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S. 1260

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

APRIL 20, 2021

Mr. SCHUMER (for himself, Mr. YOUNG, Ms. HASSAN, Ms. COLLINS, Mr. COONS, Mr. PORTMAN, Ms. BALDWIN, Mr. GRAHAM, Mr. PETERS, Mr. BLUNT, Mr. DAINES, Mr. VAN HOLLEN, Mr. ROMNEY, and Mr. KELLY) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

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,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Endless Frontier Act”.

3 **SEC. 2. FINDINGS.**

4 Congress finds the following:

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

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

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

23 (C) While wages for American workers
24 rose in parallel with growth in national produc-
25 tivity from the end of World War II through
26 most of the 1970s, since then wage growth has

1 been uneven and labor’s share in national in-
2 come has declined.

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

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

22 (4) The distribution of innovation jobs and in-
23 vestment in the United States has become largely
24 concentrated in just a few locations, while much of
25 the Nation has been left out of growth in the innova-

1 tion sector. More than 90 percent of the Nation’s in-
2 novation sector employment growth in the last 15
3 years was generated in just 5 major metropolitan
4 areas. The Federal Government must address this
5 imbalance in opportunity by—

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

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

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

18 (D) building regional capacity in such crit-
19 ical areas as entrepreneurship, access to capital
20 and other investment, and supply chain develop-
21 ment.

22 (5) As President Franklin D. Roosevelt stated,
23 “[N]ew frontiers of the mind are before us, and if
24 they are pioneered with the same vision, boldness,
25 and drive with which we have waged this war we can

1 create a fuller and more fruitful employment and a
2 fuller and more fruitful life.”

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

13 (7) Since their inception, the National Science
14 Foundation and other key Federal agencies, like the
15 Department of Energy, have carried out vital work
16 supporting basic and applied research to create
17 knowledge that is a key driver of the economy of the
18 United States and enhances the Nation’s security.

19 **SEC. 3. IMPROVING TECHNOLOGY AND INNOVATION RE-**
20 **SEARCH AT THE NATIONAL SCIENCE FOUN-**
21 **DATION.**

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

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

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

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

6 “(l) provide for the widest practicable and appro-
7 priate dissemination of information within the United
8 States concerning the Foundation’s activities and the re-
9 sults thereof.”.

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

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

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

18 **“SEC. 8A. IMPROVING RESEARCH AND ESTABLISHING DI-**
19 **RECTORATE FOR TECHNOLOGY AND INNOVA-**
20 **TION.**

21 “(a) DEFINITIONS.—In this section:

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

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

5 “(A) not less than 30 days of advance noti-
6 fication and explanation to the relevant con-
7 gressional committees before the designation;
8 and

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

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

15 “(4) EMERGING RESEARCH INSTITUTION.—The
16 term ‘emerging research institution’ means an insti-
17 tution of higher education with an established under-
18 graduate student program that has, on average for
19 the 3 years prior to an application for an award
20 under this section, received less than \$35,000,000 in
21 Federal research funding.

22 “(5) FEDERAL RESEARCH FACILITY.—The term
23 ‘Federal research facility’ includes a research labora-
24 tory of the Department of Agriculture and any other
25 federally funded research and development center.

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

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

10 “(8) KEY TECHNOLOGY FOCUS AREAS.—The
11 term ‘key technology focus areas’ means the areas
12 included on the most recent list under subsection
13 (d)(2).

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

19 “(A) any organization composed of labor
20 organizations, such as a labor union federation
21 or a State or municipal labor body; and

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

1 “(i) individuals employed by the
2 United States, any wholly owned Govern-
3 ment corporation, any Federal Reserve
4 Bank, or any State or political subdivision
5 thereof;

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

9 “(iii) individuals employed as agricul-
10 tural laborers.

11 “(10) MINORITY-SERVING INSTITUTION.—The
12 term ‘minority-serving institution’ means an institu-
13 tion described in section 371(a) of the Higher Edu-
14 cation Act of 1965 (20 U.S.C. 1067q(a)).

15 “(11) NATIONAL LABORATORY.—The term ‘Na-
16 tional Laboratory’ has the meaning given the term
17 in section 2 of the Energy Policy Act of 2005 (42
18 U.S.C. 15801).

19 “(12) 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 Energy and
25 Natural Resources, the Committee on Appro-

1 priations, the Committee on Foreign Relations,
2 the Committee on Health, Education, Labor,
3 and Pensions, and the Select Committee on In-
4 telligence of the Senate; and

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

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

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

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

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

1 “(1) IN GENERAL.—Not later than 90 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) Strengthening the leadership of the
9 United States in critical technologies, as de-
10 scribed as a critical national need in section
11 7018 of the America COMPETES Act (42
12 U.S.C. 1862o-5), through basic research in the
13 key technology focus areas and the commer-
14 cialization of those technologies to businesses in
15 the United States.

16 “(B) Addressing and mitigating technology
17 challenges integral to the geostrategic position
18 of the United States through the activities au-
19 thorized by this section.

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

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

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

17 “(F) Ensuring the programmatic work of
18 the Directorate and Foundation incorporates a
19 workforce perspective from labor organizations
20 and workforce training organizations.

21 “(2) ORGANIZATION AND ADMINISTRATIVE
22 MATTERS.—

23 “(A) PROGRAM MANAGERS.—The employ-
24 ees of the Directorate may include program
25 managers for the key technology focus areas,

1 who may perform a role similar to program
2 managers employed by the Defense Advanced
3 Research Projects Agency for the oversight and
4 selection of programs supported by the Direc-
5 torate.

6 “(B) SELECTION OF RECIPIENTS.—Recipi-
7 ents of support under the programs and activi-
8 ties of the Directorate shall be selected by pro-
9 gram managers or other employees of the Di-
10 rectorate and the selection criteria for financial
11 assistance awards shall include intellectual
12 merit and broader impacts, including economic
13 impacts on the advanced technology production
14 system of the United States. The Directorate
15 may use a peer review process or the authorities
16 provided under subsection (c), or some com-
17 bination of such process and authorities, to in-
18 form the selection of award recipients.

19 “(C) REPORT.—Not later than 1 year
20 after the date of enactment of the Endless
21 Frontier Act, the Director shall prepare and
22 submit a report to the relevant congressional
23 committees regarding the use of alternative
24 methods for the selection of recipients and the

1 distribution of funding to recipients as com-
2 pared to the traditional peer review process.

3 “(D) ASSISTANT DIRECTORS.—The Direc-
4 tor shall appoint an Assistant Director for the
5 Directorate, in the same manner as other As-
6 sistant Directors of the Foundation are ap-
7 pointed.

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

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

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

1 “(2) HIGHLY QUALIFIED EXPERTS IN NEEDED
2 OCCUPATIONS.—In addition to the authority pro-
3 vided under paragraph (1), the Director shall have
4 the authority to carry out a program of personnel
5 management authority in the same manner, and
6 subject to the same requirements, as the program to
7 attract highly qualified experts carried out by the
8 Secretary of Defense under section 9903 of title 5,
9 United States Code. Individuals hired by the Direc-
10 tor through such authority shall include individuals
11 with expertise in business creativity, innovation man-
12 agement, design thinking, entrepreneurship, venture
13 capital, and related fields.

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

1 “(d) DUTIES AND FUNCTIONS OF THE DIREC-
2 TORATE.—

3 “(1) DEVELOPMENT OF TECHNOLOGY FOCUS
4 OF THE DIRECTORATE.—The Director shall—

5 “(A) through the Directorate, advance in-
6 novation in the key technology focus areas
7 through basic and translational research and
8 other activities described in this section;

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

16 “(C) develop and focus on innovation
17 methods, processes, and promising practices
18 that can affect the speed and effectiveness of
19 innovation processes at scale.

20 “(2) KEY TECHNOLOGY FOCUS AREAS.—

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

23 “(i) artificial intelligence, machine
24 learning, and other software advances;

1 “(ii) high performance computing,
2 semiconductors, and advanced computer
3 hardware;

4 “(iii) quantum computing and infor-
5 mation systems;

6 “(iv) robotics, automation, and ad-
7 vanced manufacturing;

8 “(v) natural and anthropogenic dis-
9 aster prevention or mitigation;

10 “(vi) advanced communications tech-
11 nology;

12 “(vii) biotechnology, medical tech-
13 nology, genomics, and synthetic biology;

14 “(viii) cybersecurity, data storage, and
15 data management technologies;

16 “(ix) advanced energy, batteries, and
17 industrial efficiency; and

18 “(x) advanced materials science, engi-
19 neering, and exploration relevant to the
20 other key technology focus areas described
21 in this subparagraph.

22 “(B) REVIEW OF KEY TECHNOLOGY FOCUS
23 AREAS AND SUBSEQUENT LISTS.—

24 “(i) ADDING OR DELETING KEY
25 TECHNOLOGY FOCUS AREAS.—Beginning

1 on the date that is 3 years after the date
2 of enactment of the Endless Frontier Act,
3 and every 3 years thereafter, the Director,
4 in coordination with the Director of the
5 Office of Science and Technology Policy,
6 the Director of National Institute of
7 Standards and Technology, the Secretary
8 of Energy, the Secretary of Defense, the
9 Director of the National Institutes of
10 Health, and, as appropriate, the heads of
11 other departments and agencies—

12 “(I) shall review the list of key
13 technology focus areas;

14 “(II) may consider the challenges
15 and recommendations identified in the
16 report required by section 11 of the
17 Endless Frontier Act; and

18 “(III) as part of that review, may
19 add or delete key technology focus
20 areas if societal challenges or the com-
21 petitive threats to the United States
22 have shifted (whether because the
23 United States or other nations have
24 advanced or fallen behind in a techno-
25 logical area), subject to clause (ii).

1 “(ii) LIMIT ON KEY TECHNOLOGY
2 FOCUS AREAS.—Not more than 10 key
3 technology focus areas shall be included on
4 the list of key technology focus areas at
5 any time.

6 “(iii) UPDATING FOCUS AREAS AND
7 DISTRIBUTION.—Prior to completion of
8 each review under this subparagraph, the
9 Director shall make the list of key tech-
10 nology focus areas readily available to the
11 public and available for public comment,
12 including, at a minimum, by publishing the
13 list in the Federal Register even if no
14 changes are expected to be made to the
15 prior list.

16 “(iv) EXTRAORDINARY CIRCUMSTANCE
17 WAIVER.—In extraordinary circumstances,
18 the Director of the Office of Science and
19 Technology Policy may grant the Director
20 the ability to add or delete key technology
21 focus areas without acting in coordination
22 as described in clause (i). If such an ability
23 is determined to be necessary by the Direc-
24 tor of the Office of Science and Technology
25 Policy, the Director and the Director of

1 the Office of Science and Technology Pol-
2 icy shall not later than 15 days ahead of
3 such a waiver being granted submit a de-
4 tailed description and justification to the
5 relevant congressional committees.

6 “(3) ACTIVITIES.—

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

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

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

17 “(II) not-for-profit entities; and

18 “(III) consortia that—

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

1 “(bb) shall include at least
2 one of the following:

3 “(AA) a historically
4 Black college or university;

5 “(BB) a Tribal College
6 or University;

7 “(CC) another minor-
8 ity-serving institution;

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

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

1 from underrepresented pop-
2 ulations; or

3 “(FF) a community
4 college; and

5 “(cc) may include 1 or
6 more—

7 “(AA) entities described
8 in subclause (I) or (II) and
9 industries, including
10 startups, small businesses,
11 and public-private partner-
12 ships;

13 “(BB) economic devel-
14 opment organizations or
15 venture development organi-
16 zations, as such term is de-
17 fined in section 28(a) of the
18 Stevenson-Wydler Tech-
19 nology Innovation Act of
20 1980;

21 “(CC) National Labora-
22 tories;

23 “(DD) Federal labora-
24 tories, as defined in section
25 4 of the Stevenson-Wydler

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

3 “(EE) Federal research
4 facilities;

5 “(FF) labor organiza-
6 tions;

7 “(GG) entities de-
8 scribed in subclause (I) or
9 (II) from allied or partner
10 countries;

11 “(HH) other entities if
12 determined by the Director
13 to be vital to the success of
14 the program; and

15 “(II) binational re-
16 search and development
17 foundations and funds, ex-
18 cluding foreign entities of
19 concern;

20 “(ii) may partner with other direc-
21 torates of the Foundation for projects or
22 research, including—

23 “(I) to pursue basic questions
24 about natural, human, and physical
25 phenomena that could enable ad-

1 vances in the key technology focus
2 areas;

3 “(II) to study questions that
4 could affect the design (including
5 human interfaces), operation, deploy-
6 ment, or the social and ethical con-
7 sequences of technologies in the key
8 technology focus areas, including the
9 development of technologies that com-
10 plement or enhance the abilities of
11 workers and impact of specific innova-
12 tions on domestic jobs and equitable
13 opportunity; and

14 “(III) to further the creation of a
15 domestic workforce capable of advanc-
16 ing, using, and adapting to key tech-
17 nology focus areas and understanding
18 and improving the impact of key tech-
19 nology focus areas on STEM teaching
20 and learning advancing the key tech-
21 nology focus areas, including engaging
22 relevant partners in research and in-
23 novation programs;

24 “(iii) may provide funds to any other
25 Federal agencies for intramural or extra-

1 mural work in the key technology focus
2 areas through research, manufacturing, or
3 other means;

4 “(iv) may make awards under the
5 SBIR and STTR programs (as defined in
6 section 9(e) of the Small Business Act (15
7 U.S.C. 638(e))); and

8 “(v) may enter into and perform such
9 contracts, other transactions, or other ar-
10 rangements, or modifications thereof, as
11 may be necessary in the conduct of the
12 work of the Directorate and on such terms
13 as the Director considers appropriate, in
14 furtherance of the purposes of this Act.

15 “(B) REPORTS.—Not later than 180 days
16 after the date of enactment of the Endless
17 Frontier Act, the Director, in coordination with
18 the Secretary of State and the Director of the
19 Office of Science and Technology Policy, shall
20 prepare and submit to the relevant congres-
21 sional committees—

22 “(i) a plan to seek out additional in-
23 vestments from—

24 “(I) certain designated countries;
25 and

1 “(II) entities other than institu-
2 tions of higher education; and

3 “(ii) the planned activities of the Di-
4 rectorate to secure federally funded science
5 and technology pursuant to section 1746 of
6 the National Defense Authorization Act for
7 Fiscal Year 2020 (Public Law 116–92)
8 and section 223 of William M. (Mac)
9 Thornberry National Defense Authoriza-
10 tion Act for Fiscal Year 2021 (Public Law
11 116–283).

12 “(C) ANNUAL BRIEFING.—Each year, the
13 Director shall formally request a briefing from
14 the Secretary of Defense, the Secretary of Com-
15 merce, the Director of the Federal Bureau of
16 Investigation, the Director of National Intel-
17 ligence, and as appropriate other department or
18 agency heads regarding their efforts to preserve
19 the United States advantages generated by the
20 activity of the Directorate.

21 “(4) INTERAGENCY COOPERATION.—

22 “(A) IN GENERAL.—In carrying out this
23 section, the Director and other Federal research
24 agencies, in consultation with the United States
25 Patent and Trademark Office where appro-

1 appropriate, shall work cooperatively with each other
2 to further the goals of this section in the key
3 technology focus areas.

4 “(B) COORDINATION WITH NIST AND DE-
5 PARTMENT OF ENERGY.—In making research
6 awards under this section, the Director shall, as
7 appropriate, work in coordination with the Di-
8 rector of the National Institute of Standards
9 and Technology and the Secretary of Energy.

10 “(C) COMPTROLLER GENERAL REPORT.—
11 Each year, the Comptroller General of the
12 United States shall prepare and submit a report
13 to Congress, and shall simultaneously submit
14 the report to the Director and the Director of
15 the Office of Science and Technology Policy, de-
16 scribing the interagency cooperation that oc-
17 curred during the preceding year pursuant to
18 this paragraph, including a list of—

19 “(i) any funds provided under para-
20 graph (3)(A)(ii) to other divisions of the
21 Foundation; and

22 “(ii) any funds provided under para-
23 graph (3)(A)(iii) to other Federal research
24 agencies.

1 “(5) PROVIDING SCHOLARSHIPS, FELLOWSHIPS,
2 AND OTHER STUDENT SUPPORT.—

3 “(A) IN GENERAL.—The Director, acting
4 through the Directorate, shall fund under-
5 graduate scholarships (including at community
6 colleges), graduate fellowships and traineeships,
7 and postdoctoral awards in the key technology
8 focus areas.

9 “(B) IMPLEMENTATION.—The Director
10 may carry out subparagraph (A) by providing
11 funds—

12 “(i) for making awards—

13 “(I) directly to students; and

14 “(II) to institutions of higher
15 education or consortia of institutions
16 of higher education, including those
17 institutions or consortia involved in
18 operating university technology cen-
19 ters established under paragraph (6);
20 and

21 “(ii) to programs in Federal research
22 agencies that have experience awarding
23 such scholarships, fellowships, traineeships,
24 or postdoctoral awards.

1 “(C) BROADENING PARTICIPATION.—In
2 carrying out this paragraph, the Director
3 should work to increase the participation of
4 underrepresented populations in fields related
5 to the key technology focus areas. For that pur-
6 pose, the Director may take such steps as es-
7 tablishing or augmenting programs targeted at
8 underrepresented populations, and supporting
9 traineeships or other relevant programs at insti-
10 tutions of higher education with high enroll-
11 ments of underrepresented populations.

12 “(D) INNOVATION.—In carrying out this
13 paragraph, the Director shall encourage innova-
14 tion in graduate education, including through
15 encouraging institutions of higher education to
16 offer graduate students opportunities to gain
17 experience in industry or government as part of
18 their graduate training, and through support
19 for students in professional masters programs
20 related to the key technology focus areas.

21 “(E) SUPPLEMENT, NOT SUPPLANT.—The
22 Director shall ensure that funds made available
23 under this paragraph shall be used to create ad-
24 ditional support for postsecondary students and

1 shall not displace funding for any other avail-
2 able support.

3 “(6) UNIVERSITY TECHNOLOGY CENTERS.—

4 “(A) IN GENERAL.—From amounts made
5 available to the Directorate, the Director shall,
6 through a competitive application and selection
7 process, make awards to institutions of higher
8 education or consortia described in paragraph
9 (3)(A)(i)(III) to establish university technology
10 centers.

11 “(B) USES OF FUNDS.—

12 “(i) IN GENERAL.—A center estab-
13 lished under an award under subparagraph
14 (A)—

15 “(I) shall use support provided
16 under such subparagraph—

17 “(aa) to carry out basic and
18 translational research to advance
19 innovation in the key technology
20 focus areas; and

21 “(bb) to further the develop-
22 ment and commercialization of
23 innovations, including inventions,
24 in the key technology focus areas,
25 including—

1 “(AA) innovations de-
2 rived from research carried
3 out under item (aa), through
4 such activities as
5 translational research, proof-
6 of-concept development, and
7 prototyping, in order to re-
8 duce the cost, time, and risk
9 of commercializing new tech-
10 nologies;

11 “(BB) to promote pat-
12 enting and commercializa-
13 tion of inventions derived
14 from research carried out
15 under item (aa); and

16 “(CC) through the use
17 of public-private partner-
18 ships; and

19 “(II) may use support provided
20 under such subparagraph—

21 “(aa) for the costs of equip-
22 ment;

23 “(bb) for the costs associ-
24 ated with technology transfer and

1 commercialization, including pat-
2 enting and licensing; or

3 “(cc) for other activities or
4 costs necessary to accomplish the
5 purposes of this section, includ-
6 ing for operations and staff.

7 “(ii) SUPPORT OF REGIONAL TECH-
8 NOLOGY HUBS.—Each center established
9 under subparagraph (A) may support and
10 participate in, as appropriate, the activities
11 of any regional technology hub designated
12 under section 28(b)(1)(A) of the Steven-
13 son-Wydler Technology Innovation Act of
14 1980.

15 “(C) SELECTION PROCESS.—In selecting
16 recipients under this paragraph, the Director
17 shall consider—

18 “(i) the capacity of the applicant to
19 pursue and advance basic and translational
20 research;

21 “(ii) the extent to which the appli-
22 cant’s proposed research would be likely to
23 advance American competitiveness in 1 or
24 more key technology focus areas;

1 “(iii) the extent to which the appli-
2 cant’s proposal would broaden participa-
3 tion by underrepresented populations in
4 those areas;

5 “(iv) the capacity of the applicant to
6 engage industry, labor, and other appro-
7 priate organizations on any advances;

8 “(v) whether the applicant’s proposed
9 research will, where applicable, contribute
10 to growth in domestic manufacturing ca-
11 pacity and job creation;

12 “(vi) the quality of plans for dissemi-
13 nation of research and technology results,
14 in accordance with relevant export control
15 laws;

16 “(vii) how the applicant will, where
17 applicable, encourage the training and par-
18 ticipation of entrepreneurs and the trans-
19 lation of research results to practice, in-
20 cluding the development of new businesses;

21 “(viii) how the applicant will encour-
22 age the participation of inventors and en-
23 trepreneurs and the development of new
24 businesses, where applicable;

1 “(ix) regional and geographic diver-
2 sity;

3 “(x) in the case of a consortium, the
4 extent to which the proposal includes insti-
5 tutions listed in paragraph
6 (3)(A)(i)(III)(bb); and

7 “(xi) the amount of funds from indus-
8 try organizations described in subpara-
9 graph (D)(ii) the applicant would use to-
10 wards establishing the center under sub-
11 paragraph (A).

12 “(D) REQUIREMENTS.—The Director shall
13 ensure that any institution of higher education
14 or consortium receiving an award under sub-
15 paragraph (A) has—

16 “(i) the capacity or the ability to ac-
17 quire the capacity to advance the goals de-
18 scribed in subsection (b)(1); and

19 “(ii) secured contributions for estab-
20 lishing the center under subparagraph (A)
21 from industry organizations in an amount
22 not less than 10 percent of the total
23 amount of the award the institution or
24 consortium would receive under subpara-
25 graph (A).

1 “(7) MOVING TECHNOLOGY FROM LABORATORY
2 TO MARKET.—

3 “(A) PROGRAM AUTHORIZED.—

4 “(i) IN GENERAL.—The Director, in
5 coordination with the Director of the Na-
6 tional Institute of Standards and Tech-
7 nology, shall establish a program in the
8 Directorate to make awards, on a competi-
9 tive basis, to institutions of higher edu-
10 cation or consortia described in paragraph
11 (3)(A)(i)(III)—

12 “(I) to build capacity at an insti-
13 tution of higher education or within
14 the consortium and facilitate collabo-
15 ration with firms in the key tech-
16 nology focus areas to increase the
17 likelihood that new technologies in the
18 key technology focus areas will suc-
19 ceed in the commercial market; and

20 “(II) with the goal of promoting
21 experiments with a range of models
22 that institutions of higher education
23 or consortia could use to—

24 “(aa) enable new tech-
25 nologies and inventions to mature

1 to the point where the tech-
2 nologies are more likely to suc-
3 ceed in the commercial market
4 and promote the creation of high-
5 quality jobs in the United States;
6 and

7 “(bb) reduce the risks to
8 commercial success for new tech-
9 nologies and inventions earlier in
10 their development.

11 “(ii) USE FOR TRAINING.—An award
12 under this subparagraph for a purpose de-
13 scribed in subclause (I) or (II) of clause (i)
14 may also enable the institution of higher
15 education or consortium to provide train-
16 ing and support to scientists, engineers,
17 and inventors who are interested in re-
18 search, technology transfer, and commer-
19 cialization, including patenting and licens-
20 ing, if the use is included in the proposal
21 submitted under subparagraph (B).

22 “(B) PROPOSALS.—An institution of high-
23 er education or consortium desiring an award
24 under this paragraph shall submit a proposal to
25 the Director at such time, in such manner, and

1 containing such information as the Director
2 may require. The proposal shall include a de-
3 scription of—

4 “(i) the broader impact of the pro-
5 posal;

6 “(ii) the steps the applicant is study-
7 ing or will take to enable technology trans-
8 fer to reduce the risks for commercializa-
9 tion for new technologies, including how
10 the applicant will collaborate with firms in
11 the key technology focus areas;

12 “(iii) why such steps are likely to be
13 effective;

14 “(iv) how such steps differ from pre-
15 vious efforts to reduce the risks for com-
16 mercialization for new technologies;

17 “(v) whether the commercial viability
18 of any new technologies will promote the
19 creation of high-quality jobs in the United
20 States;

21 “(vi) how the applicant will, where ap-
22 plicable, encourage the participation of in-
23 ventors and entrepreneurs and the develop-
24 ment of new businesses; and

1 “(vii) how the applicant will, where
2 applicable, encourage the training and par-
3 ticipation of entrepreneurs and the trans-
4 lation of research results to practice, in-
5 cluding the development of new businesses.

6 “(C) USE OF FUNDS.—A recipient of an
7 award under this paragraph shall use award
8 funds to reduce the risks for commercialization
9 for new technologies, which may include—

10 “(i) creating and funding competitions
11 to allow entrepreneurial ideas from institu-
12 tions of higher education or consortia de-
13 scribed in paragraph (3)(A)(i)(III) to illus-
14 trate their commercialization potential;

15 “(ii) facilitating relationships among
16 local and national business leaders, includ-
17 ing investors, and potential entrepreneurs
18 to encourage successful commercialization;

19 “(iii) creating or supporting entities
20 that could enable researchers to further de-
21 velop new technology, through patient cap-
22 ital investment, advice, staff support, or
23 other means;

1 “(iv) providing facilities for start-up
2 companies where technology maturation
3 could occur;

4 “(v) covering legal and other fees as-
5 sociated with technology transfer and com-
6 mercialization, including patenting and li-
7 censing; and

8 “(vi) revising institution policies, in-
9 cluding policies related to intellectual prop-
10 erty and faculty entrepreneurship, to ac-
11 complish the goals of this paragraph.

12 “(D) REPORTING ON COMMERCIALIZATION
13 BASED ON METRICS.—The Director shall estab-
14 lish—

15 “(i) metrics related to commercializa-
16 tion for an award under this paragraph;
17 and

18 “(ii) a reporting schedule for recipi-
19 ents of such awards that takes into ac-
20 count both short- and long-term goals of
21 the program under this paragraph.

22 “(8) TEST BEDS.—

23 “(A) PROGRAM AUTHORIZED.—

24 “(i) IN GENERAL.—The Director, in
25 coordination with the Director of the Na-

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

17 “(ii) COORDINATION.—In establishing
18 the program under clause (i), the Director
19 shall ensure coordination in establishing
20 new test beds under this paragraph with
21 other test beds supported by the Founda-
22 tion or established under Manufacturing
23 USA to avoid duplication and maximize
24 the use of Federal resources.

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

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

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

9 “(III) the expected schedule for com-
10 pleting that work;

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

14 “(iii) how the applicant will ensure
15 broad access to the facility;

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

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

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

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

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

15 “(ix) how the test bed will disseminate
16 lessons and other technical information to
17 United States firms or allied or partner
18 country firms in the United States.

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

22 “(D) AUTHORIZED USE OF FUNDS.—An
23 awardee under this paragraph may, in order to
24 achieve the purposes described in subparagraph
25 (A)(i), use the award for the purchase of equip-

1 ment, the support of graduate students and
2 postdoctoral researchers, and the salaries of
3 staff.

4 “(E) RESULTS.—An awardee under this
5 paragraph may publish and share with the pub-
6 lic the results of the work conducted under this
7 paragraph.

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

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

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

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

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

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

8 “(i) not fewer than 1,000 postdoctoral
9 awards;

10 “(ii) not fewer than 2,000 graduate
11 fellowships and traineeships; and

12 “(iii) not fewer than 1,000 under-
13 graduate scholarships, including scholar-
14 ships to attend community colleges;

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

1 “(C) of which not less than 20 percent of
2 the funds designated under this paragraph shall
3 be used to support awards for post-doctorate
4 fellowships, graduate fellowships and
5 traineeships, and undergraduate scholarships
6 through institutions of higher education, and
7 other institutions, located in jurisdictions that
8 participate in the Established Program to Stim-
9 ulate Competitive Research under section 113
10 of the National Science Foundation Authoriza-
11 tion Act of 1988 (42 U.S.C. 1862g); and

12 “(D) if funds remain after carrying out
13 subparagraphs (A), (B), and (C), awards to in-
14 stitutions of higher education to enable the in-
15 stitutions to fund the development and estab-
16 lishment of new or specialized courses of edu-
17 cation for graduate, undergraduate, or technical
18 college students;

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

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

23 “(5) not less than 15 percent of such funds to
24 carry out research and related activities pursuant to

1 subclauses (I) and (II) of subsection (d)(3)(A)(ii);
2 and

3 “(6) not less than 20 percent of such funds to
4 support research in the key technology focus areas
5 through the Established Program to Stimulate Com-
6 petitive Research under section 113 of the National
7 Science Foundation Authorization Act of 1988 (42
8 U.S.C. 1862g).

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

11 “(1) coordinate with other Federal agencies to
12 establish interagency and multidisciplinary teams to
13 provide technical assistance to recipients of, and pro-
14 spective applicants for, awards under this section;

15 “(2) by Federal interagency agreement and not-
16 withstanding any other provision of law, transfer
17 funds available to carry out this section to the head
18 of another Federal agency to facilitate and support
19 the provision of such technical assistance; and

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

22 “(g) AUTHORIZATION OF APPROPRIATIONS AND LIM-
23 ITATIONS.—

24 “(1) AUTHORIZATION FOR THE OFFICE OF IN-
25 SPECTOR GENERAL.—From any amounts appro-

1 appropriated for the Foundation for a fiscal year, there is
2 authorized to be appropriated for necessary expenses
3 of the Office of Inspector General of the Foundation
4 an amount of not less than \$10,000,000 in any fis-
5 cal year appropriation for the Foundation, for over-
6 sight of the programs and activities established
7 under this section in accordance with the Inspector
8 General Act of 1978.

9 “(2) SUPPLEMENT AND NOT SUPPLANT.—The
10 amounts authorized to be appropriated to carry out
11 this section shall supplement, and not supplant, any
12 other amounts already appropriated to the Founda-
13 tion or Office of Inspector General of the Founda-
14 tion, except with respect to transfers described in
15 paragraph (3).

16 “(3) TRANSFER OF FUNDS AUTHORITY.—For
17 fiscal years 2022 through 2024, the Director shall
18 transfer any funds appropriated to the Directorate
19 to any other directorate or office of the Foundation
20 for activities directly related to the key technology
21 focus areas.

22 “(4) NO NEW AWARDS.—The Director shall not
23 make any new awards for the activities described in
24 this section for any fiscal year in which the total
25 amount appropriated to the Foundation (not includ-

1 ing amounts appropriated for the Directorate) is less
2 than the total amount appropriated to the Founda-
3 tion (not including such amounts), adjusted by the
4 rate of inflation, for the previous fiscal year.

5 “(5) NO FUNDS FOR CONSTRUCTION.—No
6 funds provided under this section shall be used for
7 construction.

8 “(h) RULES OF CONSTRUCTION.—Nothing in this
9 section or any other amendments made to this Act by the
10 Endless Frontier Act shall be construed to alter the mis-
11 sion of any directorate of the Foundation existing prior
12 to the date of enactment of such Act, or to alter the award
13 selection methods or criteria used by such directorates.”.

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

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

19 “(a) CHIEF DIVERSITY OFFICER.—

20 “(1) APPOINTMENT.—The Director shall ap-
21 point a Chief Diversity Officer of the National
22 Science Foundation.

23 “(2) QUALIFICATIONS.—The Chief Diversity
24 Officer should have significant experience with diver-

1 sity and inclusion, in particular within the Federal
2 Government and science community.

3 “(3) OVERSIGHT.—The Chief Diversity Officer
4 shall report directly to the Director in the perform-
5 ance of the duties of the Chief Diversity Officer
6 under this section.

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

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

15 “(2) defining a set of strategic metrics that
16 are—

17 “(A) directly linked to key organizational
18 priorities and goals;

19 “(B) actionable; and

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

22 “(3) advising in the establishment of a strategic
23 plan for diverse participation by institutions of high-
24 er education, including community colleges, histori-
25 cally Black colleges and universities, Tribal colleges

1 or universities, and other minority-serving institu-
2 tions (as such terms are defined in section 8A(a)),
3 and individuals;

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

7 “(5) performing such additional duties and ex-
8 ercise such powers as the Director may prescribe.”.

9 (d) ANNUAL REPORT ON UNFUNDED PRIORITIES.—

10 (1) ANNUAL REPORT.—Not later than 10 days
11 after the date on which the budget of the President
12 for a fiscal year is submitted to Congress pursuant
13 to section 1105 of title 31, United States Code, the
14 National Science Board shall submit to the Presi-
15 dent and to Congress a report on the unfunded pri-
16 orities of the National Science Foundation.

17 (2) ELEMENTS.—Each report submitted under
18 paragraph (1) shall provide—

19 (A) for each directorate of the National
20 Science Foundation for the most recent, fully
21 completed fiscal year—

22 (i) the proposal success rate;

23 (ii) the percentage and total funding
24 of proposals that were not funded and that
25 met the criteria for funding; and

1 (iii) the most promising research
2 areas covered by proposals described in
3 clause (ii); and

4 (B) a list, in order of priority, of the next
5 activities approved by the National Science
6 Board to be undertaken in the Major Research
7 Equipment and Facilities Construction account.

8 (e) PILOT PROGRAM.—

9 (1) IN GENERAL.—The Director, acting
10 through the Directorate, shall establish a 5-year
11 pilot program for awarding grants to eligible part-
12 nerships to build research and education capacity at
13 emerging research institutions to enable such insti-
14 tutions to contribute to programs run by the Direc-
15 torate.

16 (2) APPLICATIONS.—An eligible partnership
17 seeking a grant under this subsection shall submit
18 an application to the Director at such time, in such
19 manner, and containing such information as the Di-
20 rector may reasonably require, including a statement
21 of how the partnership will use the funds awarded
22 through the grant to achieve a lasting increase in
23 the research and education capacity of each emerg-
24 ing research institution included in the eligible part-
25 nership.

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

4 (A) faculty salaries and training;

5 (B) research experiences for undergraduate
6 and graduate students;

7 (C) maintenance and repair of research
8 equipment and instrumentation; and

9 (D) any other activities the Director deter-
10 mines appropriate.

11 (4) DEFINITIONS.—In this subsection:

12 (A) DIRECTOR.—The term “Director”
13 means the Director of the National Science
14 Foundation.

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

1 (C) ELIGIBLE PARTNERSHIP.—The term
2 “eligible partnership” means a partnership of—
3 (i) at least 1 emerging research insti-
4 tution; and
5 (ii) at least 1 institution classified as
6 a very high research activity by the Car-
7 negie Classification of Institutions of High-
8 er Education.

9 **SEC. 4. ENDLESS FRONTIER FUND.**

10 (a) IN GENERAL.—There is authorized to be appro-
11 priated a total of \$112,410,000,000 for fiscal years 2022
12 through 2026 for the implementation of this Act and the
13 amendments made by this Act. Such funds shall be avail-
14 able for the implementation of this Act and the amend-
15 ments made by this Act, and shall be administered by the
16 Director of the Office of Science and Technology Policy
17 (referred to in this section as the “Director”).

18 (b) USE OF FUNDS.—

19 (1) SUBMISSION OF ANNUAL ALLOCATION.—
20 Until the date on which all of the amounts in the
21 Fund described in subsection (a) are expended, the
22 Director shall annually submit to Congress, together
23 with the annual budget of the United States, a list
24 of allocations to agencies and departments to imple-
25 ment this Act and the amendments made by this Act

1 that includes a detailed description of each program
2 proposed to be funded, including the estimated ex-
3 penditures from the Fund for the program for the
4 applicable fiscal year.

5 (2) ALTERNATE ALLOCATION.—

6 (A) IN GENERAL.—The Commerce, Jus-
7 tice, Science, and Related Agencies Appropria-
8 tions Act for the relevant fiscal year may pro-
9 vide for alternate allocation of amounts made
10 available under this section.

11 (B) ALLOCATION BY PRESIDENT.—

12 (i) NO ALTERNATE ALLOCATIONS.—If
13 Congress has not enacted legislation estab-
14 lishing alternate allocations as described in
15 subparagraph (A) by the date on which the
16 Act making full-year appropriations for
17 Commerce, Justice, Science, and Related
18 Agencies for the applicable fiscal year is
19 enacted into law, amounts made available
20 under this section shall be allocated by the
21 Director.

22 (ii) INSUFFICIENT ALTERNATE ALLO-
23 CATION.—If Congress enacts legislation es-
24 tablishing alternate allocations for amounts
25 made available under this section that are

1 less than the full amount authorized to be
2 appropriated to the Fund for that fiscal
3 year under subsection (a), the difference
4 between the amount authorized to be ap-
5 propriated and the alternate allocation
6 shall be allocated by the Director.

7 (c) LIMITATION.—No funds provided under this sec-
8 tion shall be used for construction, except in the case of
9 infrastructure projects described in section 28(b)(1)(B) of
10 the Stevenson-Wydler Technology Innovation Act of 1980
11 (Public Law 96–480), as added by section 7(a) of this Act.

12 (d) SENSE OF CONGRESS.—It is the sense of Con-
13 gress that, during the period of fiscal years 2022 through
14 2026, the Director shall make available, from amounts
15 made available under subsection (a)—

16 (1) \$9,425,000,000 to the regional technology
17 hub program under section 28 of the Stevenson-
18 Wydler Technology Innovation Act of 1980 (Public
19 Law 96–480), as added by section 7 of this Act;

20 (2) \$575,000,000 to the comprehensive regional
21 technology strategy grant program under section 29
22 of the Stevenson-Wydler Technology Innovation Act
23 of 1980 (Public Law 96–480), as added by section
24 8 of this Act, of which \$100,000,000 shall be made
25 available for each of fiscal years 2022 and 2023 and

1 \$125,000,000 shall be made available for each of fis-
2 cal years 2024 through 2026;

3 (3) \$100,000,000,000 to the Directorate for
4 Technology and Innovation of the National Science
5 Foundation, of which \$5,000,000,000 shall be made
6 available for fiscal year 2022, \$10,000,000,000 shall
7 be made available for fiscal year 2023,
8 \$20,000,000,000 shall be made available for fiscal
9 year 2024, \$30,000,000,000 shall be made available
10 for fiscal year 2025, and \$35,000,000,000 shall be
11 made available for fiscal year 2026; and

12 (4) \$2,410,000,000 for the period of fiscal
13 years 2022 through 2026 to the Manufacturing
14 USA Program for activities described under section
15 9 of this Act.

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

20 (a) DEFINITIONS.—In this section:

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

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

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

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

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

1 transfer, including patenting and licensing, to
2 support the national security strategy;

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

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

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

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

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

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

19 (B) In 2022 and every year thereafter—

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

23 (ii) in any other year, the date that is
24 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 re-
19 search 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, particularly in regards to tech-
5 nology areas central to competition between the
6 United States and China, including the fol-
7 lowing:

8 (i) Specific objectives, tasks, metrics,
9 and milestones for each relevant Federal
10 agency.

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

20 (iii) Specific plans to promote environ-
21 mental stewardship and fair competition
22 for United States workers.

23 (iv) A description of—

24 (I) how the strategy submitted
25 under subsection (b)(1)(C)(ii) sup-

1 ports the national security strategy;
2 and

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

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

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

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

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

1 (B) An identification of additional re-
2 sources, administrative action, or legislative ac-
3 tion recommended to assist with the implemen-
4 tation of such strategy.

5 (d) FORM OF REPORTS AND STRATEGIES.—Each re-
6 port and strategy submitted under subsection (b)(1)(C)
7 shall be submitted in unclassified form, but may include
8 a classified annex.

9 **SEC. 6. SUPPLY CHAIN RESILIENCY PROGRAM.**

10 (a) DEFINITIONS.—In this section:

11 (1) CRITICAL INDUSTRY.—The term “critical
12 industry” means—

13 (A) key technology focus areas, as defined
14 in section 8A(a) of the National Science Foun-
15 dation Act of 1950, as added by section 3(b) of
16 this Act; and

17 (B) areas identified by the report in sub-
18 section (f).

19 (2) CRITICAL INFRASTRUCTURE.—The term
20 “critical infrastructure” has the meaning given the
21 term in the Critical Infrastructures Protection Act
22 of 2001 (42 U.S.C. 5195c).

23 (3) FOREIGN ENTITY.—The term “foreign enti-
24 ty”—

25 (A) means—

- 1 (i) the government of a foreign coun-
2 try;
- 3 (ii) a foreign political party;
- 4 (iii) an individual who is not a pro-
5 tected individual (as defined in section
6 274B(a)(3) of the Immigration and Na-
7 tionality Act (8 U.S.C. 1324b(a)(3))); or
- 8 (iv) a partnership, association, cor-
9 poration, organization, or other combina-
10 tion of persons organized under the laws
11 of, or having its principal place of business
12 in, a foreign country; and
- 13 (B) includes—
- 14 (i) any person owned by, controlled
15 by, or subject to the jurisdiction or direc-
16 tion of, a person described in subpara-
17 graph (A);
- 18 (ii) any person, wherever located, that
19 acts as an agent, representative, or em-
20 ployee of a person described in subpara-
21 graph (A);
- 22 (iii) any person that acts in any other
23 capacity at the order or request, or under
24 the direction or control, of—

1 (I) a person described in sub-
2 paragraph (A); or

3 (II) a person, the activities of
4 which are directly or indirectly super-
5 vised, directed, controlled, financed, or
6 subsidized in whole or in majority
7 part by a person described in subpara-
8 graph (A);

9 (iv) any person that directly or indi-
10 rectly through any contract, arrangement,
11 understanding, relationship, or otherwise
12 owns not less than 25 percent of the equity
13 interests of a person described in subpara-
14 graph (A);

15 (v) any person with significant re-
16 sponsibility to control, manage, or direct a
17 person described in subparagraph (A);

18 (vi) any individual, wherever located,
19 who is a citizen or resident of a country
20 controlled by a person described in sub-
21 paragraph (A); and

22 (vii) any corporation, partnership, as-
23 sociation, or other organization organized
24 under the laws of a country controlled by
25 a person described in subparagraph (A).

1 (4) FOREIGN ENTITY OF CONCERN.—The term
2 “foreign entity of concern” means a foreign entity
3 that is—

4 (A) designated as a foreign terrorist orga-
5 nization by the Secretary of State under section
6 219(a) of the Immigration and Nationality Act
7 (8 U.S.C. 1189(a));

8 (B) included on the list of specially des-
9 ignated nationals and blocked persons main-
10 tained by the Office of Foreign Assets Control
11 of the Department of the Treasury (commonly
12 known as the “SDN list”);

13 (C) owned by, controlled by, or subject to
14 the jurisdiction or direction of a government of
15 a foreign country that is a covered nation (as
16 defined in section 2533c(d) of title 10, United
17 States Code);

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

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

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

1 (iii) chapter 90 of title 18, United
2 States Code (commonly known as the
3 “Economic Espionage Act of 1996”);

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

6 (v) section 224, 225, 226, 227, or 236
7 of the Atomic Energy Act of 1954 (42
8 U.S.C. 2274, 2275, 2276, 2277, and
9 2284);

10 (vi) the Export Control Reform Act of
11 2018 (50 U.S.C. 4801 et seq.); or

12 (vii) the International Emergency
13 Economic Powers Act (50 U.S.C. 1701 et
14 seq.); or

15 (E) determined by the Secretary, in con-
16 sultation with the Secretary of Defense and the
17 Director of National Intelligence, to be engaged
18 in unauthorized conduct that is detrimental to
19 the national security or foreign policy of the
20 United States.

21 (5) LABOR ORGANIZATION.—The term “labor
22 organization” has the meaning given such term in
23 section 8A(a) of the National Science Foundation
24 Act of 1950.

1 (6) PROGRAM.—The term “program” means
2 the supply chain resiliency and crisis response pro-
3 gram established under subsection (b).

4 (7) RELEVANT COMMITTEES OF CONGRESS.—
5 The term “relevant committees of Congress”
6 means—

7 (A) the Committee on Commerce, Science,
8 and Transportation of the Senate;

9 (B) the Committee on Appropriations of
10 the Senate;

11 (C) the Committee on Finance of the Sen-
12 ate;

13 (D) the Committee on Homeland Security
14 and Governmental Affairs of the Senate;

15 (E) the Committee on Armed Services of
16 the Senate;

17 (F) the Select Committee on Intelligence of
18 the Senate;

19 (G) the Committee on Science, Space, and
20 Technology of the House of Representatives;

21 (H) the Committee on Energy and Com-
22 merce of the House of Representatives;

23 (I) the Committee on Appropriations of the
24 House of Representatives;

1 (J) the Committee on Ways and Means of
2 the House of Representatives;

3 (K) the Committee on Homeland Security
4 of the House of Representatives;

5 (L) the Committee on Armed Services of
6 the House of Representatives; and

7 (M) the Permanent Select Committee on
8 Intelligence of the House of Representatives.

9 (8) SECRETARY.—The term “Secretary” means
10 the Secretary of Commerce.

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

15 (c) MISSION AND PRIORITIES.—

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

18 (A) ensure the leadership of the United
19 States with respect to industries that are essen-
20 tial to mid-term and long-term national security
21 and economic competitiveness;

22 (B) promote, in partnership with the pri-
23 vate sector and other relevant stakeholders, the
24 resiliency of supply chains of the United States
25 and allied or partner countries; and

1 (C) encourage partnerships between the
2 Federal Government and industry, labor organi-
3 zations, and State, local, territorial, and Tribal
4 governments in order to better respond to sup-
5 ply chain crises.

6 (2) PRIORITIES.—The program shall—

7 (A) in partnership with the private sector,
8 build resilient and secure supply chains (includ-
9 ing through the mid-term and long-term diver-
10 sification of key supply chains, which shall in-
11 clude the support of small- and medium-sized
12 businesses) that can ensure the access of the
13 United States to critical goods and services in
14 the face of shocks, including pandemic and bio-
15 logical threats, cyberattacks, extreme weather
16 events, terrorist and geopolitical attacks, great
17 power conflict, and other threats to national se-
18 curity, with key parts of such resilience being—

19 (i) the diversification of key supply
20 chains with allies or key partners; and

21 (ii) working with allies or key partners
22 through agreements and other commit-
23 ments; and

24 (B) support collaboration with allies or key
25 partners to collectively build and strengthen re-

1 silient global supply chains, including through
2 identifying supply chain vulnerabilities, expand-
3 ing productive capacity, and stockpiling essen-
4 tial goods.

5 (d) ACTIVITIES.—Under the program, the Secretary,
6 acting through 1 or more bureaus or other divisions of
7 the Department of Commerce as appropriate, shall carry
8 out activities—

9 (1) to map and monitor key supply chains and
10 to identify current and future key supply chain gaps
11 and vulnerabilities in critical industries;

12 (2) to develop or identify opportunities to build
13 domestic capacity, and cooperate with allies or key
14 partners, to address supply chain gaps and
15 vulnerabilities in critical industries;

16 (3) to consult and collaborate with the Director
17 of the Office of Management and Budget, the Sec-
18 retary of Defense, the Secretary of Homeland Secu-
19 rity, the Secretary of the Treasury, the Secretary of
20 Energy, the Secretary of Transportation, the Sec-
21 retary of Agriculture, the Secretary of State, the Di-
22 rector of National Intelligence, the Director of the
23 Office of Science and Technology Policy, and, as ap-
24 propriate, the heads of other Federal departments
25 and agencies to invest in urgent supply chain gaps;

1 (4) to encourage partnerships between the Fed-
2 eral Government and industry, labor organizations,
3 and State, local, territorial, and Tribal governments
4 to better respond to crises;

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

8 (6) to develop contingency plans to ensure a re-
9 silient supply chain response for potential crises;

10 (7) to ensure that allies and key partners have
11 supply chains that are capable of supporting critical
12 industries; and

13 (8) to enter into agreements and partnerships
14 with allied or partner governments to promote diver-
15 sified and resilient supply chains that ensure supply
16 of critical goods to both the United States and allied
17 companies.

18 (e) AUTHORITIES.—The Secretary may—

19 (1) establish a unified coordination group to
20 serve as the primary method for coordinating be-
21 tween and among Federal departments and agencies
22 in response to known supply chain risks as well as
23 for integrating private sector partners into efforts,
24 as appropriate, to—

1 (A) study technical, engineering, and oper-
2 ational data acquired on a voluntary basis from
3 the private sector, in a manner that ensures
4 any data provided by the private sector is kept
5 confidential and as required under section 552
6 of title 5, United States Code (commonly known
7 as the “Freedom of Information Act”);

8 (B) directly receive whistleblower com-
9 plaints with appropriate protection; and

10 (C) identify key competitiveness challenges
11 in critical industries;

12 (2) enter into agreements with allied or partner
13 governments regarding supply chain security assur-
14 ances;

15 (3) coordinate with other divisions of the De-
16 partment of Commerce and other Federal depart-
17 ments and agencies to leverage existing authorities,
18 as of the date of enactment of this Act, to strength-
19 en supply chain resilience; and

20 (4) with the approval of the Committee on Ap-
21 propriations of the Senate and the Committee on
22 Appropriations of the House of Representatives,
23 transfer funds to, or receive funds from, other de-
24 partments and agencies to implement the program.

1 (f) REPORT ON SUPPLY CHAIN RESILIENCY AND DO-
2 MESTIC MANUFACTURING.—Not later than 180 days after
3 the date of enactment of this Act, and not less frequently
4 than every 2 years thereafter, the Secretary shall submit
5 to the relevant committees of Congress a review, in coordi-
6 nation with other relevant Federal departments and agen-
7 cies—

8 (1) identifying—

9 (A) technologies critical to economic com-
10 petitiveness and national security; and

11 (B) supplies critical to the crisis prepared-
12 ness of the United States, such as medical sup-
13 plies, personal protective equipment, disaster
14 response necessities, electrical generation tech-
15 nology, materials essential to critical infrastruc-
16 ture operation or repair and renovation, and
17 other supplies identified by the Secretary;

18 (2) describing—

19 (A) the current domestic manufacturing
20 base and supply chains for those technologies
21 and supplies, including raw materials, produc-
22 tion equipment, and other goods essential to the
23 production of those technologies and supplies;
24 and

1 (B) the ability of the United States to
2 maintain readiness and to surge produce those
3 technologies and supplies in response to an
4 emergency;

5 (3) identifying defense, intelligence, homeland,
6 economic, domestic labor supply, natural, geo-
7 political, or other contingencies that may disrupt,
8 strain, compromise, or eliminate the supply chain for
9 those technologies and supplies;

10 (4) assessing the resiliency and capacity of the
11 domestic, allied, and partner manufacturing base,
12 supply chains, and workforce to support the need for
13 those technologies and supplies, including any single
14 points of failure in those supply chains;

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

17 (6) making specific recommendations to im-
18 prove the security and resiliency of manufacturing
19 capacity and supply chains by—

20 (A) developing long-term strategies;

21 (B) increasing visibility throughout mul-
22 tiple supplier tiers;

23 (C) identifying and mitigating risks, in-
24 cluding the financial and operational risks of a
25 supply chain, vulnerabilities to extreme weather

1 events, cyberattacks, pandemic and biological
2 threats, terrorist and geopolitical attacks, and
3 other emergencies, and exposure to gaps in do-
4 mestic sourcing and import exposure;

5 (D) identifying enterprise resource plan-
6 ning systems that are compatible across supply
7 chain tiers and are affordable for small and me-
8 dium-sized businesses;

9 (E) understanding the total cost of owner-
10 ship, total value contribution, and other best
11 practices that encourage strategic partnerships
12 throughout the supply chain;

13 (F) understanding Federal procurement
14 opportunities to increase resiliency of supply
15 chains for goods and services and fill gaps in
16 domestic purchasing;

17 (G) identifying policies to maximize domes-
18 tic job retention and creation, including work-
19 force development programs;

20 (H) identifying and mitigating risks associ-
21 ated with allied or key partner countries in
22 building more resilient supply chains; and

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

1 (7) providing guidance on technologies and sup-
2 plies to be prioritized for assistance and other activi-
3 ties under the Department of Commerce, the Na-
4 tional Science Foundation, and other relevant Fed-
5 eral agencies;

6 (8) reviewing and, if appropriate, expanding the
7 sourcing of goods associated with critical technology
8 areas from allies or key partners, including rec-
9 ommendations for coordination with allies or key
10 partners on sourcing critical products; and

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

17 (g) ADDITIONAL HIRING AUTHORITY.—

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

20 (A) utilize hiring authorities under section
21 3372 of title 5, United States Code, to staff the
22 program with employees from other Federal
23 agencies, institutions of higher education, and
24 other organizations as described in that section
25 with relevant experience in supply chain man-

1 agement and investment in the same manner
2 and subject to the same conditions that apply
3 to such individuals utilized to accomplish other
4 missions of the Department of Commerce;

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

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

19 (2) NO REIMBURSEMENT.—Any assignment
20 provided under paragraph (1)(A) shall be made
21 without reimbursement.

22 (3) EFFECT OF APPOINTMENT.—An individual
23 appointed as described in paragraph (1)(C) shall be
24 considered to be appointed under a career-condi-
25 tional appointment, unless the individual, as of the

1 date on which the individual is appointed, has com-
2 pleted a sufficient amount of creditable service to at-
3 tain a permanent career appointment.

4 (h) SEMICONDUCTOR INCENTIVES.—

5 (1) IN GENERAL.—The Secretary shall carry
6 out the program established under section 9902 of
7 the William M. (Mac) Thornberry National Defense
8 Authorization Act for Fiscal Year 2021 (Public Law
9 116–283) as part of the program.

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

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

23 (j) COORDINATION.—The Secretary of Commerce
24 shall, as appropriate, coordinate with the heads of other
25 Federal departments and agencies, including the Sec-

1 retary of State and the United States Trade Representa-
2 tive, in the implementation of this program.

3 (k) RULE OF CONSTRUCTION REGARDING PRIVATE
4 ENTITIES.—Nothing in this section shall be construed to
5 require any private entity—

6 (1) to request assistance from the Secretary; or

7 (2) that requested such assistance from the
8 Secretary to implement any measure or rec-
9 ommendation suggested by the Secretary.

10 (l) FUNDING.—

11 (1) IN GENERAL.—There are authorized to be
12 appropriated to the Secretary such sums as may be
13 necessary to carry out this section, which shall re-
14 main available until expended.

15 (2) INSPECTOR GENERAL FUNDING.—Of the
16 amounts made available in a fiscal year to carry out
17 this section, not more than 2 percent of those
18 amounts shall be available to the Inspector General
19 of the Department of Commerce to conduct over-
20 sight activities with respect to the program.

21 (3) TRANSFERS.—Of the amounts made avail-
22 able in a fiscal year to carry out this section, the
23 Secretary may transfer not more than 5 percent of
24 those amounts to the account under the heading
25 “Department of Commerce—Salaries and Expenses”

1 to provide for administration and oversight activities
2 relating to the program.

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

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

7 (1) by redesignating section 28 as section 30;

8 and

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

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

11 “(a) DEFINITIONS.—In this section:

12 “(1) APPROPRIATE COMMITTEES OF CON-
13 GRESS.—The term ‘appropriate committees of Con-
14 gress’ means—

15 “(A) the Committee on Commerce,
16 Science, and Transportation, the Committee on
17 Environment and Public Works, and the Com-
18 mittee on Appropriations of the Senate; and

19 “(B) the Committee on Science, Space,
20 and Technology, the Committee on Transpor-
21 tation and Infrastructure, and the Committee
22 on Appropriations of the House of Representa-
23 tives.

24 “(2) COOPERATIVE EXTENSION.—The term ‘co-
25 operative extension’ has the meaning given the term

1 ‘extension’ in section 1404 of the Food and Agri-
2 culture Act of 1977 (7 U.S.C. 3103).

3 “(3) KEY TECHNOLOGY FOCUS AREAS.—The
4 term ‘key technology focus areas’ means the areas
5 included on the most recent list under section
6 8A(d)(2) of the National Science Foundation Act of
7 1950.

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

12 “(5) LARGE METROPOLITAN COMMUNITIES.—
13 The term ‘large metropolitan community’ means a
14 metropolitan statistical area with a population of
15 more than 500,000.

16 “(6) MANUFACTURING EXTENSION CENTER.—
17 The term ‘manufacturing extension center’ has the
18 meaning given the term ‘Center’ in section 25(a) of
19 the National Institute of Standards and Technology
20 Act (15 U.S.C. 278k(a)).

21 “(7) MANUFACTURING USA INSTITUTE.—The
22 term ‘Manufacturing USA institute’ means a Manu-
23 facturing USA institute described in section 34(d) of
24 the National Institute of Standards and Technology
25 Act (15 U.S.C. 278s(d)).

1 “(8) MID-SIZED METROPOLITAN COMMU-
2 NITIES.—The term ‘mid-sized metropolitan commu-
3 nity’ means a metropolitan statistical area with a
4 population of more than 200,000 and not more than
5 500,000.

6 “(9) OTHER TECHNOLOGY AND INNOVATION
7 SECTORS CRITICAL TO NATIONAL AND ECONOMIC SE-
8 CURITY.—The term ‘other technology and innovation
9 sectors critical to national and economic security’
10 means other technology and innovation sectors that
11 the Secretary determines are critical to national and
12 economic security.

13 “(10) SMALL AND RURAL COMMUNITIES.—The
14 term ‘small and rural community’ means a noncore
15 area, a micropolitan area, or a small metropolitan
16 statistical area with a population of not more than
17 200,000.

18 “(11) VENTURE DEVELOPMENT ORGANIZA-
19 TION.—The term ‘venture development organization’
20 means a State or nonprofit organization focused pri-
21 marily toward strengthening regional economic de-
22 velopment through innovation by—

23 “(A) accelerating the commercialization of
24 research and technology;

1 “(B) strengthening the competitive posi-
2 tion of startups and industry through the devel-
3 opment, commercial adoption, or deployment of
4 technology;

5 “(C) providing financial grants, loans, or
6 direct investment to commercialize technology;

7 “(D) pairing direct financial assistance
8 under subparagraph (C) with entrepreneurship,
9 technological, or business assistance to maxi-
10 mize the likelihood of success for a venture and
11 increased employment growth for the region or
12 a sector; and

13 “(E) returning any proceeds gained from
14 direct financial assistance made using organiza-
15 tion funds to the organization for future rein-
16 vestment, entrepreneurial assistance, and sup-
17 port of operations.

18 “(b) REGIONAL TECHNOLOGY HUB PROGRAM.—

19 “(1) IN GENERAL.—The Secretary shall carry
20 out a program—

21 “(A) to designate eligible consortia as re-
22 gional technology hubs that create the condi-
23 tions, within a region, to facilitate activities
24 that—

- 1 “(i) enable United States leadership
2 in a key technology focus area, comple-
3 menting the Federal research and develop-
4 ment investments under section 8A of the
5 National Science Foundation Act of 1950,
6 or other technology and innovation sectors
7 critical to national and economic security;
- 8 “(ii) support regional economic devel-
9 opment that diffuses innovation around the
10 United States, enabling better broad-based
11 growth and competitiveness in key tech-
12 nology focus areas;
- 13 “(iii) support domestic job creation;
14 and
- 15 “(iv) otherwise support the purposes
16 set forth under paragraph (2);
- 17 “(B) to support regional technology hubs
18 designated under subparagraph (A); and
- 19 “(C) to conduct ongoing research, evalua-
20 tion, analysis, and dissemination of best prac-
21 tices for regional development and competitive-
22 ness in technology and innovation.
- 23 “(2) PURPOSES.—The purposes of the program
24 carried out under paragraph (1) are as follows:

1 “(A) To designate eligible consortia as re-
2 gional technology hubs throughout the United
3 States that create the conditions within a re-
4 gion to facilitate activities that establish the
5 global competitive edge of the United States in
6 the 21st century across a range of technology
7 and innovation sectors critical to national and
8 economic security, including to encourage lower-
9 cost but economically viable technology hubs in
10 the United States to reduce technology
11 offshoring.

12 “(B) To encourage new and constructive
13 collaboration among local, State, and Federal
14 Government entities, academia, private indus-
15 try, and labor organizations to mobilize invest-
16 ment, talent, entrepreneurship, and innovation
17 for research, development, deployment, and
18 manufacturing in a range of technology and in-
19 novation sectors critical to national and eco-
20 nomic security.

21 “(C) To assist regions across the United
22 States, including small cities and rural areas—
23 “(i) to develop and implement strate-
24 gies through technology-based economic
25 development practices, including infra-

1 structure and workforce development, en-
2 trepreneurship and commercialization sup-
3 port, increasing access to capital, and
4 building networks and systems to help
5 bring ideas and businesses to market, and
6 other relevant activities;

7 “(ii) to improve domestic supply
8 chains in technology and innovation sec-
9 tors; and

10 “(iii) to enable broad-based economic
11 growth, job creation and competitiveness in
12 the United States.

13 “(3) ADMINISTRATION.—The Secretary shall
14 carry out this section through the Assistant Sec-
15 retary of Commerce for Economic Development, in
16 coordination with the Under Secretary of Commerce
17 for Standards and Technology.

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

20 “(1) includes 1 or more—

21 “(A) institutions of higher education;

22 “(B) local or Tribal governments or other
23 political subdivisions of a State;

24 “(C) State governments represented by an
25 agency designated by the governor of the State

1 or States that is representative of the geo-
2 graphic area served by the consortia;

3 “(D) economic development organizations
4 or similar entities that are focused primarily on
5 improving science, technology, innovation, or
6 entrepreneurship;

7 “(E) industry or firms in relevant tech-
8 nology or innovation sectors;

9 “(F) labor organizations; and

10 “(G) workforce training organizations, in-
11 cluding State and local workforce development
12 boards as established under section 101 of the
13 Workforce Investment and Opportunity Act (29
14 U.S.C. 3111); and

15 “(2) may include 1 or more—

16 “(A) nonprofit economic development enti-
17 ties with relevant expertise, including a district
18 organization (as defined in section 300.3 of title
19 13, Code of Federal Regulations, or successor
20 regulation);

21 “(B) for-profit entities with relevant exper-
22 tise;

23 “(C) venture development organizations;

24 “(D) financial institutions and investment
25 funds;

1 “(E) primary and secondary educational
2 institutions, including career and technical edu-
3 cation schools;

4 “(F) industry and industry associations;

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

8 “(H) Federal laboratories;

9 “(I) manufacturing extension centers;

10 “(J) Manufacturing USA institutes;

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

14 “(L) a cooperative extension.

15 “(d) DESIGNATION OF REGIONAL TECHNOLOGY
16 HUBS.—

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

20 “(2) NUMBER OF REGIONAL TECHNOLOGY
21 HUBS.—During the 5-year period beginning on the
22 date of the enactment of the Endless Frontier Act,
23 the Secretary shall designate not fewer than 10 and
24 not more than 15 eligible consortia as regional tech-
25 nology hubs under subsection (b)(1)(A), if the Sec-

1 retary has received a sufficient number of qualified
2 applications and appropriations to carry out this sec-
3 tion.

4 “(3) GEOGRAPHIC DISTRIBUTION.—In con-
5 ducting the competitive process under paragraph
6 (1), the Secretary shall ensure geographic distribu-
7 tion in the designation of regional technology hubs
8 by—

9 “(A) aiming to designate regional tech-
10 nology hubs in as many regions of the United
11 States as possible; and

12 “(B) focusing on localities that have clear
13 potential and relevant assets for developing a
14 self-sustaining competitive position in a tech-
15 nology or innovation sector but have not yet be-
16 come leading technology centers.

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

21 “(A) serve small and rural communities;
22 and

23 “(B) have received a grant under section
24 29.

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

8 “(6) RELATION TO CERTAIN GRANT AWARDS.—
9 The Secretary may not require an eligible consor-
10 tium to receive a grant under section 29 in order to
11 be designated as a regional technology hub under
12 subsection (b)(1)(A) of this section.

13 “(e) GRANTS AND COOPERATIVE AGREEMENTS.—

14 “(1) IN GENERAL.—The Secretary shall carry
15 out subparagraph (B) of subsection (b)(1) through
16 the award of grants or cooperative agreements to eli-
17 gible consortia designated under subparagraph (A)
18 of such subsection.

19 “(2) TERM.—

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

24 “(B) RENEWAL.—The Secretary may
25 renew a grant or cooperative agreement award-

1 ed to an eligible consortia under paragraph (1)
2 as the Secretary considers appropriate if the
3 Secretary determines pursuant to subsection (i)
4 that the performance of the eligible consortia is
5 satisfactory.

6 “(3) MATCHING REQUIRED.—

7 “(A) IN GENERAL.—Except in the case of
8 an eligible consortium described in subpara-
9 graph (B), the total Federal financial assistance
10 awarded in a given year to an eligible consor-
11 tium in support of the eligible consortium’s op-
12 eration as a regional technology hub under this
13 section shall not exceed amounts as follows:

14 “(i) In first year of the grant or coop-
15 erative agreement, 90 percent of the total
16 operating and maintenance costs of the re-
17 gional technology hub in that fiscal year.

18 “(ii) In second year of the grant or
19 cooperative agreement, 85 percent of the
20 total operating and maintenance costs of
21 the regional technology hub in that fiscal
22 year.

23 “(iii) In third year of the grant or co-
24 operative agreement, 80 percent of the
25 total operating and maintenance costs of

1 the regional technology hub in that fiscal
2 year.

3 “(iv) In fourth year of the grant or
4 cooperative agreement and each year there-
5 after, 75 percent of the total operating and
6 maintenance costs of the regional tech-
7 nology hub in that fiscal year.

8 “(B) SMALL AND RURAL COMMUNITIES
9 AND INDIAN TRIBES.—

10 “(i) IN GENERAL.—The total Federal
11 financial assistance awarded in a given
12 year to an eligible consortium in support of
13 the eligible consortium’s operation as a re-
14 gional technology hub under this section
15 shall not exceed amounts as follows:

16 “(I) In the case of an eligible
17 consortium that represents a small
18 and rural community, in a fiscal year,
19 90 percent of the total funding of the
20 regional technology hub in that fiscal
21 year.

22 “(II) In the case of an eligible
23 consortium that is led by a Tribal
24 government, in a fiscal year, 100 per-
25 cent of the total funding of the re-

1 regional technology hub in that fiscal
2 year.

3 “(ii) MINIMUM THRESHOLD OR RURAL
4 REPRESENTATION.—The Secretary shall
5 establish a minimum threshold of rural
6 representation for purposes of clause (i)(I).

7 “(C) IN-KIND CONTRIBUTIONS.—For pur-
8 poses of this paragraph, in-kind contributions
9 may be used for part of the non-Federal share
10 of the total funding of a regional technology
11 hub in a fiscal year.

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

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

20 “(B) activities in support of key technology
21 focus areas and other technology and innova-
22 tion sectors critical to national and economic se-
23 curity—

24 “(i) to develop regional strategies for
25 infrastructure and site development in sup-

1 port of the regional technology hub’s plans
2 and programs;

3 “(ii) to support business activity that
4 makes domestic supply chain more resilient
5 and encourages the growth of coordinated
6 multiparty systems in the United States
7 and creation and growth of business enti-
8 ties;

9 “(iii) to attract new private, public,
10 and philanthropic investment in the region
11 for developing innovation capacity, includ-
12 ing establishing regional venture and loan
13 funds, including through venture develop-
14 ment organizations, for financing tech-
15 nology commercialization, new business
16 formation, and business expansions;

17 “(iv) to further the development, de-
18 ployment, and domestic manufacturing of
19 technologies in the key technology focus
20 areas and other technology and innovation
21 sectors critical to national and economic
22 security, including innovations derived
23 from research conducted at institutions of
24 higher education or other research entities,
25 including research conducted by federally

1 funded research and development centers,
2 National Laboratories, Federal labora-
3 tories, Manufacturing USA institutes, uni-
4 versity technology centers established
5 under paragraph (6) of section 8A(d) of
6 the National Science Foundation Act of
7 1950, the program established under para-
8 graph (7) of such section 8A(d), test beds
9 established and operated under paragraph
10 (8) of such section 8A(d), or other Federal
11 research entities, through activities that
12 may include—

13 “(I) proof-of-concept development
14 and prototyping;

15 “(II) technology transfer and
16 commercialization, including patenting
17 and licensing;

18 “(III) public-private partnerships
19 in order to reduce the cost, time, and
20 risk of commercializing new tech-
21 nologies;

22 “(IV) creating and funding com-
23 petitions to allow entrepreneurial
24 ideas to illustrate their commercializa-

1 tion and domestic job creation poten-
2 tial;

3 “(V) facilitating relationships be-
4 tween local and national business
5 leaders and potential entrepreneurs to
6 encourage successful commercializa-
7 tion;

8 “(VI) creating and funding not-
9 for-profit entities that could enable re-
10 searchers at institutions of higher
11 education and other research entities
12 to further develop new technology,
13 through patient funding, advice, staff
14 support, or other means;

15 “(VII) providing facilities for
16 start-up companies where technology
17 maturation could occur; and

18 “(VIII) commercialization, de-
19 ployment, and adoption of the tech-
20 nologies that lead to domestic manu-
21 facturing of such technologies;

22 “(v) to develop the region’s skilled
23 workforce through the training and re-
24 training of workers, partnerships with
25 labor organizations, and skills-based edu-

1 cation, including the alignment of career
2 technical training and educational pro-
3 grams in the region’s elementary and sec-
4 ondary schools and institutions of higher
5 education; and

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

12 “(5) GRANTS FOR INFRASTRUCTURE.—Any
13 grant or cooperative agreement awarded under para-
14 graph (1) to support the construction of physical in-
15 frastructure shall be awarded pursuant to section
16 201 of the Public Works and Economic Development
17 Act of 1965 (42 U.S.C. 3141) and subject to the
18 provisions of such Act, except that subsection (b) of
19 such section and sections 204 and 301 of such Act
20 (42 U.S.C. 3144, 3161) shall not apply.

21 “(f) APPLICATIONS.—An eligible consortium seeking
22 designation as a regional technology hub under subpara-
23 graph (A) of subsection (b)(1) and support under subpara-
24 graph (B) of such subsection shall submit to the Secretary

1 an application therefor at such time, in such manner, and
2 containing such information as the Secretary may specify.

3 “(g) CONSIDERATIONS FOR DESIGNATION AND
4 AWARD OF GRANTS AND COOPERATIVE AGREEMENTS.—

5 “(1) IN GENERAL.—In selecting an eligible con-
6 sortium that submitted an application under sub-
7 section (f) for designation and support under sub-
8 section (b)(1), the Secretary shall consider, at a
9 minimum, the following:

10 “(A) The potential of the eligible consor-
11 tium to advance the research, development, de-
12 ployment, and domestic manufacturing of tech-
13 nologies in a key technology focus area or other
14 technology or innovation sector critical to na-
15 tional and economic security.

16 “(B) The likelihood of positive regional
17 economic effect, including increasing the num-
18 ber of high wage domestic jobs, and creating
19 new economic opportunities for economically
20 disadvantaged and underrepresented popu-
21 lations.

22 “(C) How the eligible consortium plans to
23 integrate with and leverage the resources of 1
24 or more federally funded research and develop-
25 ment centers, National Laboratories, Federal

1 laboratories, Manufacturing USA institutes,
2 Hollings Manufacturing Extension Partnership
3 centers, university technology centers estab-
4 lished under paragraph (6) of section 8A(d) of
5 the National Science Foundation Act of 1950,
6 the program established under paragraph (7) of
7 such section 8A(d), test beds established and
8 operated under paragraph (8) of such section
9 8A(d), or other Federal research entities.

10 “(D) How the eligible consortium will en-
11 gage with the private sector, including small-
12 and medium-sized businesses to commercialize
13 new technologies and improve the resiliency of
14 domestic supply chains in a key technology
15 focus area or other technology or innovation
16 sector critical to national and economic secu-
17 rity.

18 “(E) How the eligible consortium will
19 carry out workforce development and skills ac-
20 quisition programming, including through part-
21 nerships with entities that include State and
22 local workforce development boards, institutions
23 of higher education, including community col-
24 leges, historically Black colleges and univer-
25 sities, Tribal colleges and universities, and mi-

1 nority serving institutions, labor organizations,
2 and workforce development programs, and other
3 related activities authorized by the Secretary, to
4 support the development of a key technology
5 focus area or other technology or innovation
6 sector critical to national and economic secu-
7 rity.

8 “(F) How the eligible consortium will im-
9 prove science, technology, engineering, and
10 mathematics education programs in the identi-
11 fied region in elementary and secondary school
12 and higher education institutions located in the
13 identified region to support the development of
14 a key technology focus area or other technology
15 or innovation sector critical to national and eco-
16 nomic security.

17 “(G) How the eligible consortium plans to
18 develop partnerships with venture development
19 organizations and sources of private investment
20 in support of private sector activity, including
21 launching new or expanding existing companies,
22 in a key technology focus area or other tech-
23 nology or innovation sector critical to national
24 and economic security.

1 “(H) How the eligible consortium plans to
2 organize the activities of regional partners
3 across sectors in support of the proposed re-
4 gional technology hub, including the develop-
5 ment of necessary infrastructure improvements
6 and site preparation.

7 “(I) How the eligible consortium will en-
8 sure that growth in technology and innovation
9 sectors produces broadly shared opportunity
10 across the identified region, including for eco-
11 nomic disadvantaged and underrepresented pop-
12 ulations and rural areas.

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

17 “(2) FINDINGS BASED ON COMPREHENSIVE RE-
18 GIONAL TECHNOLOGY STRATEGIES.—The Secretary
19 may use a comprehensive regional technology strat-
20 egy supported by a grant under section 29 as the
21 basis for making findings under paragraph (1) of
22 this subsection.

23 “(h) COORDINATION AND COLLABORATION.—

1 “(1) COORDINATION WITH NATIONAL INSTI-
2 TUTE OF STANDARDS AND TECHNOLOGY PRO-
3 GRAMS.—

4 “(A) COORDINATION REQUIRED.—The
5 Secretary shall coordinate the activities of re-
6 gional technology hubs designated under this
7 title, the Hollings Manufacturing Extension
8 Partnership, and the Manufacturing USA Pro-
9 gram with each other to the degree that doing
10 so does not diminish the effectiveness of the on-
11 going activities of a manufacturing extension
12 center or a Manufacturing USA institute.

13 “(B) ELEMENTS.—Coordination by the
14 Secretary under subparagraph (A) may include
15 the following:

16 “(i) The alignment of activities of the
17 Hollings Manufacturing Extension Part-
18 nership with the activities of regional tech-
19 nology hubs designated under this sub-
20 section, if applicable.

21 “(ii) The alignment of activities of the
22 Manufacturing USA Program and the
23 Manufacturing USA institutes with the ac-
24 tivities of regional technology hubs des-
25 ignated under this subsection, if applicable.

1 “(2) COORDINATION WITH DEPARTMENT OF
2 ENERGY PROGRAMS.—The Secretary shall, in coordi-
3 nation with the Secretary of Energy, coordinate the
4 activities and selection of regional technology hubs
5 designated under subsection (b)(1)(A) with activities
6 at the Department of Energy and the National Lab-
7 oratories that were in effect on the day before the
8 date of the enactment of the Endless Frontier Act,
9 to the degree that doing so does not diminish the ef-
10 fectiveness of the ongoing activities or mission of the
11 Department of Energy and the National Labora-
12 tories.

13 “(3) INTERAGENCY COLLABORATION.—

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

17 “(i) shall collaborate, to the extent
18 possible, with the interagency advisory
19 committee established under subparagraph
20 (B);

21 “(ii) shall collaborate with Federal de-
22 partments and agencies whose missions
23 contribute to the goals of the regional tech-
24 nology hub; and

1 “(iii) may accept funds from other
2 Federal agencies to support grants and ac-
3 tivities under this title.

4 “(B) INTERAGENCY COORDINATING COUN-
5 CIL.—

6 “(i) ESTABLISHMENT.—The Secretary
7 shall establish an interagency coordinating
8 council to coordinate with the Secretary in
9 the designation of regional technology hubs
10 under subparagraph (A) of subsection
11 (b)(1) and in the selection of eligible con-
12 sortia to receive support under subpara-
13 graph (B) of such subsection.

14 “(ii) COMPOSITION.—The interagency
15 coordinating council established under
16 clause (i) shall be composed of the fol-
17 lowing (or their designees):

18 “(I) The Secretary of Commerce.

19 “(II) The Secretary of Edu-
20 cation.

21 “(III) The Administrator of the
22 Small Business Administration.

23 “(IV) The Deputy Secretary for
24 Housing and Urban Development.

1 “(V) The Director of the Com-
2 munity Development Financial Insti-
3 tution Fund.

4 “(VI) The Director of the Na-
5 tional Science Foundation.

6 “(VII) The Director of the Na-
7 tional Institute of Standards and
8 Technology.

9 “(VIII) The Director of the Na-
10 tional Economic Council.

11 “(IX) The Assistant Secretary of
12 Commerce for Economic Development.

13 “(X) The Assistant Secretary for
14 Employment and Training.

15 “(XI) The Director of the Office
16 of Science and Technology Policy.

17 “(XII) The Under Secretary of
18 Defense for Research and Engineer-
19 ing.

20 “(XIII) The Under Secretary of
21 Defense for Acquisition and
22 Sustainment.

23 “(XIV) The Under Secretary for
24 Science of the Department of Energy.

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

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

6 “(XVII) The Administrator of
7 the National Aeronautics and Space
8 Administration.

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

11 “(XIX) Such other Federal offi-
12 cials as the Secretary of Commerce
13 considers appropriate.

14 “(iii) CHAIRPERSON.—The Secretary
15 shall be the chairperson of the interagency
16 coordinating council established under
17 clause (i).

18 “(4) 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 at least doubling the amount of feder-
2 ally funded research awarded, as in effect on
3 the 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 determines
18 are critical to national and economic security.

19 “(b) GRANT PROGRAM REQUIRED.—The Secretary
20 shall establish a program to award grants to eligible con-
21 sortia to carry out projects—

22 “(1) to coordinate locally defined planning proc-
23 esses, across jurisdictions and agencies, relating to
24 developing a comprehensive regional technology
25 strategy;

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

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

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

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

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

24 “(d) GRANTS.—

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

5 “(A) Small and rural communities.

6 “(B) Mid-sized metropolitan communities.

7 “(C) Large metropolitan communities.

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

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

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

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

22 “(B) INSUFFICIENT APPLICATIONS.—If
23 the Secretary determines that an insufficient
24 number of sufficient quality applications for
25 grants under this section have been submitted

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

5 “(3) FEDERAL SHARE.—

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

10 “(B) EXCEPTIONS.—

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

19 “(ii) INDIAN TRIBES.—In the case of
20 an eligible consortium that is led by a
21 Tribal government, the Federal share of
22 the cost of a project carried out using a
23 grant under the grant awarded under this
24 section may be up to 100 percent of the
25 total cost of the project.

1 “(C) NON-FEDERAL SHARE.—

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

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

14 “(4) AVAILABILITY AND OBLIGATION OF GRANT
15 AMOUNTS.—

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

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

24 “(ii) expend any grant amounts re-
25 ceived under this section not later than 2

1 years after the date on which the eligible
2 consortium enters into an agreement under
3 subsection (g).

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

12 “(e) APPLICATION.—

13 “(1) IN GENERAL.—An eligible consortium
14 seeking a grant under this section shall submit to
15 the Secretary an application therefor at such time
16 and in such manner as the Secretary shall prescribe.

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

19 “(A) A description of the boundaries of the
20 region served by the eligible consortium.

21 “(B) A description of the research, tech-
22 nology development, or manufacturing con-
23 centration of the eligible consortium.

24 “(C) A general assessment of the local in-
25 dustrial ecosystem of the region described in

1 subparagraph (A), which may include assess-
2 ment of workforce and training, including part-
3 nerships with labor organizations, supplier net-
4 work, research and innovation, infrastructure
5 and site development, trade and international
6 investment, operational improvements, and cap-
7 ital access components needed for manufac-
8 turing activities in such region.

9 “(D) A description of how a grant under
10 this section may assist in developing compo-
11 nents of such local industrial ecosystem (se-
12 lected by the consortium), including descrip-
13 tions of—

14 “(i) investments to address gaps in
15 such ecosystem; and

16 “(ii) how to make the research, tech-
17 nology development, and manufacturing of
18 the region of the consortium uniquely com-
19 petitive.

20 “(E) A description of the process by which
21 a comprehensive regional technology strategy
22 will be developed by the eligible consortium to
23 address gaps in such local industrial ecosystem
24 and to strengthen the resiliency of supply
25 chains, competitiveness of the identified region,

1 and domestic job creation in technology and in-
2 novation sectors critical to national and eco-
3 nomic security.

4 “(F) A budget for the projects that the eli-
5 gible consortium plans to carry out using grant
6 amounts awarded under this section, including
7 the anticipated Federal share of the cost of
8 each project and a description of the sources of
9 the non-Federal share.

10 “(G) The designation of a lead agency or
11 organization, which may be the eligible consor-
12 tium, to receive and manage any funds received
13 by the eligible consortium under this section.

14 “(H) A signed copy of a memorandum of
15 understanding among members of the eligible
16 consortium that demonstrates—

17 “(i) the creation of an eligible consor-
18 tium;

19 “(ii) a description of the nature and
20 extent of planned collaboration between
21 members of the eligible consortium; and

22 “(iii) a commitment to develop a com-
23 prehensive regional technology strategy.

24 “(I) Such other matters as the Secretary
25 considers appropriate.

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

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

7 “(B) a focus on building a regional eco-
8 system to attract and build upon research in-
9 vestment to develop, deploy, and manufacture
10 domestically critical technologies that improve
11 the resiliency of supply chains, competitiveness
12 of the identified region, and the creation of
13 quality jobs;

14 “(C) the extent to which the consortium
15 has developed partnerships throughout an en-
16 tire region, including, as appropriate, partner-
17 ships with federally funded research and devel-
18 opment centers, National Laboratories, Federal
19 laboratories, Manufacturing USA institutes de-
20 scribed in section 34(d) of the National Insti-
21 tute of Standards and Technology Act (15
22 U.S.C. 278s(d)), university technology centers
23 established under paragraph (6) of section
24 8A(d) of the National Science Foundation Act
25 of 1950, the program established under para-

1 graph (7) of such section 8A(d), test beds es-
2 tablished and operated under paragraph (8) of
3 such section 8A(d), or other Federal research
4 entities;

5 “(D) integration with local efforts in inclu-
6 sive economic development and job creation;

7 “(E) a plan for implementing a com-
8 prehensive regional technology strategy through
9 regional infrastructure, workforce, and supply
10 chain investment plans and local land use plans;

11 “(F) diversity among the geographic re-
12 gions and the size of the population of the com-
13 munities served by recipients of grants under
14 this section;

15 “(G) a commitment to seeking substantial
16 public input during the planning process and
17 public participation in the development of the
18 comprehensive regional plan;

19 “(H) a plan to support the creation and
20 growth of new companies; and

21 “(I) such other qualities as the Secretary
22 considers appropriate.

23 “(f) USE OF GRANT FUNDS.—An eligible consortium
24 that receives a grant under this section shall use the

1 amount of such grant to carry out a project that includes
2 1 or more of the following activities:

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

5 “(2) Identifying potential regional partnerships
6 for developing and implementing a comprehensive
7 regional technology strategy.

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

10 “(A) workforce development;

11 “(B) supply chain development;

12 “(C) increasing innovation readiness, in-
13 cluding expanding research and technology de-
14 velopment facilities and developing the local
15 science, technology, engineering, and mathe-
16 matics workforce;

17 “(D) site preparation;

18 “(E) community and economic develop-
19 ment to start new companies and to attract and
20 support workers and firms; and

21 “(F) and other such needs as determined
22 by the consortium.

23 “(4) Developing or updating—

24 “(A) a comprehensive regional plan; or

1 “(B) goals and strategies to implement an
2 existing comprehensive regional plan for the
3 purposes of strengthening domestic supply
4 chain resiliency, competitiveness, and job cre-
5 ation in critical technology and innovation sec-
6 tors for national and economic security.

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

10 “(g) GRANT AGREEMENT.—Each eligible consortium
11 that receives a grant under this section shall, as a condi-
12 tion on receipt of grant amounts, agree to establish, in
13 coordination with the Secretary, performance measures,
14 reporting requirements, and such other requirements as
15 the Secretary determines are necessary, that must be met
16 at the end of each year in which the eligible consortium
17 receives funds under this section.

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

19 “(1) FINAL REPORTS.—Not later than 90 days
20 after the date on which a grant agreement into
21 which an eligible consortium entered under sub-
22 section (g) expires, the eligible consortium shall sub-
23 mit to the Secretary a final report on the project the
24 eligible consortium carried out under subsection (f)

1 using the amounts of the grant awarded to the eligi-
2 ble consortium under this section.

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

5 “(A) A detailed explanation of the activi-
6 ties undertaken using the grant, including an
7 explanation of how the comprehensive regional
8 technology strategy of the eligible consortium
9 may achieve specific improvements in domestic
10 supply chain resiliency, research, development,
11 and deployment of critical technologies, work-
12 force development, domestic job creation, and
13 entrepreneurship goals within the region served
14 by the eligible consortium.

15 “(B) A discussion of any obstacles encoun-
16 tered in the planning process of the eligible con-
17 sortium and how the eligible consortium over-
18 came the obstacles.

19 “(C) An evaluation of the success of the
20 project using the performance standards and
21 measures established under subsection (g), in-
22 cluding an evaluation of the planning process
23 and how the project contributes to carrying out
24 the comprehensive regional technology strategy.

1 “(D) The progress of the region identified
2 by the consortium toward becoming a regional
3 technology hub.

4 “(E) The effectiveness of the region identi-
5 fied by the consortium in ensuring that growth
6 in innovation sectors produces broadly shared
7 opportunity in the region.

8 “(F) Such other information as the Sec-
9 retary may require.

10 “(3) INTERIM REPORTS.—The Secretary may
11 require, as a condition on receipt of a grant under
12 this section, an eligible consortium to submit an in-
13 terim report, before the date on which a project for
14 which a grant is awarded under this section is com-
15 pleted.

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

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

22 “(2) by Federal interagency agreement, trans-
23 fer funds to another Federal agency to facilitate and
24 support the provision of such technical assistance;
25 and

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

4 “(j) AUTHORIZATION OF APPROPRIATIONS.—

5 “(1) AUTHORIZATION.—There are authorized to
6 be appropriated to the Secretary for the award of
7 grants under this section, to remain available until
8 expended, amounts as follows:

9 “(A) \$100,000,000 for each of fiscal years
10 2022 and 2023.

11 “(B) \$125,000,000 for each of fiscal years
12 2024 through 2026.

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

17 **SEC. 9. MANUFACTURING USA PROGRAM.**

18 (a) DEFINITIONS.—In this section:

19 (1) HISTORICALLY BLACK COLLEGE OR UNI-
20 VERSITY.—The term “historically Black college or
21 university” has the meaning given the term “part B
22 institution” in section 322 of the Higher Education
23 Act of 1965 (20 U.S.C. 1061).

24 (2) 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 (3) MANUFACTURING USA CENTER.—The term
4 “Manufacturing USA center” means an institute de-
5 scribed in section 34(d)(3)(B) of the National Insti-
6 tute of Standards and Technology Act (15 U.S.C.
7 278s(d)(3)(B)) and recognized by the Secretary
8 under such section for purposes of participation in
9 the Manufacturing USA Network.

10 (4) MANUFACTURING USA INSTITUTE.—The
11 term “Manufacturing USA institute” means an in-
12 stitute described in section 34(d) of the National In-
13 stitute of Standards and Technology Act (15 U.S.C.
14 278s(d)) that is not a Manufacturing USA center.

15 (5) MANUFACTURING USA NETWORK.—The
16 term “Manufacturing USA Network” means the
17 network established under section 34(c) of the Na-
18 tional Institute of Standards and Technology Act
19 (15 U.S.C. 278s(c)).

20 (6) MANUFACTURING USA PROGRAM.—The
21 term “Manufacturing USA Program” means the
22 program established under section 34(b)(1) of the
23 National Institute of Standards and Technology Act
24 (15 U.S.C. 278s(b)(1)).

1 (7) MINORITY-SERVING INSTITUTION.—The
2 term “minority-serving institution” means an eligi-
3 ble institution described in section 371(a) of the
4 Higher Education Act of 1965 (20 U.S.C.
5 1067q(a)).

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

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

15 (b) AUTHORIZATION OF APPROPRIATIONS TO EN-
16 HANCE AND EXPAND MANUFACTURING USA PROGRAM
17 AND SUPPORT INNOVATION AND GROWTH IN DOMESTIC
18 MANUFACTURING.—

19 (1) IN GENERAL.—There is authorized to be
20 appropriated \$2,410,000,000 for the period of fiscal
21 years 2022 through 2026 for the Secretary of Com-
22 merce, acting through the Director of the National
23 Institute of Standards and Technology and in co-
24 ordination with the Secretary of Energy, the Sec-
25 retary of Defense, and the heads of such other Fed-

1 eral agencies as the Secretary of Commerce con-
2 siders relevant, to carry out the Manufacturing USA
3 Program and to expand such program to support in-
4 novation and growth in domestic manufacturing.

5 (2) MANUFACTURING USA INSTITUTES.—

6 (A) IN GENERAL.—Of the amounts appro-
7 priated pursuant to the authorization of appro-
8 priations in paragraph (1), \$1,190,000,000
9 shall be available to support the establishment
10 of new Manufacturing USA institutes during
11 the period described in such paragraph.

12 (B) FINANCIAL ASSISTANCE.—The Sec-
13 retary shall support the establishment of Manu-
14 facturing USA institutes under subparagraph
15 (A) through the award of financial assistance
16 under section 34(e) of the National Institute of
17 Standards and Technology Act (15 U.S.C.
18 278s(e)).

19 (C) ASSIGNMENT OF MANUFACTURING USA
20 INSTITUTES TO FEDERAL AGENCY SPONSORS.—
21 Following an open topic competition organized
22 by the Director of the National Institute of
23 Standards and Technology, the Secretary of
24 Commerce, in consultation with the Secretary of
25 Energy, the Secretary of Defense, and other

1 relevant Federal agencies, may select an alter-
2 native Federal agency to sponsor a selected
3 Manufacturing USA institute based on its tech-
4 nology and may transfer the appropriate funds
5 to that alternative Federal agency for operation
6 and programming of the selected Manufac-
7 turing USA institute.

8 (D) COORDINATION WITH EXISTING MANU-
9 FACTURING USA INSTITUTES.—

10 (i) COORDINATION REQUIRED.—In es-
11 tablishing new Manufacturing USA insti-
12 tutes under subparagraph (A), the Sec-
13 retary of Commerce shall coordinate with
14 the Secretary of Energy and the Secretary
15 of Defense to ensure there is no duplica-
16 tion of effort or technology focus between
17 new Manufacturing USA institutes and
18 Manufacturing USA institutes that were in
19 effect before the establishment of the new
20 Manufacturing USA institutes.

21 (ii) CONSULTATION WITH EXISTING
22 MANUFACTURING USA INSTITUTES AU-
23 THORIZED.—In carrying out coordination
24 under clause (i), the Secretary of Com-
25 merce may consult with Manufacturing

1 USA institutes that were in effect before
2 the establishment of new Manufacturing
3 USA institutes under subparagraph (A) to
4 inform the Department of Commerce of
5 additional new Manufacturing USA insti-
6 tutes necessary to fill gaps in the support
7 of innovation and growth in domestic man-
8 ufacturing.

9 (iii) INVOLVEMENT OF EXISTING MAN-
10 UFACTURING USA INSTITUTES AUTHOR-
11 IZED.—In coordination with the Secretary
12 of Energy and the Secretary of Defense,
13 the Secretary of Commerce may involve
14 Manufacturing USA institutes that were in
15 effect before the establishment of new
16 Manufacturing USA institutes under sub-
17 subparagraph (A) in the planning and execu-
18 tion of the new Manufacturing USA insti-
19 tutes.

20 (3) MANUFACTURING USA CENTERS AND PUB-
21 LIC SERVICE GRANTS.—Of the amounts appropriated
22 pursuant to the authorization of appropriations in
23 paragraph (1), \$375,000,000 shall be available for
24 the period described in such paragraph—

1 (A) for the Secretary, acting through the
2 Director and in consultation with the Secretary
3 of Energy, the Secretary of Defense, and the
4 heads of such other Federal agencies as the
5 Secretary of Commerce considers relevant, to
6 recognize additional institutes as Manufacturing
7 USA institutes under section 34(d)(3)(B) of the
8 National Institute of Standards and Technology
9 Act (15 U.S.C. 278s(d)(3)(B)), giving par-
10 ticular consideration to partnerships and coordi-
11 nation with the Manufacturing USA institutes
12 that were already in effect, when practicable;
13 and

14 (B) to support the activities of Manufac-
15 turing USA institutes and Manufacturing USA
16 centers through the award of grants under sec-
17 tion 34(f) of the National Institute of Stand-
18 ards and Technology Act (15 U.S.C. 278s(f)).

19 (4) COMMERCIALIZATION, WORKFORCE TRAIN-
20 ING, AND SUPPLY CHAIN INVESTMENT.—Of the
21 amounts appropriated pursuant to the authorization
22 of appropriations in paragraph (1), \$100,000,000
23 shall be available for the period described in such
24 paragraph to support such programming for com-
25 mercialization, workforce training, and supply chain

1 activities across the Manufacturing USA Network as
2 the Secretary considers appropriate in consultation
3 with the Secretary of Energy, the Secretary of De-
4 fense, and the heads of such other Federal agencies
5 as the Secretary of Commerce considers relevant.

6 (5) ONGOING SUPPORT FOR EXISTING MANU-
7 FACTURING USA INSTITUTES.—

8 (A) IN GENERAL.—Of the amounts appro-
9 priated pursuant to the authorization of appro-
10 priations in paragraph (1), \$725,000,000 shall
11 be available for the period described in such
12 paragraph to support Manufacturing USA in-
13 stitutes that were in effect on the day before
14 the date of the enactment of this Act, of which
15 \$5,000,000 shall be available (without cost
16 share) to each such Manufacturing USA insti-
17 tute each year for such period for ongoing oper-
18 ation of the institutes, including operational
19 overhead, workforce training, and supply chain
20 activities.

21 (B) ADDITIONAL SUPPORT.—

22 (i) IN GENERAL.—Of the amounts
23 specified in subparagraph (A), amounts
24 shall be available for financial assistance
25 awards to conduct projects as follows:

1 (I) \$100,000,000 shall be avail-
2 able for Manufacturing USA insti-
3 tutes that were established under sec-
4 tion 34(e) of the National Institute of
5 Standards and Technology Act (15
6 U.S.C. 278s(e)) and that were in ef-
7 fect on the day before the date of the
8 enactment of this Act.

9 (II) \$10,000,000 shall be avail-
10 able each year for the period described
11 in such paragraph for each Manufac-
12 turing USA institute that is not re-
13 ceiving Manufacturing USA Program
14 funding from any other Federal agen-
15 cy.

16 (ii) FEDERAL FUNDS MATCHING RE-
17 QUIREMENT.—A recipient of financial as-
18 sistance for a project under clause (i) shall
19 agree to make available to carry out the
20 project an amount of non-Federal funds
21 that is equal to or greater than 20 percent
22 of the total cost of the project.

23 (C) RENEWAL REQUIREMENTS.—Receipt
24 of ongoing support under subparagraph (A)
25 shall be subject to the requirements of section

1 34(e)(2)(B) of the National Institute of Stand-
2 ards and Technology Act (15 U.S.C.
3 278s(e)(2)(B)).

4 (D) NO COST SHARE REQUIREMENT.—The
5 Secretary shall not impose any cost share or
6 matching requirement on receipt of ongoing
7 support under subparagraph (A).

8 (6) MANAGEMENT OF INTERAGENCY SOLICITA-
9 TIONS AND ONGOING MANAGEMENT.—Of the
10 amounts appropriated pursuant to the authorization
11 of appropriations in paragraph (1), \$20,000,000
12 shall be available annually for the period described
13 in such paragraph for the National Program Office
14 to coordinate the activities of the Manufacturing
15 USA Network and manage interagency solicitations.

16 (c) COORDINATION BETWEEN MANUFACTURING
17 USA PROGRAM AND HOLLINGS MANUFACTURING EXTEN-
18 SION PARTNERSHIP.—The Secretary shall coordinate the
19 activities of the Manufacturing USA Program and the ac-
20 tivities of Hollings Manufacturing Extension Partnership
21 with each other to the degree that doing so does not dimin-
22 ish the effectiveness of the ongoing activities of a Manu-
23 facturing USA institute or a Center (as the term is de-
24 fined in section 25(a) of the National Institute of Stand-
25 ards and Technology Act (15 U.S.C. 278k(a))), including

1 Manufacturing USA institutes entering into agreements
2 with a Center (as so defined) that the Secretary considers
3 appropriate to provide services relating to the mission of
4 the Hollings Manufacturing Extension Partnership, in-
5 cluding outreach, technical assistance, workforce develop-
6 ment, and technology transfer and adoption assistance to
7 small- and medium-sized manufacturers.

8 (d) WORKER ADVISORY COUNCIL FOR MANUFAC-
9 TURING USA PROGRAM.—

10 (1) ESTABLISHMENT.—

11 (A) IN GENERAL.—The Secretary of Com-
12 merce shall, in coordination with the Secretary
13 of Labor, the Secretary of Defense, the Sec-
14 retary of Energy, and the Secretary of Edu-
15 cation, establish an advisory council for the
16 Manufacturing USA Program on the develop-
17 ment and dissemination of techniques, policies,
18 and investments for high-road labor practices,
19 worker adaptation and success with techno-
20 logical change, and increased worker participa-
21 tion across the Manufacturing USA Network.

22 (B) MEMBERSHIP.—The council estab-
23 lished under subparagraph (A) shall be com-
24 posed of not fewer than 15 members appointed
25 by the Secretary of Commerce, of whom—

1 (i) four shall be from labor organiza-
2 tions;

3 (ii) four shall be from educational in-
4 stitutions;

5 (iii) four shall be from labor-manage-
6 ment training, workforce development, and
7 nonprofit organizations, including those
8 that focus on workforce diversity and in-
9 clusion; and

10 (iv) three shall be from industry orga-
11 nizations or manufacturing firms, includ-
12 ing small- and medium-sized manufactur-
13 ers.

14 (C) PERIOD OF APPOINTMENT; VACAN-
15 CIES.—

16 (i) IN GENERAL.—Each member of
17 the council established under subparagraph
18 (A) shall be appointed for a term of 3
19 years with the ability to renew the appoint-
20 ment for no more than 2 terms.

21 (ii) VACANCIES.—Any member ap-
22 pointed to fill a vacancy occurring before
23 the expiration of the term for which the
24 member's predecessor was appointed shall
25 be appointed only for the remainder of that

1 term. A member may serve after the expi-
2 ration of that term until a successor has
3 been appointed.

4 (D) MEETINGS.—

5 (i) INITIAL MEETING.—Not later than
6 180 days after the date of enactment of
7 this Act, the council established under sub-
8 paragraph (A) shall hold the first meeting.

9 (ii) ADDITIONAL MEETINGS.—After
10 the first meeting of the council, the council
11 shall meet upon the call of the Secretary,
12 and at least once every 180 days there-
13 after.

14 (iii) QUORUM.—A majority of the
15 members of the council shall constitute a
16 quorum, but a lesser number of members
17 may hold hearings.

18 (E) CHAIRPERSON AND VICE CHAIR-
19 PERSON.—The Secretary shall elect 1 member
20 of the council established under subparagraph
21 (A) to serve as the chairperson of the council
22 and 1 member of the council to serve as the
23 vice chairperson of the council.

24 (2) DUTIES OF THE COUNCIL.—The council es-
25 tablished under paragraph (1)(A) shall provide ad-

1 vice and recommendations to the Secretary of Com-
2 merce on matters concerning investment in and sup-
3 port of the manufacturing workforce relating to the
4 following:

5 (A) Worker participation, including
6 through labor organizations, in the planning
7 and deployment of new technologies across an
8 industry and within workplaces.

9 (B) Policies to help workers adapt to tech-
10 nological change, including training and edu-
11 cation priorities for the Federal Government
12 and for employer investments in workers.

13 (C) Assessments of impact on workers of
14 development of new technologies and processes
15 by the Manufacturing USA institutes.

16 (D) Management practices that prioritize
17 job quality, worker protection, worker participa-
18 tion and power in decision making, and invest-
19 ment in worker career success.

20 (E) Policies and procedures to prioritize
21 diversity and inclusion in the manufacturing
22 and technology workforce by expanding access
23 to job, career advancement, and management
24 opportunities for underrepresented populations.

1 (F) Assessments of technology improve-
2 ments achieved by the Manufacturing USA in-
3 stitutes and the degree of domestic deployment
4 of each new technology.

5 (G) Such other matters as the Secretary
6 considers appropriate.

7 (3) REPORT.—

8 (A) APPROPRIATE COMMITTEES OF CON-
9 GRESS DEFINED.—In this paragraph, the term
10 “appropriate committees of Congress” means—

11 (i) the Committee on Health, Edu-
12 cation, Labor, and Pensions, the Com-
13 mittee on Commerce, Science, and Trans-
14 portation, the Committee on Energy and
15 Natural Resources, the Committee on
16 Armed Services, and the Committee on Ap-
17 propriations of the Senate; and

18 (ii) the Committee on Education and
19 Labor, the Committee on Science, Space,
20 and Technology, the Committee on Energy
21 and Commerce, the Committee on Armed
22 Services, and the Committee on Appropria-
23 tions of the House of Representatives.

24 (B) REPORT REQUIRED.—Not later than
25 180 days after the date on which the council es-

1 established under paragraph (1)(A) holds its ini-
2 tial meeting under paragraph (1)(D)(i) and an-
3 nually thereafter, the council shall submit to
4 the appropriate committees of Congress a re-
5 port containing a detailed statement of the ad-
6 vice and recommendations of the council pursu-
7 ant to paragraph (2).

8 (4) COMPENSATION.—

9 (A) PROHIBITION OF COMPENSATION.—

10 Members of the Council may not receive addi-
11 tional pay, allowances, or benefits by reason of
12 their service on the Council.

13 (B) TRAVEL EXPENSES.—

14 Each member shall receive travel expenses, including per diem
15 in lieu of subsistence, in accordance with appli-
16 cable provisions under subchapter I of chapter
17 57 of title 5, United States Code.

18 (5) FACA APPLICABILITY.—

19 (A) IN GENERAL.—

20 In discharging its du-
21 ties under this subsection, the council estab-
22 lished under paragraph (1)(A) shall function
23 solely in an advisory capacity, in accordance
24 with the Federal Advisory Committee Act (5
 U.S.C. App.).

1 (B) EXCEPTION.—Section 14 of the Fed-
2 eral Advisory Committee Act shall not apply to
3 the Council.

4 (e) PARTICIPATION OF MINORITY-SERVING INSTITU-
5 TIONS, HISTORICALLY BLACK COLLEGES AND UNIVER-
6 SITIES, AND TRIBAL COLLEGES AND UNIVERSITIES.—

7 (1) IN GENERAL.—The Secretary of Commerce,
8 in coordination with the Secretary of Energy, the
9 Secretary of Defense, and the heads of such other
10 Federal agencies as the Secretary of Commerce con-
11 siders relevant, shall coordinate with existing and
12 new Manufacturing USA institutes to integrate cov-
13 ered entities as active members of the Manufac-
14 turing USA institutes, including through the devel-
15 opment of preference criteria for proposals to create
16 new Manufacturing USA institutes or renew existing
17 Manufacturing USA institutes that include meaning-
18 ful participation from a covered entity or that are
19 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, in consultation with the Secretary of En-
9 ergy, the Secretary of Defense, and the heads
10 of such other Federal agencies as the Secretary
11 of Commerce considers relevant, shall establish
12 policies to promote the domestic production of
13 technologies developed by the Manufacturing
14 USA Network.

15 (B) ELEMENTS.—The policies developed
16 under subparagraph (A) shall include the fol-
17 lowing:

18 (i) Measures to partner domestic de-
19 velopers of goods, services, or technologies
20 by Manufacturing USA Network activities
21 with domestic manufacturers and sources
22 of financing.

23 (ii) Measures to develop and provide
24 incentives to promote transfer of intellec-
25 tual property and goods, services, or tech-

1 nologies developed by Manufacturing USA
2 Network activities to domestic manufactur-
3 ers.

4 (iii) Measures to assist with supplier
5 scouting and other supply chain develop-
6 ment, including the use of the Hollings
7 Manufacturing Extension Partnership to
8 carry out such measures.

9 (iv) A process to review and approve
10 or deny membership in a Manufacturing
11 USA institute by foreign-owned companies,
12 especially from countries of concern, in-
13 cluding the People's Republic of China.

14 (v) Measures to prioritize Federal pro-
15 curement of goods, services, or technologies
16 developed by the Manufacturing USA Net-
17 work activities from domestic sources, as
18 appropriate.

19 (C) PROCESSES FOR WAIVERS.—The poli-
20 cies established under this paragraph shall in-
21 clude processes to permit waivers, on a case by
22 case basis, for policies that promote domestic
23 production based on cost, availability, severity
24 of technical and mission requirements, emer-
25 gency requirements, operational needs, other

1 legal or international treaty obligations, or
2 other factors deemed important to the success
3 of the Manufacturing USA Program.

4 (3) PROHIBITION.—

5 (A) COMPANY DEFINED.—In this para-
6 graph, the term “company” has the meaning
7 given such term in section 847(a) of the Na-
8 tional Defense Authorization Act for Fiscal
9 Year 2020 (Public Law 116–92; 10 U.S.C.
10 2509 note).

11 (B) IN GENERAL.—A company of the Peo-
12 ple’s Republic of China may not participate in
13 the Manufacturing USA Program or the Manu-
14 facturing USA Network without a waiver, as
15 described in paragraph (2)(C).

16 **SEC. 10. TECHNOLOGY COMMERCIALIZATION REVIEW.**

17 (a) KEY TECHNOLOGY FOCUS AREAS DEFINED.—In
18 this section, the term “key technology focus areas” means
19 the areas included on the most recent list under section
20 8A(d)(2) of the National Science Foundation Act of 1950.

21 (b) REVIEW AND RECOMMENDATIONS REQUIRED.—
22 Not later than 180 days after the date of the enactment
23 of this Act, the Director of the Office of Science and Tech-
24 nology Policy, in consultation with the Director of the Na-

1 tional Science Foundation and the Director of the Na-
2 tional Institute of Standards and Technology, shall—

3 (1) review—

4 (A) the structure of current technology re-
5 search and commercialization arrangements
6 with regard to public-private partnerships; and

7 (B) the extent to which intellectual prop-
8 erty developed with Federal funding—

9 (i) has been used by foreign business
10 entities;

11 (ii) is being used to manufacture in
12 the United States rather than in other
13 countries; and

14 (iii) is being used by foreign business
15 entities domiciled or by foreign business
16 entities affiliated with or subsidiary to for-
17 eign business entities in the People's Re-
18 public of China;

19 (2) develop recommendations for such legisla-
20 tive or administrative action as may be necessary—

21 (A) to further incentivize industry partici-
22 pation in public-private partnerships for the
23 purposes of accelerating technology research
24 and commercialization, including alternate ways

1 of accounting for in-kind contributions and
2 value of partially manufactured products;

3 (B) to ensure that intellectual property de-
4 veloped with Federal funding is commercialized
5 in the United States; and

6 (C) to ensure that intellectual property de-
7 veloped with Federal funding is not being used
8 by foreign business entities or by foreign busi-
9 ness entities affiliated with or subsidiary to for-
10 eign business entities domiciled in the People's
11 Republic of China; and

12 (3) submit to the Secretary of Commerce and
13 Congress—

14 (A) the findings of the Director of the Of-
15 fice of Science and Technology Policy with re-
16 spect to the reviews conducted under paragraph
17 (1); and

18 (B) the recommendations developed under
19 paragraph (2).

1 **SEC. 11. STUDY ON EMERGING SCIENCE AND TECHNOLOGY**
2 **CHALLENGES FACED BY THE UNITED STATES**
3 **AND RECOMMENDATIONS TO ADDRESS**
4 **THEM.**

5 (a) **SHORT TITLE.**—This section may be cited as the
6 “National Strategy to Ensure American Leadership Act
7 of 2021” or the “National SEAL Act of 2021”.

8 (b) **STUDY.**—

9 (1) **IN GENERAL.**—The Secretary of Commerce
10 (referred to in this section as the “Secretary”) shall
11 seek to enter into an agreement with the National
12 Academies of Sciences, Engineering, and Medicine to
13 conduct a study—

14 (A) to identify the 10 most critical emerg-
15 ing science and technology challenges facing the
16 United States; and

17 (B) to develop recommendations for legis-
18 lative or administrative action to ensure United
19 States leadership in matters relating to such
20 challenges.

21 (2) **ELEMENTS.**—The study conducted under
22 paragraph (1) shall include identification, review,
23 and evaluation of the following:

24 (A) Matters pertinent to identification of
25 the challenges described in paragraph (1)(A).

1 (B) Matters relating to the recommenda-
2 tions developed under paragraph (1)(B), includ-
3 ing with respect to education and workforce de-
4 velopment necessary to address each of the
5 challenges identified under paragraph (1)(A).

6 (C) Matters related to the review of key
7 technology areas by the Directorate for Tech-
8 nology and Innovation of the National Science
9 Foundation under section 8A(d) of the National
10 Science Foundation Act of 1950.

11 (D) An assessment of the current relative
12 balance in leadership in addressing the chal-
13 lenges identified in paragraph (1)(A) between
14 the United States, allies or key partners of the
15 United States, and the People’s Republic of
16 China.

17 (3) TIMEFRAME.—

18 (A) AGREEMENT.—The Secretary shall
19 seek to enter into the agreement required by
20 paragraph (1) on or before the date that is 60
21 days after the date of enactment of this Act.

22 (B) FINDINGS.—Under an agreement en-
23 tered into under paragraph (1), the National
24 Academies of Sciences, Engineering, and Medi-
25 cine shall, not later than 1 year after the date

1 on which the Secretary and the National Acad-
2 emies enter into such agreement, transmit to
3 the Secretary the findings of the National
4 Academies with respect to the study conducted
5 pursuant to such agreement.

6 (c) REPORT.—

7 (1) IN GENERAL.—Not later than 30 days after
8 the date on which the Secretary receives the findings
9 of the National Academies of Sciences, Engineering,
10 and Medicine with respect to the study conducted
11 under subsection (b), the Secretary shall submit to
12 Congress a “Strategy to Ensure American Leader-
13 ship” report on such study.

14 (2) CONTENTS.—The report submitted under
15 paragraph (1) shall include the following:

16 (A) The findings of the National Acad-
17 emies of Sciences, Engineering, and Medicine
18 with respect to the study conducted under sub-
19 section (b).

20 (B) The conclusions of the Secretary with
21 respect to such findings.

22 (C) The recommendations developed under
23 subsection (b)(1)(B).

24 (D) Such other recommendations for legis-
25 lative or administrative action as the Secretary

1 may have with respect to such findings and con-
2 clusions.

3 (3) CLASSIFIED ANNEX.—The report submitted
4 under paragraph (1) shall be submitted in unclassi-
5 fied form, but may include a classified annex if the
6 Secretary determines appropriate.

7 (d) INFORMATION FROM FEDERAL AGENCIES.—

8 (1) IN GENERAL.—The National Academies of
9 Sciences, Engineering, and Medicine may secure di-
10 rectly from a Federal department or agency such in-
11 formation as the National Academies of Sciences,
12 Engineering, and Medicine consider necessary to
13 carry out the study under subsection (b).

14 (2) FURNISHING INFORMATION.—On request of
15 the National Academies of Sciences, Engineering,
16 and Medicine for information, the head of the de-
17 partment or agency shall furnish such information to
18 the National Academies of Sciences, Engineering,
19 and Medicine.

20 (e) CONSULTATION.—The Secretary of Defense and
21 the Director of National Intelligence shall provide support
22 upon request from the Secretary of Commerce or the Na-
23 tional Academies to carry out this section.

24 (f) NON-DUPLICATION OF EFFORT.—In carrying out
25 subsection (b), the Secretary shall, to the degree prac-

1 ticable, coordinate with the steering committee established
2 under section 236(a) of the William M. (Mac) Thornberry
3 National Defense Authorization Act for Fiscal Year 2021
4 (Public Law 116–283).

5 **SEC. 12. COORDINATION OF ACTIVITIES.**

6 The Director of the Office of Science and Technology
7 Policy, the Director of the National Economic Council, the
8 Director of the Office of Management and Budget, the Di-
9 rector of the National Science Foundation, the Secretary
10 of Commerce, and the Secretary of Energy shall, as appli-
11 cable, coordinate with respect to activities of—

12 (1) the university technology centers established
13 under section 8A(d)(6) of the National Science
14 Foundation Act of 1950;

15 (2) the regional technology hubs under section
16 28 of the Stevenson-Wydler Technology Innovation
17 Act of 1980, as added by section 7;

18 (3) the Manufacturing USA Program estab-
19 lished under section 34(b)(1) of the National Insti-
20 tute of Standards and Technology Act (15 U.S.C.
21 278s(b)(1));

22 (4) federally funded research and development
23 centers;

1 (5) National Laboratories, as defined in section
2 2 of the Energy Policy Act of 2005 (42 U.S.C.
3 15801); and

4 (6) Federal laboratories, as defined in section 4
5 of the Stevenson-Wydler Technology Innovation Act
6 of 1980 (15 U.S.C. 3703).

7 **SEC. 13. PERSON OR ENTITY OF CONCERN PROHIBITION.**

8 No person published on the list under section 1237(b)
9 of the Strom Thurmond National Defense Authorization
10 Act for Fiscal Year 1999 (Public Law 105–261; 50 U.S.C.
11 1701 note) or entity identified under section 1260H of
12 the William M. (Mac) Thornberry National Defense Au-
13 thorization Act for Fiscal Year 2021 (Public Law 116–
14 283) may receive or participate in any grant, award, pro-
15 gram, support, or other activity under—

16 (1) section 8A of the National Science Founda-
17 tion Act of 1950 (Public Law 81–507), as added by
18 section 3;

19 (2) the Endless Frontier Fund under section 4;

20 (3) the supply chain resiliency program under
21 section 6;

22 (4) section 28(b)(1) of the Stevenson-Wydler
23 Technology Innovation Act of 1980 (Public Law 96–
24 480), as added by section 7(a);

1 (5) section 29 of the Stevenson-Wydler Tech-
2 nology Innovation Act of 1980 (Public Law 96-
3 480), as added by section 8; or

4 (6) the Manufacturing USA Program, as im-
5 proved and expanded under section 9.

○