

## PRIOR PROVISIONS

A prior section 6618, Pub. L. 94-282, title II, § 209, May 11, 1976, 90 Stat. 468, directed President to transmit annually to Congress a report on science and technology to be prepared by Office of Science and Technology Policy, and directed Director of Office to make the report available as a public document, prior to repeal by Pub. L. 97-375, title II, § 215(1), Dec. 21, 1982, 96 Stat. 1826. See section 6615 of this title.

**§ 6619. National coordination of research infrastructure**

**(a) Identification and prioritization of deficiencies in Federal research facilities**

Each year the Director of the Office of Science and Technology Policy shall, through the National Science and Technology Council, identify and prioritize the deficiencies in research facilities and major instrumentation located at Federal laboratories and national user facilities at academic institutions that are widely accessible for use by researchers in the United States. In prioritizing such deficiencies, the Director shall consider research needs in areas relevant to the specific mission requirements of Federal agencies.

**(b) Planning for acquisition, refurbishment, and maintenance of research facilities and major instrumentation**

The Director shall, through the National Science and Technology Council, coordinate the planning by Federal agencies for the acquisition, refurbishment, and maintenance of research facilities and major instrumentation to address the deficiencies identified under subsection (a).

**(c) Report**

The Director shall submit to Congress each year, together with documents submitted to Congress in support of the budget of the President for the fiscal year beginning in such year (as submitted pursuant to section 1105 of title 31), a report, current as of the fiscal year ending in the year before such report is submitted, setting forth the following:

(1) A description of the deficiencies in research infrastructure identified in accordance with subsection (a).

(2) A list of projects and budget proposals of Federal research facilities, set forth by agency, for major instrumentation acquisitions that are included in the budget proposal of the President.

(3) An explanation of how the projects and instrumentation acquisitions described in paragraph (2) relate to the deficiencies and priorities identified pursuant to subsection (a).

(Pub. L. 110-69, title I, § 1007, Aug. 9, 2007, 121 Stat. 580.)

## CODIFICATION

Section was enacted as part of the America COMPETES Act, also known as the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act, and not as part of the National Science and Technology Policy, Organization, and Priorities Act of 1976 which comprises this chapter.

**§ 6620. Release of scientific research results**

**(a) Principles**

Not later than 90 days after August 9, 2007, the Director of the Office of Science and Technology Policy, in consultation with the Director of the Office of Management and Budget and the heads of all Federal civilian agencies that conduct scientific research, shall develop and issue an overarching set of principles to ensure the communication and open exchange of data and results to other agencies, policymakers, and the public of research conducted by a scientist employed by a Federal civilian agency and to prevent the intentional or unintentional suppression or distortion of such research findings. The principles shall encourage the open exchange of data and results of research undertaken by a scientist employed by such an agency and shall be consistent with existing Federal laws, including chapter 18 of title 35 (commonly known as the “Bayh-Dole Act”). The principles shall also take into consideration the policies of peer-reviewed scientific journals in which Federal scientists may currently publish results.

**(b) Implementation**

Not later than 180 days after August 9, 2007, the Director of the Office of Science and Technology Policy shall ensure that all civilian Federal agencies that conduct scientific research develop specific policies and procedures regarding the public release of data and results of research conducted by a scientist employed by such an agency consistent with the principles established under subsection (a). Such policies<sup>1</sup> and procedures shall—

(1) specifically address what is and what is not permitted or recommended under such policies and procedures;

(2) be specifically designed for each such agency;

(3) be applied uniformly throughout each such agency; and

(4) be widely communicated and readily accessible to all employees of each such agency and the public.

(Pub. L. 110-69, title I, § 1009, Aug. 9, 2007, 121 Stat. 581.)

## CODIFICATION

Section was enacted as part of the America COMPETES Act, also known as the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Act, and not as part of the National Science and Technology Policy, Organization, and Priorities Act of 1976 which comprises this chapter.

**§ 6621. Coordination of Federal STEM education**

**(a) Establishment**

The Director shall establish a committee under the National Science and Technology Council, including the Office of Management and Budget, with the responsibility to coordinate Federal programs and activities in support of STEM education, including at the National Science Foundation, the Department of Energy, the National Aeronautics and Space Administra-

<sup>1</sup> So in original. Probably should be “policies”.

tion, the National Oceanic and Atmospheric Administration, the Department of Education, and all other Federal agencies that have programs and activities in support of STEM education.

**(b) Responsibilities**

The committee established under subsection (a) shall—

(1) coordinate the STEM education activities and programs of the Federal agencies;

(2) coordinate STEM education activities and programs with the Office of Management and Budget;

(3) encourage the teaching of innovation and entrepreneurship as part of STEM education activities;

(4) review STEM education activities and programs to ensure they are not duplicative of similar efforts within the Federal government;

(5) develop, implement through the participating agencies, and update once every 5 years a 5-year STEM education strategic plan, which shall—

(A) specify and prioritize annual and long-term objectives;

(B) specify the common metrics that will be used to assess progress toward achieving the objectives;

(C) describe the approaches that will be taken by each participating agency to assess the effectiveness of its STEM education programs and activities; and

(D) with respect to subparagraph (A), describe the role of each agency in supporting programs and activities designed to achieve the objectives;

(6) establish, periodically update, and maintain an inventory of federally sponsored STEM education programs and activities, including documentation of assessments of the effectiveness of such programs and activities and rates of participation by women, underrepresented minorities, and persons in rural areas in such programs and activities;

(7) collaborate with the STEM Education Advisory Panel established under section 303 of the American Innovation and Competitiveness Act and other outside stakeholders to ensure the engagement of the STEM education community;

(8) review the measures used by a Federal agency to evaluate its STEM education activities and programs;

(9) request and review feedback from States on how the States are utilizing Federal STEM education programs and activities; and

(10) recommend the reform, termination, or consolidation of Federal STEM education activities and programs, taking into consideration the recommendations of the STEM Education Advisory Panel.

**(c) Responsibilities of OSTP**

The Director shall encourage and monitor the efforts of the participating agencies to ensure that the strategic plan under subsection (b)(5) is developed and executed effectively and that the objectives of the strategic plan are met.

**(d) Reports**

The Director shall transmit a report annually to Congress at the time of the President's bud-

get request describing the plan required under subsection (b)(5). The annual report shall include—

(1) a description of the STEM education programs and activities for the previous and current fiscal years, and the proposed programs and activities under the President's budget request, of each participating Federal agency;

(2) the levels of funding for each participating Federal agency for the programs and activities described under paragraph (1) for the previous fiscal year and under the President's budget request;

(3) an evaluation of the levels of duplication and fragmentation of the programs and activities described under paragraph (1);

(4) except for the initial annual report, a description of the progress made in carrying out the implementation plan, including a description of the outcome of any program assessments completed in the previous year, and any changes made to that plan since the previous annual report;

(5) a description of how the participating Federal agencies will disseminate information about federally supported resources for STEM education practitioners, including teacher professional development programs, to States and to STEM education practitioners, including to teachers and administrators in schools that meet the criteria described in subsection (c)(1)(A) and (B) of section 7381j of this title;

(6) a description of all consolidations and terminations of Federal STEM education programs and activities implemented in the previous fiscal year, including an explanation for the consolidations and terminations;

(7) recommendations for reforms, consolidations, and terminations of STEM education programs or activities in the upcoming fiscal year; and

(8) a description of any significant new STEM education public-private partnerships.

(Pub. L. 111-358, title I, §101, Jan. 4, 2011, 124 Stat. 3984; Pub. L. 114-329, title III, §304, Jan. 6, 2017, 130 Stat. 3006.)

REFERENCES IN TEXT

Section 303 of the American Innovation and Competitiveness Act, referred to in subsec. (b)(7), is section 303 of Pub. L. 114-329, which is set out as a note under this section.

CODIFICATION

Section was enacted as part of the America COMPETES Reauthorization Act of 2010, also known as the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Reauthorization Act of 2010, and not as part of the National Science and Technology Policy, Organization, and Priorities Act of 1976 which comprises this chapter.

AMENDMENTS

2017—Subsec. (b)(7) to (10). Pub. L. 114-329, §304(a), added pars. (7) to (10).

Subsec. (c). Pub. L. 114-329, §304(b)(2), redesignated subsec. (b) relating to responsibilities of OSTP as (c). Former subsec. (c) redesignated (d).

Subsec. (d). Pub. L. 114-329, §304(b)(1), redesignated subsec. (c) as (d) and substituted "Reports" for "Report" in heading.

Subsec. (d)(6) to (8). Pub. L. 114-329, §304(b)(3), added pars. (6) to (8).

## STEM EDUCATION ADVISORY PANEL

Pub. L. 114-329, title III, §303, Jan. 6, 2017, 130 Stat. 3004, provided that:

“(a) ESTABLISHMENT.—Not later than 180 days after the date of enactment this Act [Jan. 6, 2017], the Director of the Foundation, Secretary of Education, Administrator of the National Aeronautics and Space Administration, and Administrator of the National Oceanic and Atmospheric Administration shall jointly establish an advisory panel (referred to in this section as the ‘STEM Education Advisory Panel’) to advise the Committee on STEM Education of the National Science and Technology Council (referred to in this section as ‘CoSTEM’) on matters relating to STEM education.

“(b) MEMBERS.—

“(1) IN GENERAL.—The STEM Education Advisory Panel shall be composed of not less than 11 members.

“(2) APPOINTMENT.—

“(A) IN GENERAL.—Subject to subparagraph (B), the Director of the Foundation, in consultation with the Secretary of Education and the heads of the Federal science agencies, shall appoint the members of the STEM Education Advisory Panel.

“(B) CONSIDERATION.—In selecting individuals to appoint under subparagraph (A), the Director of the Foundation shall seek and give consideration to recommendations from Congress, industry, the scientific community, including the National Academy of Sciences, scientific professional societies, academia, State and local governments, organizations representing individuals identified in section 33 or section 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a, 1885b), and such other organizations as the Director considers appropriate.

“(C) QUALIFICATIONS.—Members shall—

“(i) primarily be individuals from academic institutions, nonprofit organizations, and industry, including in-school, out-of-school, and informal education practitioners; and

“(ii) be individuals who are qualified to provide advice and information on STEM education research, development, training, implementation, interventions, professional development, or workforce needs or concerns.

“(c) RESPONSIBILITIES.—

“(1) IN GENERAL.—The STEM Education Advisory Panel shall—

“(A) advise CoSTEM;

“(B) periodically assess CoSTEM’s progress in carrying out its responsibilities under section 101(b) of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 6621(b)); and

“(C) help identify any need or opportunity to update the strategic plan under section 101(b) of that Act.

“(2) CONSIDERATIONS.—In its advisory role, the STEM Education Advisory Panel shall consider—

“(A) the management, coordination, and implementation of STEM education programs and activities across the Federal Government;

“(B) the appropriateness of criteria used by Federal agencies to evaluate the effectiveness of Federal STEM education programs and activities;

“(C) whether societal and workforce concerns are adequately addressed by current Federal STEM education programs and activities;

“(D) how Federal agencies can incentivize institutions of higher education to improve retention of STEM students;

“(E) ways to leverage private and nonprofit STEM investments and encourage public-private partnerships to strengthen STEM education and help build the STEM workforce pipeline;

“(F) ways to incorporate workforce needs into Federal STEM education programs and activities, particularly for specific employment fields of national interest and employment fields experiencing high unemployment rates;

“(G) ways to better vertically and horizontally integrate Federal STEM education programs and activities from pre-kindergarten through graduate study and the workforce, and from in-school to out-of-school in order to improve transitions for students moving through the STEM education and workforce pipelines;

“(H) the extent to which Federal STEM education programs and activities are contributing to recruitment and retention of individuals identified in sections 33 and 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a, 1885b) in the STEM education and workforce pipelines; and

“(I) ways to encourage geographic diversity in the STEM education and the workforce pipelines.

“(3) RECOMMENDATIONS.—The STEM Education Advisory Panel shall make recommendations to improve Federal STEM education programs and activities based on each assessment under paragraph (1)(B).

“(d) FUNDING.—The Director of the Foundation, the Secretary of Education, the Administrator of the National Aeronautics and Space Administration, and the Administrator of the National Oceanic and Atmospheric Administration shall jointly make funds available on an annual basis to support the activities of the STEM Education Advisory Panel.

“(e) REPORTS.—Not later than 1 year after the date of enactment of this Act [Jan. 6, 2017], and after each assessment under subsection (c)(1)(B), the STEM Education Advisory Panel shall submit to the appropriate committees of Congress and CoSTEM a report on its assessment under that subsection and its recommendations under subsection (c)(3).

“(f) TRAVEL EXPENSES OF NON-FEDERAL MEMBERS.—

“(1) IN GENERAL.—Non-Federal members of the STEM Education Advisory Panel, while attending meetings of the panel or while otherwise serving at the request of a co-chairperson away from their homes or regular places of business, may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code, for individuals in the Government serving without pay.

“(2) RULE OF CONSTRUCTION.—Nothing in this subsection shall be construed to prohibit members of the STEM Advisory Panel who are officers or employees of the United States from being allowed travel expenses, including per diem in lieu of subsistence, in accordance with existing law.

“(g) TERMINATION.—The STEM Education Advisory Panel established under subsection (a) shall terminate on the date that is 5 years after the date that it is established.”

[For definitions of terms as used in section 303 of Pub. L. 114-329, set out above, see section 2 of Pub. L. 114-329, set out as a note under section 1862s of this title.]

## DEFINITIONS

Pub. L. 114-59, §2, Oct. 7, 2015, 129 Stat. 540, provided that: “For purposes of carrying out STEM education activities at the National Science Foundation, the Department of Energy, the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, the National Institute of Standards and Technology, and the Environmental Protection Agency, the term ‘STEM education’ means education in the subjects of science, technology, engineering, and mathematics, including computer science.”

Pub. L. 111-358, §2, Jan. 4, 2011, 124 Stat. 3984, provided that: “In this Act [see Tables for classification]:

“(1) DIRECTOR.—In title I [enacting this section, sections 6622 to 6624 of this title, and section 3719 of Title 15, Commerce and Trade, and amending section 20144 of Title 51, National and Commercial Space Programs], the term ‘Director’ means the Director of the Office of Science and Technology Policy.

“(2) STEM.—The term ‘STEM’ means the academic and professional disciplines of science, technology, engineering, and mathematics.”

**§ 6622. Coordination of advanced manufacturing research and development**

**(a) Interagency Committee**

The Director shall establish or designate a Committee on Technology under the National Science and Technology Council. The Committee shall be responsible for planning and coordinating Federal programs and activities in advanced manufacturing research and development. In furtherance of the Committee's work, the Committee shall consult with the National Economic Council.

**(b) Responsibilities of Committee**

The Committee shall—

(1) coordinate the advanced manufacturing research and development programs and activities of the Federal agencies;

(2) establish goals and priorities for advanced manufacturing research and development that will strengthen United States manufacturing;

(3) work with industry organizations, Federal agencies, and Federally Funded Research and Development Centers not represented on the Committee, to identify and reduce regulatory, logistical, and fiscal barriers within the Federal government and State governments that inhibit United States manufacturing;

(4) facilitate the transfer of intellectual property and technology based on federally supported university research into commercialization and manufacturing;

(5) identify technological, market, or business challenges that may best be addressed by public-private partnerships, and are likely to attract both participation and primary funding from industry;

(6) encourage the formation of public-private partnerships to respond to those challenges for transition to United States manufacturing; and

(7) develop and update a national strategic plan for advanced manufacturing in accordance with subsection (c).

**(c) National strategic plan for advanced manufacturing**

**(1) In general**

The President shall submit to Congress, and publish on an Internet website that is accessible to the public, the strategic plan developed under paragraph (2).

**(2) Development**

The Committee shall develop, and update as required under paragraph (4), in coordination with the National Economic Council, a strategic plan to improve Government coordination and provide long-term guidance for Federal programs and activities in support of United States manufacturing competitiveness, including advanced manufacturing research and development.

**(3) Contents**

The strategic plan described in paragraph (2) shall—

(A) specify and prioritize near-term and long-term objectives, including research and

development objectives, the anticipated time frame for achieving the objectives, and the metrics for use in assessing progress toward the objectives;

(B) describe the progress made in achieving the objectives from prior strategic plans, including a discussion of why specific objectives were not met;

(C) specify the role, including the programs and activities, of each relevant Federal agency in meeting the objectives of the strategic plan;

(D) describe how the Federal agencies and Federally funded research and development centers supporting advanced manufacturing research and development will foster the transfer of research and development results into new manufacturing technologies and United States-based manufacturing of new products and processes for the benefit of society to ensure national, energy, and economic security;

(E) describe how such Federal agencies and centers will strengthen all levels of manufacturing education and training programs to ensure an adequate, well-trained workforce;

(F) describe how such Federal agencies and centers will assist small and medium-sized manufacturers in developing and implementing new products and processes;

(G) analyze factors that impact innovation and competitiveness for United States advanced manufacturing, including—

(i) technology transfer and commercialization activities;

(ii) the adequacy of the national security industrial base;

(iii) the capabilities of the domestic manufacturing workforce;

(iv) export opportunities and trade policies;

(v) financing, investment, and taxation policies and practices;

(vi) emerging technologies and markets;

(vii) advanced manufacturing research and development undertaken by competing nations; and

(viii) the capabilities of the manufacturing workforce of competing nations; and

(H) elicit and consider the recommendations of a wide range of stakeholders, including representatives from diverse manufacturing companies, academia, and other relevant organizations and institutions.

**(4) Updates**

Not later than May 1, 2018, and not less frequently than once every 4 years thereafter, the President shall submit to Congress, and publish on an Internet website that is accessible to the public, an update of the strategic plan submitted under paragraph (1). Such updates shall be developed in accordance with the procedures set forth under this subsection.

**(5) Requirement to consider strategy in the budget**

In preparing the budget for a fiscal year under section 1105(a) of title 31, the President shall include information regarding the con-