

116TH CONGRESS  
2D SESSION

# S. 4982

To provide incentives for the production of semiconductors for the United States, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

DECEMBER 8, 2020

Mr. CORNYN (for himself, Mr. WARNER, Mr. SCHUMER, and Mr. COTTON) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

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## A BILL

To provide incentives for the production of semiconductors for the United States, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Creating Helpful In-  
5 centives for Producing Semiconductors for America and  
6 Foundries Act”.

7 **SEC. 2. DEFINITIONS.**

8 In this Act:

9 (1) The term “appropriate committees of Con-  
10 gress” means—

1 (A) the Select Committee on Intelligence,  
2 the Committee on Energy and Natural Re-  
3 sources, the Committee on Commerce, Science,  
4 and Transportation, the Committee on Foreign  
5 Relations, the Committee on Armed Services,  
6 the Committee on Appropriations, the Com-  
7 mittee on Banking, Housing, and Urban Af-  
8 fairs, the Committee on Homeland Security and  
9 Governmental Affairs, and the Committee on  
10 Finance of the Senate; and

11 (B) the Permanent Select Committee on  
12 Intelligence, the Committee on Energy and  
13 Commerce, the Committee on Foreign Affairs,  
14 the Committee on Armed Services, the Com-  
15 mittee on Science, Space, and Technology, the  
16 Committee on Appropriations, the Committee  
17 on Financial Services, the Committee on Home-  
18 land Security, and the Committee on Ways and  
19 Means of the House of Representatives.

20 (2) The term “covered entity” means a private  
21 entity, a consortium of private entities, or a consor-  
22 tium of public and private entities with a dem-  
23 onstrated ability to substantially finance, construct,  
24 expand, or modernize a facility relating to fabrica-

1 tion, assembly, testing, advanced packaging, or re-  
2 search and development of semiconductors.

3 (3) The term “covered incentive”—

4 (A) means an incentive offered by a gov-  
5 ernmental entity to a covered entity for the pur-  
6 poses of constructing within the jurisdiction of  
7 the governmental entity, or expanding or mod-  
8 ernizing an existing facility within that jurisdic-  
9 tion, a facility described in paragraph (2); and

10 (B) a workforce-related incentive (includ-  
11 ing a grant agreement relating to workforce  
12 training or vocational education), any conces-  
13 sion with respect to real property, funding for  
14 research and development with respect to semi-  
15 conductors, and any other incentive determined  
16 appropriate by the Secretary, in consultation  
17 with the Secretary of State.

18 (4) The term “person” includes an individual,  
19 partnership, association, corporation, organization,  
20 or any other combination of individuals.

21 (5) The term “foreign entity”—

22 (A) means—

23 (i) a government of a foreign country  
24 and a foreign political party;

1 (ii) a natural person who is not a law-  
2 ful permanent resident of the United  
3 States, citizen of the United States, or any  
4 other protected individual (as such term is  
5 defined in section 274B(a)(3) of the Immi-  
6 gration and Nationality Act (8 U.S.C.  
7 1324b(a)(3))); or

8 (iii) a partnership, association, cor-  
9 poration, organization, or other combina-  
10 tion of persons organized under the laws of  
11 or having its principal place of business in  
12 a foreign country; and

13 (B) includes—

14 (i) any person owned by, controlled  
15 by, or subject to the jurisdiction or direc-  
16 tion of an entity listed in subparagraph  
17 (A);

18 (ii) any person, wherever located, who  
19 acts as an agent, representative, or em-  
20 ployee of an entity listed in subparagraph  
21 (A);

22 (iii) any person who acts in any other  
23 capacity at the order, request, or under the  
24 direction or control, of an entity listed in  
25 subparagraph (A), or of a person whose

1 activities are directly or indirectly super-  
2 vised, directed, controlled, financed, or  
3 subsidized in whole or in majority part by  
4 an entity listed in subparagraph (A);

5 (iv) any person who directly or indi-  
6 rectly through any contract, arrangement,  
7 understanding, relationship, or otherwise,  
8 owns 25 percent or more of the equity in-  
9 terests of an entity listed in subparagraph  
10 (A);

11 (v) any person with significant re-  
12 sponsibility to control, manage, or direct  
13 an entity listed in subparagraph (A);

14 (vi) any person, wherever located, who  
15 is a citizen or resident of a country con-  
16 trolled by an entity listed in subparagraph  
17 (A); or

18 (vii) any corporation, partnership, as-  
19 sociation, or other organization organized  
20 under the laws of a country controlled by  
21 an entity listed in subparagraph (A).

22 (6) The term “foreign entity of concern” means  
23 any foreign entity that is—

24 (A) designated as a foreign terrorist orga-  
25 nization by the Secretary of State under section

1           219 of the Immigration and Nationality Act (8  
2           U.S.C. 1189);

3           (B) included on the list of specially des-  
4           ignated nationals and blocked persons main-  
5           tained by the Office of Foreign Assets Control  
6           of the Department of the Treasury;

7           (C) owned by, controlled by, or subject to  
8           the jurisdiction or direction of a government of  
9           a foreign country that is listed in section 2533c  
10          of title 10, United States Code; or

11          (D) alleged by the Attorney General to  
12          have been involved in activities for which a con-  
13          viction was obtained under—

14               (i) chapter 37 of title 18, United  
15               States Code (commonly known as the “Es-  
16               pionage Act”) (18 U.S.C. 792 et seq.);

17               (ii) section 951 or 1030 of title 18,  
18               United States Code;

19               (iii) chapter 90 of title 18, United  
20               States Code (commonly known as the  
21               “Economic Espionage Act of 1996”);

22               (iv) the Arms Export Control Act (22  
23               U.S.C. 2751 et seq.);

1 (v) section 224, 225, 226, 227, or 236  
2 of the Atomic Energy Act of 1954 (42  
3 U.S.C. 2274–2278; 2284);

4 (vi) the Export Control Reform Act of  
5 2018 (50 U.S.C. 4801 et seq.); or

6 (vii) the International Economic  
7 Emergency Powers Act (50 U.S.C. 1701 et  
8 seq.); or

9 (E) determined by the Secretary, in con-  
10 sultation with the Secretary of Defense and the  
11 Director of National Intelligence, to be engaged  
12 in unauthorized conduct that is detrimental to  
13 the national security or foreign policy of the  
14 United States under this Act.

15 (7) The term “governmental entity” means a  
16 State or local government.

17 (8) The term “Secretary” means the Secretary  
18 of Commerce.

19 (9) The term “semiconductor” has the meaning  
20 given that term by the Secretary.

21 **SEC. 3. SEMICONDUCTOR INCENTIVES.**

22 (a) FINANCIAL ASSISTANCE PROGRAM.—

23 (1) IN GENERAL.—The Secretary shall establish  
24 in the Department of Commerce a program that, in  
25 accordance with the requirements of this section and

1 subject to the availability of appropriations for such  
2 purposes, provides Federal financial assistance to  
3 covered entities to incentivize investment in facilities  
4 and equipment in the United States for semicon-  
5 ductor fabrication, assembly, testing, advanced pack-  
6 aging, or research and development.

7 (2) PROCEDURE.—

8 (A) IN GENERAL.—A covered entity shall  
9 submit to the Secretary an application that de-  
10 scribes the project for which the covered entity  
11 is seeking financial assistance under this sec-  
12 tion.

13 (B) ELIGIBILITY.—In order for a covered  
14 entity to qualify for financial assistance under  
15 this section, the covered entity shall dem-  
16 onstrate to the Secretary, in the application  
17 submitted by the covered entity under subpara-  
18 graph (A), that—

19 (i) the covered entity has a docu-  
20 mented interest in constructing, expanding,  
21 or modernizing a facility described in para-  
22 graph (1); and

23 (ii) with respect to the project de-  
24 scribed in clause (i), the covered entity  
25 has—



1 (I) been offered a covered incen-  
2 tive;

3 (II) made commitments to work-  
4 er and community investment, includ-  
5 ing through—

6 (aa) training and education  
7 benefits paid by the covered enti-  
8 ty; and

9 (bb) programs to expand  
10 employment opportunity for eco-  
11 nomically disadvantaged individ-  
12 uals;

13 (III) secured commitments from  
14 regional educational and training enti-  
15 ties and institutions of higher edu-  
16 cation to provide workforce training,  
17 including programming for training  
18 and job placement of economically dis-  
19 advantaged individuals; and

20 (IV) an executable plan to sus-  
21 tain the facility described in clause (i)  
22 without additional Federal financial  
23 assistance under this subsection for  
24 facility support.

1 (C) CONSIDERATIONS FOR REVIEW.—With  
2 respect to the review by the Secretary of an ap-  
3 plication submitted by a covered entity under  
4 subparagraph (A)—

5 (i) the Secretary may not approve the  
6 application unless the Secretary—

7 (I) confirms that the covered en-  
8 tity has satisfied the eligibility criteria  
9 under subparagraph (B);

10 (II) determines that the project  
11 to which the application relates is in  
12 the interest of the United States; and

13 (III) has notified the appropriate  
14 committees of Congress not later than  
15 15 days before making any commit-  
16 ment to provide a grant to any cov-  
17 ered entity that exceeds \$10,000,000;  
18 and

19 (ii) the Secretary may consider wheth-  
20 er—

21 (I) the covered entity has pre-  
22 viously received financial assistance  
23 made under this subsection;

24 (II) the governmental entity of-  
25 fering the applicable covered incentive

1 has benefitted from financial assist-  
2 ance previously provided under this  
3 subsection;

4 (III) the covered entity has dem-  
5 onstrated that they are responsive to  
6 the national security needs or require-  
7 ments established by the Intelligence  
8 Community (or an agency thereof),  
9 the National Nuclear Security Admin-  
10 istration, or the Department of De-  
11 fense; and

12 (IV) when practicable, a consor-  
13 tium that is considered a covered enti-  
14 ty includes a small business concern,  
15 as defined under section 3 of the  
16 Small Business Act (15 U.S.C. 632),  
17 notwithstanding section 121.103 of  
18 title 13, Code of Federal Regulations;  
19 and

20 (iii) the Secretary may not approve an  
21 application if the Secretary determines  
22 that the covered entity is a foreign entity  
23 of concern.

24 (D) RECORDS.—The Secretary may re-  
25 quest records and information from the appli-

1 cant to review the status of a covered entity.  
2 The applicant shall provide the records and in-  
3 formation requested by the Secretary.

4 (3) AMOUNT.—

5 (A) IN GENERAL.—The Secretary shall de-  
6 termine the appropriate amount and funding  
7 type for each financial assistance award made  
8 to a covered entity under this subsection.

9 (B) LARGER INVESTMENT.—Federal in-  
10 vestment in any individual project shall not ex-  
11 ceed \$3,000,000,000 unless the Secretary, in  
12 consultation with the Secretary of Defense and  
13 the Director of National Intelligence, rec-  
14 ommends to the President, and the President  
15 certifies and reports to the appropriate commit-  
16 tees of Congress, that a larger investment is  
17 necessary to—

18 (i) significantly increase the propor-  
19 tion of reliable domestic supply of semi-  
20 conductors relevant for national security  
21 and economic competitiveness that can be  
22 met through domestic production; and

23 (ii) meet the needs of national secu-  
24 rity.

1           (4) USE OF FUNDS.—A covered entity that re-  
2           ceives a financial assistance award under this sub-  
3           section may only use the financial assistance award  
4           amounts to—

5                   (A) finance the construction, expansion, or  
6                   modernization of a facility or equipment to be  
7                   used for semiconductors described in paragraph  
8                   (1), as documented in the application submitted  
9                   by the covered entity under paragraph (2)(B),  
10                  as determined necessary by the Secretary for  
11                  purposes relating to the national security and  
12                  economic competitiveness of the United States;

13                  (B) support workforce development for a  
14                  facility described in subparagraph (A);

15                  (C) support site development and mod-  
16                  ernization for a facility described in subpara-  
17                  graph (A); and

18                  (D) pay reasonable costs related to the op-  
19                  erating expenses for a facility described in sub-  
20                  paragraph (A), including specialized workforce,  
21                  essential materials, and complex equipment  
22                  maintenance, as determined by the Secretary.

23           (5) CLAWBACK.—

1 (A) TARGET DATES.—For all major  
2 awards to covered entities, the Secretary  
3 shall—

4 (i) determine target dates by which a  
5 project shall commence and complete; and

6 (ii) set these dates by the time of  
7 award.

8 (B) PROGRESSIVE RECOVERY FOR  
9 DELAYS.—If the project does not commence  
10 and complete by the set target dates in (A), the  
11 Secretary shall progressively recover up to the  
12 full amount of an award provided to a covered  
13 entity under this subsection.

14 (C) TECHNOLOGY CLAWBACK.—The Sec-  
15 retary shall recover the full amount of an award  
16 provided to a covered entity under this sub-  
17 section if, during the applicable term with re-  
18 spect to the award, the covered entity know-  
19 ingly engages in any joint research or tech-  
20 nology licensing effort—

21 (i) with a foreign entity of concern;

22 and

23 (ii) that relates to a technology or  
24 product that raises national security con-  
25 cerns, as determined by the Secretary and

1           communicated to the covered entity before  
2           engaging in such joint research or tech-  
3           nology licensing.

4           (D) WAIVER.—In the case of delayed  
5           projects, the Secretary may waive elements of  
6           the clawback provisions incorporated in each  
7           major award after—

8                   (i) making a formal determination  
9                   that circumstances beyond the ability of  
10                  the covered entity to foresee or control are  
11                  responsible for delays; and

12                   (ii) submitting congressional notifica-  
13                  tion.

14           (E) CONGRESSIONAL NOTIFICATION.—The  
15           Secretary shall notify appropriate committees of  
16           Congress—

17                   (i) of the clawback provisions attend-  
18                  ing each such major award; and

19                   (ii) of any waivers provided, not later  
20                  than 15 days after the date on which such  
21                  a waiver was provided.

22           (b) COORDINATION REQUIRED.—In carrying out the  
23           program established under subsection (a), the Secretary  
24           shall coordinate with the Secretary of State, the Secretary  
25           of Defense, the Secretary of Homeland Security, the Sec-

1   retary of Energy, and the Director of National Intel-  
2   ligence.

3       (c) GAO REVIEWS.—The Comptroller General of the  
4   United States shall—

5           (1) not later than 2 years after the date of dis-  
6   bursement of the first financial award under sub-  
7   section (a), and biennially thereafter for 10 years,  
8   conduct a review of the program established under  
9   subsection (a), which shall include, at a minimum—

10           (A) a determination of the number of in-  
11   stances in which financial assistance awards  
12   were provided under that subsection during the  
13   period covered by the review;

14           (B) an evaluation of how—

15           (i) the program is being carried out,  
16   including how recipients of financial assist-  
17   ance awards are being selected under the  
18   program; and

19           (ii) other Federal programs are lever-  
20   aged for manufacturing, research, and  
21   training to complement the financial assist-  
22   ance awards awarded under the program;  
23   and



1 (C) a description of the outcomes of  
2 projects supported by awards made under the  
3 program, including a description of—

4 (i) facilities described in subsection  
5 (a)(1) that were constructed, expanded, or  
6 modernized as a result of awards made  
7 under the program;

8 (ii) research and development carried  
9 out with awards made under the program;

10 (iii) workforce training programs car-  
11 ried out with awards made under the pro-  
12 gram, including efforts to hire individuals  
13 from disadvantaged populations; and

14 (iv) the impact of projects on the  
15 United States share of global microelec-  
16 tronics production; and

17 (2) submit to the appropriate committees of  
18 Congress the results of each review conducted under  
19 paragraph (1).

20 **SEC. 4. DEPARTMENT OF DEFENSE.**

21 (a) DEPARTMENT OF DEFENSE EFFORTS.—

22 (1) IN GENERAL.—Subject to the availability of  
23 appropriations for such purposes, the Secretary of  
24 Defense, in consultation with the Secretary of Com-  
25 merce, the Secretary of Energy, the Secretary of

1 Homeland Security, and the Director of National In-  
2 telligence, shall establish a public-private partnership  
3 through which the Secretary shall work to  
4 incentivize the formation of one or more consortia of  
5 companies (or other such partnerships of private-sec-  
6 tor entities, as appropriate) to ensure the develop-  
7 ment and production of measurably secure micro-  
8 electronics, including integrated circuits, logic de-  
9 vices, memory, and the packaging and testing prac-  
10 tices that support these microelectronic components  
11 by the Department of Defense, the intelligence com-  
12 munity, critical infrastructure sectors, and other na-  
13 tional security applications. Such incentives may in-  
14 clude the use of grants under section 3, and pro-  
15 viding incentives for the creation, expansion, or mod-  
16 ernization of one or more commercially competitive  
17 and sustainable microelectronics manufacturing or  
18 advanced research and development facilities in the  
19 United States.

20 (2) RISK MITIGATION REQUIREMENTS.—A par-  
21 ticipant in a consortium formed with incentives  
22 under paragraph (1)—

23 (A) shall have the potential to enable de-  
24 sign, perform fabrication, assembly, package, or  
25 test functions for microelectronics deemed crit-

1           ical to national security as defined by the Na-  
2           tional Security Advisor and the Secretary of  
3           Defense;

4           (B) may be a fabless company migrating  
5           its designs to the facility envisioned in para-  
6           graph (1) or migrating to an existing facility  
7           onshore;

8           (C) may be companies, including fabless  
9           companies and companies that procure large  
10          quantities of microelectronics, willing to co-in-  
11          vest to achieve the objectives set forth in para-  
12          graph (1);

13          (D) shall include management processes to  
14          identify and mitigate supply chain security  
15          risks; and

16          (E) shall be capable of providing microelec-  
17          tronic components that are consistent with ap-  
18          plicable measurably secure supply chain and  
19          operational security standards established under  
20          section 224(b) of the National Defense Author-  
21          ization Act for Fiscal Year 2020 (Public Law  
22          116–92).

23          (3) NATIONAL SECURITY CONSIDERATIONS.—  
24          The Secretary of Defense and the Director of Na-  
25          tional Intelligence shall select participants for each

1 consortium and or partnership formed with incen-  
2 tives under paragraph (1). In selecting such partici-  
3 pants, the Secretary and the Director may jointly  
4 consider whether the companies—

5 (A) have participated in previous programs  
6 and projects of the Department of Defense, De-  
7 partment of Energy, or the intelligence commu-  
8 nity, including—

9 (i) the Trusted Integrated Circuit pro-  
10 gram of the Intelligence Advanced Re-  
11 search Projects Activity;

12 (ii) trusted and assured microelec-  
13 tronics projects, as administered by the  
14 Department of Defense;

15 (iii) the Electronics Resurgence Initia-  
16 tive program of the Defense Advanced Re-  
17 search Projects Agency; or

18 (iv) relevant semiconductor research  
19 programs of the Advanced Research  
20 Projects Agency–Energy;

21 (B) have demonstrated an ongoing com-  
22 mitment to performing contracts for the De-  
23 partment of Defense and the intelligence com-  
24 munity;

1 (C) are approved by the Defense Counter-  
2 intelligence and Security Agency or the Office  
3 of the Director of National Intelligence as pre-  
4 senting an acceptable security risk, taking into  
5 account supply chain assurance vulnerabilities,  
6 counterintelligence risks, and any risks pre-  
7 sented by companies whose beneficial owners  
8 are located outside the United States; and

9 (D) are evaluated periodically for foreign  
10 ownership, control, or influence by a foreign en-  
11 tity of concern.

12 (4) NONTRADITIONAL DEFENSE CONTRACTORS  
13 AND COMMERCIAL ENTITIES.—Arrangements en-  
14 tered into to carry out paragraph (1) shall be in  
15 such form as the Secretary of Defense determines  
16 appropriate to encourage industry participation of  
17 nontraditional defense contractors or commercial en-  
18 tities and may include a contract, a grant, a cooper-  
19 ative agreement, a commercial agreement, the use of  
20 other transaction authority under section 2371 of  
21 title 10, United States Code, or another such ar-  
22 rangement.

23 (5) IMPLEMENTATION.—Subject to the avail-  
24 ability of appropriations for such purposes, the Sec-  
25 retary of Defense—

1 (A) shall carry out paragraph (1) jointly  
2 through the Office of the Under Secretary of  
3 Defense for Research and Engineering and the  
4 Office of the Under Secretary of Defense for  
5 Acquisition and Sustainment; and

6 (B) may carry out paragraph (1) in col-  
7 laboration with any such other component of  
8 the Department of Defense as the Secretary of  
9 Defense considers appropriate.

10 (6) OTHER INITIATIVES.—

11 (A) REQUIRED INITIATIVES.—Subject to  
12 the availability of appropriations for such pur-  
13 poses, the Secretary of Defense, in consultation  
14 with the Secretary of Energy and the Adminis-  
15 trator of the National Nuclear Security Admin-  
16 istration, as appropriate, may dedicate initia-  
17 tives within the Department of Defense to carry  
18 out activities to advance radio frequency, mixed  
19 signal, radiation tolerant, and radiation hard-  
20 ened microelectronics that support national se-  
21 curity and dual-use applications.

22 (B) SUPPORT PLAN REQUIRED.—The Sec-  
23 retary of Defense, in consultation with the  
24 heads of appropriate departments and agencies  
25 of the Federal Government, shall develop a

1 plan, including assessment of resource require-  
2 ments and designation of responsible officials,  
3 for the maintenance of capabilities to produce  
4 trusted and assured microelectronics to support  
5 current and legacy defense systems, other gov-  
6 ernment systems essential for national security,  
7 and critical infrastructure of the United States,  
8 especially for items with otherwise limited com-  
9 mercial demand.

10 (C) ASSESSMENT OF PUBLIC PRIVATE  
11 PARTNERSHIPS AND ACTIVITIES.—In conjunc-  
12 tion with the activities carried out under this  
13 section, the Secretary of Defense shall enter  
14 into an agreement with the National Academies  
15 of Sciences, Engineering, and Medicine to un-  
16 dertake a study to make recommendations and  
17 provide policy options for optimal public-private  
18 partnerships and partnership activities, includ-  
19 ing an analysis of establishing a semiconductor  
20 manufacturing corporation to leverage private  
21 sector technical, managerial, and investment ex-  
22 pertise, and private capital, as well as an as-  
23 sessment of and response to the industrial poli-  
24 cies of other nations to support industries in  
25 similar critical technology sectors, and deliver

1 such study to the congressional defense commit-  
2 tees not later than October 1, 2022.

3 (7) REPORTS.—

4 (A) REPORT BY SECRETARY OF DE-  
5 FENSE.—Not later than 90 days after the date  
6 of the enactment of this Act, the Secretary of  
7 Defense shall submit to Congress a report on  
8 the plans of the Secretary to carry out para-  
9 graphs (1) and (6).

10 (B) BIENNIAL REPORTS BY COMPTROLLER  
11 GENERAL OF THE UNITED STATES.—Not later  
12 than one year after the date on which the Sec-  
13 retary submits the report required by subpara-  
14 graph (A) and not less frequently than once  
15 every two years thereafter for a period of 10  
16 years, the Comptroller General of the United  
17 States shall submit to Congress a report on the  
18 activities carried out under this subsection.

19 (b) NATIONAL NETWORK FOR MICROELECTRONICS  
20 RESEARCH AND DEVELOPMENT.—

21 (1) IN GENERAL.—Subject to the availability of  
22 appropriations for such purposes, the Secretary of  
23 Defense may establish a national network for micro-  
24 electronics research and development—



1 (A) to enable the laboratory to fabrication  
2 transition of microelectronics innovations in the  
3 United States; and

4 (B) to expand the global leadership in  
5 microelectronics of the United States.

6 (2) ACTIVITIES.—The national network for  
7 microelectronics research and development shall—

8 (A) enable cost-effective exploration of new  
9 materials, devices, and architectures, and proto-  
10 typing in domestic facilities to safeguard do-  
11 mestic intellectual property;

12 (B) accelerate the transition of new tech-  
13 nologies to domestic microelectronics manufac-  
14 turers; and

15 (C) conduct other relevant activities  
16 deemed necessary by the Secretary of Defense  
17 for accomplishing the purposes of the national  
18 network for microelectronics research and devel-  
19 opment.

20 **SEC. 5. DEPARTMENT OF COMMERCE STUDY ON STATUS OF**  
21 **MICROELECTRONICS TECHNOLOGIES IN THE**  
22 **UNITED STATES INDUSTRIAL BASE.**

23 (a) IN GENERAL.—Beginning not later than 180  
24 days after the date of the enactment of this Act, the Sec-  
25 retary, in consultation with the heads of other Federal de-

1 departments and agencies, as appropriate, including the Sec-  
2 retary of Defense, the Secretary of Homeland Security,  
3 and the Secretary of Energy, shall undertake a review,  
4 which shall include a survey, using authorities in section  
5 705 of the Defense Production Act of 1950 (50 U.S.C.  
6 4555), to assess the capabilities of the United States in-  
7 dustrial base to support the national defense in light of  
8 the global nature of the supply chain and significant inter-  
9 dependencies between the United States industrial base  
10 and the industrial bases of foreign countries with respect  
11 to the manufacture, design, and end use of microelec-  
12 tronics.

13 (b) RESPONSE TO SURVEY.—To the extent author-  
14 ized by section 705 of the Defense Production Act of 1950  
15 (50 U.S.C. 4555) and section 702 of title 15, Code of Fed-  
16 eral Regulations, the Secretary shall ensure all relevant  
17 potential respondents reply to the survey, including the  
18 following:

19 (1) Corporations, partnerships, associations, or  
20 any other organized groups domiciled and with sub-  
21 stantial operations in the United States.

22 (2) Corporations, partnerships, associations, or  
23 any other organized groups with a physical presence  
24 of any kind in the United States.

1           (3) Foreign domiciled corporations, partner-  
2           ships, associations, or any other organized groups  
3           with a physical presence of any kind in the United  
4           States.

5           (c) INFORMATION REQUESTED.—To the extent au-  
6           thorized by section 705 of the Defense Production Act of  
7           1950 (50 U.S.C. 4555) and section 702 of title 15, Code  
8           of Federal Regulations, the information sought from a re-  
9           sponding entity specified in subsection (b) shall include,  
10          at minimum, information on the following with respect to  
11          the manufacture, design, or end use of microelectronics  
12          by such entity:

13           (1) An identification of the geographic scope of  
14           operations.

15           (2) Information on relevant cost structures.

16           (3) An identification of types of microelec-  
17           tronics development, manufacture, assembly, test,  
18           and packaging equipment in operation at such an  
19           entity.

20           (4) An identification of all relevant intellectual  
21           property, raw materials, and semi-finished goods and  
22           components sourced domestically and abroad by  
23           such an entity.

24           (5) Specifications of the microelectronics manu-  
25           factured or designed by such an entity, descriptions

1 of the end uses of such microelectronics, and a de-  
2 scription of any technical support provided to end  
3 users of such microelectronics by such an entity.

4 (6) Information on domestic and export market  
5 sales by such an entity.

6 (7) Information on the financial performance,  
7 including income and expenditures, of such an enti-  
8 ty.

9 (8) A list of all foreign and domestic subsidies,  
10 and any other financial incentives, received by such  
11 an entity in each market in which such entity oper-  
12 ates.

13 (9) A list of regulatory or other informational  
14 requests about the respondents' operations, sales, or  
15 other proprietary information by the People's Re-  
16 public of China entities under its direction or offi-  
17 cials of the Chinese Communist Party, a description  
18 of the nature of each request, and the type of infor-  
19 mation provided.

20 (10) Information on any joint ventures, tech-  
21 nology licensing agreements, and cooperative re-  
22 search or production arrangements of such an enti-  
23 ty.

24 (11) A description of efforts by such an entity  
25 to evaluate and control supply chain risks.

1           (12) A list and description of any sales, licens-  
2           ing agreements, or partnerships between such an en-  
3           tity and the People's Liberation Army or People's  
4           Armed Police, including any business relationships  
5           with entities through which such sales, licensing  
6           agreements, or partnerships may occur.

7           (d) REPORT.—

8           (1) IN GENERAL.—The Secretary shall, in con-  
9           sultation with the heads of other appropriate Fed-  
10          eral departments and agencies, as appropriate, in-  
11          cluding the Secretary of Defense, the Secretary of  
12          Homeland Security, and the Secretary of Energy,  
13          submit to Congress a report on the results of the re-  
14          view required by subsection (a). The report shall in-  
15          clude the following:

16                (A) An assessment of the results of the re-  
17                view.

18                (B) A list of critical technology areas im-  
19                pacted by potential disruptions in production of  
20                microelectronics, and a detailed description and  
21                assessment of the impact of such potential dis-  
22                ruptions on such areas.

23                (C) A description and assessment of gaps  
24                and vulnerabilities in the microelectronics sup-

1           ply chain and the national industrial supply  
2           base.

3           (2) FORM.—The report required by paragraph  
4           (1) may be submitted in classified form.

5 **SEC. 6. FUNDING FOR DEVELOPMENT AND ADOPTION OF**  
6           **MEASURABLY SECURE SEMICONDUCTORS**  
7           **AND MEASURABLY SECURE SEMICONDUCTORS**  
8           **SUPPLY CHAINS.**

9           (a) MULTILATERAL SEMICONDUCTORS SECURITY  
10          FUND.—

11           (1) ESTABLISHMENT OF FUND.—The Secretary  
12           of the Treasury is authorized to establish a trust  
13           fund, to be known as the “Multilateral Semiconduc-  
14           tors Security Fund” (in this section referred to as  
15           the “Fund”), consisting of any appropriated funds  
16           credited to the Fund for such purpose.

17           (2) REPORTING REQUIREMENT.—If the Fund  
18           authorized under subsection (a)(1) is not estab-  
19           lished, 180 days after the date of the enactment of  
20           this Act and annually thereafter until such Fund is  
21           established, the Secretary of the Treasury, in coordi-  
22           nation with the Secretary of State, shall provide, in  
23           writing, to the appropriate committees of Congress  
24           a rationale for not establishing the Fund.

25           (3) INVESTMENT OF AMOUNTS.—

1 (A) INVESTMENT OF AMOUNTS.—If the  
2 Fund authorized under subsection (a)(1) is es-  
3 tablished, the Secretary of the Treasury shall  
4 invest such portion of the Fund as is not re-  
5 quired to meet current withdrawals in interest-  
6 bearing obligations of the United States or in  
7 obligations guaranteed as to both principal and  
8 interest by the United States.

9 (B) INTEREST AND PROCEEDS.—The in-  
10 terest on, and the proceeds from the sale or re-  
11 demption of, any obligations held in the Fund  
12 shall be credited to and form a part of the  
13 Fund.

14 (4) USE OF FUND.—

15 (A) IN GENERAL.—Subject to subpara-  
16 graph (B), amounts in the Fund shall be avail-  
17 able, as provided in advance in an appropria-  
18 tions Act, to the Secretary of State—

19 (i) to provide funding through the  
20 common funding mechanism described in  
21 subsection (b)(1) to support the develop-  
22 ment and adoption of measurably secure  
23 semiconductors and measurably secure  
24 semiconductors supply chains; and

25 (ii) to otherwise carry out this section.

1 (B) AVAILABILITY CONTINGENT ON INTER-  
2 NATIONAL ARRANGEMENT OR AGREEMENT.—

3 (i) IN GENERAL.—Amounts in the  
4 Fund shall be available to the Secretary of  
5 State, subject to appropriation, on and  
6 after the date on which the Secretary of  
7 State enters into an arrangement or agree-  
8 ment with the governments of countries  
9 that are partners of the United States to  
10 participate in the common funding mecha-  
11 nism under paragraph (1) of subsection  
12 (b).

13 (ii) CONSULTATION.—Before entering  
14 into an arrangement or agreement as de-  
15 scribed clause (i), the Secretary of State,  
16 in consultation with the Secretary of Com-  
17 merce, shall ensure any partner govern-  
18 ment maintains export control licensing  
19 policies on semiconductor technology sub-  
20 stantively equivalent to the United States  
21 with respect to restrictions on such exports  
22 to the People's Republic of China.

23 (b) COMMON FUNDING MECHANISM FOR DEVELOP-  
24 MENT AND ADOPTION OF MEASURABLY SECURE SEMI-



1 CONDUCTORS AND MEASURABLY SECURE SEMICONDUCTOR  
2 TORS SUPPLY CHAINS.—

3           (1) IN GENERAL.—The Secretary of State, in  
4           consultation with the Secretary of Commerce, the  
5           Secretary of Defense, the Secretary of Homeland Se-  
6           curity, the Secretary of the Treasury, the Secretary  
7           of Energy, and the Director of National Intelligence,  
8           is authorized to establish a common funding mecha-  
9           nism, in coordination with foreign partners, that  
10          uses amounts from the Fund to support the develop-  
11          ment and adoption of secure semiconductors and se-  
12          cure semiconductors supply chains, including for use  
13          in research and development collaborations among  
14          partner countries participating in the common fund-  
15          ing mechanism. In establishing and sustaining a  
16          common funding mechanism, the Secretary of State  
17          should leverage United States funding in order to  
18          secure contributions and commitments from trusted  
19          foreign partners, including cost sharing and other  
20          cooperative measures leading to the development and  
21          adoption of secure semiconductors and secure micro-  
22          electronic supply chains.

23           (2) COMMITMENTS.—In creating and sustaining  
24          a common funding mechanism described in para-

1 graph (1), the Secretary of State should promote ef-  
2 forts among foreign partners to—

3 (A) establish transparency requirements  
4 for any subsidies or other financial benefits (in-  
5 cluding revenue foregone) provided to semi-  
6 conductors firms located in or outside such  
7 countries;

8 (B) establish consistent policies with re-  
9 spect to countries that—

10 (i) are not participating in the com-  
11 mon funding mechanism; and

12 (ii) do not meet transparency require-  
13 ments established under subparagraph (A);

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

19 (D) establish consistent policies and com-  
20 mon external policies to address nonmarket  
21 economies as the behavior of such countries  
22 pertains to semiconductors;

23 (E) align policies on supply chain integrity  
24 and semiconductors security, including with re-

1           spect to protection and enforcement of intellec-  
2           tual property rights; and

3           (F) promote harmonized foreign direct in-  
4           vestment screening measures and export control  
5           policies with respect to semiconductors to align  
6           with national, multilateral, and plurilateral se-  
7           curity priorities.

8           (c) ANNUAL REPORT TO CONGRESS.—Not later than  
9           one year after the date of the enactment of this Act, and  
10          annually thereafter for each fiscal year during which  
11          amounts in the Fund are available under subsection  
12          (a)(4), the Secretary of State shall submit to the appro-  
13          priate committees of Congress a report on the status of  
14          the implementation of this section that includes a descrip-  
15          tion of—

16               (1) any commitments made by the governments  
17               of countries that have entered into an arrangement  
18               or agreement with the United States to provide  
19               funding for the common funding mechanism de-  
20               scribed in subsection (b)(1) and the specific amount  
21               so committed and other cooperative measures being  
22               taken by such countries as part of the common  
23               funding mechanism;

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

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

5           (4) amounts remaining in the Fund;

6           (5) the progress of the Secretary of State to-  
7           ward entering into an arrangement or agreement  
8           with the governments of countries that are partners  
9           of the United States to participate in the common  
10          funding mechanism and the commitments described  
11          in subsection (b)(2); and

12          (6) any additional authorities needed to en-  
13          hance the effectiveness of the Fund in achieving the  
14          security goals of the United States.

15          (d) NOTIFICATIONS TO BE PROVIDED BY THE  
16          FUND.—

17               (1) IN GENERAL.—Not later than 15 days prior  
18               to the Fund making a financial commitment associ-  
19               ated with the provision of expenditures under sub-  
20               section (a)(4)(A) in an amount in excess of  
21               \$1,000,000, the Secretary of State shall submit to  
22               the appropriate committees of Congress a report in  
23               writing that contains the information required by  
24               paragraph (2).

1           (2) INFORMATION REQUIRED.—The information  
2 required by this subsection includes—

3           (A) the amount of each such expenditure;

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

6           (C) a description of the project or activity  
7 and the purpose to be achieved by an expendi-  
8 ture of the Fund.

9           (3) ARRANGEMENTS OR AGREEMENTS.—The  
10 Secretary of State shall notify the appropriate com-  
11 mittees of Congress not later than 30 days after en-  
12 tering into a new bilateral or multilateral arrange-  
13 ment or agreement described in subsection  
14 (a)(4)(B).

15 **SEC. 7. ADVANCED MICROELECTRONICS RESEARCH AND**  
16 **DEVELOPMENT.**

17           (a) SUBCOMMITTEE ON MICROELECTRONICS LEAD-  
18 ERSHIP.—

19           (1) ESTABLISHMENT REQUIRED.—The Presi-  
20 dent shall establish in the National Science and  
21 Technology Council a subcommittee on matters re-  
22 lating to leadership and competitiveness of the  
23 United States in microelectronics technology and in-  
24 novation (in this section referred to as the “Sub-  
25 committee”).

1           (2) MEMBERSHIP.—The Subcommittee shall be  
2 composed of the following members:

3           (A) The Secretary of Defense.

4           (B) The Secretary of Energy.

5           (C) The Director of the National Science  
6 Foundation.

7           (D) The Secretary of Commerce.

8           (E) The Secretary of State.

9           (F) The Secretary of Homeland Security.

10          (G) The United States Trade Representa-  
11 tive.

12          (H) The Director of National Intelligence.

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

16          (3) DUTIES.—The duties of the Subcommittee  
17 are as follows:

18           (A) NATIONAL STRATEGY ON MICROELEC-  
19 TRONICS RESEARCH.—

20           (i) IN GENERAL.—In consultation  
21 with the advisory committee established in  
22 (b), and other appropriate stakeholders in  
23 the microelectronics industry and aca-  
24 demia, the Subcommittee shall develop a  
25 national strategy on microelectronics re-

1 search, development, manufacturing, and  
2 supply chain security to—

3 (I) accelerate the domestic devel-  
4 opment and production of microelec-  
5 tronics and strengthen the domestic  
6 microelectronics workforce; and

7 (II) ensure that the United  
8 States is a global leader in the field of  
9 microelectronics research and develop-  
10 ment.

11 (ii) ELEMENTS.—The strategy devel-  
12 oped under this subparagraph shall ad-  
13 dress—

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

22 (II) priorities for research and  
23 development to accelerate the ad-  
24 vancement and adoption of innovative

1 microelectronics and new uses of  
2 microelectronics and components;

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

7 (IV) the potential role of a Fed-  
8 eral laboratory, center, or incubator  
9 exclusively focused on the research  
10 and development of microelectronics,  
11 as described in section 231(b)(15) of  
12 the National Defense Authorization  
13 Act for Fiscal Year 2017 (as added by  
14 section 276 of this Act) in carrying  
15 out the strategy and plan required  
16 under this subparagraph; and

17 (V) such other activities as the  
18 Subcommittee determines may be ap-  
19 propriate to overcome future chal-  
20 lenges to the innovation, competitive-  
21 ness, and supply chain integrity of the  
22 United States in the field of micro-  
23 electronics.

24 (B) FOSTERING COORDINATION OF RE-  
25 SEARCH AND DEVELOPMENT.—The Sub-



1 committee shall coordinate microelectronics re-  
2 lated research, development, manufacturing,  
3 and supply chain security activities and budgets  
4 of Federal agencies and ensure such activities  
5 are consistent with the strategy required under  
6 subparagraph (A).

7 (C) REPORTING AND UPDATES.—

8 (i) PROGRESS BRIEFING.—Not later  
9 than one year after the date of the enact-  
10 ment of this Act, the President shall pro-  
11 vide to the appropriate committees of Con-  
12 gress a briefing on the progress of the  
13 Subcommittee in developing the strategy  
14 required under subparagraph (A).

15 (ii) STRATEGY UPDATE.—Not less fre-  
16 quently than once every 5 years, the Sub-  
17 committee shall update the strategy devel-  
18 oped under subparagraph (A) and submit  
19 the revised strategy to the appropriate  
20 committees of Congress.

21 (4) SUNSET.—The Subcommittee shall termi-  
22 nate on the date that is 10 years after the date of  
23 the enactment of this Act.

24 (b) INDUSTRIAL ADVISORY COMMITTEE.—

1           (1) ESTABLISHMENT.—The Secretary of Com-  
2 merce, in consultation with the Secretary of Defense,  
3 the Secretary of Energy, and the Secretary of  
4 Homeland Security, shall establish an advisory com-  
5 mittee to be composed of not fewer than 12 mem-  
6 bers, including representatives of industry, Federal  
7 laboratories, and academic institutions, who are  
8 qualified to provide advice to the United States Gov-  
9 ernment on matters relating to microelectronics re-  
10 search, development, manufacturing, and policy.

11           (2) DUTIES.—The advisory committee shall as-  
12 sess and provide guidance to the United States Gov-  
13 ernment on—

14           (A) science and technology needs of the  
15 Nation’s domestic microelectronics industry;

16           (B) the extent to which the strategy devel-  
17 oped under subsection (a)(3) is helping main-  
18 tain United States leadership in microelec-  
19 tronics manufacturing;

20           (C) assessment of the research and devel-  
21 opment programs and activities authorized  
22 under this section; and

23           (D) opportunities for new public-private  
24 partnerships to advance microelectronics re-

1 search, development, and domestic manufac-  
2 turing.

3 (3) FACA EXEMPTION.—Section 14 of the Fed-  
4 eral Advisory Committee Act (5 U.S.C. App.) shall  
5 not apply to the advisory committee established  
6 under this subsection.

7 (c) NATIONAL SEMICONDUCTOR TECHNOLOGY CEN-  
8 TER.—

9 (1) ESTABLISHMENT.—Subject to the avail-  
10 ability of appropriations for such purpose, the Sec-  
11 retary of Commerce, in collaboration with the Sec-  
12 retary of Defense, shall establish a national semicon-  
13 ductor technology center to conduct research and  
14 prototyping of advanced semiconductor technology to  
15 strengthen the economic competitiveness and secu-  
16 rity of the domestic supply chain. Such center shall  
17 be operated as a public private-sector consortium  
18 with participation from the private sector, the De-  
19 partment of Energy, and the National Science Foun-  
20 dation.

21 (2) FUNCTIONS.—The functions of the center  
22 established under paragraph (1) shall be as follows:

23 (A) To conduct advanced semiconductor  
24 manufacturing, design and packaging research,  
25 and prototyping that strengthens the entire do-

1 domestic ecosystem and is aligned with the strat-  
2 egy required under subsection (a)(3)(A) with  
3 emphasis on the following:

4 (i) Semiconductor advanced test, as-  
5 sembly, and packaging capability in the do-  
6 mestic ecosystem.

7 (ii) Materials characterization, instru-  
8 mentation and testing for next generation  
9 microelectronics.

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

12 (iv) Metrology for security and supply  
13 chain verification.

14 (B) To establish an investment fund, in  
15 partnership with the private sector, to support  
16 startups and collaborations between startups,  
17 academia, established companies, and new ven-  
18 tures, with the goal of commercializing innova-  
19 tions that contribute to the domestic semicon-  
20 ductor ecosystem, including—

21 (i) advanced metrology and character-  
22 ization for manufacturing of microchips  
23 using 3 nanometer transistor processes or  
24 more advanced processes; and

1 (ii) metrology for security and supply  
2 chain verification.

3 (C) To work with the Secretary of Labor,  
4 the Director of the National Science Founda-  
5 tion, the Secretary of Energy, the private sec-  
6 tor, institutions of higher education, and work-  
7 force training entities to incentivize and expand  
8 participation in graduate and undergraduate  
9 programs, and develop workforce training pro-  
10 grams and apprenticeships, in advanced micro-  
11 electronic design, research, fabrication, and  
12 packaging capabilities.

13 (d) NATIONAL ADVANCED PACKAGING MANUFAC-  
14 TURING PROGRAM.—Subject to the availability of appro-  
15 priations for such purpose, the Secretary of Commerce  
16 shall establish a National Advanced Packaging Manufac-  
17 turing Program led by the Director of the National Insti-  
18 tute of Standards and Technology, in coordination with  
19 the national semiconductor technology center established  
20 under subsection (c), to strengthen semiconductor ad-  
21 vanced test, assembly, and packaging capability in the do-  
22 mestic ecosystem, and which shall coordinate with the  
23 Manufacturing USA institute established under subsection  
24 (f), if applicable.

1           (e) MICROELECTRONICS RESEARCH AT THE NA-  
2 TIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—  
3 Subject to the availability of appropriations for such pur-  
4 pose, the Director of the National Institute of Standards  
5 and Technology shall carry out a microelectronics research  
6 program to enable advances and breakthroughs in meas-  
7 urement science, standards, material characterization, in-  
8 strumentation, testing, and manufacturing capabilities  
9 that will accelerate the underlying research and develop-  
10 ment for metrology of next generation microelectronics  
11 and ensure the competitiveness and leadership of the  
12 United States within this sector.

13           (f) CREATION OF A MANUFACTURING USA INSTI-  
14 TUTE.—Subject to the availability of appropriations for  
15 such purpose, the Director of the National Institute of  
16 Standards and Technology may establish a Manufacturing  
17 USA institute described in section 34(d) of the National  
18 Institute of Standards and Technology Act (15 U.S.C.  
19 278s(d)) that is focused on semiconductor manufacturing.  
20 Such institute may emphasize the following:

21           (1) Research to support the virtualization and  
22 automation of maintenance of semiconductor ma-  
23 chinery.

24           (2) Development of new advanced test, assem-  
25 bly, and packaging capabilities.

1           (3) Developing and deploying educational and  
2           skills training curricula needed to support the indus-  
3           try sector and ensure the United States can build  
4           and maintain a trusted and predictable talent pipe-  
5           line.

6           (g) DOMESTIC PRODUCTION REQUIREMENTS.—The  
7           head of any executive agency receiving funding under this  
8           section shall develop policies to require domestic produc-  
9           tion, to the extent possible, for any intellectual property  
10          resulting from microelectronics research and development  
11          conducted as a result of such funding and domestic control  
12          requirements to protect any such intellectual property  
13          from foreign adversaries.

14       **SEC. 8. PROHIBITION RELATING TO FOREIGN ENTITIES OF**  
15                               **CONCERN.**

16          None of the funds authorized to be appropriated to  
17          carry out this Act may be provided to a foreign entity of  
18          concern.

19       **SEC. 9. DEFENSE PRODUCTION ACT OF 1950 EFFORTS.**

20          (a) IN GENERAL.—Not later than 180 days after the  
21          date of the enactment of this Act, the President shall sub-  
22          mit to Congress a report on a plan of action for any use  
23          of authorities available in title III of the Defense Produc-  
24          tion Act of 1950 (50 U.S.C. 4531 et seq.) to establish

1 or enhance a domestic production capability for microelec-  
2 tronics technologies and related technologies, subject to—

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

5           (2) a determination made under the plan pursu-  
6           ant to such title III that such technologies are essen-  
7           tial to the national defense and that domestic indus-  
8           trial capabilities are insufficient to meet these needs.

9           (b) COORDINATION.—The President shall develop the  
10          plan of action required by subsection (a) in consultation  
11          with any relevant head of a Federal agency, an advisory  
12          committee established under section 708(d) of the Defense  
13          Production Act of 1950 (50 U.S.C. 4558(d)), and appro-  
14          priate stakeholders in the private sector.

○