to the appropriate committees of Congress a report on the status of the implementation of this section that includes a description of—

(1) any commitments made by the governments of countries that have entered into an arrangement or agreement with the United States to provide funding for the common funding mechanism described in subsection (b)(1) and the specific amount so committed and other cooperative measures being taken by such countries as part of the common funding mechanism;

(2) the criteria established for expenditure of funds through the common funding mechanism;

(3) how, and to whom, amounts have been expended from the Fund and a description of progress made utilizing the Fund to support the objectives described in subsection (b)(1);

(4) amounts remaining in the Fund;

(5) the progress of the Secretary of State toward entering into an arrangement or agreement with the governments of countries that are partners of the United States to participate in the common funding mechanism and the commitments described in subsection (b)(2); and

(6) any additional authorities needed to enhance the effectiveness of the Fund in achieving the security goals of the United States.

(d) 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.)

§ 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 sub-

committee 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;

(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, and supply chain integrity 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.) 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 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.

(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 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

(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 participation in graduate and undergraduate programs, and develop 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 the Manufacturing USA institute established under subsection (f), if applicable.

(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 a Manufacturing USA institute described in section 278s(d) of this title that is focused on semiconductor manufacturing. Such institute 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.

(Pub. L. 116–283, div. H, title XCIX, § 9906, Jan. 1, 2021, 134 Stat. 4856.)

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 is set out in the Appendix to Title 5, Government Organization and Employees.

§ 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.)