

and expenditure for such period or periods as may be specified in the Acts making such appropriations.

(Mar. 3, 1901, ch. 872, §32, formerly §18, as added Pub. L. 92-317, §3(a), June 22, 1972, 86 Stat. 235; amended Pub. L. 95-322, §2(b), July 21, 1978, 92 Stat. 395; Pub. L. 96-461, §10, Oct. 15, 1980, 94 Stat. 2052; renumbered §19, Pub. L. 99-574, §6(a), Oct. 28, 1986, 100 Stat. 3237; renumbered §20, Pub. L. 99-574, §8(a), Oct. 28, 1986, 100 Stat. 3238; renumbered §22, Pub. L. 100-235, §3(2), Jan. 8, 1988, 101 Stat. 1724; renumbered §32, Pub. L. 107-305, §8(a)(1), Nov. 27, 2002, 116 Stat. 2375.)

#### Editorial Notes

##### CODIFICATION

Section was formerly classified to section 278h of this title prior to renumbering by Pub. L. 107-305.

Another section 32 of act Mar. 3, 1901, ch. 872, was renumbered section 35 and is set out as a Short Title note under section 271 of this title.

##### AMENDMENTS

1980—Pub. L. 96-461 substituted “Appropriations” for “(a) Appropriations” and struck out subsec. (b) which authorized appropriations to carry out provisions of this chapter, including the Working Capital Fund referred to in section 278b(a) of this title, but excluding section 278f of this title, of such sums as may be necessary for each of the fiscal years 1979 and 1980.

1978—Pub. L. 95-322 designated existing provisions as subsec. (a) and added subsec. (b).

#### § 278r. Collaborative manufacturing research pilot grants

##### (a) Authority

###### (1) Establishment

The Director shall establish a pilot program of awards to partnerships among participants described in paragraph (2) for the purposes described in paragraph (3). Awards shall be made on a peer-reviewed, competitive basis.

###### (2) Participants

Such partnerships shall include at least—

- (A) 1 manufacturing industry partner; and
- (B) 1 nonindustry partner.

###### (3) Purpose

The purpose of the program under this section is to foster cost-shared collaborations among firms, educational institutions, research institutions, State agencies, and non-profit organizations to encourage the development of innovative, multidisciplinary manufacturing technologies. Partnerships receiving awards under this section shall conduct applied research to develop new manufacturing processes, techniques, or materials that would contribute to improved performance, productivity, and competitiveness of United States manufacturing, and build lasting alliances among collaborators.

##### (b) Program contribution

Awards under this section shall provide for not more than one-third of the costs of a partnership. Not more than an additional one-third of such costs may be obtained directly or indirectly from other Federal sources.

##### (c) Applications

Applications for awards under this section shall be submitted in such manner, at such

time, and containing such information as the Director shall require. Such applications shall describe at a minimum—

(1) how each partner will participate in developing and carrying out the research agenda of the partnership;

(2) the research that the grant would fund; and

(3) how the research to be funded with the award would contribute to improved performance, productivity, and competitiveness of the United States manufacturing industry.

##### (d) Selection criteria

In selecting applications for awards under this section, the Director shall consider at a minimum—

(1) the degree to which projects will have a broad impact on manufacturing;

(2) the novelty and scientific and technical merit of the proposed projects; and

(3) the demonstrated capabilities of the applicants to successfully carry out the proposed research.

##### (e) Distribution

In selecting applications under this section the Director shall ensure, to the extent practicable, a distribution of overall awards among a variety of manufacturing industry sectors and a range of firm sizes.

##### (f) Duration

In carrying out this section, the Director shall run a single pilot competition to solicit and make awards. Each award shall be for a 3-year period.

(Mar. 3, 1901, ch. 872, §33, as added Pub. L. 110-69, title III, §3007(2), Aug. 9, 2007, 121 Stat. 591.)

#### § 278s. Manufacturing USA

##### (a) Definitions

In this section:

###### (1) Agency head

The term “agency head” means the head of any Executive agency (as defined in section 105 of title 5), other than the Department of Defense.

###### (2) Regional innovation initiative

The term “regional innovation initiative” has the meaning given such term in section 3722(f)(1) of this title.

##### (b) Establishment of Manufacturing USA Program

###### (1) In general

The Secretary shall establish within the Institute a program to be known as the “Manufacturing United States of America Program” or the “Manufacturing USA Program” (referred to in this section as the “Program”).

###### (2) Purposes of Program

The purposes of the Program are—

(A) to improve the competitiveness of United States manufacturing and to increase the production of goods manufactured predominantly within the United States;

(B) to stimulate United States leadership in advanced manufacturing research, innovation, and technology;

(C) to facilitate the transition of innovative technologies into scalable, cost-effective, and high-performing manufacturing capabilities;

(D) to facilitate access by manufacturing enterprises to capital-intensive infrastructure, including high-performance electronics and computing, and the supply chains that enable these technologies;

(E) to accelerate the development of an advanced manufacturing workforce;

(F) to facilitate peer exchange of and the documentation of best practices in addressing advanced manufacturing challenges;

(G) to leverage non-Federal sources of support to promote a stable and sustainable business model without the need for long-term Federal funding;

(H) to create and preserve jobs; and

(I) to contribute to the development of regional innovation initiatives across the United States.

### (3) Support

The Secretary, acting through the Director, shall carry out the purposes set forth in paragraph (2) by supporting—

(A) the Manufacturing USA Network established under subsection (b); and

(B) the establishment of Manufacturing USA institutes.

### (4) Director

The Secretary shall carry out the Program through the Director.

## (c) Establishment of Manufacturing USA Network

### (1) In general

As part of the Program, the Secretary shall establish a network of Manufacturing USA institutes.

### (2) Designation

The network established under paragraph (1) shall be known as the “Manufacturing United States of America Network” or the “Manufacturing USA Network” (referred to in this section as the “Network”).

## (d) Manufacturing USA institutes

### (1) In general

For purposes of this section, a Manufacturing USA institute is an institute that—

(A) has been established by a person or group of persons to address challenges in advanced manufacturing and to assist manufacturers in retaining or expanding industrial production and jobs in the United States;

(B) has a predominant focus on a manufacturing process, novel material, enabling technology, supply chain integration methodology, or another relevant aspect of advanced manufacturing, such as nanotechnology applications, advanced ceramics, photonics and optics, composites, biobased and advanced materials, flexible hybrid technologies, tool development for microelectronics, food manufacturing, superconductors, advanced battery technologies, robotics, advanced sensors, quan-

tum information science, supply chain water optimization, aeronautics and advanced materials, and graphene and graphene commercialization;

(C) has the potential—

(i) to improve the competitiveness of United States manufacturing, including key advanced manufacturing technologies such as nanotechnology, advanced ceramics, photonics and optics, composites, biobased and advanced materials, flexible hybrid technologies, tool development for microelectronics, food manufacturing, superconductors, advanced battery technologies, robotics, advanced sensors, quantum information science, supply chain water optimization, aeronautics and advanced materials, and graphene and graphene commercialization;

(ii) to accelerate non-Federal investment in advanced manufacturing production capacity in the United States; or

(iii) to enable the commercial application of new technologies or industry-wide manufacturing processes; and

(D) includes active participation among representatives from multiple industrial entities, research universities, community colleges, and other entities as appropriate, which may include industry-led consortia, career and technical education schools, Federal laboratories, State, local, and Tribal governments, businesses, educational institutions, and nonprofit organizations.

## (2) Activities

### (A) Required activities

For purposes of this section, a Manufacturing USA institute is also an institute that carries out the following:

(i) Research, development, and demonstration projects, including proof-of-concept development and prototyping, to reduce the cost, time, or risk of commercializing new technologies and improvements in existing technologies, processes, products, and research and development of materials to solve precompetitive industrial problems with economic or national security implications.

(ii) Development and implementation of education, training, and workforce recruitment courses, materials, and programs addressing workforce needs through training and education programs at all appropriate education levels, including programs on applied engineering.

(iii) Development of innovative methodologies and practices for supply chain integration and introduction of new technologies into supply chains, as appropriate.

(iv) Outreach and engagement with small and medium-sized manufacturing enterprises, including women, minority, and veteran owned manufacturing enterprises, in addition to large manufacturing enterprises.

(v) Development of roadmaps or leveraging of existing roadmaps with respect to technology areas being pursued by

that Manufacturing USA institute that take into account the research and development undertaken at other Manufacturing USA institutes and Federal agencies with respect to such areas.

**(B) Permissible activities**

In addition to the activities set forth under subparagraph (A), a Manufacturing USA institute may carry out such other activities as may be consistent with the purposes set forth under subsection (b)(2).

**(3) Additional Manufacturing USA institutes**

**(A) In general**

Except as provided in subparagraph (C), the National Additive Manufacturing Innovation Institute and other manufacturing institutes formally recognized as Manufacturing USA institutes pursuant to Federal law or executive actions, or under pending interagency review for such recognition as of December 16, 2014, shall be considered Manufacturing USA institutes for purposes of this section.

**(B) Network participation**

Except as provided in subparagraph (C), an institute that is substantially similar to an institute described by paragraphs (1) and (2) but does not meet every element of such description and does not receive financial assistance under subsection (e) may, upon request of the institute, be recognized as a Manufacturing USA institute by the Secretary for purposes of participation in the Network.

**(C) Applicability**

Effective beginning on December 20, 2019, an institute shall be treated as a Manufacturing USA institute under this section and subject to subsections (b)(2), (d), and (e) in the same manner and to the same extent as such provisions apply to a Manufacturing USA institute described by paragraphs (1) and (2) if such institute—

(i)(I) is, as of December 20, 2019, considered a Manufacturing USA institute under subparagraph (A) or recognized as a Manufacturing USA institute under subparagraph (B); and

(II) as of December 20, 2019, receives Federal financial assistance under subsection (e) or otherwise consistent with the purposes of this section;

(ii) is under pending agency review for such recognition as of December 20, 2019; or

(iii) is currently funded by the Department of Energy.

**(e) Financial assistance to establish and support Manufacturing USA institutes**

**(1) Financial assistance authorized**

Under the Program, the Secretary and the Secretary of Energy shall, and every other agency head may, award financial assistance to a person or group of persons to assist the person or group of persons in planning, establishing, or supporting a Manufacturing USA institute.

**(2) Period and renewal of awards**

**(A) Initial periods**

An award of financial assistance under paragraph (1) shall be awarded for an initial period of not less than 5 years and not more than 7 years.

**(B) Renewal of awards**

**(i) Renewal authorized**

An award of financial assistance under paragraph (1) may be renewed for additional periods, with each period not to exceed the duration of the initial period of the award, subject to a rigorous merit review.

**(ii) Consideration of performance standards**

In carrying out a rigorous merit review under clause (i) for renewal of an award under such clause for a Manufacturing USA institute, an agency head shall consider the extent to which the institute has made progress in meeting the standards of performance established pursuant to paragraph (5)(C).

**(iii) Initial failure to meet performance standards**

If, pursuant to a rigorous merit review under clause (i) for renewal of an award under such clause for a Manufacturing USA institute, an agency head finds that the institute does not meet the standards for performance established pursuant to paragraph (5)(C), the agency head shall—

(I) notify the institute of any deficiencies in the performance of the institute; and

(II) provide the institute one year to remedy such deficiencies.

**(iv) Further failure to meet performance standards**

If a Manufacturing USA institute fails to remedy a deficiency identified or to show significant improvement in performance during the 1-year period set forth under clause (iii)(II)—

(I) the institute shall not be eligible for<sup>1</sup> renewed award under clause (i); and

(II) the agency head that conducted the review for renewal shall notify the institute of such ineligibility.

**(v) Continuation of existing Manufacturing USA institutes**

Notwithstanding clauses (i) through (iv), a Manufacturing USA institute already in existence or undergoing a renewal process prior to December 1, 2019—

(I) may continue to receive support for the duration of the original funding award beginning on the date of establishment of that institute; and

(II) shall be eligible for renewal of that funding pursuant to clause (i).

**(3) Application for financial assistance**

**(A) In general**

A person or group of persons seeking financial assistance under paragraph (1) shall sub-

<sup>1</sup> So in original. Probably should be followed by “a”.

mit to an agency head an application therefor at such time, in such manner, and containing such information as the agency head may require.

**(B) Requirements**

An application submitted under subparagraph (A) for an institute shall, at a minimum include the following:

- (i) A description of the specific sources and amounts of non-Federal financial support for the institute on the date financial assistance is sought.
- (ii) A description of the anticipated sources and amounts of non-Federal financial support during the period for which the institute could be eligible for continued Federal financial assistance under this section.

**(4) Selection**

**(A) Competitive, merit review**

In awarding financial assistance under paragraph (1), an agency head shall—

- (i) use a competitive, merit review process that includes review by a diverse group of individuals with relevant expertise from both the private and public sectors; and
- (ii) ensure that the technology focus of a Manufacturing USA institute does not substantially duplicate the technology focus of any other Manufacturing USA institute.

**(B) Participation in process**

**(i) Prohibition on participation by political appointees**

The review required by subparagraph (A)(i) may not include a review by a group of individuals that includes a political appointee.

**(ii) Conflict of interest policies**

Each agency head shall implement a conflict of interest policy that—

- (I) ensures public transparency and accountability in the process used under subparagraph (A)(i); and
- (II) requires full disclosure of any real or potential conflicts of interest on the parts of individuals that participate in the process used under subparagraph (A)(i).

**(iii) Definition of political appointee**

For purposes of this subparagraph, the term “political appointee” has the meaning given such term in section 714(h) of title 38.

**(C) Considerations**

In selecting a person or group of persons who submitted an application to an agency head under paragraph (3) for an award of financial assistance under paragraph (1) for a Manufacturing USA institute, the agency head shall consider, at a minimum, the following:

- (i) The potential of the Manufacturing USA institute to advance domestic manufacturing and the likelihood of economic impact, including the creation or preservation of jobs, in the predominant focus areas of the institute.

- (ii) The commitment of continued financial support, advice, participation, and other contributions from non-Federal sources, to provide leverage and resources to promote a stable and sustainable business model.

- (iii) Whether the financial support provided to the Manufacturing USA institute from non-Federal sources exceeds the requested Federal financial assistance.

- (iv) How the Manufacturing USA institute will increase the non-Federal investment in advanced manufacturing research in the United States.

- (v) How the Manufacturing USA institute will engage with small and medium-sized manufacturing enterprises to improve the capacity of such enterprises to commercialize new processes and technologies and to improve the domestic supply chain.

- (vi) How the Manufacturing USA institute will carry out educational and workforce activities that meet industrial needs related to the predominant focus areas of the institute.

- (vii) How the Manufacturing USA institute will advance economic competitiveness and generate substantial benefits to the Nation that extend beyond the direct return to participants in the Program.

- (viii) Whether the predominant focus of the Manufacturing USA institute is a manufacturing process, novel material, enabling technology, supply chain integration methodology, or other relevant aspect of advanced manufacturing that has not already been commercialized, marketed, distributed, or sold by another entity.

- (ix) How the Manufacturing USA institute will strengthen and leverage the industrial, research, entrepreneurship, and other assets of a region.

- (x) How the Manufacturing USA institute will encourage the education and training of veterans and individuals with disabilities.

**(5) Performance measurement, transparency, and accountability**

For each award of financial assistance under paragraph (1) by an agency head, the agency head shall—

- (A) develop metrics to assess the effectiveness of the activities funded in making progress toward the purposes of the Program set forth under subsection (b)(2), including the effectiveness of Manufacturing USA institutes in advancing technology readiness levels or manufacturing readiness levels;

- (B) establish standards for the performance of Manufacturing USA institutes that are based on the metrics developed under subparagraph (A); and

- (C) for each Manufacturing USA institute supported by the award, 5 years after the initial award and every 5 years thereafter until Federal financial assistance under this subsection is discontinued, conduct an assessment of the institute to confirm whether the performance of the institute is meeting the

standards for performance established under subparagraph (B).

**(6) Collaboration**

In awarding financial assistance under paragraph (1), an agency head, in coordination with the National Program Office, as the agency head considers appropriate, may collaborate with Federal departments and agencies whose missions contribute to or are affected by advanced manufacturing, including, as the agency head considers appropriate, the Department of Agriculture, the Department of Defense, the Department of Education, the Department of Energy, the Department of Labor, the Food and Drug Administration, the National Aeronautics and Space Administration, the National Institutes of Health, and the National Science Foundation.

**(7) Matching funds and preferences**

**(A) In general**

Except as provided in subparagraph (B), an agency head may not, with respect to a Manufacturing USA institute, award financial assistance under paragraph (1) or renew an award of financial assistance under paragraph (2) unless the agency head determines that non-Federal funding comprises 50 percent or more of the total amount of funding made available for the operation and support of the institute.

**(B) Waivers**

An agency head awarding financial assistance under paragraph (1) with respect to a Manufacturing USA institute may waive the requirements of subparagraph (A) in the case of satellite centers, large capital facilities, equipment purchases, workforce development, or general operations.

**(8) Diversity preferences**

In awarding financial assistance under paragraph (1) for planning or establishing a Manufacturing USA institute, an agency head shall give special consideration to Manufacturing USA institutes that—

- (A) contribute to the geographic diversity of the Manufacturing USA Program;
- (B) are located in an area with a low per capita income;
- (C) are located in an area with a high proportion of socially disadvantaged residents; or
- (D) are located in small and rural communities.

**(f) Authority to award financial assistance for construction of test beds and specialized facilities**

**(1) In general**

The Secretary may, acting through the Director, award financial assistance for the construction of test beds and specialized facilities by Manufacturing USA institutes established or supported under subsection (e) as the Secretary considers appropriate to carry out the purposes of the Program.

**(2) Requirements**

The Secretary shall exercise authority under paragraph (1) in a manner and with require-

ments consistent with paragraphs (3) through (8) of subsection (e).

**(3) Priority**

The Secretary shall establish preferences in selection criteria for proposals for financial assistance under this subsection from Manufacturing USA institutes that integrate as active members one or more covered entities as described in section 18971 of title 42.

**(g) Grant program for public service activities for Manufacturing USA institutes without Federal funding**

The Secretary may award a grant on a competitive basis to a Manufacturing USA institute that is not receiving financial assistance under subsection (e) to carry out workforce development, outreach to small- and medium-sized manufacturers, and other activities that—

- (1) are determined by the Secretary to be in the national interest; and
- (2) are unlikely to receive private sector financial support.

**(h) Authorization of appropriations**

**(1) NIST Industrial Technical Services account**

To the extent provided for in advance by appropriations Acts, the Secretary may use amounts appropriated to the Industrial Technical Services account to carry out this section as follows:

(A) For each of the fiscal years 2015 through 2019, an amount not to exceed \$5,000,000.

(B) For each of fiscal years 2020 through 2030, such amounts as may be necessary to carry out this section.

**(2) Department of Energy**

There are authorized to be appropriated to the Secretary of Energy for the provision of financial assistance under subsection (e) by the Department of Energy amounts as follows:

(A) \$70,000,000 for each of fiscal years 2020, 2021, and 2022.

(B) \$84,000,000 for each of fiscal years 2023 and 2024.

**(i) National Program Office**

**(1) Establishment**

The Secretary shall establish, within the Institute, the National Office of the Manufacturing USA Network (referred to in this section as the “National Program Office”), which shall oversee and carry out the Program.

**(2) Functions**

The functions of the National Program Office are—

(A) to oversee the planning, management, and coordination of the Program;

(B) to coordinate with and, as appropriate, enter into memorandums of understanding with Federal departments and agencies whose missions contribute to or are affected by advanced manufacturing, including the Department of Agriculture, the Department of Defense, the Department of Education, the Department of Energy, the Department of Labor, the Food and Drug Administration, the National Aeronautics and Space Admin-

istration, the National Institutes of Health, and the National Science Foundation, to carry out the purposes set forth under subsection (b)(2);

(C) to develop, not later than December 16, 2015, and update not less frequently than once every 3 years thereafter, a strategic plan to guide the Program, including a strategy for retaining domestic public benefits from Manufacturing USA institutes once Federal funding has been discontinued;

(D) to establish such procedures, processes, and criteria as may be necessary and appropriate to maximize cooperation and coordinate the activities of the Program with programs and activities of other Federal departments and agencies whose missions contribute to or are affected by advanced manufacturing;

(E) to establish a clearinghouse of public information related to the activities of the Program;

(F) to act as a convener of the Network;

(G) to work with Federal agencies that are not sponsoring or supporting a Manufacturing USA institute to explore and develop options for sponsoring or supporting a Manufacturing USA institute;

(H) to work with Federal agencies that are sponsoring or supporting a Manufacturing USA institute to develop and implement network-wide performance goals with measurable targets and timelines;

(I) to help develop pilot programs that may be implemented by the Manufacturing USA institutes to address specific purposes of the Program, including to accelerate technology transfer to the private sector and to develop entrepreneurship programs;

(J) to provide support services to promote workforce development activities, including the development of industry credentials;

(K) to identify and disseminate best practices for workforce education and training across the Network and further enhance collaboration among Manufacturing USA institutes in developing and implementing such practices;

(L) to collaborate with the Department of Labor, the Department of Education, industry, career and technical education schools, local community colleges, universities, and labor organizations to provide input, as appropriate, for the development of national certifications for advanced manufacturing workforce skills in the technology areas of the Manufacturing USA institutes; and

(M) to coordinate with Manufacturing USA institutes to develop best practices for the membership agreements and coordination of similar project solicitations.

### (3) Recommendations

In developing and updating the strategic plan under paragraph (2)(C), the Secretary shall solicit recommendations and advice from a wide range of stakeholders, including industry, small and medium-sized manufacturing enterprises, research universities, community colleges, State, Tribal, and local governments, and other relevant organizations and institutions on an ongoing basis.

### (4) Report to Congress

Upon completion, the Secretary shall transmit the strategic plan required under paragraph (2)(C) to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives.

### (5) Hollings Manufacturing Extension Partnership

#### (A) In general

The Secretary shall ensure that the National Program Office leverages the capabilities of the Hollings Manufacturing Extension Partnership into Program planning to ensure—

(i) significant outreach to, participation of, and engagement of small- and medium-sized manufacturers in Manufacturing USA institutes across the entirety of the manufacturing supply chain; and

(ii) that the results of the Program, including technologies developed by the Program, reach small- and medium-sized manufacturers and that such entities have access to technical assistance, as appropriate, in deploying those technologies.

#### (B) Liaisons

The Secretary may provide financial assistance to a manufacturing extension center established as part of the Hollings Manufacturing Extension Partnership to support the purposes of the Program by providing services in one or more of the following areas:

(i) Support services for small- and medium-sized manufacturers, that many include the designation of a liaison.

(ii) Assistance with workforce development.

(iii) Technology transfer for small and medium-sized manufacturers.

(iv) Such other areas as the Secretary determines appropriate to support the purposes of the Program.

### (6) Detailees

Any Federal Government employee may be detailed to the National Program Office without reimbursement. Such detail shall be without interruption or loss of civil service status or privilege.

### (7) Council for coordination of institutes

#### (A) Council

The National Program Office shall establish or designate a council of heads of any Manufacturing USA institute receiving Federal funding at any time to foster collaboration between Manufacturing USA institutes.

#### (B) Meetings

The council established or designated pursuant to subparagraph (A) shall meet not less frequently than twice each year.

#### (C) Duties of the council

The council established pursuant to subparagraph (A) shall assist the National Program Office in carrying out the functions of the National Program Office under paragraph (2).

**(j) Reporting and auditing****(1) Annual reports to the Secretary****(A) In general**

Not less frequently than once each year, each agency head that is providing financial assistance under subsection (e) shall—

(i) require each recipient of such financial assistance submit to the agency head a report that describes the finances and performance of the Manufacturing USA institute with respect to which the financial assistance is awarded; and

(ii) submit to the Secretary each report received by the agency head under clause (i).

**(B) Elements**

Each report submitted under subparagraph (A) shall include:

(i) an accounting of expenditures of amounts awarded to the recipient under subsection (e); and

(ii) consistent with the standards for performance established under subsection (e)(5)(B), a description of the performance of the Manufacturing USA institute with respect to—

(I) its goals, plans, financial support, and accomplishments; and

(II) how the Manufacturing USA institute has furthered the purposes set forth under subsection (b)(2).

**(2) Annual reports to Congress****(A) In general**

Not less frequently than once each year until December 31, 2030, the Secretary shall submit a report to Congress that describes the performance of the Program during the most recent 1-year period.

**(B) Elements**

Each report submitted under subparagraph (A) shall include, for the period covered by the report—

(i) a summary and assessment of the reports received by the Secretary under paragraph (1);

(ii) an accounting of the funds expended by the Secretary under the Program, including any waivers made under subsection (e)(7)(B);

(iii) an assessment of the participation in, and contributions to, the Network by any Manufacturing USA institutes not receiving financial assistance under subsection (e); and

(iv) an assessment of the Program with respect to meeting the purposes set forth under subsection (b)(2).

**(3) Assessments by Comptroller General of the United States****(A) Assessments**

Not less frequently than once every 3 years, the Comptroller General of the United States shall submit to Congress an assessment of the operation of the Program during the most recent 3-year period, including an assessment of the progress made towards achieving the goals specified in the national

strategic plan for advanced manufacturing required under section 6622(b)(7) of title 42.

**(B) Elements**

Each assessment submitted under subparagraph (A) shall include, for the period covered by the report—

(i) a review of the management, coordination, and industry utility of the Program;

(ii) an assessment of the extent to which the Program has furthered the purposes set forth under subsection (b)(2);

(iii) such recommendations for legislative and administrative action as the Comptroller General considers appropriate to improve the Program; and

(iv) an assessment as to whether any prior recommendations for improvement made by the Comptroller General have been implemented or adopted.

**(C) Final assessment**

No later than December 31, 2030, the Comptroller General shall submit to Congress a final report regarding the overall success of the Program.

**(k) Additional authorities****(1) Appointment of personnel and contracts**

The Secretary may appoint such personnel and enter into such contracts, financial assistance agreements, and other agreements as the Secretary considers necessary or appropriate to carry out the Program, including support for research and development activities involving a Manufacturing USA institute.

**(2) Transfer of funds**

Of amounts available under the authority provided by subsection (g), the Secretary may transfer to other Federal agencies such sums as the Secretary considers necessary or appropriate to carry out the Program. No funds so transferred may be used to reimburse or otherwise pay for the costs of financial assistance incurred or commitments of financial assistance made prior to December 16, 2014.

**(3) Authority of other agencies**

In the event that the Secretary exercises the authority to transfer funds to another agency under paragraph (2), such agency may accept such funds to award and administer, under the same conditions and constraints applicable to the Secretary, all aspects of financial assistance awards under this section.

**(4) Use of resources**

In furtherance of the purposes of the Program, the Secretary may use, with the consent of a covered entity and with or without reimbursement, the land, services, equipment, personnel, and facilities of such covered entity.

**(5) Acceptance of resources**

In addition to amounts appropriated to carry out the Program, the Secretary may accept funds, services, equipment, personnel, and facilities from any covered entity to carry out the Program, subject to the same conditions and constraints otherwise applicable to the Secretary under this section and such funds

may only be obligated to the extent provided for in advance by appropriations Acts.

**(6) Covered entities**

For purposes of this subsection, a covered entity is any Federal department, Federal agency, instrumentality of the United States, State, local government, Tribal government, territory, or possession of the United States, or of any political subdivision thereof, or international organization, or any public or private entity or individual.

**(7) Collaborations with other agencies**

The Secretary shall collaborate with Federal agencies whose missions contribute to, or are affected by, advanced manufacturing to identify and leverage existing resources at such Federal agencies to assist Manufacturing USA institutes in carrying out the purposes of the Program set forth under subsection (b)(2). Such existing resources may include programs—

(A) at the Department of Labor relating to labor and apprenticeships;

(B) at the Economic Development Administration relating to regional innovation, such as the Regional Innovation Strategies program;

(C) at the Department of Education relating to workforce development, education, training, and retraining;

(D) at the Department of Defense relating to procurement and other authorities of the Department of Defense;

(E) at the Food and Drug Administration relating to biopharmaceutical manufacturing;

(F) at the National Science Foundation, including the Advanced Technological Education program;

(G) at the National Aeronautics and Space Administration relating to procurement, workforce development, education, training, and retraining;

(H) at the Department of Energy relating to development of clean energy technologies and other authorities of the Department of Energy;

(I) at the Department of Agriculture relating to outreach to rural communities;

(J) additional programs that the Secretary determines are appropriate to support the activities of existing Manufacturing USA institutes; and<sup>2</sup>

(K) additional programs that the Secretary determines are appropriate to support the activities of existing Manufacturing USA institutes.<sup>2</sup>

**(l) Patents**

Chapter 18 of title 35 shall apply to any funding agreement (as defined in section 201 of that title) awarded to new or existing Manufacturing USA institutes with respect to which financial assistance is awarded under subsection (e).

**(m) References to prior names and terminology**

Any reference in law, regulation, map, document, paper, or other record of the United

States to the “Network for Manufacturing Innovation Program”, the “Network for Manufacturing Innovation”, “National Office of the Network for Manufacturing Innovation Program”, or a “center for manufacturing innovation” shall be considered to be a reference to the Manufacturing USA Program, the Manufacturing USA Network, the National Office of the Manufacturing USA Network, or a Manufacturing USA institute, respectively.

(Mar. 3, 1901, ch. 872, § 34, as added Pub. L. 113-235, div. B, title VII, § 703(2), Dec. 16, 2014, 128 Stat. 2221; amended Pub. L. 116-92, div. A, title XVII, § 1741(a), Dec. 20, 2019, 133 Stat. 1826; Pub. L. 117-167, div. B, title II, §§ 10261, 10263(b)–(d), Aug. 9, 2022, 136 Stat. 1503, 1505, 1506; Pub. L. 117-263, div. E, title LIX, § 5911, Dec. 23, 2022, 136 Stat. 3442.)

**Editorial Notes**

**PRIOR PROVISIONS**

A prior section 34 of act Mar. 3, 1901, ch. 872, was renumbered section 35 and is set out as a Short Title note under section 271 of this title.

**AMENDMENTS**

2022—Subsec. (e)(8). Pub. L. 117-167, § 10261, added par. (8).

Subsecs. (f) to (h). Pub. L. 117-263, § 5911, added subsec. (f) and redesignated former subsecs. (f) and (g) as (g) and (h), respectively. Former subsec. (h) redesignated (i).

Subsec. (h)(2)(C). Pub. L. 117-167, § 10263(c), inserted “, including a strategy for retaining domestic public benefits from Manufacturing USA institutes once Federal funding has been discontinued” after “Program”.

Subsec. (h)(2)(J). Pub. L. 117-167, § 10263(d), inserted “, including the development of industry credentials” after “activities”.

Subsec. (h)(7). Pub. L. 117-167, § 10263(b), added par. (7).

Subsecs. (i) to (m). Pub. L. 117-263, § 5911(l), redesignated subsecs. (h) to (l) as (i) to (m), respectively.

2019—Pub. L. 116-92 amended section generally. Prior to amendment, section related to Network for Manufacturing Innovation.

**Statutory Notes and Related Subsidiaries**

**COORDINATION WITH HOLLINGS MANUFACTURING EXTENSION PARTNERSHIP CENTERS**

Pub. L. 116-283, div. H, title XCIV, § 9415, Jan. 1, 2021, 134 Stat. 4822, provided that: “Notwithstanding section 34(d)(2)(A)(iv) of the National Institute for [of] Standards and Technology Act (15 U.S.C. 278s(d)(2)(A)(iv)), each Manufacturing USA Institute (established under subsection (d) of such section) shall, as appropriate, contract with a Hollings Manufacturing Extension Partnership Center (established under section 25 of such Act [15 U.S.C. 278k]) in each State in which such Institute provides services, either directly or through another such Center, to provide defense industrial base-related outreach, technical assistance, workforce development, and technology transfer assistance to small and medium-sized manufacturers. No Center shall charge in excess of its standard rate for such services. Funds received by a Center through such a contract shall not constitute financial assistance under section 25(e) of such Act.”

**EXPANSION OF MANUFACTURING USA NETWORK**

Pub. L. 116-92, div. A, title XVII, § 1741(b), Dec. 20, 2019, 133 Stat. 1837, provided that: “Subject to the availability of appropriations, the Secretary of Commerce shall take such actions as may be necessary to increase

<sup>2</sup>So in original. Subpars. (J) and (K) are identical and the words “additional programs” do not follow from introductory provisions.

the number of Manufacturing USA institutes that participate in the Manufacturing USA Network.”

#### FINDINGS

Pub. L. 113-235, div. B, title VII, § 702, Dec. 16, 2014, 128 Stat. 2220, provided that: “Congress finds the following:

“(1) In 2012, manufacturers contributed \$2.03 trillion to the economy, or 1/4 of United States Gross Domestic Product.

“(2) For every \$1.00 spent in manufacturing, another \$1.32 is added to the economy, the highest multiplier effect of any economic sector.

“(3) Manufacturing supports an estimated 17,400,000 jobs in the United States—about 1 in 6 private-sector jobs. More than 12,000,000 Americans (or 9 percent of the workforce) are employed directly in manufacturing.

“(4) In 2012, the average manufacturing worker in the United States earned \$77,505 annually, including pay and benefits. The average worker in all industries earned \$62,063.

“(5) Taken alone, manufacturing in the United States would be the 8th largest economy in the world.

“(6) Manufacturers in the United States perform two-thirds of all private-sector research and development in the United States, driving more innovation than any other sector.”

### § 278t. Advanced communications research activities

#### (a) Advanced communications research

##### (1) In general

The Director, in consultation with the Assistant Secretary for Communications and Information, the Director of the National Science Foundation, and heads of other Federal agencies, as appropriate, shall carry out a program of measurement research for advanced communications technologies.

##### (2) Research areas

Research areas may include—

(A) radio frequency emissions and interference, including technologies and techniques to mitigate such emissions and interference;

(B) advanced antenna arrays and artificial intelligence systems capable of operating advanced antenna arrays;

(C) artificial intelligence systems to enable internet of things networks, immersive technology, and other advanced communications technologies;

(D) network sensing and monitoring technologies;

(E) technologies to enable spectrum flexibility and agility;

(F) optical and quantum communications technologies;

(G) security of advanced communications systems;

(H) public safety communications;

(I) resilient internet of things applications for advanced manufacturing; and

(J) other research areas determined necessary by the Director.

##### (3) Testbeds

In coordination with the Assistant Secretary for Communications and Information, the private sector, and other Federal agencies as appropriate, the Director may develop and manage testbeds for research and development of

advanced communications technologies, avoiding duplication of existing testbeds run by other agencies or the private sector.

##### (4) Outreach

In carrying out the activities under this subsection, the Director shall seek input from other Federal agencies and from private sector stakeholders, on an ongoing basis, to help inform research and development priorities, including through workshops and other multi-stakeholder activities.

##### (5) Technical roadmaps

In carrying out the activities under this subsection, the Director shall convene industry, institutions of higher education, nonprofit organizations, Federal laboratories, and other Federal agencies engaged in advanced communications research and development to develop, and periodically update, coordinated technical roadmaps for advanced communications research in priority areas, such as those described in paragraph (2).

#### (b) National Advanced Spectrum and Communications Test Network

##### (1) In general

The Director, in coordination with the Administrator of the National Telecommunications and Information Administration and heads of other Federal agencies, as appropriate, shall operate a national network of government, academic, and commercial test capabilities and facilities to be known as the National Advanced Spectrum and Communications Test Network (referred to in this section as “NASCTN”).

##### (2) Purposes

NASCTN shall be for the purposes of facilitating and coordinating the use of intellectual capacity, modeling and simulation, laboratory facilities, and test facilities to meet national spectrum interests and challenges, including—

(A) measurements and analyses of electromagnetic propagation, radio systems characteristics, and operating techniques affecting the utilization of the electromagnetic spectrum in coordination with specialized, related research and analysis performed by other Federal agencies in their areas of responsibility;

(B) conducting research and analysis in the general field of telecommunications sciences in support of the Institute’s mission and in support of other Government agencies;

(C) developing methodologies for testing, measuring, and setting guidelines for interference;

(D) conducting interference tests to better understand the impact of current and proposed Federal and commercial spectrum activities;

(E) conducting research and testing to improve spectrum interference tolerance, flexibility, agility, and interference mitigation methods; and

(F) other activities as determined necessary by the Director.

(Mar. 3, 1901, ch. 872, § 35, as added Pub. L. 117-167, div. B, title II, § 10230(2), Aug. 9, 2022, 136 Stat. 1482.)