

117TH CONGRESS  
1ST SESSION

# H. R. 2731

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.

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## IN THE HOUSE OF REPRESENTATIVES

APRIL 21, 2021

Mr. KHANNA (for himself, Mr. GALLAGHER, Ms. WILD, Mr. TURNER, Mr. BOWMAN, Mr. FITZPATRICK, and Ms. SHERRILL) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committee on Energy and Commerce, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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## 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 partici-  
3           pation 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  
19 research to new domestic manufacturing growth  
20 and job creation across sectors in the United  
21 States.

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

1 (A) A plan to utilize available tools to ad-  
2 dress or minimize the leading threats and chal-  
3 lenges and to take advantage of the leading op-  
4 portunities, 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 an Man-  
23 ufacturing USA institute described in section 34(d)  
24 of the National Institute of Standards and Tech-  
25 nology 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 industry,  
15          and labor organizations to mobilize investment,  
16          talent, entrepreneurship, and innovation for re-  
17          search, development, deployment, and manufac-  
18          turing in a range of technology and innovation  
19          sectors critical to national and economic secu-  
20          rity.

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           tablished 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.—Each member

14           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.—In discharging its du-

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

○