

117TH CONGRESS
1ST SESSION

S. _____

To establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes.

IN THE SENATE OF THE UNITED STATES

_____ introduced the following bill; which was read twice
and referred to the Committee on _____

A BILL

To establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, 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 “Endless Frontier Act”.

1 **SEC. 2. FINDINGS.**

2 Congress finds the following:

3 (1) For over 70 years, the United States has
4 been the unequivocal global leader in scientific and
5 technological innovation, and as a result the people
6 of the United States have benefitted through good-
7 paying jobs, economic prosperity, and a higher qual-
8 ity of life.

9 (A) Today, however, this leadership posi-
10 tion is being eroded and challenged by foreign
11 competitors, some of which are stealing intellec-
12 tual property and trade secrets of the United
13 States and aggressively investing in research
14 and commercialization to dominate the key ex-
15 isting and future technology fields.

16 (B) While the United States once led the
17 world in the share of our economy invested in
18 research, our Nation now ranks 9th globally in
19 total research and development and 12th in
20 publicly financed research and development.

21 (C) While wages for American workers
22 rose in parallel with growth in national produc-
23 tivity from the end of World War II through
24 most of the 1970s, since then wages have stag-
25 nated and labor's share in national income has
26 declined.

1 (2) Without a significant increase in investment
2 in research, education, technology transfer, intellec-
3 tual property, manufacturing, and other core
4 strengths of the United States innovation ecosystem,
5 it is only a matter of time before the global competi-
6 tors of the United States overtake the United States
7 in terms of technological primacy. The country that
8 wins the race in key technologies—such as artificial
9 intelligence, quantum computing, advanced commu-
10 nications, and advanced manufacturing—and uses
11 technological innovation to support high-quality jobs
12 and incomes will be the superpower of the future.

13 (3) The Federal Government must catalyze
14 United States innovation by boosting research in-
15 vestments focused on discovering, creating, commer-
16 cializing, and demonstrating new technologies and
17 manufacturing those technologies domestically
18 throughout the country to ensure the leadership of
19 the United States in the industries of the future and
20 broadly shared prosperity.

21 (4) The distribution of innovation jobs and in-
22 vestment in the United States has become largely
23 concentrated in just a few locations, while much of
24 the Nation has been left out of growth in the innova-
25 tion sector. More than 90 percent of the Nation's in-

1 novation sector employment growth in the last 15
2 years was generated in just 5 major metropolitan
3 areas. The Federal Government must address this
4 imbalance in opportunity by—

5 (A) dramatically increasing funding for
6 science and engineering research and expanding
7 partnerships with the private sector to build
8 new technology hubs across the country;

9 (B) spreading high-quality innovation sec-
10 tor jobs more broadly;

11 (C) increasing the participation of under-
12 represented populations, engaging workers, and
13 collaborating with labor organizations in inno-
14 vation efforts to tap the talent and potential of
15 the entire Nation to ensure the United States
16 leads the industries of the future;

17 (D) building regional expertise and capac-
18 ity in such critical areas as entrepreneurship,
19 venture capital and other investment, and de-
20 sign thinking; and

21 (E) investing in new kinds of innovation-
22 relevant activities such as collaboration and
23 learning platforms that reflect the evolving na-
24 ture of innovation and the acceleration of tech-
25 nology development.

1 (5) As President Franklin D. Roosevelt stated,
2 “[N]ew frontiers of the mind are before us, and if
3 they are pioneered with the same vision, boldness,
4 and drive with which we have waged this war we can
5 create a fuller and more fruitful employment and a
6 fuller and more fruitful life.”

7 (6) As Vannevar Bush stated in his 1945 re-
8 port entitled Science, The Endless Frontier, “New
9 products, new industries, and more jobs require con-
10 tinuous additions to knowledge of the laws of nature,
11 and the application of that knowledge to practical
12 purposes. Similarly, our defense against aggression
13 demands new knowledge so that we can develop new
14 and improved weapons. This essential, new knowl-
15 edge can be obtained only through basic scientific re-
16 search.”

17 (7) Since its inception, the National Science
18 Foundation has carried out vital work supporting
19 basic research and people to create knowledge that
20 is a key driver of the economy of the United States
21 and enhances the Nation’s security.

1 **SEC. 3. IMPROVING TECHNOLOGY AND INNOVATION RE-**
2 **SEARCH AT THE NATIONAL SCIENCE FOUN-**
3 **DATION.**

4 (a) PROVIDING AUTHORITY TO DISSEMINATE INFOR-
5 MATION.—Section 11 of the National Science Foundation
6 Act of 1950 (42 U.S.C. 1870) is amended—

7 (1) in subsection (j), by striking “and” after
8 the semicolon;

9 (2) in subsection (k), by striking the period at
10 the end and inserting “; and”; and

11 (3) by adding at the end the following:

12 “(l) provide for the widest practicable and appro-
13 priate dissemination of information within the United
14 States concerning the Foundation’s activities and the re-
15 sults thereof.”.

16 (b) ESTABLISHMENT OF DIRECTORATE FOR TECH-
17 NOLOGY AND INNOVATION.—The National Science Foun-
18 dation Act of 1950 (42 U.S.C. 1861 et seq.) is amended—

19 (1) in section 8 (42 U.S.C. 1866), by inserting
20 at the end the following: “Such divisions shall in-
21 clude the Directorate for Technology and Innovation
22 established under section 8A.”; and

23 (2) by inserting after section 8 the following:

1 **“SEC. 8A. IMPROVING RESEARCH AND ESTABLISHING DI-**
2 **RECTORATE FOR TECHNOLOGY AND INNOVA-**
3 **TION.**

4 “(a) DEFINITIONS.—In this section:

5 “(1) COMMUNITY COLLEGE.—The term ‘com-
6 munity college’ has the meaning given the term ‘jun-
7 ior or community college’ in section 312(f) of the
8 Higher Education Act of 1965 (20 U.S.C. 1058(f)).

9 “(2) DESIGNATED COUNTRY.—The term ‘des-
10 ignated country’ means a country that has been ap-
11 proved and designated in writing by the President
12 for purposes of this section, after providing—

13 “(A) not less than 30 days of advance noti-
14 fication and explanation to the relevant con-
15 gressional committees before the designation;
16 and

17 “(B) in-person briefings to such commit-
18 tees, if requested during the 30-day advance no-
19 tification period described in subparagraph (A).

20 “(3) DIRECTORATE.—The term ‘Directorate’
21 means the Directorate for Technology and Innova-
22 tion established under subsection (b).

23 “(4) EMERGING INSTITUTION OF HIGHER EDU-
24 CATION.—The term ‘emerging institution of higher
25 education’ means an institution of higher education
26 with an established undergraduate student program

1 that has, on average for the 3 years prior to an ap-
2 plication for an award under this section, received
3 less than \$35,000,000 in Federal research funding.

4 “(5) HISTORICALLY BLACK COLLEGE OR UNI-
5 VERSITY.—The term ‘historically Black college or
6 university’ has the meaning given the term ‘part B
7 institution’ in section 322 of the Higher Education
8 Act of 1965 (20 U.S.C. 1061)).

9 “(6) INSTITUTION OF HIGHER EDUCATION.—
10 The term ‘institution of higher education’ has the
11 meaning given the term in section 101(a) of the
12 Higher Education Act of 1965 (20 U.S.C. 1001(a)).

13 “(7) KEY TECHNOLOGY FOCUS AREAS.—The
14 term ‘key technology focus areas’ means the areas
15 included on the most recent list under subsection
16 (d)(2).

17 “(8) LABOR ORGANIZATION.—The term ‘labor
18 organization’ has the meaning given the term in sec-
19 tion 2(5) of the National Labor Relations Act (29
20 U.S.C. 152(5)), except that such term shall also in-
21 clude—

22 “(A) any organization composed of labor
23 organizations, such as a labor union federation
24 or a State or municipal labor body; and

1 “(B) any organization which would be in-
2 cluded in the definition for such term under
3 such section 2(5) but for the fact that the orga-
4 nization represents—

5 “(i) individuals employed by the
6 United States, any wholly owned Govern-
7 ment corporation, any Federal Reserve
8 Bank, or any State or political subdivision
9 thereof;

10 “(ii) individuals employed by persons
11 subject to the Railway Labor Act (45
12 U.S.C. 151 et seq.); or

13 “(iii) individuals employed as agricul-
14 tural laborers.

15 “(9) MINORITY-SERVING INSTITUTION.—The
16 term ‘minority-serving institution’ means an institu-
17 tion described in section 371(a) of the Higher Edu-
18 cation Act of 1965 (20 U.S.C. 1067q(a)).

19 “(10) RELEVANT CONGRESSIONAL COMMIT-
20 TEES.—The term ‘relevant congressional commit-
21 tees’ means—

22 “(A) the Committee on Armed Services,
23 the Committee on Commerce, Science, and
24 Transportation, the Committee on Appropria-
25 tions, the Committee on Foreign Relations, the

1 Committee on Health, Education, Labor, and
2 Pensions, and the Select Committee on Intel-
3 ligence of the Senate; and

4 “(B) the Committee on Armed Services,
5 the Committee on Science, Space, and Tech-
6 nology, the Committee on Appropriations, the
7 Committee on Foreign Affairs, and the Perma-
8 nent Select Committee on Intelligence of the
9 House of Representatives.

10 “(11) STEM.—The term ‘STEM’ has the
11 meaning given such term in section 2 of the America
12 COMPETES Reauthorization Act of 2010 (Public
13 Law 111–358; 42 U.S.C. 6621 note).

14 “(12) TRIBAL COLLEGE OR UNIVERSITY.—The
15 term ‘Tribal college or university’ has the meaning
16 given the term in section 316(b)(3) of the Higher
17 Education Act of 1965 (20 U.S.C. 1059c(b)(3)).

18 “(13) UNDERREPRESENTED POPULATIONS.—
19 The term ‘underrepresented populations’ means
20 women, minorities, veterans, tribal populations, per-
21 sons with disabilities, and other populations that are
22 underrepresented in STEM.

23 “(b) ESTABLISHMENT OF DIRECTORATE OF TECH-
24 NOLOGY AND INNOVATION.—

1 “(1) IN GENERAL.—Not later than 60 days
2 after the date of enactment of the Endless Frontier
3 Act, the Director shall establish in the Foundation
4 a Directorate for Technology and Innovation. The
5 Directorate shall carry out the duties and respon-
6 sibilities described in this section, in order to further
7 the following goals:

8 “(A) Addressing and mitigating societal
9 challenges through the activities authorized by
10 this section.

11 “(B) Strengthening the leadership of the
12 United States in critical technologies, as de-
13 scribed as a critical national need in section
14 7018 of the America COMPETES Act (42
15 U.S.C. 1862o–5), through basic research in the
16 key technology focus areas and the commer-
17 cialization of those technologies to businesses in
18 the United States.

19 “(C) Enhancing the competitiveness of the
20 United States in the key technology focus areas
21 by improving education in the key technology
22 focus areas and attracting more students to
23 such areas at all levels of education.

24 “(D) Consistent with the mission and oper-
25 ations of the Foundation, fostering the eco-

1 nomic and societal impact of Federally funded
2 research and development through an acceler-
3 ated translation of basic advances in the key
4 technology focus areas into processes and prod-
5 ucts, known as technology transfer, that can
6 help achieve national goals related to economic
7 competitiveness, domestic manufacturing, na-
8 tional security, shared prosperity, energy and
9 the environment, health, education and work-
10 force development, and transportation.

11 “(E) Utilizing the full potential of the
12 United States workforce by encouraging broad-
13 er participation in key technology focus areas
14 by underrepresented populations.

15 “(F) Ensuring the programmatic work of
16 the Directorate and Foundation incorporates a
17 worker perspective from labor organizations.

18 “(2) ORGANIZATION AND ADMINISTRATIVE
19 MATTERS.—

20 “(A) PROGRAM MANAGERS.—The employ-
21 ees of the Directorate may include program
22 managers for the key technology focus areas,
23 who may perform a role similar to programs
24 managers employed by the Defense Advanced
25 Research Projects Agency for the oversight and

1 selection of programs supported by the Direc-
2 torate.

3 “(B) SELECTION OF RECIPIENTS.—Recipi-
4 ents of support under the programs and activi-
5 ties of the Directorate shall be selected by pro-
6 gram managers or other employees of the Di-
7 rectorate and the selection criteria may include
8 intellectual merit and broader impacts, includ-
9 ing economic impacts on the advanced tech-
10 nology production system of the United States.
11 The Directorate may use a peer review process
12 or the authorities provided under subsection (c),
13 or some combination of such process and au-
14 thorities, to inform the selection of award re-
15 cipients.

16 “(C) REPORT.—Not later than 1 year
17 after the date of enactment of the Endless
18 Frontier Act, the Director shall prepare and
19 submit a report to the relevant congressional
20 committees regarding the use of alternative
21 methods for the selection of recipients and the
22 distribution of funding to recipients as com-
23 pared to the traditional peer review process.

24 “(D) ASSISTANT DIRECTORS.—The Direc-
25 tor shall appoint an Assistant Director for the

1 Directorate, in the same manner as other As-
2 sistant Directors of the Foundation are ap-
3 pointed.

4 “(3) REPORT.—Not later than 120 days after
5 the date of enactment of the Endless Frontier Act,
6 the Director shall prepare and submit a report to
7 the relevant congressional committees regarding the
8 establishment of the Directorate.

9 “(c) PERSONNEL MANAGEMENT AUTHORITIES FOR
10 THE FOUNDATION.—In addition to the authorities and re-
11 quirements of section 15, the Director shall have the fol-
12 lowing authorities:

13 “(1) EXPERTS IN SCIENCE AND ENGINEER-
14 ING.—The Director shall have the authority to carry
15 out a program of personnel management authority
16 in the same manner, and subject to the same re-
17 quirements, as the program of personnel manage-
18 ment authority authorized for the Director of the
19 Defense Advanced Research Projects Agency under
20 section 1599h of title 10, United States Code, for
21 the Defense Advanced Research Projects Agency.

22 “(2) HIGHLY QUALIFIED EXPERTS IN NEEDED
23 OCCUPATIONS.—In addition to the authority pro-
24 vided under paragraph (1), the Director shall have
25 the authority to carry out a program of personnel

1 management authority in the same manner, and
2 subject to the same requirements, as the program to
3 attract highly qualified experts carried out by the
4 Secretary of Defense under section 9903 of title 5,
5 United States Code. Individuals hired by the Direc-
6 tor through such authority shall include individuals
7 with expertise in business creativity, innovation man-
8 agement, design thinking, entrepreneurship, venture
9 capital, and related fields.

10 “(3) ADDITIONAL HIRING AUTHORITY.—To the
11 extent needed to carry out the duties in paragraph
12 (1), the Director is authorized to utilize hiring au-
13 thorities under section 3372 of title 5, United States
14 Code, to staff the Directorate with employees from
15 other Federal agencies, State and local governments,
16 Indian Tribes and Tribal organizations, institutions
17 of higher education, and other organizations, as de-
18 scribed in that section, in the same manner and sub-
19 ject to the same conditions, that apply to such indi-
20 viduals utilized to accomplish other missions of the
21 Foundation.

22 “(d) DUTIES AND FUNCTIONS OF THE DIREC-
23 TORATE.—

24 “(1) DEVELOPMENT OF TECHNOLOGY FOCUS
25 OF THE DIRECTORATE.—The Director shall—

1 “(A) through the Directorate, advance in-
2 novation in the key technology focus areas
3 through basic and translational research and
4 other activities described in this section; and

5 “(B) develop and implement strategies to
6 ensure that the activities of the Directorate are
7 directed toward the key technology focus areas
8 in order to accomplish the goals described in
9 subsection (b)(1) consistent with the most re-
10 cent report conducted under section 5(b) of the
11 Endless Frontier Act.

12 “(2) KEY TECHNOLOGY FOCUS AREAS.—

13 “(A) INITIAL LIST.—The initial key tech-
14 nology focus areas are—

15 “(i) artificial intelligence, machine
16 learning, and other software advances;

17 “(ii) high performance computing,
18 semiconductors, and advanced computer
19 hardware;

20 “(iii) quantum computing and infor-
21 mation systems;

22 “(iv) robotics, automation, and ad-
23 vanced manufacturing;

24 “(v) natural and anthropogenic dis-
25 aster prevention or mitigation;

1 “(vi) advanced communications tech-
2 nology;

3 “(vii) biotechnology, genomics, and
4 synthetic biology;

5 “(viii) cybersecurity, data storage, and
6 data management technologies;

7 “(ix) advanced energy, batteries, and
8 industrial efficiency;

9 “(x) advanced materials science, engi-
10 neering, and exploration relevant to the
11 other key technology focus areas described
12 in this subparagraph; and

13 “(xi) innovation methods, processes
14 and promising practices that can affect the
15 speed and effectiveness of innovation proc-
16 esses at scale.

17 “(B) REVIEW OF KEY TECHNOLOGY FOCUS
18 AREAS AND SUBSEQUENT LISTS.—

19 “(i) ADDING OR DELETING KEY
20 TECHNOLOGY FOCUS AREAS.—Beginning
21 on the date that is 3 years after the date
22 of enactment of the Endless Frontier Act,
23 and every 3 years thereafter, the Director,
24 in coordination with the Director of the
25 Office of Science and Technology Policy,

1 the Director of National Institute of
2 Standards and Technology, the Secretary
3 of Energy, and, as appropriate, the heads
4 of other departments and agencies—

5 “(I) shall review the list of key
6 technology focus areas; and

7 “(II) as part of that review, may
8 add or delete key technology focus
9 areas if societal challenges or the com-
10 petitive threats to the United States
11 have shifted (whether because the
12 United States or other nations have
13 advanced or fallen behind in a techno-
14 logical area), subject to clause (ii).

15 “(ii) LIMIT ON KEY TECHNOLOGY
16 FOCUS AREAS.—Not more than 10 key
17 technology focus areas shall be included on
18 the list of key technology focus areas at
19 any time.

20 “(iii) UPDATING FOCUS AREAS AND
21 DISTRIBUTION.—Prior to completion of
22 each review under this subparagraph, the
23 Director shall make the list of key tech-
24 nology focus areas readily available to the
25 public and available for public comment,

1 including, at a minimum, by publishing the
2 list in the Federal Register even if no
3 changes are expected to be made to the
4 prior list.

5 “(3) ACTIVITIES.—

6 “(A) IN GENERAL.—In carrying out the
7 duties and functions of the Directorate, the Di-
8 rector—

9 “(i) may make awards in a techno-
10 logically-neutral manner for key technology
11 focus areas to—

12 “(I) individual institutions of
13 higher education for work at centers
14 or by individual researchers or teams
15 of researchers;

16 “(II) not-for-profit entities; and

17 “(III) consortia that—

18 “(aa) shall include and be
19 led by an institution of higher
20 education, or by a not-for-profit
21 entity designed to support tech-
22 nology development, and may in-
23 clude 1 or more additional insti-
24 tutions of higher education;

1 “(bb) shall include (as either
2 the lead institution described in
3 item (aa) or as a member of the
4 consortium)—

5 “(AA) a historically
6 Black college or university;

7 “(BB) a Tribal College
8 or University;

9 “(CC) another minor-
10 ity-serving institution;

11 “(DD) an institution
12 that participates in the Es-
13 tablished Program to Stimu-
14 late Competitive Research
15 under section 113 of the Na-
16 tional Science Foundation
17 Authorization Act of 1988
18 (42 U.S.C. 1862g);

19 “(EE) an emerging re-
20 search institution that is not
21 classified as a very high re-
22 search activity by the Car-
23 negie Classification of Insti-
24 tutions of Higher Education
25 and that has an under-

1 graduate enrollment with a
2 majority of students who are
3 from underrepresented pop-
4 ulations;

5 “(cc) shall include a commu-
6 nity college; and

7 “(dd) shall, where feasible,
8 include—

9 “(AA) 1 or more enti-
10 ties described in subclause
11 (I) or (II) and, if appro-
12 priate, industry organiza-
13 tions, including startups and
14 small business;

15 “(BB) 1 or more labor
16 organizations;

17 “(CC) 1 or more Na-
18 tional Laboratories, as de-
19 fined in section 2 of the En-
20 ergy Policy Act of 2005 (42
21 U.S.C. 15801);

22 “(DD) 1 or more Fed-
23 eral laboratories, as defined
24 in section 4 of the Steven-
25 son-Wydler Technology In-

1 novation Act of 1980 (15
2 U.S.C. 3703);

3 “(EE) 1 or more enti-
4 ties described in subclause
5 (I) or (II) from treaty allies
6 and security partners of the
7 United States; and

8 “(FF) other entities if
9 determined by the Director
10 to be vital to the success of
11 the program;

12 “(ii) shall provide funds to and part-
13 ner with other directorates of the Founda-
14 tion for projects or research, including—

15 “(I) to pursue basic questions
16 about natural, human, and physical
17 phenomena that could enable ad-
18 vances in the key technology focus
19 areas;

20 “(II) to study questions that
21 could affect the design (including
22 human interfaces), operation, deploy-
23 ment, or the social and ethical con-
24 sequences of technologies in the key
25 technology focus areas, including the

1 development of technologies that com-
2 plement or enhance the abilities of
3 workers and impact of specific innova-
4 tions on domestic jobs and equitable
5 opportunity; and

6 “(III) to further the creation of a
7 domestic workforce capable of advanc-
8 ing, using, and adapting to key tech-
9 nology focus areas and understanding
10 and improving the impact of key tech-
11 nology focus areas on STEM teaching
12 and learning advancing the key tech-
13 nology focus areas, including engaging
14 industry and labor organizations in
15 research and innovation programs;

16 “(iii) may provide funds to any other
17 Federal agencies for intramural or extra-
18 mural work in the key technology focus
19 areas through research, manufacturing, or
20 other means;

21 “(iv) may make awards under the
22 SBIR and STTR programs (as defined in
23 section 9(e) of the Small Business Act (15
24 U.S.C. 638(e)); and

1 “(v) may enter into and perform such
2 contracts, other transactions, or other ar-
3 rangements, or modifications thereof, as
4 may be necessary in the conduct of the
5 work of the Directorate and on such terms
6 as the Director considers appropriate, in
7 furtherance of the purposes of this Act.

8 “(B) REPORTS.—Not later than 180 days
9 after the date of enactment of the Endless
10 Frontier Act, the Director, in coordination with
11 the Secretary of State and the Director of the
12 Office of Science and Technology Policy, shall
13 prepare and submit to the relevant congres-
14 sional committees—

15 “(i) a plan to seek out additional in-
16 vestments from—

17 “(I) certain designated countries;
18 and

19 “(II) entities other than institu-
20 tions of higher education; and

21 “(ii) the planned activities of the Di-
22 rectorate to secure federally funded science
23 and technology pursuant to section 1746 of
24 the National Defense Authorization Act for
25 Fiscal Year 2020 (Public Law 116–92)

1 and section 223 of William M. (Mac)
2 Thornberry National Defense Authoriza-
3 tion Act for Fiscal Year 2021 (Public Law
4 116–283).

5 “(C) ANNUAL BRIEFING.—Each year, the
6 Director shall formally request a briefing from
7 the Secretary of Defense, the Secretary of Com-
8 merce, the Director of the Federal Bureau of
9 Investigation, the Director of National Intel-
10 ligence, and as appropriate other department or
11 agency heads regarding their efforts to preserve
12 the United States’ advantages generated by the
13 activity of the Directorate.

14 “(4) INTERAGENCY COOPERATION.—

15 “(A) IN GENERAL.—In carrying out this
16 section, the Director and other Federal research
17 agencies, in consultation with the United States
18 Patent and Trademark Office where appro-
19 priate, shall work cooperatively with each other
20 to further the goals of this section in the key
21 technology focus areas.

22 “(B) COMPTROLLER GENERAL REPORT.—
23 Each year, the Comptroller General of the
24 United States shall prepare and submit a report
25 to Congress, and shall simultaneously submit

1 the report to the Director and the Director of
2 the Office of Science and Technology Policy, de-
3 scribing the interagency cooperation that oc-
4 curred during the preceding year pursuant to
5 this paragraph, including a list of—

6 “(i) any funds provided under para-
7 graph (3)(A)(ii) to other divisions of the
8 Foundation; and

9 “(ii) any funds provided under para-
10 graph (3)(A)(iii) to other Federal research
11 agencies.

12 “(5) PROVIDING SCHOLARSHIPS, FELLOWSHIPS,
13 AND OTHER STUDENT SUPPORT.—

14 “(A) IN GENERAL.—The Director, acting
15 through the Directorate, shall fund under-
16 graduate scholarships, graduate fellowships and
17 traineeships, and postdoctoral awards in the
18 key technology focus areas.

19 “(B) IMPLEMENTATION.—The Director
20 may carry out subparagraph (A) by providing
21 funds—

22 “(i) for making awards—

23 “(I) directly to students; and

24 “(II) to institutions of higher
25 education or consortia of institutions

1 of higher education, including those
2 institutions or consortia involved in
3 operating university technology cen-
4 ters established under paragraph (6);
5 and

6 “(ii) to programs in Federal research
7 agencies that have experience awarding
8 such scholarships, fellowships, traineeships,
9 or postdoctoral awards.

10 “(C) BROADENING PARTICIPATION.—In
11 carrying out this paragraph, the Director shall
12 work to increase the participation of underrep-
13 resented populations in fields related to the key
14 technology focus areas. For that purpose, the
15 Director may take such steps as establishing or
16 augmenting programs targeted at underrep-
17 resented populations, and supporting
18 traineeships or other relevant programs at insti-
19 tutions of higher education with high enroll-
20 ments of underrepresented populations.

21 “(D) INNOVATION.—In carrying out this
22 paragraph, the Director shall encourage innova-
23 tion in graduate education, including through
24 encouraging institutions of higher education to
25 offer graduate students opportunities to gain

1 experience in industry or government as part of
2 their graduate training, and through support
3 for students in professional masters programs
4 related to the key technology focus areas.

5 “(E) SUPPLEMENT, NOT SUPPLANT.—The
6 Director shall ensure that funds made available
7 under this paragraph shall be used to create ad-
8 ditional support for postsecondary students and
9 shall not displace funding for any other avail-
10 able support.

11 “(6) UNIVERSITY TECHNOLOGY CENTERS.—

12 “(A) IN GENERAL.—From amounts made
13 available to the Directorate, the Director shall,
14 through a competitive application and selection
15 process, make awards to institutions of higher
16 education or consortia described in paragraph
17 (3)(A)(i)(III) to establish university technology
18 centers.

19 “(B) USES OF FUNDS.—

20 “(i) IN GENERAL.—A center estab-
21 lished under an award under subparagraph
22 (A)—

23 “(I) shall use support provided
24 under such subparagraph—

1 “(aa) to carry out basic and
2 translational research to advance
3 innovation in the key technology
4 focus areas; and

5 “(bb) to further the develop-
6 ment and commercialization of
7 innovations, including inventions,
8 in the key technology focus areas,
9 including—

10 “(AA) innovations de-
11 rived from research carried
12 out under item (aa), through
13 such activities as
14 translational research, proof-
15 of-concept development, and
16 prototyping, in order to re-
17 duce the cost, time, and risk
18 of commercializing new tech-
19 nologies;

20 “(BB) to promote pat-
21 enting and commercializa-
22 tion of inventions derived
23 from research carried out
24 under item (aa); and

1 “(CC) through the use
2 of public-private partner-
3 ships; and

4 “(II) may use support provided
5 under such subparagraph—

6 “(aa) for the costs of equip-
7 ment;

8 “(bb) for the costs associ-
9 ated with technology transfer and
10 commercialization, including pat-
11 enting and licensing; or

12 “(cc) for other activities or
13 costs necessary to accomplish the
14 purposes of this section, includ-
15 ing for operations and staff.

16 “(ii) SUPPORT OF REGIONAL TECH-
17 NOLOGY HUBS.—Each center established
18 under subparagraph (A) may support and
19 participate in, as appropriate, the activities
20 of any regional technology hub designated
21 under section 28(b)(1)(A) of the Steven-
22 son-Wydler Technology Innovation Act of
23 1980.

1 “(C) SELECTION PROCESS.—In selecting
2 recipients under this paragraph, the Director
3 shall consider—

4 “(i) the capacity of the applicant to
5 pursue and advance basic and translational
6 research;

7 “(ii) the extent to which the appli-
8 cant’s proposed research would be likely to
9 advance progress in 1 or more key tech-
10 nology focus areas;

11 “(iii) the extent to which the appli-
12 cant’s proposal would broaden participa-
13 tion by underrepresented populations in
14 those areas;

15 “(iv) the capacity of the applicant to
16 engage industry, labor, and other appro-
17 priate organizations on any advances;

18 “(v) whether the applicant’s proposed
19 research will require or contribute to
20 growth in domestic manufacturing capacity
21 and job creation;

22 “(vi) the quality of plans for dissemi-
23 nation of research and technology results;

24 “(vii) how the applicant will encour-
25 age the training and participation of entre-

1 preneurs and the translation of research
2 results to practice, including the develop-
3 ment of new businesses;

4 “(viii) how the applicant will encour-
5 age the participation of inventors and en-
6 trepreneurs and the development of new
7 businesses;

8 “(ix) regional and geographic diver-
9 sity;

10 “(x) in the case of a consortium, the
11 extent to which the proposal includes insti-
12 tutions listed in item (bb) or (cc) of para-
13 graph (3)(A)(i)(III); and

14 “(xi) the amount of funds from indus-
15 try organizations described in subpara-
16 graph (D)(ii) the applicant would use to-
17 wards establishing the center under sub-
18 paragraph (A).

19 “(D) REQUIREMENTS.—The Director shall
20 ensure that any institution of higher education
21 or consortium receiving an award under sub-
22 paragraph (A) has—

23 “(i) the capacity or the ability to ac-
24 quire the capacity to advance the goals de-
25 scribed in subsection (b)(1); and

1 “(ii) secured contributions for estab-
2 lishing the center under subparagraph (A)
3 from industry organizations in an amount
4 not less than 10 percent of the total
5 amount of the award the institution or
6 consortium would receive under this sec-
7 tion.

8 “(7) MOVING TECHNOLOGY FROM LABORATORY
9 TO MARKET.—

10 “(A) PROGRAM AUTHORIZED.—

11 “(i) IN GENERAL.—The Director, in
12 coordination with the Director of the Na-
13 tional Institute of Standards and Tech-
14 nology, shall establish a program in the
15 Directorate to make awards, on a competi-
16 tive basis, to institutions of higher edu-
17 cation or consortia described in paragraph
18 (3)(A)(i)(III)—

19 “(I) to build capacity at an insti-
20 tution of higher education and facili-
21 tate collaboration with firms in the
22 key technology focus areas to increase
23 the likelihood that new technologies in
24 the key technology focus areas will

1 succeed in the commercial market;
2 and

3 “(II) with the goal of promoting
4 experiments with a range of models
5 that institutions of higher education
6 could use to—

7 “(aa) enable new tech-
8 nologies and inventions to mature
9 to the point where the tech-
10 nologies are more likely to suc-
11 ceed in the commercial market
12 and promote the creation of high-
13 quality jobs in the United States;
14 and

15 “(bb) reduce the risks to
16 commercial success for new tech-
17 nologies and inventions earlier in
18 their development.

19 “(ii) USE FOR TRAINING.—An award
20 under this subparagraph for a purpose de-
21 scribed in subclause (I) or (II) of clause (i)
22 may also enable the institution of higher
23 education or consortium to provide train-
24 ing and support to scientists, engineers,
25 and inventors who are interested in re-

1 search, technology transfer, and commer-
2 cialization, including patenting and licens-
3 ing, if the use is included in the proposal
4 submitted under subparagraph (B).

5 “(B) PROPOSALS.—An institution of high-
6 er education or consortium desiring an award
7 under this paragraph shall submit a proposal to
8 the Director at such time, in such manner, and
9 containing such information as the Director
10 may require. The proposal shall include a de-
11 scription of—

12 “(i) the broader impact of the pro-
13 posal;

14 “(ii) the steps the applicant is study-
15 ing or will take to enable technology trans-
16 fer to reduce the risks for commercializa-
17 tion for new technologies, including how
18 the applicant will collaborate with firms in
19 the key technology focus areas;

20 “(iii) why such steps are likely to be
21 effective;

22 “(iv) how such steps differ from pre-
23 vious efforts to reduce the risks for com-
24 mercialization for new technologies;

1 “(v) whether the commercial viability
2 of any new technologies will promote the
3 creation of high-quality jobs in the United
4 States;

5 “(vi) how the applicant will encourage
6 the participation of inventors and entre-
7 preneurs and the development of new busi-
8 nesses; and

9 “(vii) how the applicant will encour-
10 age the training and participation of entre-
11 preneurs and the translation of research
12 results to practice, including the develop-
13 ment of new businesses.

14 “(C) USE OF FUNDS.—A recipient of an
15 award under this paragraph shall use award
16 funds to reduce the risks for commercialization
17 for new technologies developed on campus,
18 which may include—

19 “(i) creating and funding competitions
20 to allow entrepreneurial ideas from institu-
21 tions of higher education to illustrate their
22 commercialization potential;

23 “(ii) facilitating relationships among
24 local and national business leaders, includ-

1 ing investors, and potential entrepreneurs
2 to encourage successful commercialization;

3 “(iii) creating entities that could en-
4 able researchers at institutions of higher
5 education to further develop new tech-
6 nology, through patient capital investment,
7 advice, staff support, or other means;

8 “(iv) providing facilities for start-up
9 companies where technology maturation
10 could occur;

11 “(v) covering legal and other fees as-
12 sociated with technology transfer and com-
13 mercialization, including patenting and li-
14 censing; and

15 “(vi) revising institution policies, in-
16 cluding policies related to intellectual prop-
17 erty and faculty entrepreneurship, to ac-
18 complish the goals of this paragraph.

19 “(D) REPORTING ON COMMERCIALIZATION
20 BASED ON METRICS.—The Director shall estab-
21 lish metrics related to commercialization and
22 require each recipient of an award under this
23 paragraph to annually report to the Director on
24 such metrics.

25 “(8) TEST BEDS.—

1 “(A) PROGRAM AUTHORIZED.—

2 “(i) IN GENERAL.—The Director, in
3 coordination with the Director of the Na-
4 tional Institute of Standards and Tech-
5 nology, shall establish a program in the
6 Directorate to make awards, on a competi-
7 tive basis, to institutions of higher edu-
8 cation or consortia described in paragraph
9 (3)(A)(i)(III) to establish and operate test
10 beds and fabrication facilities to advance
11 the operation, integration, deployment,
12 and, as appropriate, manufacturing of new,
13 innovative technologies in the key tech-
14 nology focus areas, which may include
15 hardware or software. The goal of such
16 test beds and facilities shall be to accel-
17 erate the movement of innovative tech-
18 nologies into the commercial market
19 through the private sector.

20 “(ii) COORDINATION.—In establishing
21 the program under clause (i), the Director
22 shall ensure coordination in establishing
23 new test beds under this section with exist-
24 ing test beds established under Manufac-

1 turing USA to avoid duplication and maxi-
2 mize the use of Federal resources.

3 “(B) PROPOSALS.—A proposal submitted
4 under this paragraph shall, at a minimum, de-
5 scribe—

6 “(i)(I) the technology or technologies
7 that will be the focus of the test bed or
8 fabrication facility;

9 “(II) the goals of the work to be done
10 at the test bed or facility; and

11 “(III) the expected schedule for com-
12 pleting that work;

13 “(ii) how the applicant will assemble a
14 workforce with the skills needed to operate
15 the test bed or facility;

16 “(iii) how the applicant will ensure
17 broad access to the facility;

18 “(iv) how the applicant will collabo-
19 rate with firms in the key technology focus
20 areas, including through coordinated re-
21 search and development and funding, to
22 ensure that work in the test bed or facility
23 will contribute to the commercial viability
24 of any technologies and will include col-

1 laboration from industry partners and
2 labor organizations;

3 “(v) how the applicant will encourage
4 the participation of inventors and entre-
5 preneurs and the development of new busi-
6 nesses;

7 “(vi) how the applicant will increase
8 participation by underrepresented popu-
9 lations;

10 “(vii) how the applicant will dem-
11 onstrate that the commercial viability of
12 any new technologies will support the cre-
13 ation of high-quality domestic jobs;

14 “(viii) how the test bed or facility will
15 operate after Federal funding has ended;
16 and

17 “(ix) how the test bed will disseminate
18 lessons and other technical information to
19 United States firms or allied nation firms
20 in the United States.

21 “(C) AWARDS.—Awards made under this
22 paragraph shall be for 7 years, with the possi-
23 bility of 5-year extensions.

24 “(D) RESULTS.—An awardee under this
25 paragraph may publish and share with the pub-

1 lic the results of the work conducted under this
2 paragraph.

3 “(E) INTERAGENCY SEMI-ANNUAL MEET-
4 INGS.—The Director, the Director of the Na-
5 tional Institute of Standards and Technology,
6 and the heads of other departments and agen-
7 cies, or their designees, with test bed related eq-
8 uities shall hold an annual meeting to coordi-
9 nate their respective test bed related invest-
10 ments, future years plan, and other appropriate
11 matters, to avoid conflicts and duplication of ef-
12 forts. Upon request by Congress, Congress shall
13 be briefed on the results of the meetings.

14 “(9) INAPPLICABILITY.—Section 5(e)(1) shall
15 not apply to grants, contracts, awards, or other ar-
16 rangements made under this section.

17 “(e) AREAS OF FUNDING SUPPORT.—Subject to the
18 availability of funds to carry out this section, the Director
19 shall endeavor, for each fiscal year, to use—

20 “(1) not less than 35 percent of funds provided
21 to the Directorate for such year to carry out sub-
22 section (d)(6);

23 “(2) not less than 15 percent of such funds to
24 carry out the purpose of subsection (d)(5)—

1 “(A) with the goal of awarding, across the
2 key technology focus areas—

3 “(i) not fewer than 1,000 postdoctoral
4 awards;

5 “(ii) not fewer than 2,000 graduate
6 fellowships and traineeships; and

7 “(iii) not fewer than 1,000 under-
8 graduate scholarships;

9 “(B) of which not less than 10 percent of
10 the funds designated under this paragraph shall
11 be used to support additional awards to focus
12 on community college training, education, and
13 teaching programs that increase the participa-
14 tion of underrepresented populations in science,
15 technology, engineering, and mathematics, in-
16 cluding technical programs through programs
17 such as the Advanced Technological Education
18 program; and

19 “(C) if funds remain after carrying out
20 subparagraphs (A) and (B), awards to institu-
21 tions of higher education to enable the institu-
22 tions to fund the development and establish-
23 ment of new or specialized courses of education
24 for graduate, undergraduate, or technical col-
25 lege students;

1 “(3) not less than 5 percent of such funds to
2 carry out subsection (d)(7);

3 “(4) not less than 10 percent of such funds to
4 carry out subsection (d)(8);

5 “(5) not less than 15 percent of such funds to
6 carry out research and related activities pursuant to
7 subclauses (I) and (II) of subsection (d)(3)(A)(ii);
8 and

9 “(6) not less than 12 percent of such funds to
10 support research in the key technology focus areas
11 through the Established Program to Stimulate Com-
12 petitive Research under section 113 of the National
13 Science Foundation Authorization Act of 1988 (42
14 U.S.C. 1862g).

15 “(f) TECHNICAL ASSISTANCE FOR AWARD RECIPI-
16 ENTS AND APPLICANTS.—The Director may—

17 “(1) coordinate with other Federal agencies to
18 establish interagency and multidisciplinary teams to
19 provide technical assistance to recipients of, and pro-
20 spective applicants for, awards under this section;

21 “(2) by Federal interagency agreement and not-
22 withstanding any other provision of law, transfer
23 funds available to carry out this section to the head
24 of another Federal agency to facilitate and support
25 the provision of such technical assistance; and

1 “(3) enter into contracts with third parties to
2 provide such technical assistance.

3 “(g) AUTHORIZATION OF APPROPRIATIONS AND LIM-
4 ITATIONS.—

5 “(1) AUTHORIZATION FOR THE OFFICE OF IN-
6 SPECTOR GENERAL.—From any amounts appro-
7 priated for the Foundation for a fiscal year, there is
8 authorized to be appropriated for necessary expenses
9 of the Office of Inspector General of the Foundation
10 an amount of not less than \$10,000,000 in any fis-
11 cal year appropriation for the Foundation, for over-
12 sight of the programs and activities established
13 under this section in accordance with the Inspector
14 General Act of 1978.

15 “(2) SUPPLEMENT AND NOT SUPPLANT.—The
16 amounts authorized to be appropriated to carry out
17 this section shall supplement, and not supplant, any
18 other amounts already appropriated to the Founda-
19 tion or Office of Inspector General of the Founda-
20 tion.

21 “(h) RULES OF CONSTRUCTION.—Nothing in this
22 section or any other amendments made to this Act by the
23 Endless Frontier Act shall be construed to alter the mis-
24 sion of any directorate of the Foundation existing prior

1 to the date of enactment of such Act, or to alter the award
2 selection methods or criteria used by such directorates.”.

3 (c) CHIEF DIVERSITY OFFICER.—The National
4 Science Foundation Act of 1950 (42 U.S.C. 1861 et seq.),
5 as amended by subsection (b), is further amended by in-
6 serting after section 8A the following:

7 **“SEC. 8B. CHIEF DIVERSITY OFFICER.**

8 “(a) CHIEF DIVERSITY OFFICER.—

9 “(1) APPOINTMENT.—The Director shall ap-
10 point a Chief Diversity Officer of the National
11 Science Foundation.

12 “(2) QUALIFICATIONS.—The Chief Diversity
13 Officer should have significant experience with diver-
14 sity and inclusion, in particular within the Federal
15 Government and science community.

16 “(3) OVERSIGHT.—The Chief Diversity Officer
17 shall report directly to the Director in the perform-
18 ance of the duties of the Chief Diversity Officer
19 under this section.

20 “(b) DUTIES.—The Chief Diversity Officer is respon-
21 sible for providing advice on policy, oversight, guidance,
22 and coordination with respect to matters of the National
23 Science Foundation related to diversity and inclusion.
24 Other duties may include—

1 “(1) establishing and maintaining a strategic
2 plan that publicly states a diversity definition, vision,
3 and goals for the National Science Foundation;

4 “(2) defining a set of strategic metrics that
5 are—

6 “(A) directly linked to key organizational
7 priorities and goals;

8 “(B) actionable; and

9 “(C) actively used to implement the stra-
10 tegic plan under paragraph (1);

11 “(3) advising in the establishment of training in
12 diversity dynamics and training in practices for lead-
13 ing diverse groups effectively;

14 “(4) advising in the establishment of a strategic
15 plan for diverse participation by institutions of high-
16 er education, including community colleges, histori-
17 cally Black colleges and universities, Tribal colleges
18 or universities, and other minority-serving institu-
19 tions (as such terms are defined in section 8A(a)),
20 and individuals;

21 “(5) advising in the establishment of a strategic
22 plan for outreach to, and recruiting from, untapped
23 locations and underrepresented populations; and

24 “(6) performing such additional duties and ex-
25 ercise such powers as the Director may prescribe.”.

1 (d) ANNUAL REPORT ON UNFUNDED PRIORITIES.—

2 (1) ANNUAL REPORT.—Not later than 10 days
3 after the date on which the budget of the President
4 for a fiscal year is submitted to Congress pursuant
5 to section 1105 of title 31, United States Code, the
6 National Science Board shall submit to the Presi-
7 dent and to Congress a report on the unfunded pri-
8 orities of the National Science Foundation.

9 (2) ELEMENTS.—Each report submitted under
10 paragraph (1) shall provide—

11 (A) for each directorate of the National
12 Science Foundation for the most recent, fully
13 completed fiscal year—

14 (i) the proposal success rate;

15 (ii) the percentage and total funding
16 of proposals that were not funded and that
17 met the criteria for funding; and

18 (iii) the most promising research
19 areas covered by proposals described in
20 clause (ii); and

21 (B) a list, in order of priority, of the next
22 activities approved by the National Science
23 Board to be undertaken in the Major Research
24 Equipment and Facilities Construction account.

25 (e) PILOT PROGRAM.—

1 (1) IN GENERAL.—The Director, acting
2 through the Directorate, shall establish a 5-year
3 pilot program for awarding grants to eligible part-
4 nerships to build research and education capacity at
5 emerging research institutions to enable such insti-
6 tutions to contribute to programs run by the Direc-
7 torate.

8 (2) APPLICATIONS.—An eligible partnership
9 seeking a grant under this subsection shall submit
10 an application to the Director at such time, in such
11 manner, and containing such information as the Di-
12 rector may reasonably require, including a statement
13 of how the partnership will use the funds awarded
14 through the grant to achieve a lasting increase in
15 the research and education capacity of each emerg-
16 ing research institution included in the eligible part-
17 nership.

18 (3) ACTIVITIES.—An eligible partnership receiv-
19 ing a grant under this subsection may use the funds
20 awarded through such grant for—

21 (A) faculty salaries and training;

22 (B) research experiences for undergraduate
23 and graduate students;

24 (C) maintenance and repair of research
25 equipment and instrumentation; and

1 (D) any other activities the Director deter-
2 mines appropriate.

3 (4) DEFINITIONS.—In this subsection:

4 (A) DIRECTOR.—The term “Director”
5 means the Director of the National Science
6 Foundation.

7 (B) DIRECTORATE; EMERGING RESEARCH
8 INSTITUTION.—The terms “Directorate” and
9 “emerging research institution” have the mean-
10 ings given such terms in section 8A(a) of the
11 National Science Foundation Act of 1950, ex-
12 cept that, with respect to the term “emerging
13 research institution”, the reference in para-
14 graph (4) of such section to an award under
15 section 8A of that Act shall be deemed a ref-
16 erence to a grant under this subsection.

17 (C) ELIGIBLE PARTNERSHIP.—The term
18 “eligible partnership” means a partnership of—

19 (i) at least 1 emerging research insti-
20 tution; and

21 (ii) at least 1 institution classified as
22 a very high research activity by the Car-
23 negie Classification of Institutions of High-
24 er Education.

1 **SEC. 4. ENDLESS FRONTIER FUND.**

2 (a) IN GENERAL.—There is authorized to be appro-
3 priated a total of \$190,000,000,000 for fiscal years 2022
4 through 2026 for the implementation of this Act and the
5 amendments made by this Act. Such funds shall be avail-
6 able for the implementation of this Act and the amend-
7 ments made by this Act, and shall be administered by the
8 Director of the Office of Science and Technology Policy
9 (referred to in this section as the “Director”).

10 (b) USE OF FUNDS.—

11 (1) SUBMISSION OF ANNUAL ALLOCATION.—

12 Until the date on which all of the amounts in the
13 Fund described in subsection (a) are expended, the
14 Director shall annually submit to Congress, together
15 with the annual budget of the United States, a list
16 of allocations to agencies and departments to imple-
17 ment this Act and the amendments made by this Act
18 that includes a detailed description of each program
19 proposed to be funded, including the estimated ex-
20 penditures from the Fund for the program for the
21 applicable fiscal year.

22 (2) ALTERNATE ALLOCATION.—

23 (A) IN GENERAL.—The Commerce, Jus-
24 tice, Science, and Related Agencies Appropria-
25 tions Act for the relevant fiscal year may pro-

1 vide for alternate allocation of amounts made
2 available under this section.

3 (B) ALLOCATION BY PRESIDENT.—

4 (i) NO ALTERNATE ALLOCATIONS.—If
5 Congress has not enacted legislation estab-
6 lishing alternate allocations as described in
7 subparagraph (A) by the date on which the
8 Act making full-year appropriations for
9 Commerce, Justice, Science, and Related
10 Agencies for the applicable fiscal year is
11 enacted into law, amounts made available
12 under this section shall be allocated by the
13 Director.

14 (ii) INSUFFICIENT ALTERNATE ALLO-
15 CATION.—If Congress enacts legislation es-
16 tablishing alternate allocations for amounts
17 made available under this section that are
18 less than the full amount authorized to be
19 appropriated to the Fund for that fiscal
20 year under subsection (a), the difference
21 between the amount authorized to be ap-
22 propriated and the alternate allocation
23 shall be allocated by the Director.

24 (c) SENSE OF CONGRESS.—It is the sense of Con-
25 gress that, during the period of fiscal years 2022 through

1 2026, the Director shall make available, from amounts
2 made available under subsection (a), not less than—

3 (1) \$10,000,000,000 to the regional technology
4 hub program under section 28 of the Stevenson-
5 Wydler Technology Innovation Act of 1980 (Public
6 Law 96–480), as added by section 7 of this Act;

7 (2) \$100,000,000,000 to the National Science
8 Foundation, of which not less than \$2,000,000,000
9 shall be made available for each of such fiscal years
10 to the Directorate for Technology and Innovation es-
11 tablished under section 8A of the National Science
12 Foundation Act of 1950; and

13 (3) \$10,000,000,000 to the National Institute
14 of Standards and Technology.

15 **SEC. 5. STRATEGY AND REPORT ON ECONOMIC SECURITY,**
16 **SCIENCE, RESEARCH, AND INNOVATION TO**
17 **SUPPORT THE NATIONAL SECURITY STRAT-**
18 **EGY.**

19 (a) DEFINITIONS.—In this section:

20 (1) APPROPRIATE COMMITTEES OF CON-
21 GRESS.—The term “appropriate committees of Con-
22 gress” means—

23 (A) the Committee on Agriculture, Nutri-
24 tion, and Forestry, the Committee on Appro-
25 priations, the Committee on Armed Services,

1 the Committee on Banking, Housing, and
2 Urban Affairs, the Committee on the Budget,
3 the Committee on Commerce, Science, and
4 Transportation, the Committee on Energy and
5 Natural Resources, the Committee on Finance,
6 the Committee on Foreign Relations, the Com-
7 mittee on Health, Education, Labor, and Pen-
8 sions, the Committee on Homeland Security
9 and Governmental Affairs, the Committee on
10 the Judiciary, and the Select Committee on In-
11 telligence of the Senate; and

12 (B) the Committee on Agriculture, the
13 Committee on Appropriations, the Committee
14 on Armed Services, the Committee on the
15 Budget, the Committee on Education and
16 Labor, the Committee on Energy and Com-
17 merce, the Committee on Financial Services,
18 the Committee on Foreign Affairs, the Com-
19 mittee on Homeland Security, the Committee
20 on the Judiciary, the Committee on Oversight
21 and Reform, the Committee on Science, Space,
22 and Technology, the Committee on Ways and
23 Means, and the Permanent Select Committee
24 on Intelligence of the House of Representatives.

1 (2) KEY TECHNOLOGY FOCUS AREA.—The term
2 “key technology focus area” means an area included
3 on the most recent list under section 8A(d)(2) of the
4 National Science Foundation Act of 1950.

5 (3) NATIONAL SECURITY STRATEGY.—The term
6 “national security strategy” means the national se-
7 curity strategy required by section 108 of the Na-
8 tional Security Act of 1947 (50 U.S.C. 3043).

9 (b) STRATEGY AND REPORT.—

10 (1) IN GENERAL.—In 2021 and in each year
11 thereafter before the applicable date set forth under
12 paragraph (2), the Director of the Office of Science
13 and Technology Policy, in coordination with the Di-
14 rector of the National Economic Council, the Direc-
15 tor of the National Science Foundation, the Sec-
16 retary of Commerce, the Secretary of Energy, the
17 National Security Council, the United States Patent
18 and Trademark Office, and the heads of other rel-
19 evant Federal agencies and in consultation with rel-
20 evant industry representatives and labor organiza-
21 tions, shall—

22 (A) review such strategy, programs, and
23 resources as the Director of the Office of
24 Science and Technology Policy determines per-
25 tain to United States national competitiveness

1 in science, research, innovation, and technology
2 transfer, including patenting and licensing, to
3 support the national security strategy;

4 (B) develop or revise a strategy for the
5 Federal Government to improve the national
6 competitiveness of the United States in science,
7 research, and innovation to support the national
8 security strategy; and

9 (C) submit to the appropriate committees
10 of Congress—

11 (i) a report on the findings of the Di-
12 rector with respect to the review conducted
13 under subparagraph (A); and

14 (ii) the strategy developed or revised
15 under subparagraph (B).

16 (2) APPLICABLE DATES.—In each year, the ap-
17 plicable date set forth under this paragraph is as fol-
18 lows:

19 (A) In 2021, December 31, 2021.

20 (B) In 2022 and every year thereafter—

21 (i) in any year in which a new Presi-
22 dent is inaugurated, October 1 of that
23 year; and

24 (ii) in any other year, the date that is
25 90 days after the date of the transmission

1 to Congress in that year of the national se-
2 curity strategy.

3 (c) ELEMENTS.—

4 (1) REPORT.—Each report submitted under
5 subsection (b)(1)(C)(i) shall include the following:

6 (A) An assessment of public and private
7 investment in civilian and military science and
8 technology and its implications for the
9 geostrategic position and national security of
10 the United States.

11 (B) A description of the prioritized eco-
12 nomic security interests and objectives, includ-
13 ing domestic job creation, of the United States
14 relating to science, research, and innovation
15 and an assessment of how investment in civilian
16 and military science and technology can ad-
17 vance those objectives.

18 (C) An assessment of how regional efforts
19 are contributing and could contribute to the in-
20 novation capacity of the United States, includ-
21 ing—

22 (i) programs run by State and local
23 governments; and

1 (ii) regional factors that are contrib-
2 uting or could contribute positively to inno-
3 vation.

4 (D) An assessment of—

5 (i) workforce needs for competitive-
6 ness and national security in key tech-
7 nology areas; and

8 (ii) Federal support needed—

9 (I) to expand domestic and inter-
10 national student pathways into key
11 technology areas; and

12 (II) to improve workforce devel-
13 opment and employment systems, as
14 well as programs and practices to
15 upskill incumbent workers.

16 (E) An assessment of barriers to competi-
17 tiveness in key technology focus areas and bar-
18 riers to the development and evolution of start-
19 ups, small and mid-sized business entities, and
20 industries in key technology focus areas.

21 (F) An assessment of the effectiveness of
22 the Federal Government, federally funded re-
23 search and development centers, and national
24 labs in supporting and promoting technology
25 commercialization and technology transfer, in-

1 including an assessment of the adequacy of Fed-
2 eral research and development funding in pro-
3 moting competitiveness and the development of
4 new technologies.

5 (G) An assessment of manufacturing ca-
6 pacity, logistics, and supply chain dynamics of
7 major export sectors, including access to a
8 skilled workforce, physical infrastructure, and
9 broadband network infrastructure.

10 (H) An assessment of how the Federal
11 Government is increasing the participation of
12 underrepresented populations in science, re-
13 search, innovation, and manufacturing.

14 (I) An assessment of the effectiveness of
15 the Federal Government, Federally funded re-
16 search and development centers, and national
17 laboratories in transitioning technologies and
18 processes that emerge from Federally funded
19 research to new domestic manufacturing growth
20 and job creation across sectors in the United
21 States.

22 (2) STRATEGY.—Each strategy submitted
23 under subsection (b)(1)(C)(ii) shall include the fol-
24 lowing:

1 (A) A plan to utilize available tools to ad-
2 dress or minimize the leading threats and chal-
3 lenges and to take advantage of the leading op-
4 portunities, including the following:

5 (i) Specific objectives, tasks, metrics,
6 and milestones for each relevant Federal
7 agency.

8 (ii) Specific plans to support public
9 and private sector investment in research,
10 technology development, education and
11 workforce development, and domestic man-
12 ufacturing in key technology focus areas
13 supportive of the national economic com-
14 petitiveness of the United States and to
15 foster the prudent use of public-private
16 partnerships.

17 (iii) Specific plans to promote environ-
18 mental stewardship and fair competition
19 for United States workers.

20 (iv) A description of—

21 (I) how the strategy submitted
22 under subsection (b)(1)(C)(ii) sup-
23 ports the national security strategy;
24 and

1 (II) how the strategy submitted
2 under such subsection is integrated
3 and coordinated with the most recent
4 national defense strategy under sec-
5 tion 113(g) of title 10, United States
6 Code.

7 (v) A plan to encourage the govern-
8 ments of countries that are allies or part-
9 ners of the United States to cooperate with
10 the execution of the strategy submitted
11 under subsection (b)(1)(C)(ii), where ap-
12 propriate.

13 (vi) A plan to encourage certain inter-
14 national and multilateral organizations to
15 support the implementation of such strat-
16 egy.

17 (vii) A plan for how the United States
18 should develop local and regional capacity
19 for building innovation ecosystems across
20 the nation by providing Federal support.

21 (viii) A plan for strengthening the in-
22 dustrial base of the United States.

23 (B) An identification of additional re-
24 sources, administrative action, or legislative ac-

tion recommended to assist with the implementation of such strategy.

(d) FORM OF REPORTS AND STRATEGIES.—Each report and strategy submitted under subsection (b)(1)(C) shall be submitted in unclassified form, but may include a classified annex.

7 SEC. 6. SUPPLY CHAIN RESILIENCY PROGRAM.

8 (a) DEFINITIONS.—In this section:

9 (1) CRITICAL INDUSTRY.—The term “critical
10 industry” means—

(A) key technology focus areas, as defined in section 8A(a) of the National Science Foundation Act of 1950, as added by section 3(b) of this Act; and

(B) areas identified by the industrial review in subsection (g).

17 (2) FOREIGN ENTITY.—The term “foreign enti-
18 ty”—

19 (A) means—

20 (i) the government of a foreign coun-
21 try;

22 (ii) a foreign political party;

(iii) an individual who is not a protected individual (as defined in section

1 274B(a)(3) of the Immigration and Na-
2 tionality Act (8 U.S.C. 1324b(a)(3))); or

3 (iv) a partnership, association, cor-
4 poration, organization, or other combina-
5 tion of persons organized under the laws
6 of, or having its principal place of business
7 in, a foreign country; and

8 (B) includes—

9 (i) any person owned by, controlled
10 by, or subject to the jurisdiction or direc-
11 tion of, a person described in subpara-
12 graph (A);

13 (ii) any person, wherever located, that
14 acts as an agent, representative, or em-
15 ployee of a person described in subpara-
16 graph (A);

17 (iii) any person that acts in any other
18 capacity at the order or request, or under
19 the direction or control, of—

20 (I) a person described in sub-
21 paragraph (A); or

22 (II) a person, the activities of
23 which are directly or indirectly super-
24 vised, directed, controlled, financed, or
25 subsidized in whole or in majority

1 part by a person described in subpara-
2 graph (A);

3 (iv) any person that directly or indi-
4 rectly through any contract, arrangement,
5 understanding, relationship, or otherwise
6 owns not less than 25 percent of the equity
7 interests of a person described in subpara-
8 graph (A);

9 (v) any person with significant re-
10 sponsibility to control, manage, or direct a
11 person described in subparagraph (A);

12 (vi) any individual, wherever located,
13 who is a citizen or resident of a country
14 controlled by a person described in sub-
15 paragraph (A); and

16 (vii) any corporation, partnership, as-
17 sociation, or other organization organized
18 under the laws of a country controlled by
19 a person described in subparagraph (A).

20 (3) FOREIGN ENTITY OF CONCERN.—The term
21 “foreign entity of concern” means a foreign entity
22 that is—

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

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

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 (commonly
7 known as the “SDN list”);

8 (C) owned by, controlled by, or subject to
9 the jurisdiction or direction of a government of
10 a foreign country that is a covered nation (as
11 defined in section 2533c(d) of title 10, United
12 States Code);

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

16 (i) chapter 37 of title 18, United
17 States Code (commonly known as the “Es-
18 pionage Act”);

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

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

24 (iv) the Arms Export Control Act (22
25 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, 2275, 2276, 2277, and
4 2284);

5 (vi) the Export Control Reform Act of
6 2018 (50 U.S.C. 4801 et seq.); or

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

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

16 (4) LABOR ORGANIZATION.—The term “labor
17 organization” has the meaning given such term in
18 section 8A(a) of the National Science Foundation
19 Act of 1950.

20 (5) PROGRAM.—The term “program” means
21 the supply chain resiliency and crisis response pro-
22 gram established under subsection (b).

23 (6) RELEVANT COMMITTEES OF CONGRESS.—
24 The term “relevant committees of Congress”
25 means—

1 (A) the Committee on Commerce, Science,
2 and Transportation of the Senate;

3 (B) the Committee on Appropriations of
4 the Senate;

5 (C) the Committee on Science, Space, and
6 Technology of the House of Representatives;

7 (D) the Committee on Energy and Com-
8 merce of the House of Representatives; and

9 (E) the Committee on Appropriations of
10 the House of Representatives.

11 (7) SECRETARY.—The term “Secretary” means
12 the Secretary of Commerce.

13 (8) SOCIALLY AND ECONOMICALLY DISADVAN-
14 TAGED INDIVIDUAL.—The term “socially and eco-
15 nomically disadvantaged individual” means a socially
16 and economically disadvantaged individual for the
17 purposes of section 8(d) of the Small Business Act
18 (15 U.S.C. 637(d)) and any rules issued under such
19 section 8(d).

20 (b) ESTABLISHMENT.—The Secretary shall establish
21 in the Department of Commerce a supply chain resiliency
22 and crisis response program to carry out the activities de-
23 scribed in subsection (d).

24 (c) MISSION AND PRIORITIES.—

1 (1) MISSION.—The mission of the program is
2 to—

3 (A) ensure the leadership of the Federal
4 Government with respect to industries that are
5 essential to the mid-term and long-term na-
6 tional security and economic competitiveness of
7 the United States; and

8 (B) coordinate the efforts of the Federal
9 Government with industry, labor organizations,
10 and State, local, territorial, and Tribal govern-
11 ments in responding to supply chain crises.

12 (2) PRIORITIES.—The program, and the associ-
13 ated supply chain resiliency fund described in sub-
14 section (f), shall—

15 (A) in partnership with the private sector,
16 build resilient and secure supply chains (includ-
17 ing through the mid-term and long-term
18 onshoring and diversification of key supply
19 chains) that can ensure the access of the
20 United States to critical goods and services in
21 the face of shocks, including pandemic and bio-
22 logical threats, cyberattacks, extreme weather
23 events, terrorist and geopolitical attacks, and
24 economic competition;

1 (B) enhance domestic innovation and man-
2 ufacturing capacity across the United States,
3 including in de-industrialized areas, economi-
4 cally distressed regions, rural areas, and histori-
5 cally marginalized communities;

6 (C) improve the competitiveness of small
7 and medium-sized businesses, and businesses
8 owned and controlled by socially and economi-
9 cally disadvantaged individuals, women, vet-
10 erans, or other individuals from underrep-
11 resented populations, to support more resilient
12 domestic supply chains in critical industries;

13 (D) support high-quality domestic jobs in
14 critical industries and associated supply chains,
15 including for underrepresented and disadvan-
16 tagged populations; and

17 (E) support collaboration with allies and
18 partners who share the values of the United
19 States to build resilient global supply chains
20 and stockpile essential goods.

21 (d) ACTIVITIES.—Under the program, the Assistant
22 Secretary of Commerce for Economic Development, in co-
23 ordination with the Under Secretary of Commerce for
24 Standards and Technology, the Under Secretary of Com-
25 merce for Industry and Security, the Executive Director

1 of the SelectUSA Initiative established under Executive
2 Order 13577 (15 U.S.C. 1512 note), and the Under Sec-
3 retary of Commerce for International Trade (acting
4 through the Assistant Secretary of Commerce for Industry
5 and Analysis), shall carry out activities—

6 (1) to identify and monitor current and future
7 key supply chain gaps and vulnerabilities in critical
8 industries;

9 (2) to develop or identify opportunities to build
10 domestic capacity to address supply chain gaps and
11 vulnerabilities in critical industries;

12 (3) to partner with the private sector to make
13 investments and purchases through the supply chain
14 resiliency fund described in subsection (f) to support
15 the domestic production of critical goods and
16 strengthen domestic supply chains in critical indus-
17 tries, including investments that upgrade, re-equip,
18 expand, or establish an industrial or manufacturing
19 facility;

20 (4) to collaborate with the Director of the Of-
21 fice of Management and Budget, the Secretary of
22 Defense, the Secretary of Energy, the Director of
23 National Intelligence, the Director of the National
24 Science Foundation, and, as appropriate, the heads

1 of other Federal departments and agencies to invest
2 in urgent domestic supply chain gaps;

3 (5) to establish and manage partnerships be-
4 tween the Federal Government and industry, labor
5 organizations, and State, local, territorial, and Trib-
6 al governments to respond to crises;

7 (6) to coordinate the distribution of critical re-
8 sources to areas that have the greatest needs during
9 crises;

10 (7) to develop contingency plans to ensure a ro-
11 bust domestic supply chain response for potential
12 crises; and

13 (8) to ensure that the allies and foreign part-
14 ners of the United States have supply chains that
15 are capable of supporting critical industries.

16 (e) AUTHORITIES.—The Secretary may—

17 (1) request information on known risks in sup-
18 ply chains from private sector entities, including sin-
19 gle-sourcing risk, the financial risk of suppliers, ex-
20 posure to hazards relating to extreme weather
21 events, intellectual property risk, cybersecurity risk,
22 and geopolitical risk;

23 (2) request that an entity submit information
24 on the known supply chain vulnerabilities of the en-
25 tity;

1 (3) establish advisory boards and councils with
2 authority to—

3 (A) request technical, engineering, and
4 operational data directly from the private sec-
5 tor;

6 (B) directly receive whistleblower com-
7 plaints with appropriate protection; and

8 (C) identify key competitiveness challenges
9 in critical industries;

10 (4) enter into agreements with allies and part-
11 ner governments regarding supply chain security as-
12 surances; and

13 (5) with the approval of the Committee on Ap-
14 propriations of the Senate and the Committee on
15 Appropriations of the House of Representatives,
16 transfer funds to, or receive funds from, other de-
17 partments and agencies to implement the program.

18 (f) SUPPLY CHAIN RESILIENCY FUND.—

19 (1) IN GENERAL.—In carrying out activities
20 under the program, the Secretary may, as appro-
21 priate, provide Federal financial and technical as-
22 sistance through a supply chain resiliency fund (re-
23 ferred to in this section as the “Fund”), including
24 through—

1 (A) direct loans, loan guarantees, bond
2 guarantees, grants, and cooperative agreements;

3 (B) purchase commitments and cost shar-
4 ing with nongovernmental sources, for the pri-
5 vate sector to develop manufacturing and pro-
6 duction capabilities;

7 (C) the installation or purchase of equip-
8 ment;

9 (D) incentive prizes;

10 (E) milestone payments;

11 (F) awards to, or contracts with, inde-
12 pendent nonprofit organizations or nonprofit
13 corporations to—

14 (i) make investments and other finan-
15 cial awards; or

16 (ii) provide in-kind services; and

17 (G) other transaction authority to accel-
18 erate the development or prototyping and pro-
19 duction of advanced technology projects.

20 (2) FOREIGN DIRECT INVESTMENT
21 PROJECTS.—The Secretary shall evaluate any for-
22 eign direct investment project to be supported by the
23 program, including any assistance provided through
24 the Fund, in accordance with the process established

1 by the Committee on Foreign Investment in the
2 United States.

3 (3) REQUIREMENTS FOR ASSISTANCE.—

4 (A) IN GENERAL.—In providing assistance
5 through the Fund, the Secretary shall consider
6 the following factors:

7 (i) Whether the project or initiative to
8 which the assistance relates is in the inter-
9 ests of the United States.

10 (ii) How the project or initiative to
11 which the assistance relates accomplishes
12 the mission and priorities of the program.

13 (iii) The non-Federal cost share pro-
14 vided by the recipient of the assistance.

15 (iv) When applicable, the extent of the
16 commitment from the recipient of the
17 funding to expand high-quality employment
18 opportunities for underrepresented and dis-
19 advantaged populations through the
20 project or initiative to which the assistance
21 relates.

22 (B) PROHIBITION.—The Secretary may
23 not provide assistance through the Fund if the
24 Secretary determines that the recipient of the
25 assistance is a foreign entity of concern.

1 (4) EXTERNAL ADVISORY BOARD.—

2 (A) IN GENERAL.—The Fund shall have
3 an oversight board that—

4 (i) shall be comprised of members who
5 represent both national security and eco-
6 nomic competitiveness stakeholders, includ-
7 ing representatives of labor organizations
8 and small businesses; and

9 (ii) may—

10 (I) offer guidance and direction
11 regarding assistance provided through
12 the Fund; and

13 (II) monitor, and provide rec-
14 ommendations regarding, the assist-
15 ance provided through the Fund.

16 (B) CONFLICTS OF INTEREST.—No mem-
17 ber of the oversight board described in subpara-
18 graph (A) may, in any manner, directly or indi-
19 rectly, participate in the deliberation regarding,
20 or the determination of, any question affect-
21 ing—

22 (i) the personal interests of that mem-
23 ber; or

24 (ii) the interests of any corporation,
25 partnership, or association in which that

1 member is directly or indirectly personally
2 interested.

3 (C) APPLICABILITY OF FACA.—The Fed-
4 eral Advisory Committee Act (5 U.S.C. App.)
5 shall apply with respect to the oversight board
6 described in subparagraph (A) and the activities
7 of the oversight board, except that section 14 of
8 that Act shall not so apply.

9 (5) SMALL AND DISADVANTAGED BUSINESS
10 MANDATES.—The Fund may have set asides, pref-
11 erences, or explicit mandates to assist or benefit
12 small and medium-sized businesses and businesses
13 owned and controlled by socially and economically
14 disadvantaged individuals, women, veterans, or other
15 individuals from underrepresented populations.

16 (6) PROTECTION OF TAXPAYER FUNDS.—The
17 Fund may place restrictions on executive compensa-
18 tion and shareholder activities to ensure taxpayer in-
19 vestments are being protected, including explicit
20 time limits on the length of the restrictions.

21 (7) RECORDS.—

22 (A) IN GENERAL.—With respect to assist-
23 ance provided under this section through the
24 Fund, the recipient of the assistance and any
25 other appropriate party shall keep such records

1 and other pertinent documents as the Secretary
2 shall prescribe by regulation, including such
3 records as the Secretary may require to facili-
4 tate an effective audit.

5 (B) ACCESS.—The Secretary and the
6 Comptroller General of the United States, or
7 any duly authorized representative of either
8 such official, shall have access to the records
9 and documents described in subparagraph (A)
10 for the purposes of conducting an audit.

11 (8) TERMS.—

12 (A) IN GENERAL.—The Secretary may es-
13 tablish the terms of any assistance provided
14 through the Fund.

15 (B) PUBLIC AVAILABILITY.—The Secretary
16 shall make all terms described in subparagraph
17 (A) available to the public, including copies of
18 any contracts relating to the assistance de-
19 scribed in that subparagraph.

20 (9) AMOUNT OF ASSISTANCE.—

21 (A) IN GENERAL.—Subject to subpara-
22 graph (B), the Secretary may determine the ap-
23 propriate amount, and the type of funding, with
24 respect to assistance provided through the
25 Fund.

1 (B) NOTIFICATION.—Not later than 15
2 days before the date on which the Secretary
3 makes any commitment to provide assistance
4 through the Fund in an amount that is more
5 than \$10,000,000, the Secretary shall submit to
6 the relevant committees of Congress a notifica-
7 tion regarding that commitment.

8 (10) CLAWBACK REQUIREMENTS AND OTHER
9 REGULATIONS.—The Secretary shall prescribe regu-
10 lations to carry out this subsection, which shall in-
11 clude policies relating to the circumstances under
12 which the Secretary may recover assistance provided
13 through the Fund and any other policies, proce-
14 dures, or information necessary to implement this
15 subsection.

16 (11) TECHNICAL ASSISTANCE.—In carrying out
17 activities under the program through the Fund, the
18 Secretary may provide technical assistance, including
19 in coordination with the program established under
20 section 25 of the National Institute of Standards
21 and Technology Act (15 U.S.C. 278k) and the Man-
22 ufacturing USA Program established under section
23 34 of that Act (15 U.S.C. 278s).

24 (12) AUDIT.—

1 (A) ANNUAL INDEPENDENT AUDITS.—The
2 Secretary shall enter into an arrangement with
3 an independent auditor to conduct annual eval-
4 uations of assistance provided through the
5 Fund under this section.

6 (B) COMPTROLLER GENERAL REVIEW.—
7 The Comptroller General of the United States
8 shall conduct a biennial review of the adminis-
9 tration by the Secretary of the Fund under this
10 section.

11 (C) REPORTS.—The results of each audit
12 conducted under subparagraph (A), and each
13 review conducted under subparagraph (B), shall
14 be submitted to the relevant committees of Con-
15 gress.

16 (g) INDUSTRIAL REVIEW ON SUPPLY CHAIN RESIL-
17 IENCY AND DOMESTIC MANUFACTURING.—Not later than
18 90 days after the date of enactment of this Act, and not
19 less frequently than every 2 years thereafter, the Secretary
20 shall conduct a review, in coordination with other relevant
21 Federal departments and agencies, to be submitted to the
22 relevant committees of Congress—

23 (1) identifying—

24 (A) technologies critical to economic com-
25 petitiveness and national security; and

1 (B) supplies critical to the crisis prepared-
2 ness of the United States, such as medical sup-
3 plies, personal protective equipment, disaster
4 response necessities, electrical generation tech-
5 nology, materials essential to infrastructure re-
6 pair and renovation, and other supplies identi-
7 fied by the Secretary;

8 (2) describing—

9 (A) the current domestic manufacturing
10 base and supply chains for those technologies
11 and supplies, including raw materials, produc-
12 tion equipment, and other goods essential to the
13 production of those technologies and supplies;
14 and

15 (B) the ability of the United States to
16 maintain readiness and to surge produce those
17 technologies and supplies in response to an
18 emergency;

19 (3) identifying defense, intelligence, homeland,
20 economic, domestic labor supply, natural, geo-
21 political, or other contingencies that may disrupt,
22 strain, compromise, or eliminate the supply chain for
23 those technologies and supplies;

24 (4) assessing the resiliency and capacity of the
25 domestic manufacturing base, supply chains, and

1 workforce to support the need for those technologies
2 and supplies, including any single points of failure in
3 those supply chains;

4 (5) assessing flexible manufacturing capacity
5 available in the United States in cases of emergency;

6 (6) making specific recommendations to im-
7 prove the security and resiliency of domestic manu-
8 facturing capacity and supply chains, including the
9 development of sector-based plans for re-shoring
10 manufacturing and for supply chain optimization de-
11 signed to help manufacturers build domestic supply
12 chains and a domestic workforce in critical tech-
13 nologies and supplies by—

14 (A) developing long-term strategies;

15 (B) increasing visibility throughout mul-
16 tiple supplier tiers;

17 (C) identifying and mitigating risks, in-
18 cluding the financial and operational risks of a
19 supply chain, vulnerabilities to extreme weather
20 events, cyberattacks, pandemic and biological
21 threats, terrorist and geopolitical attacks, and
22 other emergencies, and exposure to gaps in do-
23 mestic sourcing and import exposure;

24 (D) identifying enterprise resource plan-
25 ning systems that are compatible across supply

1 chain tiers and are affordable for small and me-
2 dium-sized enterprises;

3 (E) understanding the total cost of owner-
4 ship, total value contribution, and other best
5 practices that encourage strategic partnerships
6 throughout the supply chain;

7 (F) understanding Federal procurement
8 opportunities to fulfill requirements for buying
9 domestically sourced goods and services and fill
10 gaps in domestic purchasing;

11 (G) understanding how advanced digital
12 technology, including artificial intelligence, ro-
13 botics, 3D printing, and cloud computing—

14 (i) can improve the security and resil-
15 iency of domestic manufacturing capacity
16 and supply chains; and

17 (ii) will affect the number and quality
18 of jobs in the United States;

19 (H) identifying policies to maximize do-
20 mestic job retention and creation, including
21 workforce development programs; and

22 (I) identifying such other services as the
23 Secretary considers necessary;

24 (7) providing guidance on technologies and sup-
25 plies to be prioritized for assistance through the

1 Fund and other activities under the Department of
2 Commerce, the National Science Foundation, and
3 other relevant Federal agencies;

4 (8) reviewing the sourcing of key goods from al-
5 lies and partners, including recommendations for co-
6 ordination with allies and partners on sourcing crit-
7 ical products where appropriate; and

8 (9) monitoring and strengthening the financial
9 and operational health of small and medium enter-
10 prises in domestic supply chains to mitigate risks
11 and ensure diverse, competitive supplier markets
12 that are less vulnerable to single points of failure.

13 (h) ADDITIONAL HIRING AUTHORITY.—

14 (1) IN GENERAL.—To the extent needed to
15 carry out the program, the Secretary may—

16 (A) utilize hiring authorities under section
17 3372 of title 5, United States Code, to staff the
18 program with employees from other Federal
19 agencies, institutions of higher education, and
20 other organizations as described in that section
21 with relevant experience in supply chain man-
22 agement and investment in the same manner
23 and subject to the same conditions that apply
24 to such individuals utilized to accomplish other
25 missions of the Department of Commerce;

1 (B) appoint and fix the compensation of
2 such temporary personnel as may be necessary
3 to implement the requirements of this section
4 relating to the program, without regard to the
5 provisions of title 5, United States Code, gov-
6 erning appointments in the competitive service;
7 and

8 (C) appoint an individual appointed under
9 subparagraph (B), after serving continuously
10 for not less than 2 years, to a position in the
11 Department of Commerce in the same manner
12 that an employee serving in a position in the
13 competitive service may be transferred, reas-
14 signed, or promoted.

15 (2) NO REIMBURSEMENT.—Any assignment
16 provided under paragraph (1)(A) shall be made
17 without reimbursement.

18 (3) EFFECT OF APPOINTMENT.—An individual
19 appointed as described in paragraph (1)(C) shall be
20 considered to be appointed under a career-condi-
21 tional appointment, unless the individual, as of the
22 date on which the individual is appointed, has com-
23 pleted a sufficient amount of creditable service to at-
24 tain a permanent career appointment.

25 (i) SEMICONDUCTOR INCENTIVES.—

1 (1) IN GENERAL.—The Secretary shall carry
2 out the program established under section 9902 of
3 the William M. (Mac) Thornberry National Defense
4 Authorization Act for Fiscal Year 2021 (Public Law
5 116–283) as part of the program.

6 (2) TECHNICAL AND CONFORMING AMEND-
7 MENT.—Section 9902(a)(1) of the William M. (Mac)
8 Thornberry National Defense Authorization Act for
9 Fiscal Year 2021 (Public Law 116–283) is amended
10 by striking “in the Department of Commerce” and
11 inserting “as part of the program established under
12 section 6 of the Endless Frontier Act”.

13 (j) REPORT TO CONGRESS.—Concurrent with the an-
14 nual submission by the President of a budget under sec-
15 tion 1105 of title 31, United States Code, the Secretary
16 shall submit to the relevant committees of Congress a re-
17 port that contains a summary of all activities carried out
18 under this section for the year covered by the report.

19 (k) MAINTENANCE OF STANDARDS.—A recipient of
20 assistance provided under this section, including assist-
21 ance provided through the Fund, shall be required to com-
22 ply with the requirements of title VI of the Public Works
23 and Economic Development Act of 1965 (42 U.S.C. 3211
24 et seq.), except to the extent that the Secretary determines
25 that any such requirement is manifestly incompatible with

1 or inapposite to a project other than a project assisted
2 under such title.

3 (l) FUNDING.—

4 (1) IN GENERAL.—There are authorized to be
5 appropriated to the Secretary such sums as may be
6 necessary carry out this section, which shall remain
7 available until expended.

8 (2) INSPECTOR GENERAL FUNDING.—Of the
9 amounts made available in a fiscal year to carry out
10 this section, not more than 2 percent of those
11 amounts shall be available to the Inspector General
12 of the Department of Commerce to conduct over-
13 sight activities with respect to the program.

14 (3) TRANSFERS.—Of the amounts made avail-
15 able in a fiscal year to carry out this section, the
16 Secretary may transfer not more than 5 percent of
17 those amounts to the account under the heading
18 “Department of Commerce—Salaries and Expenses”
19 to provide for administration and oversight activities
20 relating to the program.

21 **SEC. 7. REGIONAL TECHNOLOGY HUB PROGRAM.**

22 (a) IN GENERAL.—The Stevenson-Wydler Tech-
23 nology Innovation Act of 1980 (Public Law 96–480; 15
24 U.S.C. 3701 et seq.) is amended—

1 (1) by redesignating section 28 as section 30;
2 and

3 (2) by inserting after section 27 the following:

4 **“SEC. 28. REGIONAL TECHNOLOGY HUB PROGRAM.**

5 “(a) DEFINITIONS.—In this section:

6 “(1) APPRENTICESHIP.—The term ‘apprentice-
7 ship’ means an apprenticeship program that is reg-
8 istered by the Office of Apprenticeship or a State
9 apprenticeship agency under the Act of August 16,
10 1937 (commonly known as the ‘National Apprentice-
11 ship Act’) (50 Stat. 664, chapter 663; 29 U.S.C. 50
12 et seq.), including, as in effect on December 30,
13 2019, any requirement, standard, or rule promul-
14 gated under that Act.

15 “(2) APPROPRIATE COMMITTEES OF CON-
16 GRESS.—The term ‘appropriate committees of Con-
17 gress’ means—

18 “(A) the Committee on Commerce,
19 Science, and Transportation, the Committee on
20 Environment and Public Works, and the Com-
21 mittee on Appropriations of the Senate; and

22 “(B) the Committee on Science, Space,
23 and Technology, the Committee on Transpor-
24 tation and Infrastructure, and the Committee

1 on Appropriations of the House of Representa-
2 tives.

3 “(3) COOPERATIVE EXTENSION.—The term ‘co-
4 operative extension’ means the extension services es-
5 tablished at the land-grant colleges and universities
6 under the Smith-Lever Act of May 8, 1914 (7
7 U.S.C. 341 et seq.).

8 “(4) KEY TECHNOLOGY FOCUS AREAS.—The
9 term ‘key technology focus areas’ means the areas
10 included on the most recent list under section
11 8A(d)(2) of the National Science Foundation Act of
12 1950.

13 “(5) LABOR ORGANIZATION.—The term ‘labor
14 organization’ has the meaning given such term in
15 section 8A(a) of the National Science Foundation
16 Act of 1950.

17 “(6) LARGE METROPOLITAN COMMUNITIES.—
18 The term ‘large metropolitan community’ means a
19 metropolitan statistical area with a population of
20 more than 500,000.

21 “(7) MANUFACTURING EXTENSION CENTER.—
22 The term ‘manufacturing extension center’ has the
23 meaning given the term ‘Center’ in section 25(a) of
24 the National Institute of Standards and Technology
25 Act (15 U.S.C. 278k(a)).

1 “(8) MANUFACTURING USA INSTITUTE.—The
2 term ‘Manufacturing USA institute’ means an Man-
3 ufacturing USA institute described in section 34(d)
4 of the National Institute of Standards and Tech-
5 nology Act (15 U.S.C. 278s(d)).

6 “(9) MID-SIZED METROPOLITAN COMMU-
7 NITIES.—The term ‘mid-sized metropolitan commu-
8 nity’ means a metropolitan statistical area with a
9 population of more than 200,000 and not more than
10 500,000.

11 “(10) OTHER TECHNOLOGY AND INNOVATION
12 SECTORS CRITICAL TO NATIONAL AND ECONOMIC SE-
13 CURITY.—The term ‘other technology and innovation
14 sectors critical to national and economic security’
15 means other technology and innovation sectors that
16 the Secretary of Commerce determines are critical to
17 national and economic security.

18 “(11) SMALL AND RURAL COMMUNITIES.—The
19 term ‘small and rural community’ means a noncore
20 area, a micropolitan area, or a small metropolitan
21 statistical area with a population of not more than
22 200,000.

23 “(12) VENTURE DEVELOPMENT ORGANIZA-
24 TION.—The term ‘venture development organization’
25 means a State or nonprofit organization that con-

1 tributes to regional or sector-based economic pros-
2 perity by providing services for the purposes of—

3 “(A) accelerating the commercialization of
4 research;

5 “(B) strengthening the competitive posi-
6 tion of industry through the development, com-
7 mercial adoption, or deployment of technology;
8 and

9 “(C) providing Federal financial assist-
10 ance, loans, direct financial investment, or in-
11 kind services to commercialize technology.

12 “(b) REGIONAL TECHNOLOGY HUB PROGRAM.—

13 “(1) IN GENERAL.—The Secretary of Com-
14 merce shall carry out a program—

15 “(A) to designate eligible consortia as re-
16 gional technology hubs that create the condi-
17 tions, within a region, to facilitate activities
18 that—

19 “(i) enable United States leadership
20 in a key technology focus area, comple-
21 menting the Federal research and develop-
22 ment investments under section 8A of the
23 National Science Foundation Act of 1950,
24 or other technology and innovation sectors
25 critical to national and economic security;

1 “(ii) support regional economic devel-
2 opment that diffuses innovation capacity
3 around the United States, enabling better
4 broad-based growth and competitiveness in
5 key technology focus areas;

6 “(iii) support domestic job creation;
7 and

8 “(iv) otherwise support the purposes
9 set forth under paragraph (2);

10 “(B) to support regional technology hubs
11 designated under subparagraph (A); and

12 “(C) to conduct ongoing research, evalua-
13 tion, analysis, and dissemination of best prac-
14 tices for regional development and competitive-
15 ness in technology and innovation.

16 “(2) PURPOSES.—The purposes of the program
17 carried out under paragraph (1) are as follows:

18 “(A) To designate eligible consortia as re-
19 gional technology hubs throughout the United
20 States that create the conditions within a re-
21 gion to facilitate activities that establish the
22 global competitive edge of the United States in
23 the 21st century across a range of technology
24 and innovation sectors critical to national and
25 economic security, including to encourage lower-

1 cost but economically viable technology hubs in
2 the United States to reduce technology
3 offshoring.

4 “(B) To encourage new and constructive
5 collaboration among local, State, and Federal
6 government entities, academia, private industry,
7 and labor organizations to mobilize investment,
8 talent, entrepreneurship, and innovation for re-
9 search, development, deployment, and manufac-
10 turing in a range of technology and innovation
11 sectors critical to national and economic secu-
12 rity.

13 “(C) To assist regions across the United
14 States, including small cities and rural areas, to
15 develop and implement strategies to improve
16 domestic supply chains in technology and inno-
17 vation sectors and to enable broad-based eco-
18 nomic growth, job creation and competitiveness
19 in the United States.

20 “(3) ADMINISTRATION.—The Secretary shall
21 carry out this section through the Assistant Sec-
22 retary of Commerce for Economic Development, in
23 coordination with the Under Secretary of Commerce
24 for Standards and Technology.

1 “(c) ELIGIBLE CONSORTIA.—For purposes of this
2 section, an eligible consortium is a consortium that—

3 “(1) includes—

4 “(A) an institution of higher education;

5 “(B) a local or Tribal government or other
6 political subdivision of a State;

7 “(C) a representative appointed by the
8 governor of the State or States that is rep-
9 resentative of the geographic coverage of the re-
10 gional technology hub;

“(D) an economic development organiza-
tion or similar entity that is focused primarily
on improving science, technology, innovation, or
entrepreneurship;

15 “(E) an industry organization or firm or
16 firms in a relevant technology or innovation sec-
17 tor; and

18 “(F) a labor organization; and

19 “(2) may include 1 or more—

20 “(A) nonprofit economic development enti-
21 ties with relevant expertise, including a district
22 organization (as defined in section 300.3 of title
23 13, Code of Federal Regulations, or successor
24 regulation);

25 “(B) venture development organizations;

1 “(C) financial institutions and investment
2 funds;

3 “(D) primary and secondary educational
4 institutions, including career and technical edu-
5 cation schools;

6 “(E) workforce training organizations, in-
7 cluding State and local workforce development
8 boards as established under section 101 of the
9 Workforce Investment and Opportunity Act (29
10 U.S.C. 3111);

11 “(F) industry associations;

12 “(G) National Laboratories (as defined in
13 section 2 of the Energy Policy Act of 2005 (42
14 U.S.C. 15801));

15 “(H) Federal laboratories;

16 “(I) manufacturing extension centers;

17 “(J) Manufacturing USA institutes;

18 “(K) institutions receiving an award under
19 paragraph (6) or (7) of section 8A(d) of the
20 National Science Foundation Act of 1950; and

21 “(L) a cooperative extension.

22 “(d) DESIGNATION OF REGIONAL TECHNOLOGY
23 HUBS.—

1 “(1) IN GENERAL.—The Secretary shall use a
2 competitive process for the designation of regional
3 technology hubs under subsection (b)(1)(A).

4 “(2) NUMBER OF REGIONAL TECHNOLOGY
5 HUBS.—During the 5-year period beginning on the
6 date of the enactment of the Endless Frontier Act,
7 the Secretary shall designate not fewer than 10 and
8 not more than 15 eligible consortia as regional tech-
9 nology hubs under subsection (b)(1)(A), if the Sec-
10 retary has received a sufficient number of qualified
11 applications and appropriations to carry out this sec-
12 tion.

13 “(3) GEOGRAPHIC DISTRIBUTION.—In con-
14 ducting the competitive process under paragraph
15 (1), the Secretary shall ensure geographic distribu-
16 tion in the designation of regional technology hubs
17 by—

18 “(A) aiming to designate regional tech-
19 nology hubs in as many regions of the United
20 States as possible; and

21 “(B) focusing on localities that have clear
22 potential and relevant assets for developing a
23 self-sustaining competitive position in a tech-
24 nology or innovation sector but have not yet be-
25 come leading technology centers.

1 “(4) ELIGIBLE CONSORTIA THAT SERVE SMALL
2 AND RURAL COMMUNITIES.—Under subsection
3 (b)(1)(A), the Secretary shall designate at least 3 el-
4 igible consortia that—

5 “(A) serve small and rural communities;
6 and

7 “(B) have received a grant under section
8 29.

9 “(5) EPSCoR.—The Secretary shall ensure
10 that, of the eligible consortia designated as regional
11 technology hubs under subsection (b)(1)(A), not
12 fewer than 7 of such consortia include at least 1
13 State that is eligible to receive funding from the Es-
14 tablished Program to Stimulate Competitive Re-
15 search of the National Science Foundation.

16 “(6) RELATION TO CERTAIN GRANT AWARDS.—
17 The Secretary may not require an eligible consor-
18 tium to receive a grant under section 29 in order to
19 be designated as a regional technology under sub-
20 section (b)(1)(A) of this section.

21 “(e) GRANTS AND COOPERATIVE AGREEMENTS.—

22 “(1) IN GENERAL.—The Secretary shall carry
23 out subparagraph (B) of subsection (b)(1) through
24 the award of grants or cooperative agreements to eli-

1 gible consortia designated under subparagraph (A)
2 of such subsection.

3 “(2) TERM.—

4 “(A) IN GENERAL.—The term of a grant
5 or cooperative agreement awarded under para-
6 graph (1) shall be for such period as the Sec-
7 retary considers appropriate.

8 “(B) RENEWAL.—The Secretary may
9 renew a grant or cooperative agreement award-
10 ed to an eligible consortia under paragraph (1)
11 as the Secretary considers appropriate if the
12 Secretary determines pursuant to subsection (i)
13 that the performance of the eligible consortia is
14 satisfactory.

15 “(3) MATCHING REQUIRED.—

16 “(A) IN GENERAL.—Except in the case of
17 an eligible consortium described in subpara-
18 graph (B), the total Federal financial assistance
19 awarded in a given year to an eligible consor-
20 tium in support of the eligible consortium’s op-
21 eration as a regional technology hub under this
22 section shall not exceed amounts as follows:

23 “(i) In first year of the grant or coop-
24 erative agreement, 90 percent of the total

1 operating and maintenance costs of the re-
2 gional technology hub in that fiscal year.

3 “(ii) In second year of the grant or
4 cooperative agreement, 85 percent of the
5 total operating and maintenance costs of
6 the regional technology hub in that fiscal
7 year.

8 “(iii) In third year of the grant or co-
9 operative agreement, 80 percent of the
10 total operating and maintenance costs of
11 the regional technology hub in that fiscal
12 year.

13 “(iv) In fourth year of the grant or
14 cooperative agreement and each year there-
15 after, 75 percent of the total operating and
16 maintenance costs of the regional tech-
17 nology hub in that fiscal year.

18 “(B) SMALL AND RURAL COMMUNITIES
19 AND INDIAN TRIBES.—The total Federal finan-
20 cial assistance awarded in a given year to an el-
21 igible consortium in support of the eligible con-
22 sortium’s operation as a regional technology
23 hub under this section shall not exceed amounts
24 as follows:

1 “(i) In the case of an eligible consor-
2 tium that represents a small and rural
3 community, in a fiscal year, 90 percent of
4 the total funding of the regional technology
5 hub in that fiscal year.

6 “(ii) In the case of an eligible consor-
7 tium that is led by a Tribal government, in
8 a fiscal year, 100 percent of the total fund-
9 ing of the regional technology hub in that
10 fiscal year.

11 “(C) IN-KIND CONTRIBUTIONS.—For pur-
12 poses of this paragraph, in-kind contributions
13 may be used for all or part of the non-Federal
14 share of the total funding of a regional tech-
15 nology hub in a fiscal year.

16 “(4) USE OF GRANT AND COOPERATIVE AGREE-
17 MENT FUNDS.—The recipient of a grant or coopera-
18 tive agreement awarded under paragraph (1) shall
19 use the grant or cooperative agreement for multiple
20 activities determined appropriate by the Secretary,
21 including—

22 “(A) the permissible activities set forth
23 under section 27(c)(2); and

24 “(B) activities in support of key technology
25 focus areas and other technology and innova-

1 tion sectors critical to national and economic se-
2 curity—

3 “(i) to develop the region’s skilled
4 workforce through the training and re-
5 training of workers, partnerships with
6 labor organizations and labor-management
7 organizations, and skills-based education,
8 including the alignment of career technical
9 training and educational programs in the
10 region’s elementary and secondary schools
11 and institutions of higher education;

12 “(ii) to develop regional strategies for
13 infrastructure and site development in sup-
14 port of the regional technology hub’s plans
15 and programs;

16 “(iii) to support business activity that
17 makes domestic supply chain more resilient
18 and encourages the growth of coordinated
19 multiparty systems in the United States
20 and creation and growth of business enti-
21 ties;

22 “(iv) to attract new private, public,
23 and philanthropic investment in the region
24 for developing innovation capacity, includ-
25 ing establishing regional venture and loan

1 funds for financing technology commer-
2 cialization, new business formation, and
3 business expansions;

4 “(v) to further the development, de-
5 ployment, and domestic manufacturing of
6 technologies in the key technology focus
7 areas and other technology and innovation
8 sectors critical to national and economic
9 security, including innovations derived
10 from research conducted at institutions of
11 higher education or other research entities,
12 including research conducted by federally-
13 funded research and development centers,
14 National Laboratories, Federal labora-
15 tories, Manufacturing USA institutes, uni-
16 versity technology centers established
17 under paragraph (6) of section 8A(d) of
18 the National Science Foundation Act of
19 1950, the program established under para-
20 graph (7) of such section 8A(d), test beds
21 established and operated under paragraph
22 (8) of such section 8A(d), or other Federal
23 research entities, through activities that
24 may include—

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1 “(I) proof-of-concept development
2 and prototyping;

3 “(II) technology transfer and
4 commercialization, including patenting
5 and licensing;

6 “(III) public-private partnerships
7 in order to reduce the cost, time, and
8 risk of commercializing new tech-
9 nologies;

10 “(IV) creating and funding com-
11 petitions to allow entrepreneurial
12 ideas from institutions of higher edu-
13 cation to illustrate their commer-
14 cialization and domestic job creation
15 potential;

16 “(V) facilitating relationships be-
17 tween local and national business
18 leaders and potential entrepreneurs to
19 encourage successful commercializa-
20 tion;

21 “(VI) creating and funding not-
22 for-profit entities that could enable re-
23 searchers at institutions of higher
24 education and other research entities
25 to further develop new technology,

1 through patient funding, advice, staff
2 support, or other means;

3 “(VII) providing facilities for
4 start-up companies where technology
5 maturation could occur; and

6 “(VIII) commercialization, de-
7 ployment, and adoption of the tech-
8 nologies that lead to domestic manu-
9 facturing of such technologies; and

10 “(vi) to carry out such other activities
11 as the Secretary considers appropriate to
12 improve United States competitiveness and
13 regional economic development to support
14 a key technology focus area and that would
15 further the purposes of this section.

16 “(5) MAINTENANCE OF STANDARDS.—A recipi-
17 ent of support provided under subsection (b)(1)(B)
18 shall be required to comply with the requirements of
19 title VI of the Public Works and Economic Develop-
20 ment Act of 1965 (42 U.S.C. 3211 et seq.), except
21 to the extent that the Secretary determines that any
22 such requirement is manifestly incompatible with or
23 inapposite to a project other than a project assisted
24 under such title.

1 “(f) APPLICATIONS.—An eligible consortium seeking
2 designation as a regional technology hub under subpara-
3 graph (A) of subsection (b)(1) and support under subpara-
4 graph (B) of such subsection shall submit to the Secretary
5 an application therefor at such time, in such manner, and
6 containing such information as the Secretary may specify.

7 “(g) CONSIDERATIONS FOR DESIGNATION AND
8 AWARD OF GRANTS AND COOPERATIVE AGREEMENTS.—
9 In selecting an eligible consortium that submitted an ap-
10 plication under subsection (f) for designation and support
11 under subsection (b)(1), the Secretary shall consider, at
12 a minimum, the following:

13 “(1) The potential of the eligible consortium to
14 advance the research, development, deployment, and
15 domestic manufacturing of technologies in a key
16 technology focus area or other technology or innova-
17 tion sector critical to national and economic security.

18 “(2) The likelihood of positive regional eco-
19 nomic effect, including increasing the number of
20 high wage domestic jobs, and creating new economic
21 opportunities for economically disadvantaged and
22 underrepresented populations.

23 “(3) How the eligible consortium plans to inte-
24 grate with and leverage the resources of 1 or more
25 federally-funded research and development centers,

1 National Laboratories, Federal laboratories, Manu-
2 facturing USA institutes, university technology cen-
3 ters established under paragraph (6) of section
4 8A(d) of the National Science Foundation Act of
5 1950, the program established under paragraph (7)
6 of such section 8A(d), test beds established and op-
7 erated under paragraph (8) of such section 8A(d), or
8 other Federal research entities.

9 “(4) How the eligible consortium will engage
10 with the private sector, including small- and me-
11 dium-sized enterprises to commercialize new tech-
12 nologies and improve the resiliency of domestic sup-
13 ply chains in a key technology focus area or other
14 technology or innovation sector critical to national
15 and economic security.

16 “(5) How the eligible consortium will carry out
17 workforce development and skills acquisition pro-
18 gramming, including through the use of apprentice-
19 ships, mentorships, partnerships with State and local
20 workforce development boards, institutions of higher
21 education, including community colleges, historically
22 Black colleges and universities, Tribal colleges and
23 universities, and minority serving institutions, labor
24 organizations, labor-management organizations, and
25 workforce development programs, and other related

1 activities authorized by the Secretary, to support the
2 development of a key technology focus area or other
3 technology or innovation sector critical to national
4 and economic security.

5 “(6) How the eligible consortium will improve
6 science, technology, engineering, and mathematics
7 education programs in the identified region in ele-
8 mentary and secondary school and higher education
9 institutions located in the identified region to sup-
10 port the development of a key technology focus area
11 or other technology or innovation sector critical to
12 national and economic security.

13 “(7) How the eligible consortium plans to de-
14 velop partnerships with venture development organi-
15 zations and sources of private investment in support
16 of private sector activity, including launching new or
17 expanding existing companies, in a key technology
18 focus area or other technology or innovation sector
19 critical to national and economic security.

20 “(8) How the eligible consortium plans to orga-
21 nize the activities of regional partners in the public,
22 private, philanthropic, and organized labor sectors in
23 support of the proposed regional technology hub, in-
24 cluding the development of necessary infrastructure
25 improvements and site preparation.

1 “(9) How the eligible consortium will foster ra-
2 cial equity and inclusive growth, including by
3 leveraging minority serving institutions, preventing
4 gentrification, combating segregation, promoting the
5 inclusion of underrepresented residents, and ensur-
6 ing affordable housing options.

7 “(10) How the eligible consortium will ensure
8 that growth in technology and innovation sectors
9 produces broadly shared opportunity across the iden-
10 tified region, including for economic disadvantaged
11 and underrepresented populations and rural areas.

12 “(11) The likelihood that the region served by
13 the eligible consortium will be able to become a self-
14 sustaining globally leading technology hub once Fed-
15 eral support ends.

16 “(h) COORDINATION AND COLLABORATION.—

17 “(1) COORDINATION WITH NATIONAL INSTI-
18 TUTE OF STANDARDS AND TECHNOLOGY PRO-
19 GRAMS.—

20 “(A) COORDINATION REQUIRED.—The
21 Secretary shall coordinate the activities of re-
22 gional technology hubs designated under this
23 title, the Hollings Manufacturing Extension
24 Partnership, and the Manufacturing USA Pro-
25 gram with each other to the degree that doing

1 so does not diminish the effectiveness of the on-
2 going activities of a manufacturing extension
3 center or a Manufacturing USA institute.

4 “(B) ELEMENTS.—Coordination by the
5 Secretary under subparagraph (A) may include
6 the following:

7 “(i) The alignment of activities of the
8 Hollings Manufacturing Extension Part-
9 nership with the activities of regional tech-
10 nology hubs designated under this sub-
11 section, if applicable.

12 “(ii) The alignment of activities of the
13 Manufacturing USA Program and the
14 Manufacturing USA institutes with the ac-
15 tivities of regional technology hubs des-
16 ignated under this subsection, if applicable.

17 “(2) INTERAGENCY COLLABORATION.—

18 “(A) IN GENERAL.—In selecting and as-
19 sisting regional technology hubs designated
20 under subsection (b)(1)(A), the Secretary—

21 “(i) shall collaborate, to the extent
22 possible, with the interagency advisory
23 committee established under subparagraph
24 (B)

1 “(ii) shall collaborate with Federal de-
2 partments and agencies whose missions
3 contribute to the goals of the regional tech-
4 nology hub; and

5 “(iii) may accept funds from other
6 Federal agencies to support grants and ac-
7 tivities under this title.

8 “(B) INTERAGENCY ADVISORY COM-
9 MITTEE.—

10 “(i) ESTABLISHMENT.—The Secretary
11 shall establish an interagency advisory
12 committee to coordinate with the Secretary
13 in the designation of regional technology
14 hubs under subparagraph (A) of subsection
15 (b)(1) and in the selection of eligible con-
16 sortia to receive support under subpara-
17 graph (B) of such subsection.

18 “(ii) COMPOSITION.—The interagency
19 advisory committee established under
20 clause (i) shall be composed of the fol-
21 lowing (or their designees):

22 “(I) The Secretary of Commerce.

23 “(II) The Secretary of Edu-
24 cation.

1 “(III) The Administrator of the
2 Small Business Administration.

3 “(IV) The Deputy Secretary for
4 Housing and Urban Development.

5 “(V) The Director of the Com-
6 munity Development Financial Insti-
7 tution Fund.

8 “(VI) The Director of the Na-
9 tional Science Foundation.

10 “(VII) The Director of the Na-
11 tional Institute of Standards and
12 Technology.

13 “(VIII) The Director of the Na-
14 tional Economic Council.

15 “(IX) The Assistant Secretary of
16 Commerce for Economic Development.

17 “(X) The Assistant Secretary for
18 Employment and Training.

19 “(XI) The Director of the Office
20 of Science and Technology Policy.

21 “(XII) The Under Secretary of
22 Defense for Research and Engineer-
23 ing.

24 “(XIII) The Under Secretary for
25 Science of the Department of Energy.

1 “(XIV) The Director of the Na-
2 tional Institutes of Health.

3 “(XV) The Under Secretary for
4 Science and Technology of the De-
5 partment of Homeland Security.

6 “(XVI) The Administrator of the
7 National Aeronautics and Space Ad-
8 ministration.

9 “(XVII) The Director of the Of-
10 fice of Management and Budget.

11 “(XVIII) Such other Federal of-
12 ficials as the Secretary of Commerce
13 considers appropriate.

14 “(iii) CHAIRPERSON.—The Secretary
15 of Commerce shall be the chairperson of
16 the interagency advisory committee estab-
17 lished under clause (i).

18 “(3) SETTING GOALS FOR FEDERALLY FUNDED
19 REGIONS SERVED BY RESEARCH IN REGIONAL TECH-
20 NOLOGY HUBS.—

21 “(A) IN GENERAL.—The Director of the
22 Office of Science and Technology Policy and the
23 Director of the Office of Management and
24 Budget shall coordinate with the each head of
25 a Federal agency that conducts research to set

1 goals for doubling the amount of Federally-
2 funded research awarded, as in effect on the
3 day before the date of the enactment of the
4 Endless Frontier Act, to regions served by re-
5 gional technology hubs designated under sub-
6 section (b)(1)(A).

7 “(B) ANNUAL REPORTS.—Not less fre-
8 quently than once each year, the Director of the
9 Office of Science and Technology Policy and the
10 Director of the Office of Management and
11 Budget shall submit to the appropriate commit-
12 tees of Congress an annual report on progress
13 made relating to the goals set under subpara-
14 graph (A).

15 “(i) PERFORMANCE MEASUREMENT, TRANS-
16 PARENCY, AND ACCOUNTABILITY.—

17 “(1) METRICS, STANDARDS, AND ASSESS-
18 MENT.—For each grant and cooperative agreement
19 awarded under subsection (e)(1) for a regional tech-
20 nology hub, the Secretary shall—

21 “(A) develop metrics to assess the effec-
22 tiveness of the activities funded in making
23 progress toward the purposes set forth under
24 subsection (b)(2), which may include—

1 “(i) research supported in a key tech-
2 nology focus area;

3 “(ii) commercialization activities un-
4 dertaken by each regional technology hub
5 that is designated and supported under
6 subsection (b)(1);

7 “(iii) educational and workforce devel-
8 opment improvements undertaken by each
9 regional technology hub that is designated
10 and supported under subsection (b)(1);

11 “(iv) sources of matching funds for
12 each regional technology hub that is des-
13 ignated and supported under subsection
14 (b)(1); and

15 “(v) domestic job creation, patent
16 awards, and business formation and expan-
17 sion relating to the activities of the re-
18 gional technology hub that is designated
19 and supported under subsection (b)(1);

20 “(B) establish standards for the perform-
21 ance of the regional technology hub that are
22 based on the metrics developed under subpara-
23 graph (A); and

24 “(C) 4 years after the initial award under
25 subsection (e)(1) and every 2 years thereafter

1 until Federal financial assistance under this
2 section for the regional technology hub is dis-
3 continued, conduct an assessment of the re-
4 gional technology hub to confirm whether the
5 performance of the regional technology hub is
6 meeting the standards for performance estab-
7 lished under subparagraph (B) of this para-
8 graph.

9 “(2) FINAL REPORTS BY RECIPIENTS OF AS-
10 SISTANCE.—

11 “(A) IN GENERAL.—The Secretary shall
12 require each eligible consortium that receives a
13 grant or cooperative agreement under sub-
14 section (e)(1) for support of a regional tech-
15 nology hub, as a condition of receipt of such
16 grant or cooperative agreement, submit to the
17 Secretary, not later than 90 days after the last
18 day of the term of the grant or cooperative
19 agreement, a report on the activities of the re-
20 gional technology hub supported by the grant or
21 cooperative agreement.

22 “(B) CONTENTS OF REPORT.—Each report
23 submitted by an eligible consortium under sub-
24 paragraph (A) shall include the following:

1 “(i) A detailed description of the ac-
2 tivities carried out by the eligible consor-
3 tium using the assistance described in sub-
4 paragraph (A), including the following:

5 “(I) A description of each project
6 the eligible consortium completed
7 using such assistance.

8 “(II) An explanation of how each
9 project described in subclause (I)
10 achieves a specific goal under this sec-
11 tion in the region of the regional tech-
12 nology hub of the eligible consortium
13 with respect to—

14 “(aa) the resiliency of a sup-
15 ply chain;

16 “(bb) research, development,
17 and deployment of a critical tech-
18 nology;

19 “(cc) workforce training and
20 development;

21 “(dd) domestic job creation;
22 or

23 “(ee) entrepreneurship.

24 “(ii) A discussion of any obstacles en-
25 countered by the eligible consortium in the

1 implementation of the regional technology
2 hub and how the eligible entity overcame
3 those obstacles.

4 “(iii) An evaluation of the success of
5 the projects supported by the eligible con-
6 sortium to implement the regional tech-
7 nology hub using the performance stand-
8 ards and measures established under para-
9 graph (1), including an evaluation of the
10 planning process and how the project con-
11 tributes to carrying out the comprehensive
12 strategy for the regional technology hub if
13 the regional technology hub has such a
14 strategy.

15 “(iv) The effectiveness of the eligible
16 consortium in ensuring that, in the region
17 of the eligible consortium’s regional tech-
18 nology hub, growth in technology and inno-
19 vation sectors produces broadly shared op-
20 portunity across the region, including for
21 economic disadvantaged and underrep-
22 resented populations and rural areas.

23 “(v) Information regarding such other
24 matters as the Secretary may require.

1 “(3) INTERIM REPORTS BY RECIPIENTS OF AS-
2 SISTANCE.—In addition to requiring submittal of
3 final reports under paragraph (2)(A), the Secretary
4 may require an eligible consortium described in such
5 paragraph to submit to the Secretary such interim
6 reports as the Secretary considers appropriate.

7 “(4) ANNUAL REPORTS TO CONGRESS.—Not
8 less frequently than once each year, the Secretary
9 shall submit to the appropriate committees of Con-
10 gress an annual report on the results of the assess-
11 ments conducted by the Secretary under paragraph
12 (1)(C) during the period covered by the report.

13 “(j) AUTHORIZATION OF APPROPRIATIONS.—There
14 is authorized to be appropriated to the Secretary to carry
15 out this section \$9,425,000,000 for the period of fiscal
16 years 2022 through 2026.”.

17 (b) INITIAL DESIGNATIONS AND AWARDS.—

18 (1) COMPETITION REQUIRED.—Not later than
19 180 days after the date of the enactment of this Act,
20 the Secretary of Commerce shall commence a com-
21 petition under subsection (d)(1) of section 28 of the
22 Stevenson-Wydler Technology Innovation Act of
23 1980 (Public Law 96–480), as added by subsection
24 (a).

1 (2) DESIGNATION AND AWARD.—Not later than
2 1 year after the date of the enactment of this Act,
3 if the Secretary has received at least 1 application
4 under subsection (f) of such section from an eligible
5 consortium whom the Secretary considers suitable
6 for designation under subsection (b)(1)(A) of such
7 section, the Secretary shall—

8 (A) designate at least 1 regional tech-
9 nology hub under subsection (b)(1)(A) of such
10 section; and

11 (B) award a grant or cooperative agree-
12 ment under subsection (e)(1) of such section to
13 each regional technology hub designated pursu-
14 ant to subparagraph (A) of this paragraph.

15 **SEC. 8. COMPREHENSIVE REGIONAL TECHNOLOGY STRAT-**
16 **EGY GRANT PROGRAM.**

17 The Stevenson-Wydler Technology Innovation Act of
18 1980 (Public Law 96–480; 15 U.S.C. 3701 et seq.), as
19 amended by section 7, is further amended, by inserting
20 after section 28, as added by such section, the following:

21 **“SEC. 29. COMPREHENSIVE REGIONAL TECHNOLOGY**
22 **STRATEGY GRANT PROGRAM.**

23 “(a) DEFINITIONS.—In this section:

24 “(1) LABOR ORGANIZATION.—The term ‘labor
25 organization’ has the meaning given such term in

1 section 8A(a) of the National Science Foundation
2 Act of 1950.

3 “(2) REGIONAL TECHNOLOGY HUB.—The term
4 ‘regional technology hub’ means a consortium des-
5 ignated as a regional technology hub under section
6 28(b)(1)(A).

7 “(3) SMALL AND RURAL COMMUNITIES; MID-
8 SIZED METROPOLITAN COMMUNITIES; LARGE MET-
9 ROPOLITAN COMMUNITIES.—The terms ‘small and
10 rural communities’, ‘mid-sized metropolitan commu-
11 nities’, and ‘large metropolitan communities’ have
12 the meanings given such terms in section 28(a).

13 “(4) TECHNOLOGY AND INNOVATION SECTORS
14 CRITICAL TO NATIONAL AND ECONOMIC SECURITY.—
15 The term ‘technology and innovation sectors critical
16 to national and economic security’ means technology
17 and innovation sectors that the Secretary of Com-
18 merce determines are critical to national and eco-
19 nomic security.

20 “(b) GRANT PROGRAM REQUIRED.—The Secretary of
21 Commerce shall establish a program to award grants to
22 eligible consortia to carry out projects—

23 “(1) to coordinate locally defined planning proc-
24 esses, across jurisdictions and agencies, relating to

1 developing a comprehensive regional technology
2 strategy;

3 “(2) to identify regional partnerships for devel-
4 oping and implementing a comprehensive regional
5 technology strategy;

6 “(3) to conduct or update assessments to deter-
7 mine regional needs and promote economic and com-
8 munity development related to the resiliency of a do-
9 mestic supply chains, competitiveness of the region,
10 and domestic job creation in technology and innova-
11 tion sectors critical to national and economic secu-
12 rity;

13 “(4) to develop or update goals and strategies
14 to implement an existing comprehensive regional
15 plan related to enhancing the resiliency of domestic
16 supply chains, competitiveness of the region, and do-
17 mestic job creation in technology and innovation sec-
18 tors critical to national and economic security; and

19 “(5) to identify local zoning and other code
20 changes necessary to implement a comprehensive re-
21 gional technology strategy, including promoting sus-
22 tainable development within the identified region.

23 “(c) ELIGIBLE CONSORTIA.—For purposes of this
24 section, an eligible consortium is any consortium described
25 by section 28(c).

1 “(d) GRANTS.—

2 “(1) DIVERSITY OF RECIPIENTS.—In awarding
3 grants under this section, the Secretary shall ensure
4 geographic diversity among, and adequate represen-
5 tation from, each of the following:

6 “(A) Small and rural communities.

7 “(B) Mid-sized metropolitan communities.

8 “(C) Large metropolitan communities.

9 “(2) AWARDS TO SMALL AND RURAL COMMU-
10 NITIES.—

11 “(A) IN GENERAL.—Except as provided in
12 subparagraph (B), the Secretary shall—

13 “(i) award not less than 25 percent of
14 the funds under this section to eligible con-
15 sortia that represent all or part of a small
16 and rural community; and

17 “(ii) ensure diversity among the geo-
18 graphic regions and the size of the popu-
19 lation of the communities served by recipi-
20 ents of grants that are eligible consortia
21 that represent all or part of a small and
22 rural community.

23 “(B) INSUFFICIENT APPLICATIONS.—If
24 the Secretary determines that an insufficient
25 number of sufficient quality applications for

1 grants under this section have been submitted
2 by eligible consortia that represent all or part
3 of a small and rural community, the Secretary
4 may reduce the percentage threshold set forth
5 in subparagraph (A)(i).

6 “(3) FEDERAL SHARE.—

7 “(A) IN GENERAL.—Except as provided in
8 subparagraph (B), the Federal share of the cost
9 of a project carried out using a grant awarded
10 under this section may not exceed 80 percent.

11 “(B) EXCEPTIONS.—

12 “(i) SMALL AND RURAL COMMU-
13 NITIES.—In the case of an eligible consor-
14 tium that represents all or part of a small
15 and rural community, the Federal share of
16 the cost of a project carried out using a
17 grant awarded under this section may be
18 up to 90 percent of the total cost of the
19 project.

20 “(ii) INDIAN TRIBES.—In the case of
21 an eligible consortium that is led by a
22 Tribal government, the Federal share of
23 the cost of a project carried out using a
24 grant under the grant awarded under this

1 section may be up to 100 percent of the
2 total cost of the project.

3 “(C) NON-FEDERAL SHARE.—

4 “(i) IN-KIND CONTRIBUTIONS.—For
5 the purposes of this paragraph, in-kind
6 contributions may be used for all or part
7 of the non-Federal share of the cost of a
8 project carried out using a grant awarded
9 under this section.

10 “(ii) OTHER FEDERAL FUNDING.—
11 Federal funding from sources other than a
12 grant awarded under this section may not
13 be used for the non-Federal share of the
14 cost of a project carried out using a grant
15 under this section.

16 “(4) AVAILABILITY AND OBLIGATION OF GRANT
17 AMOUNTS.—

18 “(A) IN GENERAL.—An eligible consortium
19 that receives a grant under this section shall, as
20 a condition on receipt of grant amounts—

21 “(i) obligate any grant amounts re-
22 ceived under this section not later than 1
23 year after the date on which the eligible
24 consortium enters into an agreement under
25 subsection (g); and

1 “(ii) expend any grant amounts re-
2 ceived under this section not later than 2
3 years after the date on which the eligible
4 consortium enters into an agreement under
5 subsection (g).

6 “(B) UNOBLIGATED AMOUNTS.—After the
7 date described in subparagraph (A)(i), any
8 amounts awarded to an eligible consortium
9 under this section that remain unobligated by
10 the eligible consortium shall be returned to the
11 Secretary and made available to the Secretary
12 for the award of grants to other eligible con-
13 sortia under this section.

14 “(5) MAINTENANCE OF STANDARDS.—A recipi-
15 ent of a grant awarded under subsection (b) shall be
16 required to comply with the requirements of title VI
17 of the Public Works and Economic Development Act
18 of 1965 (42 U.S.C. 3211 et seq.), except to the ex-
19 tent that the Secretary determines that any such re-
20 quirement is manifestly incompatible with or inap-
21 posite to a project other than a project assisted
22 under such title.

23 “(e) APPLICATION.—

24 “(1) IN GENERAL.—An eligible consortium
25 seeking a grant under this section shall submit to

1 the Secretary an application therefor at such time
2 and in such manner as the Secretary shall prescribe.

3 “(2) CONTENTS.—Each application submitted
4 under paragraph (1) shall include the following:

5 “(A) A description of the boundaries of the
6 region served by the eligible consortium.

7 “(B) A description of the research, tech-
8 nology development, or manufacturing con-
9 centration of the eligible consortium.

10 “(C) An integrated assessment of the local
11 industrial ecosystem of the region described in
12 subparagraph (A), which may include assess-
13 ment of workforce and training, including part-
14 nerships with labor organizations, supplier net-
15 work, research and innovation, infrastructure
16 and site development, trade and international
17 investment, operational improvements, and cap-
18 ital access components needed for manufac-
19 turing activities in such region.

20 “(D) A description of how a grant under
21 this section may assist in developing compo-
22 nents of such local industrial ecosystem (se-
23 lected by the consortium)—

24 “(i) by making specific investments to
25 address gaps in such ecosystem; and

1 “(ii) by making the research, tech-
2 nology development, and manufacturing of
3 the region of the consortium uniquely com-
4 petitive.

5 “(E) A description of the process by which
6 a comprehensive regional technology strategy
7 will be developed by the eligible consortium to
8 address gaps in such local industrial ecosystem
9 and to strengthen the resiliency of supply
10 chains, competitiveness of the identified region,
11 and domestic job creation in technology and in-
12 novation sectors critical to national and eco-
13 nomic security.

14 “(F) A description of the outcome-based
15 metrics, benchmarks, and milestones that the
16 eligible consortium will develop to gauge per-
17 formance of the strategy of the consortium to
18 improve the research, development, deployment,
19 and manufacturing of critical technology and
20 innovation in the region of the consortium.

21 “(G) A budget for the projects that the eli-
22 gible consortium plans to carry out using grant
23 amounts awarded under this section, including
24 the anticipated Federal share of the cost of

1 each project and a description of the sources of
2 the non-Federal share.

3 “(H) The designation of a lead agency or
4 organization, which may be the eligible consor-
5 tium, to receive and manage any funds received
6 by the eligible consortium under this section.

7 “(I) A signed copy of a memorandum of
8 understanding among members of the eligible
9 consortium that demonstrates—

10 “(i) the creation of an eligible consor-
11 tium;

12 “(ii) a description of the nature and
13 extent of planned collaboration between
14 members of the eligible consortium;

15 “(iii) a commitment to develop a com-
16 prehensive regional technology strategy;
17 and

18 “(iv) a commitment to implement the
19 strategy after the strategy is developed.

20 “(J) Such other matters as the Secretary
21 considers appropriate.

22 “(3) EVALUATION OF APPLICATIONS.—The
23 Secretary shall evaluate each application received
24 under paragraph (1) to determine whether the appli-
25 cant demonstrates—

1 “(A) a significant level of regional coopera-
2 tion in their proposal;

3 “(B) the technical capacity of the eligible
4 consortium to carry projects proposed in the ap-
5 plication, including established performance in
6 or a plan to improve performance in—

7 “(i) science, technology, engineering,
8 and mathematics spending per capita;

9 “(ii) the number of patents per
10 100,000 residents;

11 “(iii) the share of the population in
12 the applicable region with a Bachelor of
13 Arts degree or a higher degree; and

14 “(iv) the number of university degrees
15 in science, technology, engineering, and
16 mathematics per capita;

17 “(C) a focus on building a regional eco-
18 system to attract and build upon research in-
19 vestment to develop, deploy, and manufacture
20 domestically critical technologies that improve
21 the resiliency of supply chains, competitiveness
22 of the identified region, and the creation of
23 quality jobs;

24 “(D) the extent to which the consortium
25 has developed partnerships throughout an en-

1 tire region, including, as appropriate, partner-
2 ships with federally funded research and devel-
3 opment centers, National Laboratories, Federal
4 laboratories, Manufacturing USA institutes de-
5 scribed in section 34(d) of the National Insti-
6 tute of Standards and Technology Act (15
7 U.S.C. 278s(d)), university technology centers
8 established under paragraph (6) of section
9 8A(d) of the National Science Foundation Act
10 of 1950, the program established under para-
11 graph (7) of such section 8A(d), test beds es-
12 tablished and operated under paragraph (8) of
13 such section 8A(d), or other Federal research
14 entities;

15 “(E) integration with local efforts in inclu-
16 sive economic development and job creation;

17 “(F) a plan for implementing a com-
18 prehensive regional technology strategy through
19 regional infrastructure, workforce, and supply
20 chain investment plans and local land use plans;

21 “(G) diversity among the geographic re-
22 gions and the size of the population of the com-
23 munities served by recipients of grants under
24 this section;

1 “(H) a commitment to seeking substantial
2 public input during the planning process and
3 public participation in the development of the
4 comprehensive regional plan;

5 “(I) a plan for formal collaboration with
6 labor organizations; and

7 “(J) such other qualities as the Secretary
8 considers appropriate.

9 “(f) USE OF GRANT FUNDS.—An eligible consortium
10 that receives a grant under this section shall use the
11 amount of such grant to carry out a project that includes
12 1 or more of the following activities:

13 “(1) Coordinating locally defined planning proc-
14 esses across jurisdictions and agencies.

15 “(2) Identifying potential regional partnerships
16 for developing and implementing a comprehensive
17 regional technology strategy.

18 “(3) Conducting or updating assessments to de-
19 termine regional needs, which may include—

20 “(A) workforce development;

21 “(B) supply chain development;

22 “(C) increasing innovation readiness, in-
23 cluding expanding research and technology de-
24 velopment facilities and developing the local

1 science, technology, engineering, and mathe-
2 matics workforce;

3 “(D) site preparation;

4 “(E) community and economic develop-
5 ment to attract and support workers and firms;
6 and

7 “(F) and other such needs as determined
8 by the consortium.

9 “(4) Developing or updating—

10 “(A) a comprehensive regional plan; or

11 “(B) goals and strategies to implement an
12 existing comprehensive regional plan for the
13 purposes of strengthening domestic supply
14 chain resiliency, competitiveness, and job cre-
15 ation in critical technology and innovation sec-
16 tors for national and economic security.

17 “(5) Implementing local zoning and other code
18 changes necessary to implement a comprehensive re-
19 gional plan and promote sustainable development.

20 “(g) GRANT AGREEMENT.—Each eligible consortium
21 that receives a grant under this section shall, as a condi-
22 tion on receipt of grant amounts, agree to establish, in
23 coordination with the Secretary, performance measures,
24 reporting requirements, and such other requirements as
25 the Secretary determines are necessary, that must be met

1 at the end of each year in which the eligible consortium
2 receives funds under this section.

3 “(h) REPORTS BY RECIPIENTS OF GRANTS.—

4 “(1) FINAL REPORTS.—Not later than 90 days
5 after the date on which a grant agreement into
6 which an eligible consortium entered under sub-
7 section (g) expires, the eligible consortium shall sub-
8 mit to the Secretary a final report on the project the
9 eligible consortium carried out under subsection (f)
10 using the amounts of the grant awarded to the eligi-
11 ble consortium under this section.

12 “(2) CONTENTS.—Each report submitted under
13 paragraph (1) shall include the following:

14 “(A) A detailed explanation of the activi-
15 ties undertaken using the grant, including an
16 explanation of the completed project and how it
17 achieves specific domestic supply chain resil-
18 iency, research, development, and deployment of
19 critical technologies, workforce development, do-
20 mestic job creation, and entrepreneurship goals
21 within the region served by the eligible consor-
22 tium.

23 “(B) A discussion of any obstacles encoun-
24 tered in the planning process of the eligible con-

1 consortium and how the eligible consortium over-
2 came the obstacles.

3 “(C) An evaluation of the success of the
4 project using the performance standards and
5 measures established under subsection (g), in-
6 cluding an evaluation of the planning process
7 and how the project contributes to carrying out
8 the comprehensive regional technology strategy.

9 “(D) The progress of the region identified
10 by the consortium toward becoming a regional
11 technology hub.

12 “(E) The effectiveness of the region identi-
13 fied by the consortium in ensuring that growth
14 in innovation sectors produces broadly shared
15 opportunity in the region.

16 “(F) Such other information as the Sec-
17 retary may require.

18 “(3) INTERIM REPORTS.—The Secretary may
19 require, as a condition on receipt of a grant under
20 this section, an eligible consortium to submit an in-
21 terim report, before the date on which a project for
22 which a grant is awarded under this section is com-
23 pleted.

24 “(i) TECHNICAL ASSISTANCE FOR GRANT RECIPI-
25 ENTS AND APPLICANTS.—The Secretary may—

1 “(1) coordinate with other Federal agencies to
2 establish interagency and multidisciplinary teams to
3 provide technical assistance to recipients of, and pro-
4 spective applicants for, grants under this section;

5 “(2) by Federal interagency agreement, trans-
6 fer funds to another Federal agency to facilitate and
7 support the provision of such technical assistance;
8 and

9 “(3) enter into contracts with third parties to
10 provide technical assistance to grant recipients and
11 prospective applicants for grants under this section.

12 “(j) AUTHORIZATION OF APPROPRIATIONS.—

13 “(1) AUTHORIZATION.—There are authorized to
14 be appropriated to the Secretary for the award of
15 grants under this section, to remain available until
16 expended, amounts as follows:

17 “(A) \$100,000,000 for each of fiscal years
18 2022 and 2023.

19 “(B) \$125,000,000 for each of fiscal years
20 2024 through 2026.

21 “(2) TECHNICAL ASSISTANCE.—The Secretary
22 may use not more than 5 percent of the amounts
23 made available under this subsection for a fiscal
24 year for technical assistance under subsection (i).”.

1 **SEC. 9. IMPROVEMENTS TO AUTHORITY FOR GRANT PRO-**
2 **GRAM ON EXPANSION OF STEM APPRENTICE-**
3 **SHIP PROGRAMS.**

4 Section 30 of the Stevenson-Wydler Technology Inno-
5 vation Act of 1980 (15 U.S.C. 3723), as redesignated by
6 section 7(a)(1), is amended to read as follows:

7 **“SEC. 30. STEM APPRENTICESHIP PROGRAMS.**

8 “(a) DEFINITIONS.—In this section:

9 “(1) APPRENTICESHIP PROGRAM.—The term
10 ‘apprenticeship program’ means an apprenticeship
11 program that is registered by the Office of Appren-
12 ticeship or a State apprenticeship agency under the
13 Act of August 16, 1937 (commonly known as the
14 ‘National Apprenticeship Act’) (50 Stat. 664, chap-
15 ter 663; 29 U.S.C. 50 et seq.), including, as in effect
16 on December 30, 2019, any requirement, standard,
17 or rule promulgated under that Act.

18 “(2) ELIGIBLE RECIPIENT.—The term ‘eligible
19 recipient’ means—

20 “(A) a State;

21 “(B) an Indian tribe;

22 “(C) a city or other political subdivision of
23 a State;

24 “(D) an entity that—

25 “(i) is a nonprofit organization, an in-
26 stitution of higher education, a labor orga-

1 nization, a public-private partnership, a
2 science or research park, a Federal labora-
3 tory, or an economic development organiza-
4 tion or similar entity; and

5 “(ii) has an application that is sup-
6 ported by a State, a political subdivision of
7 a State, or a native organization; or

8 “(E) a consortium of any of the entities
9 described in paragraphs (1) through (5).

10 “(3) LABOR ORGANIZATION.—The term ‘labor
11 organization’ has the meaning given such term in
12 section 8A(a) of the National Science Foundation
13 Act of 1950.

14 “(4) STEM.—The term ‘STEM’ means science,
15 technology, engineering, and mathematics.

16 “(b) GRANT PROGRAM AUTHORIZED.—The Secretary
17 of Commerce may carry out a grant program—

18 “(1) to identify the need for STEM workers;
19 and

20 “(2) to expand STEM apprenticeship programs.

21 “(c) NEEDS ASSESSMENT GRANTS.—In carrying out
22 a grant program under subsection (b), the Secretary may
23 provide a grant to an eligible recipient to conduct a needs
24 assessment to identify—

1 “(1) the unmet need of a region’s employer
2 base for skilled STEM workers;

3 “(2) the potential of STEM apprenticeships to
4 address the unmet need described in paragraph (1);
5 and

6 “(3) any barriers to addressing the unmet need
7 described in paragraph (1).

8 “(d) APPRENTICESHIP EXPANSION GRANTS.—In
9 carrying out a program under subsection (b), the Sec-
10 retary may provide a grant to an eligible recipient that
11 has conducted a needs assessment as described in sub-
12 section (c)(1) to develop infrastructure to expand STEM
13 apprenticeship programs.

14 “(e) PREFERENCE.—In awarding a grant under a
15 grant program under subsection (b), the Secretary shall
16 give preference to an eligible recipient—

17 “(1) with demonstrated success in admin-
18 istering apprenticeship programs and other work-
19 force development models; and

20 “(2) that demonstrates a commitment to serv-
21 ing individuals—

22 “(A) from underrepresented populations;
23 or

24 “(B) who face barriers to employment, in-
25 cluding—

1 “(i) long-term unemployment;

2 “(ii) past incarceration; or

3 “(iii) veteran or disability status.

4 “(f) DISSEMINATION OF APPRENTICESHIP INFORMA-
5 TION.—The Secretary shall disseminate findings from re-
6 search on apprenticeship programs to businesses and
7 other relevant stakeholders, including—

8 “(1) institutions of higher education;

9 “(2) State and local chambers of commerce;

10 “(3) workforce training organizations; and

11 “(4) labor organizations.

12 “(g) AUTHORIZATION OF APPROPRIATIONS.—There
13 is authorized to be appropriated to carry out this section
14 \$50,000,000 for each of fiscal years 2022 through 2030.”.

15 **SEC. 10. COORDINATION WITH THE MINORITY BUSINESS**
16 **DEVELOPMENT AGENCY IN REGIONS SERVED**
17 **BY REGIONAL TECHNOLOGY HUBS.**

18 The Secretary of Commerce, acting through the Na-
19 tional Director of the Minority Business Development
20 Agency, may make available dedicated assistance through
21 the programs of the Minority Business Development Agen-
22 cy to eligible consortia described in subsection (c) of sec-
23 tion 28 of the Stevenson-Wydler Technology Innovation
24 Act of 1980 (Public Law 96–480), as added by section
25 7 of this Act, located within each region served by a re-

1 gional technology hub designated under subsection
2 (b)(1)(A) of such section 28, as so added, to provide sup-
3 port to minority businesses to increase participation of
4 such businesses in the activities of such eligible consortia.

5 **SEC. 11. MANUFACTURING USA PROGRAM.**

6 (a) DEFINITIONS.—In this section:

7 (1) ALLIANCE MANUFACTURING USA INSTI-
8 TUTE.—The term “alliance Manufacturing USA in-
9 stitute” means a Manufacturing USA institute de-
10 scribed in paragraph (3) of section 34(d) of the Na-
11 tional Institute of Standards and Technology Act
12 (15 U.S.C. 278s(d)).

13 (2) HISTORICALLY BLACK COLLEGE OR UNI-
14 VERSITY.—The term “historically Black college or
15 university” has the meaning given the term “part B
16 institution” in section 322 of the Higher Education
17 Act of 1965 (20 U.S.C. 1061)).

18 (3) LABOR ORGANIZATION.—The term “labor
19 organization” has the meaning given such term in
20 section 8A(a) of the National Science Foundation
21 Act of 1950.

22 (4) MANUFACTURING USA INSTITUTE.—The
23 term “Manufacturing USA institute” means an in-
24 stitute described in section 34(d) of the National In-

1 stitute of Standards and Technology Act (15 U.S.C.
2 278s(d)).

3 (5) MANUFACTURING USA NETWORK.—The
4 term “Manufacturing USA Network” means the
5 network established under section 34(c) of the Na-
6 tional Institute of Standards and Technology Act
7 (15 U.S.C. 278s(c)).

8 (6) MANUFACTURING USA PROGRAM.—The
9 term “Manufacturing USA Program” means the
10 program established under section 34(b)(1) of the
11 National Institute of Standards and Technology Act
12 (15 U.S.C. 278s(b)(1)).

13 (7) MINORITY-SERVING INSTITUTION.—The
14 term “minority-serving institution” means an eligi-
15 ble institution described in section 371(a) of the
16 Higher Education Act of 1965 (20 U.S.C.
17 1067q(a)).

18 (8) NATIONAL PROGRAM OFFICE.—The term
19 “National Program Office” means the National Pro-
20 gram Office established under section 34(h)(1) of
21 the National Institute of Standards and Technology
22 Act (15 U.S.C. 278s(h)(1)).

23 (9) TRADITIONAL MANUFACTURING USA INSTI-
24 TUTE.—The term “traditional Manufacturing USA

1 institute” means a Manufacturing USA institute
2 that is not an alliance Manufacturing USA institute.

3 (10) TRIBAL COLLEGE OR UNIVERSITY.—The
4 term “Tribal college or university” has the meaning
5 given the term in section 316(b)(3) of the Higher
6 Education Act of 1965 (20 U.S.C. 1059c(b)(3)).

7 (b) AUTHORIZATION OF APPROPRIATIONS FOR EX-
8 PANSION OF MANUFACTURING USA PROGRAM.—

9 (1) IN GENERAL.—There is authorized to be
10 appropriated \$2,410,000,000 for the period of fiscal
11 years 2021 through 2025 for the Director of the Na-
12 tional Institute of Standards and Technology to
13 carry out the Manufacturing USA Program and to
14 expand such program to include at least 45 Manu-
15 facturing USA institutes.

16 (2) TRADITIONAL MANUFACTURING USA INSTI-
17 TUTES.—

18 (A) IN GENERAL.—Of the amounts appro-
19 priated pursuant to the authorization of appro-
20 priations in paragraph (1), \$1,500,000,000
21 shall be available for the period described in
22 such paragraph to support the establishment of
23 at least 3 traditional Manufacturing USA insti-
24 tutes each year during that period.

1 (B) FINANCIAL ASSISTANCE.—The Direc-
2 tor shall support the establishment of tradi-
3 tional Manufacturing USA institutes under sub-
4 paragraph (A) through the award of financial
5 assistance under section 34(e) of the National
6 Institute of Standards and Technology Act (15
7 U.S.C. 278s(e)).

8 (3) ALLIANCE MANUFACTURING USA INSTI-
9 TUTES.—Of the amounts appropriated pursuant to
10 the authorization of appropriations in paragraph (1),
11 \$375,000,000 shall be available for the period de-
12 scribed in such paragraph to establish not fewer
13 than 3 alliance Manufacturing USA institutes each
14 year during that covered period as designated by the
15 Director of the National Institute of Standards and
16 Technology for a Federal commitment of at least 5
17 years.

18 (4) COMMERCIALIZATION, WORKFORCE TRAIN-
19 ING, AND SUPPLY CHAIN INVESTMENT.—Of the
20 amounts appropriated pursuant to the authorization
21 of appropriations in paragraph (1), \$100,000,000
22 shall be available for the period described in such
23 paragraph to support such programming for com-
24 mercialization, workforce training, and supply chain

1 activities across the Manufacturing USA Network as
2 the Director considers appropriate.

3 (5) ONGOING SUPPORT FOR EXISTING MANU-
4 FACTURING USA INSTITUTES.—Of the amounts ap-
5 propriated pursuant to the authorization of appro-
6 priations in paragraph (1), \$375,000,000 shall be
7 available for the period described in such paragraph
8 to support Manufacturing USA institutes that were
9 in effect on the day before the date of the enactment
10 of this Act, and \$5,000,000 shall be available to
11 each such Manufacturing USA institute each year
12 for such period for ongoing operation of the insti-
13 tutes, including operational overhead, workforce
14 training, and supply chain activities.

15 (6) MANAGEMENT OF INTERAGENCY SOLICITA-
16 TIONS AND ONGOING MANAGEMENT.—Of the
17 amounts appropriated pursuant to the authorization
18 of appropriations in paragraph (1), \$20,000,000
19 shall be available annually for the period described
20 in such paragraph for the National Program Office
21 to coordinate the activities of the Manufacturing
22 USA Network and manage interagency solicitations.

23 (c) COORDINATION BETWEEN MANUFACTURING
24 USA PROGRAM AND HOLLINGS MANUFACTURING EXTEN-
25 SION PARTNERSHIP.—The Secretary of Commerce shall

1 coordinate the activities of the Manufacturing USA Pro-
2 gram and the activities of Hollings Manufacturing Exten-
3 sion Partnership with each other to the degree that doing
4 so does not diminish the effectiveness of the ongoing ac-
5 tivities of a Manufacturing USA institute or a Center (as
6 the term is defined in section 25(a) of the National Insti-
7 tute of Standards and Technology Act (15 U.S.C.
8 278k(a)), including Manufacturing USA institutes con-
9 tracting with a Center (as so defined) to provide services
10 relating to the mission of the Hollings Manufacturing Ex-
11 tension Partnership, including outreach, technical assist-
12 ance, workforce development, and technology transfer and
13 adoption assistance to small and medium-sized manufac-
14 turers.

15 (d) WORKER ADVISORY COUNCIL FOR MANUFAC-
16 TURING USA PROGRAM.—

17 (1) ESTABLISHMENT.—

18 (A) IN GENERAL.—The Secretary of Com-
19 merce shall, in coordination with the Secretary
20 of Labor, the Secretary of Defense, the Sec-
21 retary of Energy, and the Secretary of Edu-
22 cation, establish an advisory council for the
23 Manufacturing USA Program on the develop-
24 ment and dissemination of techniques, policies,
25 and investments for high-road labor practices,

1 worker adaptation and success with techno-
2 logical change, and increased worker participa-
3 tion across the Manufacturing USA Network.

4 (B) MEMBERSHIP.—The council estab-
5 lished under subparagraph (A) shall be com-
6 posed of not fewer than 15 members appointed
7 by the Secretary of Commerce, of whom—

8 (i) five shall be from labor organiza-
9 tions;

10 (ii) five shall be from educational in-
11 stitutions; and

12 (iii) five shall be from labor-manage-
13 ment training, workforce development, and
14 nonprofit organizations, including those
15 that focus on workforce diversity and in-
16 clusion.

17 (C) PERIOD OF APPOINTMENT; VACAN-
18 CIES.—

19 (i) IN GENERAL.—Each member of
20 the council established under subparagraph
21 (A) shall be appointed for a term of 3
22 years with the ability to renew the appoint-
23 ment for no more than 2 terms.

24 (ii) VACANCIES.—Any member ap-
25 pointed to fill a vacancy occurring before

1 the expiration of the term for which the
2 member's predecessor was appointed shall
3 be appointed only for the remainder of that
4 term. A member may serve after the expi-
5 ration of that term until a successor has
6 been appointed.

7 (D) MEETINGS.—

8 (i) INITIAL MEETING.—Not later than
9 180 days after the date of enactment of
10 this Act, the council established under sub-
11 paragraph (A) shall hold the first meeting.

12 (ii) ADDITIONAL MEETINGS.—After
13 the first meeting of the council, the council
14 shall meet upon the call of the Secretary,
15 and at least once every 180 days there-
16 after.

17 (iii) QUORUM.—A majority of the
18 members of the council shall constitute a
19 quorum, but a lesser number of members
20 may hold hearings.

21 (E) CHAIRPERSON AND VICE CHAIR-
22 PERSON.—The Secretary shall elect 1 member
23 of the council established under subparagraph
24 (A) to serve as the chairperson of the council

1 and 1 member of the council to serve as the
2 vice chairperson of the council.

3 (2) DUTIES OF THE COUNCIL.—The council es-
4 tablished under paragraph (1)(A) shall provide ad-
5 vice and recommendations to the Secretary of Com-
6 merce on matters concerning investment in and sup-
7 port of the manufacturing workforce relating to the
8 following:

9 (A) Worker participation, including
10 through labor organizations, in the planning
11 and deployment of new technologies across an
12 industry and within workplaces.

13 (B) Policies to help workers adapt to tech-
14 nological change, including training and edu-
15 cation priorities for the Federal Government
16 and for employer investments in workers.

17 (C) Assessments of impact on workers of
18 development of new technologies and processes
19 by the Manufacturing USA institutes.

20 (D) Management practices that prioritize
21 job quality, worker protection, worker participa-
22 tion and power in decision making, and invest-
23 ment in worker career success.

24 (E) Policies and procedures to prioritize
25 diversity and inclusion in the manufacturing

1 and technology workforce by expanding access
2 to job, career advancement, and management
3 opportunities for underrepresented populations.

4 (F) Assessments of technology improve-
5 ments achieved by the Manufacturing USA in-
6 stitutes and the degree of domestic deployment
7 of each new technology.

8 (G) Such other matters as the Secretary
9 considers appropriate.

10 (3) REPORT.—

11 (A) APPROPRIATE COMMITTEES OF CON-
12 GRESS DEFINED.—In this paragraph, the term
13 “appropriate committees of Congress” means—

14 (i) the Committee on Health, Edu-
15 cation, Labor, and Pensions, the Com-
16 mittee on Commerce, Science, and Trans-
17 portation, the Committee on Energy and
18 Natural Resources, the Committee on
19 Armed Services, and the Committee on Ap-
20 propriations of the Senate; and

21 (ii) the Committee on Education and
22 Labor, the Committee on Science, Space,
23 and Technology, the Committee on Energy
24 and Commerce, the Committee on Armed

1 Services, and the Committee on Appropria-
2 tions of the House of Representatives.

3 (B) REPORT REQUIRED.—Not later than
4 180 days after the date on which the council es-
5 tablished under paragraph (1)(A) holds its ini-
6 tial meeting under paragraph (1)(D)(i) and an-
7 nually thereafter, the council shall submit to
8 the appropriate committees of Congress a re-
9 port containing a detailed statement of the ad-
10 vice and recommendations of the council pursu-
11 ant to paragraph (2).

12 (4) COMPENSATION.—

13 (A) PROHIBITION OF COMPENSATION.—
14 Members of the Council may not receive addi-
15 tional pay, allowances, or benefits by reason of
16 their service on the Council.

17 (B) TRAVEL EXPENSES.—Each member
18 shall receive travel expenses, including per diem
19 in lieu of subsistence, in accordance with appli-
20 cable provisions under subchapter I of chapter
21 57 of title 5, United States Code.

22 (5) FACA APPLICABILITY.—

23 (A) IN GENERAL.—In discharging its du-
24 ties under this subsection, the council estab-
25 lished under paragraph (1)(A) shall function

1 solely in an advisory capacity, in accordance
2 with the Federal Advisory Committee Act (5
3 U.S.C. App.).

(B) EXCEPTION.—Section 14 of the Federal Advisory Committee Act shall not apply to the Council.

(e) PARTICIPATION OF MINORITY-SERVING INSTITUTIONS, HISTORICALLY BLACK COLLEGES AND UNIVERSITIES, AND TRIBAL COLLEGES AND UNIVERSITIES.—

(1) IN GENERAL.—The Secretary of Commerce shall coordinate with existing and new Manufacturing USA institutes to integrate covered entities as active members of the Manufacturing USA institutes, including through the development of preference criteria for proposals to create new Manufacturing USA institutes or renew existing Manufacturing USA institutes that include meaningful participation from a covered entity or that are led by a covered entity.

20 (2) COVERED ENTITIES.—For purposes of this
21 subsection, a covered entity is—

22 (A) a minority-serving institution;

23 (B) an historically Black college or univer-
24 sity; or

25 (C) a Tribal college or university.

1 (f) DEPARTMENT OF COMMERCE POLICIES TO PRO-
2 MOTE DOMESTIC PRODUCTION OF TECHNOLOGIES DE-
3 VELOPED UNDER MANUFACTURING USA PROGRAM.—

4 (1) DEFINITION OF DOMESTIC.—In this sub-
5 section, the term “domestic”, with respect to devel-
6 opment or production means development or produc-
7 tion by, or with respect to source means the source
8 is, a person incorporated or formed in the United
9 States—

10 (A) that is not under foreign ownership,
11 control, or influence (FOCI) as defined in sec-
12 tion 847 of the National Defense Authorization
13 Act for Fiscal Year 2020 (Public Law 116–92);

14 (B) whose beneficial owners, as defined in
15 section 847 of the National Defense Authoriza-
16 tion Act for Fiscal Year 2020 (Public Law
17 116–92), are United States persons;

18 (C) whose management are United States
19 citizens;

20 (D) whose principal place of business is in
21 the United States; and

22 (E) who is not—

23 (i) a foreign incorporated entity that
24 is an inverted domestic corporation or any
25 subsidiary of such entity; or

1 (ii) any joint venture if more than 10
2 percent of the joint venture (by vote or
3 value) is held by a foreign incorporated en-
4 tity that is an inverted domestic corpora-
5 tion or any subsidiary of such entity.

6 (2) POLICIES.—

7 (A) IN GENERAL.—The Secretary of Com-
8 merce shall establish policies to promote the do-
9 mestic production of technologies developed by
10 the Manufacturing USA Network.

11 (B) ELEMENTS.—The policies developed
12 under subparagraph (A) shall include the fol-
13 lowing:

14 (i) Measures to partner domestic de-
15 velopers of goods, services, or technologies
16 by Manufacturing USA Network activities
17 with domestic manufacturers and sources
18 of financing.

19 (ii) Measures to develop and provide
20 incentives to promote transfer of intellec-
21 tual property and goods, services, or tech-
22 nologies developed by Manufacturing USA
23 Network activities to domestic manufactur-
24 ers.

1 (iii) Measures to assist with supplier
2 scouting and other supply chain develop-
3 ment, including the use of the Hollings
4 Manufacturing Extension Partnership to
5 carry out such measures.

6 (iv) A process to review and approve
7 or deny any transfer of intellectual prop-
8 erty and goods, services, or technologies
9 developed by Manufacturing USA Network
10 activities to outside of the United States,
11 especially to countries of concern, including
12 the People's Republic of China.

13 (v) Measures to prioritize Federal pro-
14 curement of goods, services, or technologies
15 developed by the Manufacturing USA Net-
16 work activities from domestic sources, as
17 appropriate.

18 (vi) Requirements that all contracts,
19 transactions, and agreements entered into
20 as part of participation in the Manufac-
21 turing USA Network shall include condi-
22 tions where developers of technologies by
23 activities conducted by the Manufacturing
24 USA network who manufacture such tech-
25 nology outside the United States agree

1 that they shall be required to refund to the
2 United States an appropriate amount of
3 funding, which shall include the amount
4 the Federal Government has contributed
5 and the present value of the future value
6 lost by the United States as a result of
7 such technology being manufactured out-
8 side the United States, under reasonable
9 conditions and procedures determined by
10 the Secretary in the interest of protecting
11 taxpayers.

12 (C) PROCESSES FOR WAIVERS.—The poli-
13 cies established under this paragraph shall in-
14 clude processes to permit waivers, on a case by
15 case basis, for policies that promote domestic
16 production based on cost, availability, severity
17 of technical and mission requirements, emer-
18 gency requirements, operational needs, other
19 legal or international treaty obligations, or
20 other factors deemed important to the success
21 of the Manufacturing USA Program.

22 (3) PROHIBITION.—

23 (A) DEFINITIONS.—In this paragraph, the
24 terms “beneficial owner”, “company”, and “for-
25 eign ownership, control, or influence” have the

1 meanings given such terms in section 847(a) of
2 the National Defense Authorization Act for Fis-
3 cal Year 2020 (Public Law 116–92).

4 (B) IN GENERAL.—A company of the Peo-
5 ple’s Republic of China may not participate in
6 the Manufacturing USA Program or the Manu-
7 facturing USA Network. Any company that en-
8 gages in joint research and development, tech-
9 nology licensing or transfer, or investment in-
10 volving technologies that result from the activi-
11 ties of the Manufacturing USA Program or the
12 Manufacturing USA Network with companies
13 in the People’s Republic of China or otherwise
14 under the foreign ownership, control or influ-
15 ence of the Government of China or whose ben-
16 efiticial owners are citizens of the People’s Re-
17 public of China may not participate in the Man-
18 ufacturing USA Program or the Manufacturing
19 USA Network.

20 (g) CONSTRUCTION AUTHORITY FOR NATIONAL OF-
21 FICE OF THE MANUFACTURING USA NETWORK.—Section
22 34(h) of the National Institute of Standards and Tech-
23 nology Act (15 U.S.C. 278s(h)) is amended by adding at
24 the end the following:

1 “(7) CONSTRUCTION AUTHORITY.—The Na-
2 tional Program Office may carry out such activities
3 for the construction or improvement of facilities as
4 the Secretary considers appropriate for the National
5 Program Office to carry out the functions set forth
6 under paragraph (2).”.

7 **SEC. 12. HOLLINGS MANUFACTURING EXTENSION PART-**
8 **NERSHIP AND STRENGTHENING DOMESTIC**
9 **SUPPLY CHAINS.**

10 (a) ESTABLISHMENT OF EXPANSION AWARDS PRO-
11 GRAM IN HOLLINGS MANUFACTURING EXTENSION PART-
12 NERSHIP.—The National Institute of Standards and
13 Technology Act (15 U.S.C. 271 et seq.) is amended by
14 inserting after section 25A (15 U.S.C. 278k–1) the fol-
15 lowing:

16 **“SEC. 25B. EXPANSION AWARDS PROGRAM.**

17 “(a) DEFINITIONS.—The terms used in this section
18 have the meanings given the terms in section 25.

19 “(b) ESTABLISHMENT.—The Director shall establish
20 within the Hollings Manufacturing Extension Partnership
21 under sections 25 and 26 a program of expansion awards
22 among participants described in subsection (c) of this sec-
23 tion for the purposes described in subsection (e) of this
24 section.

1 “(c) PARTICIPANTS.—Participants receiving awards
2 under this section shall be Centers, or a consortium of
3 Centers.

4 “(d) AWARD AMOUNTS.—Subject to the availability
5 of appropriations, an award for a recipient under this sec-
6 tion shall be in an amount equal to the sum of the fol-
7 lowing:

8 “(1) Such amount as the Director considers ap-
9 propriate as a minimum base funding level for each
10 award under this section.

11 “(2) Such additional amount as the Director
12 considers in proportion to the manufacturing density
13 of the region of the recipient.

14 “(3) Such supplemental amounts as the Direc-
15 tor considers appropriate.

16 “(e) PURPOSE OF AWARDS.—An award under this
17 section shall be made for one or more of the following pur-
18 poses:

19 “(1) To provide coordinating services on em-
20 ployee engagement, including employee ownership
21 and workforce training, including connecting manu-
22 facturers with career and technical education enti-
23 ties, institutions of higher education (including com-
24 munity colleges), workforce development boards,
25 labor organizations, and nonprofit job training pro-

1 viders to develop and support training and job place-
2 ment services, including apprenticeship and online
3 learning platforms, for new and incumbent workers,
4 programming to prevent job losses when adopting
5 new technologies and processes, and development of
6 employee ownership practices.

7 “(2) To provide services to improve the resil-
8 iency of domestic supply chains and to mitigate
9 vulnerabilities to cyberattacks, including helping to
10 offset the cost of cybersecurity projects for small
11 manufacturers.

12 “(3) To expand advanced technology services to
13 small- and medium-sized manufacturers, which may
14 include—

15 “(A) developing technology demonstration
16 laboratories;

17 “(B) services for the adoption of advanced
18 technologies, including smart manufacturing
19 technologies and practices; and

20 “(C) establishing partnerships, for the de-
21 velopment, demonstration, and deployment of
22 advanced technologies, with—

23 “(i) national laboratories (as defined
24 in section 2 of the Energy Policy Act of
25 2005 (42 U.S.C. 15801));

1 “(ii) Federal laboratories;
2 “(iii) Manufacturing USA institutes
3 (as described in section 34(d)); and
4 “(iv) institutions of higher education.
5 “(4) To build capabilities across the Hollings
6 Manufacturing Extension Partnership for domestic
7 supply chain resiliency and optimization, including—
8 “(A) assessment of domestic manufac-
9 turing capabilities and inventories, expanded ca-
10 pacity for researching and deploying informa-
11 tion on supply chain risk, hidden costs of reli-
12 ance on offshore suppliers, redesigning products
13 and processes to encourage reshoring, and other
14 relevant topics; and
15 “(B) expanded services to provide indus-
16 try-wide support that assists United States
17 manufacturers with reshoring manufacturing to
18 strengthen the resiliency of domestic supply
19 chains, including in critical technology areas
20 and foundational manufacturing capabilities
21 that are key to domestic manufacturing com-
22 petitiveness and resiliency, including forming,
23 casting, machining, joining, surface treatment,
24 and tooling.

1 “(f) REIMBURSEMENT.—The Director may reim-
2 burse Centers for costs incurred by the Centers under this
3 section.

4 “(g) APPLICATIONS.—Applications for awards under
5 this section shall be submitted in such manner, at such
6 time, and containing such information as the Director
7 shall require in consultation with the MEP Advisory
8 Board.

9 “(h) SELECTION.—

10 “(1) REVIEWED AND MERIT-BASED.—The Di-
11 rector shall ensure that awards under this section
12 are reviewed and merit-based.

13 “(2) GEOGRAPHIC DIVERSITY.—The Director
14 shall endeavor to have broad geographic diversity
15 among selected proposals.

16 “(3) CRITERIA.—The Director shall select ap-
17 plications consistent with the purposes identified
18 pursuant to subsection (e) to receive awards that the
19 Director determines will achieve 1 or more of the
20 following:

21 “(A) Improve the competitiveness of indus-
22 tries in the region in which the Center or Cen-
23 ters are located.

24 “(B) Create jobs or train newly hired em-
25 ployees.

1 “(C) Promote the transfer and commer-
2 cialization of research and technology from in-
3 stitutions of higher education, national labora-
4 tories or other federally funded research pro-
5 grams, and nonprofit research institutes.

6 “(D) Recruit a diverse manufacturing
7 workforce, including through outreach to under-
8 represented populations, including individuals
9 identified in section 33 or section 34 of the
10 Science and Engineering Equal Opportunities
11 Act (42 U.S.C. 1885a, 1885b).

12 “(E) Such other result as the Director de-
13 termines will advance the objective set forth in
14 section 25(c) or 26.

15 “(i) PROGRAM CONTRIBUTION.—Recipients of
16 awards under this section shall not be required to provide
17 a matching contribution.

18 “(j) GLOBAL MARKETPLACE PROJECTS.—In making
19 an award under this section, the Director, in consultation
20 with the MEP Advisory Board and the Secretary, may
21 take into consideration whether an application has signifi-
22 cant potential for enhancing the competitiveness of small-
23 and medium-sized United States manufacturers in the
24 global marketplace.

1 “(k) DURATION.—The Director shall ensure that the
2 duration of an award under this section is aligned and
3 consistent with a Center’s cooperative agreement estab-
4 lished in section 25(e).”.

5 (b) AUTHORIZATION OF APPROPRIATIONS.—

6 (1) IN GENERAL.—There is authorized to be
7 appropriated to carry out the Hollings Manufac-
8 turing Extension Partnership program under sec-
9 tions 25 and 26 of the National Institute of Stand-
10 ards and Technology Act (15 U.S.C. 278k and 278l)
11 \$600,000,000 for each of fiscal years 2022 through
12 fiscal year 2026.

13 (2) BASE FUNDING.—Of the amounts appro-
14 priated pursuant to the authorization in paragraph
15 (1), \$270,000,000 shall be available in each fiscal
16 year to carry out the Hollings Manufacturing Exten-
17 sion Partnership as authorized by section 25 of such
18 Act (15 U.S.C. 278k), of which \$50,000,000 shall
19 not be subject to cost share requirements under sub-
20 section (e)(2) of such section: *Provided*, That the au-
21 thority made available pursuant to this section shall
22 be elective for any Manufacturing Extension Part-
23 nership Center that also receives funding from a
24 State that is conditioned upon the application of a
25 Federal cost sharing requirement.

1 (3) EXPANSION AWARD PROGRAM.—Of the
2 amounts appropriated pursuant to the authorization
3 in paragraph (1), \$330,000,000 shall be available
4 each fiscal year to carry out subsection 25B of such
5 Act.

6 **SEC. 13. TECHNOLOGY COMMERCIALIZATION REVIEW.**

7 (a) KEY TECHNOLOGY FOCUS AREAS DEFINED.—In
8 this section, the term “key technology focus areas” means
9 the areas included on the most recent list under section
10 8A(d)(2) of the National Science Foundation Act of 1950.

11 (b) REVIEW AND RECOMMENDATIONS REQUIRED.—
12 Not later than 180 days after the date of the enactment
13 of this Act, the Director of the Office of Science and Tech-
14 nology Policy, in consultation with the Director of the Na-
15 tional Science Foundation and the Director of the Na-
16 tional Institute of Standards and Technology, shall—

17 (1) review—

18 (A) the structure of current technology re-
19 search and commercialization arrangements
20 with regard to public-private partnerships; and

21 (B) the extent to which intellectual prop-
22 erty developed with Federal funding—

23 (i) has been used by foreign business
24 entities; and

1 (ii) is being used to manufacture in
2 the United States rather than in other
3 countries;

4 (2) develop recommendations for such legisla-
5 tive or administrative action as may be necessary—

6 (A) to further incentivize industry partici-
7 pation in public-private partnerships for the
8 purposes of accelerating technology research
9 and commercialization, including alternate ways
10 of accounting for in-kind contributions and
11 value of partially manufactured products; and

12 (B) to ensure that intellectual property de-
13 veloped with Federal funding is commercialized
14 in the United States; and

15 (3) submit to the Secretary of Commerce and
16 Congress—

17 (A) the findings of the Director of the Of-
18 fice of Science and Technology Policy with re-
19 spect to the reviews conducted under paragraph
20 (1); and

21 (B) the recommendations developed under
22 paragraph (2).

1 **SEC. 14. DIRECTOR OF NATIONAL INTELLIGENCE REPORT**
2 **ON TRENDS IN TECHNOLOGIES OF STRA-**
3 **TEGIC IMPORTANCE TO UNITED STATES.**

4 (a) IN GENERAL.—Not less frequently than once
5 every 2 years, the Director of National Intelligence shall
6 submit to Congress a report assessing foreign trends in
7 technologies the Director considers of strategic importance
8 to the United States.

9 (b) CONTENTS.—The report required by subsection
10 (a) shall including the following:

11 (1) A list of the 10 technology focus areas that
12 the Director considers to be of the most strategic
13 importance to the United States.

14 (2) A list of the 10 technology focus areas in
15 which countries that are adversarial to the United
16 States are poised to match or surpass the techno-
17 logical leadership of the United States.

18 **SEC. 15. COORDINATION OF ACTIVITIES.**

19 The Director of the Office of Science and Technology
20 Policy, the Director of the National Economic Council, the
21 Director of the National Science Foundation, the Sec-
22 retary of Commerce, and the Secretary of Energy shall,
23 as applicable, coordinate with respect to activities of—

24 (1) the university technology centers established
25 under section 8A(d)(6) of the National Science
26 Foundation Act of 1950;

1 (2) the regional technology hubs under section
2 28 of the Stevenson-Wydler Technology Innovation
3 Act of 1980, as added by section 7;

4 (3) the Manufacturing USA Program estab-
5 lished under section 34(b)(1) of the National Insti-
6 tute of Standards and Technology Act (15 U.S.C.
7 278s(b)(1));

8 (4) Federally funded research and development
9 centers;

10 (5) National Laboratories, as defined in section
11 2 of the Energy Policy Act of 2005 (42 U.S.C.
12 15801); and

13 (6) Federal laboratories, as defined in section 4
14 of the Stevenson-Wydler Technology Innovation Act
15 of 1980 (15 U.S.C. 3703).