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(a) The Congress, recognizing the profound impact of science and technology on society, and the interrelations of scientific, technological, economic, social, political, and institutional factors, hereby finds and declares that—

(1) the general welfare, the security, the economic health and stability of the Nation, the conservation and efficient utilization of its natural and human resources, and the effective functioning of government and society require vigorous, perceptive support and employment of science and technology in achieving national objectives;

(2) the many large and complex scientific and technological factors which increasingly influence the course of national and international events require appropriate provision, involving long-range, inclusive planning as well as more immediate program development, to incorporate scientific and technological knowledge in the national decisionmaking process;

(3) the scientific and technological capabilities of the United States, when properly fostered, applied, and directed, can effectively assist in improving the quality of life, in anticipating and resolving critical and emerging international, national, and local problems, in strengthening the Nation's international economic position, and in furthering its foreign policy objectives;

(4) Federal funding for science and technology represents an investment in the future which is indispensable to sustained national progress and human betterment, and there should be a continuing national investment in science, engineering, and technology which is commensurate with national needs and opportunities and the prevalent economic situation;

(5) the manpower pool of scientists, engineers, and technicians, constitutes an invaluable national resource which should be utilized to the fullest extent possible; and

(6) the Nation's capabilities for technology assessment and for technological planning and policy formulation must be strengthened at both Federal and State levels.

(b) As a consequence, the Congress finds and declares that science and technology should contribute to the following priority goals without being limited thereto:

(1) fostering leadership in the quest for international peace and progress toward human freedom, dignity, and well-being by enlarging the contributions of American scientists and engineers to the knowledge of man and his universe, by making discoveries of basic science widely available at home and abroad, and by utilizing technology in support of United States national and foreign policy goals;

(2) increasing the efficient use of essential materials and products, and generally contributing to economic opportunity, stability, and appropriate growth;

(3) assuring an adequate supply of food, materials, and energy for the Nation's needs;

(4) contributing to the national security;

(5) improving the quality of health care available to all residents of the United States;

(6) preserving, fostering, and restoring a healthful and esthetic natural environment;

(7) providing for the protection of the oceans and coastal zones, and the polar regions, and the efficient utilization of their resources;

(8) strengthening the economy and promoting full employment through useful scientific and technological innovations;

(9) increasing the quality of educational opportunities available to all residents of the United States;

(10) promoting the conservation and efficient utilization of the Nation's natural and human resources;

(11) improving the Nation's housing, transportation, and communication systems, and assuring the provision of effective public services throughout urban, suburban, and rural areas;

(12) eliminating air and water pollution, and unnecessary, unhealthful, or ineffective drugs and food additives; and

(13) advancing the exploration and peaceful uses of outer space.

(Pub. L. 94-282, title I, § 101, May 11, 1976, 90 Stat. 459.)

Statutory Notes and Related Subsidiaries

SHORT TITLE OF 2017 AMENDMENT

Pub. L. 114-329, title VI, § 604(a), Jan. 6, 2017, 130 Stat. 3037, provided that: "This section [amending section 6612 of this title] may be cited as the 'United States Chief Technology Officer Act'."

SHORT TITLE

Pub. L. 94-282, § 1, May 11, 1976, 90 Stat. 459, provided that: "This Act [enacting this chapter, amending section 1863 of this title, repealing sections 1, 2, 3, and 4 of Reorganization Plan Numbered 2 of 1962 (76 Stat. 1253), set out as a note under section 1861 of this title, and section 2 of Reorganization Plan Numbered 1 of 1973 (87 Stat. 1089), set out as a note under section 5195 of this title, and enacting provisions set out as notes under this section and sections 1862 and 6611 of this title] may be cited as the 'National Science and Technology Policy, Organization, and Priorities Act of 1976'."

Pub. L. 94-282, title II, § 201, May 11, 1976, 90 Stat. 463, provided that: "This title [enacting subchapter II of this chapter] may be cited as the 'Presidential Science and Technology Advisory Organization Act of 1976'."

INDUSTRIES OF THE FUTURE

Pub. L. 116-283, div. H, title XCIV, § 9412, Jan. 1, 2021, 134 Stat. 4818, provided that:

"(a) SHORT TITLE.—This section may be cited as the 'Industries of the Future Act of 2020'.

"(b) REPORT ON FEDERAL RESEARCH AND DEVELOPMENT FOCUSED ON INDUSTRIES OF THE FUTURE.—

"(1) IN GENERAL.—Not later than 120 days after the date of the enactment of this Act [Jan. 1, 2021], the Director of the Office of Science and Technology Policy shall submit to Congress a report on research and development investments, infrastructure, and workforce development investments of the Federal Government that enable continued United States leadership in industries of the future.

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

"(A) A definition, for purposes of this section, of the term 'industries of the future' that includes emerging technologies.

"(B) An assessment of the current baseline of investments in civilian research and development investments of the Federal Government in the industries of the future.

"(C) A plan to double such baseline investments in artificial intelligence and quantum information science by fiscal year 2022.

"(D) A detailed plan to increase investments described in subparagraph (B) in industries of the future to \$10,000,000,000 per year by fiscal year 2025.

"(E) A plan to leverage investments described in subparagraphs (B), (C), and (D) in industries of the future to elicit complimentary investments by non-Federal entities, including providing incentives for significant complementary investments by such entities and facilitating public-private partnerships.

"(F) Proposals for the Federal Government, including any necessary draft legislation, to implement such plans.

"(c) INDUSTRIES OF THE FUTURE COORDINATION COUNCIL.—

"(1) ESTABLISHMENT.—

"(A) IN GENERAL.—The President shall establish or designate a council to advise the Director of the Office of Science and Technology Policy on matters relevant to the Director and the industries of the future.

"(B) DESIGNATION.—The council established or designated under subparagraph (A) shall be known as the 'Industries of the Future Coordination Council' (in this section the 'Council').

"(2) MEMBERSHIP.—

"(A) COMPOSITION.—The Council shall be composed of employees of the Federal Government who shall be appointed as follows:

"(i) One member appointed by the Director.

"(ii) A chairperson of the Select Committee on Artificial Intelligence of the National Science and Technology Council.

"(iii) A chairperson of the Subcommittee on Advanced Manufacturing of the National Science and Technology Council.

"(iv) A chairperson of the Subcommittee on Quantum Information Science of the National Science and Technology Council.

"(v) Such other members as the President considers appropriate.

"(B) CHAIRPERSON.—The member appointed to the Council under paragraph (A)(i) shall serve as the chairperson of the Council.

"(3) DUTIES.—The duties of the Council are as follows:

"(A) To provide the Director with advice on ways in which in [sic] the Federal Government can ensure the United States continues to lead the world in developing emerging technologies that improve the quality of life of the people of the United States, increase economic competitiveness of the United States, and strengthen the national security of the United States, including identification of the following:

"(i) Federal investments required in fundamental research and development, infrastructure, technology transfer, and workforce development of the United States workers who will support the industries of the future.

"(ii) Actions necessary to create and further develop the workforce that will support the industries of the future.

"(iii) Actions required to leverage the strength of the research and development ecosystem of the United States, which includes academia, industry, and nonprofit organizations, to support industries of the future.

"(iv) Ways that the Federal Government can consider leveraging existing partnerships and creating new partnerships and other multisector collaborations to advance the industries of the future.

"(v) Actions required to accelerate the translation of federally funded research and development to practice and meaningful benefits for society while mitigating any risks.

"(B) To provide the Director with advice on matters relevant to the report required under subsection (b).

"(4) COORDINATION.—The Council shall coordinate with and utilize relevant existing National Science and Technology Council committees to the maximum extent feasible in order to minimize duplication of effort.

"(5) APPLICABILITY OF FACAA.—The Federal Advisory Committee Act ([former] 5 U.S.C. App.) [see 5 U.S.C. 1001 et seq.] shall not apply to the Council established under this subsection.

"(6) SUNSET.—The Council shall terminate on the date that is 6 years after the date of the enactment of this Act [Jan. 1, 2021]."

SECURING AMERICAN SCIENCE AND TECHNOLOGY

Pub. L. 116-92, div. A, title XVII, § 1746, Dec. 20, 2019, 133 Stat. 1843, provided that:

“(a) INTERAGENCY WORKING GROUP.—

“(1) IN GENERAL.—The Director of the Office of Science and Technology Policy, acting through the National Science and Technology Council, in consultation with the National Security Advisor, shall establish or designate an interagency working group to coordinate activities to protect federally funded research and development from foreign interference, cyber attacks, theft, or espionage and to develop common definitions and best practices for Federal science agencies and grantees, while accounting for the importance of the open exchange of ideas and international talent required for scientific progress and American leadership in science and technology.

“(2) MEMBERSHIP.—

“(A) IN GENERAL.—The working group shall include at least one representative of—

“(i) the National Science Foundation;

“(ii) the Department of Energy;

“(iii) the National Aeronautics and Space Administration;

“(iv) the Department of Commerce;

“(v) the Department of Health and Human Services;

“(vi) the Department of Defense;

“(vii) the Department of Agriculture;

“(viii) the Department of Education;

“(ix) the Department of State;

“(x) the Department of the Treasury;

“(xi) the Department of Justice;

“(xii) the Department of Homeland Security;

“(xiii) the Central Intelligence Agency;

“(xiv) the Office of the Director of National Intelligence;

“(xv) the Office of Management and Budget;

“(xvi) the National Economic Council; and

“(xvii) such other Federal department or agency as the President considers appropriate.

“(B) CHAIR.—The working group shall be chaired by the Director of the Office of Science and Technology Policy (or the Director’s designee).

“(3) RESPONSIBILITIES OF THE WORKING GROUP.—The working group established under paragraph (1) shall—

“(A) identify known and potential cyber, physical, and human intelligence threats and vulnerabilities within the United States scientific and technological enterprise;

“(B) coordinate efforts among agencies to share and update important information, including specific examples of foreign interference, cyber attacks, theft, or espionage directed at federally funded research and development or the integrity of the United States scientific enterprise;

“(C) identify and assess existing mechanisms for protection of federally funded research and development;

“(D) develop an inventory of—

“(i) terms and definitions used across Federal science agencies to delineate areas that may require additional protection; and

“(ii) policies and procedures at Federal science agencies regarding protection of federally funded research; and

“(E) develop and periodically update unclassified recommendations for policy guidance to assist Federal science agencies and grantees in defending against threats to federally funded research and development and the integrity of the United States scientific enterprise that—

“(i) includes—

“(I) descriptions of known and potential threats to federally funded research and development and the integrity of the United States scientific enterprise;

“(II) common definitions and terminology for categorization of research and technologies that are protected;

“(III) identified areas of research or technology that might require additional protection;

“(IV) recommendations for how control mechanisms can be utilized to protect federally funded research and development from foreign interference, cyber attacks, theft or espionage, including any recommendations for updates to existing control mechanisms;

“(V) recommendations for best practices for Federal science agencies, universities, and grantees to defend against threats to federally funded research and development, including coordination and harmonization of any relevant reporting requirements that Federal science agencies implement for grantees, and by providing such best practices with grantees and universities at the time of awarding such grants or entering into research contracts;

“(VI) a remediation plan for grantees and universities to mitigate the risks regarding such threats before research grants or contracts are cancelled because of such threats;

“(VII) recommendations for providing opportunities and facilities for academic researchers to perform controlled and classified research in support of Federal missions;

“(VIII) assessments of potential consequences that any proposed practices would have on international collaboration and United States leadership in science and technology; and

“(IX) a classified addendum as necessary to further inform Federal science agency decision-making; and

“(ii) accounts for the range of needs across different sectors of the United States science and technology enterprise.

“(4) POLICY GUIDANCE.—Not later than 270 days after the date of the enactment of this Act [Dec. 20, 2019], the Director of the Office of Science and Technology Policy, in consultation with the working group established under paragraph (1), shall—

“(A) develop and issue policy guidance to Federal science agencies with more than \$100,000,000 in extramural research in fiscal year 2018 to protect against threats to federally funded research and the United States science enterprise, including foreign interference, cyber attacks, theft, or espionage; and

“(B) encourage consistency in the policies developed by Federal science agencies with more than \$100,000,000 in extramural research in fiscal year 2018, as appropriate, and factoring in the potential range of applications across different areas of science and technology.

“(5) COORDINATION WITH NATIONAL ACADEMIES ROUNDTABLE.—The Director of the Office of Science and Technology Policy shall coordinate with the Academies to ensure that at least one member of the interagency working group is also a member of the roundtable under subsection (b).

“(6) INTERIM REPORT.—Not later than six months after the date of enactment of this Act, the Director of the Office of Science and Technology Policy shall provide a report to the relevant committees that includes the inventory required under paragraph (3)(D), and an update on progress toward developing the policy guidance required under paragraphs (3)(E) and (4), as well as any additional activities undertaken by the working group in that time.

“(7) BIENNIAL REPORTING.—Two years after the date of enactment of this Act, and at least every two years thereafter, the Director of the Office of Science and Technology Policy shall provide a summary report to the relevant committees on the activities of the working group and the most current version of the policy guidance required under paragraph (4).

“(8) TERMINATION.—The working group established or designated under paragraph (1) shall terminate on the date that is ten years after the date on which such working group is established or designated.

“(b) NATIONAL ACADEMIES SCIENCE, TECHNOLOGY AND SECURITY ROUNDTABLE.—

“(1) IN GENERAL.—The National Science Foundation, the Department of Energy, and the Department

of Defense, and any other agencies as determined by the Director of the Office of Science and Technology Policy, shall enter into a joint agreement with the Academies to create a new ‘National Science, Technology, and Security Roundtable’ (hereinafter in this subsection referred to as the ‘roundtable’).

“(2) PARTICIPANTS.—The roundtable shall include senior representatives and practitioners from Federal science, intelligence, and national security agencies, law enforcement, as well as key stakeholders in the United States scientific enterprise including institutions of higher education, Federal research laboratories, industry, and non-profit research organizations.

“(3) PURPOSE.—The purpose of the roundtable is to facilitate among participants—

“(A) exploration of critical issues related to protecting United States national and economic security while ensuring the open exchange of ideas and international talent required for scientific progress and American leadership in science and technology;

“(B) identification and consideration of security threats and risks involving federally funded research and development, including foreign interference, cyber attacks, theft, or espionage;

“(C) identification of effective approaches for communicating the threats and risks identified in subparagraph (b) to the academic and scientific community, including through the sharing of unclassified data and relevant case studies;

“(D) sharing of best practices for addressing and mitigating the threats and risks identified in subparagraph (B); and

“(E) examination of potential near- and long-term responses by the Government and the academic and scientific community to mitigate and address the risks associated with foreign threats.

“(4) REPORT AND BRIEFING.—The joint agreement under paragraph (1) shall specify that—

“(A) the roundtable shall periodically organize workshops and issue publicly available reports on the topics described in paragraph (3) and the activities of the roundtable;

“(B) not later than March 1, 2020, the Academies shall provide a briefing to the relevant committees on the progress and activities of the roundtable; and

“(C) the Academies shall issue a final report on its activities to the relevant committees before the end of fiscal year 2024.

“(5) TERMINATION.—The roundtable shall terminate on September 30, 2024.

“(c) DEFINITIONS.—In this section:

“(1) The term ‘Academies’ means the National Academies of Science, Engineering and Medicine.

“(2) The term ‘Federal science agency’ means any Federal agency with at least \$100,000,000 in basic and applied research obligations in fiscal year 2018.

“(3) The term ‘grantee’ means an entity that is—

“(A) a recipient or subrecipient of a Federal grant or cooperative agreement; and

“(B) an institution of higher education or a non-profit organization.

“(4) The term ‘relevant committees’ means—

“(A) the Committee on Science, Space, and Technology of the House of Representatives;

“(B) the Committee on Commerce, Science, and Transportation of the Senate;

“(C) the Committee on Armed Services of the House of Representatives;

“(D) the Committee on Armed Services of the Senate; and

“(E) the Committee on Homeland Security and Governmental Affairs of the Senate.”

PHYSICAL SCIENCES COORDINATION

Pub. L. 114-329, title I, § 106, Jan. 6, 2017, 130 Stat. 2985, provided that:

“(a) HIGH-ENERGY PHYSICS.—

“(1) IN GENERAL.—The Physical Science Subcommittee of the National Science and Technology

Council (referred to in this section as ‘Subcommittee’) shall continue to coordinate Federal efforts related to high-energy physics research to maximize the efficiency and effectiveness of United States investment in high-energy physics.

“(2) PURPOSES.—The purposes of the Subcommittee include—

“(A) to advise and assist the Committee on Science and the National Science and Technology Council on United States policies, procedures, and plans in the physical sciences, including high-energy physics; and

“(B) to identify emerging opportunities, stimulate international cooperation, and foster the development of the physical sciences in the United States, including—

“(i) in high-energy physics research, including related underground science and engineering research;

“(ii) in physical infrastructure and facilities;

“(iii) in information and analysis; and

“(iv) in coordination activities.

“(3) RESPONSIBILITIES.—In regard to coordinating Federal efforts related to high-energy physics research, the Subcommittee shall, taking into account the findings and recommendations of relevant advisory committees—

“(A) provide recommendations on planning for construction and stewardship of large facilities participating in high-energy physics;

“(B) provide recommendations on research coordination and collaboration among the programs and activities of Federal agencies related to underground science, neutrino research, dark energy, and dark matter research;

“(C) establish goals and priorities for high-energy physics, related underground science, and research and development that will strengthen United States competitiveness in high-energy physics;

“(D) propose methods for engagement with international, Federal, and State agencies and Federal laboratories not represented on the National Science and Technology Council to identify and reduce regulatory, logistical, and fiscal barriers that inhibit United States leadership in high-energy physics and related underground science; and

“(E) develop, and update as necessary, a strategic plan to guide Federal programs and activities in support of high-energy physics research, including—

“(i) the efforts taken in support of paragraph (2) since the last strategic plan;

“(ii) an evaluation of the current research needs for maintaining United States leadership in high-energy physics; and

“(iii) an identification of future priorities in the area of high-energy physics.

“(b) RADIATION BIOLOGY.—

“(1) IN GENERAL.—The Subcommittee shall continue to coordinate Federal efforts related to radiation biology research to maximize the efficiency and effectiveness of United States investment in radiation biology.

“(2) RESPONSIBILITIES FOR RADIATION BIOLOGY.—In regard to coordinating Federal efforts related to radiation biology research, the Subcommittee shall—

“(A) advise and assist the National Science and Technology Council on policies and initiatives in radiation biology, including enhancing scientific knowledge of the effects of low dose radiation on biological systems to improve radiation risk management methods;

“(B) identify opportunities to stimulate international cooperation and leverage research and knowledge from sources outside of the United States;

“(C) ensure coordination between the Department of Energy Office of Science, [National Science] Foundation, National Aeronautics and Space Administration, National Institutes of Health, Envi-

ronmental Protection Agency, Department of Defense, Nuclear Regulatory Commission, and Department of Homeland Security;

“(D) identify ongoing scientific challenges for understanding the long-term effects of ionizing radiation on biological systems; and

“(E) formulate overall scientific goals for the future of low-dose radiation research in the United States.

“(c) FUSION ENERGY SCIENCES.—

“(1) IN GENERAL.—The Subcommittee shall continue to coordinate Federal efforts related to fusion energy research to maximize the efficiency and effectiveness of United States investment in fusion energy sciences.

“(2) RESPONSIBILITIES FOR FUSION ENERGY SCIENCES.—In regard to coordinating Federal efforts related to fusion energy sciences, the Subcommittee shall—

“(A) advise and assist the National Science and Technology Council on policies and initiatives in fusion energy sciences, including enhancing scientific knowledge of fusion energy science, plasma physics, and related materials sciences;

“(B) identify opportunities to stimulate international cooperation and leverage research and knowledge from sources outside of the United States, including the ITER project;

“(C) ensure coordination between the Department of Energy Office of Science, National Nuclear Security Administration, Advanced Research Projects Agency-Energy, National Aeronautics and Space Administration, [National Science] Foundation, and Department of Defense regarding fusion energy sciences and plasma physics; and

“(D) formulate overall scientific goals for the future of fusion energy sciences and plasma physics.”

Executive Documents

EX. ORD. NO. 12039. TRANSFER OF CERTAIN SCIENCE AND TECHNOLOGY POLICY FUNCTIONS

Ex. Ord. No. 12039, Feb. 24, 1978, 43 F.R. 8095, as amended by Ex. Ord. No. 12399, Dec. 31, 1982, 48 F.R. 379, provided:

By virtue of the authority vested in me by the Constitution and laws of the United States of America, including Section 7 of Reorganization Plan No. 1 of 1977 (42 FR 56101 (October 21, 1977)) [set out in Appendix of Title 5, Government Organization and Employees], Section 301 of Title 3 of the United States Code, and Section 202 of the Budget and Accounting Procedures Act of 1950 (31 U.S.C. 581c) [31 U.S.C. 1531], and as President of the United States of America, in order to provide for the transfer of certain science and technology functions, it is hereby ordered as follows:

SECTION 1. (a) The transfer, provided by Section 5A of Reorganization Plan No. 1 of 1977 (42 FR 56101) [set out in Appendix of Title 5, Government Organization and Employees], of certain functions under the National Science and Technology Policy, Organization, and Priorities Act of 1976, hereinafter referred to as the Act (90 Stat. 459, 42 U.S.C. 6601 et seq.), from the Office of Science and Technology Policy and its Director to the Director of the National Science Foundation is hereby effective.

(b) The abolition of the Intergovernmental Science, Engineering, and Technology Advisory Panel, the President's Committee on Science and Technology, and the Federal Coordinating Council for Science, Engineering and Technology (established in accordance with Titles II, III, and IV of the Act) [sections 6611 et seq., 6631 et seq., and 6651 of this title] and the transfer of their functions (Sections 205(b)(1), 303(a) and (b)(1), and 401 of the Act, 42 U.S.C. 6614(b)(1), 6633 (a) and (b)(1), and 6651(e)) to the President of the United States of America, provided by Section 5A of Reorganization Plan No. 1 of 1977 [set out in Appendix of Title 5, Government Organization and Employees], are hereby effective.

SEC. 2. (a) The intergovernmental science, engineering, and technology functions under Section 205(b)(1) of the Act (42 U.S.C. 6614(b)(1)), which were transferred to the President (see Section 1(b) of this Order), are delegated to the Director of the Office of Science and Technology Policy; *Except that*, the responsibility for fostering any policies to facilitate the transfer and utilization of research and development results is delegated to the Director of the Office of Management and Budget.

(b) The functions vested by subsection (a) of this Section in the Director of the Office of Management and Budget shall be performed in accord with the Director's responsibilities under the Intergovernmental Cooperation Act of 1968 (82 Stat. 1098, 42 U.S.C. 4201 et seq.) [31 U.S.C. 6501 et seq.]. The Director of the Office of Science and Technology Policy shall advise the Director of the Office of Management and Budget with respect to the needs of State, regional, and local governments which may be assisted by the utilization of science, engineering, and technology research and development results.

(c) The functions vested by subsection (a) of this Section in the Director of the Office of Science and Technology Policy shall be performed in coordination with the Director of the Office of Management and Budget and with others as designated by the President.

(d) [Revoked by Ex. Ord. No. 12399, Dec. 31, 1982, 48 F.R. 379.]

SEC. 3. The Federal science, engineering, and technology functions under Section 303 (a) and (b)(1) of the Act (42 U.S.C. 6633 (a) and (b)(1)), which were transferred to the President (see Section 1(b) of this Order), are delegated to the Director of the Office of Science and Technology Policy; *Except that*, those functions concerned with reorganization, including Federal-State liaison, are delegated to the Director of the Office of Management and Budget, who shall be provided advice and assistance thereon by the Director of the Office of Science and Technology Policy.

SEC. 4. The science, engineering, and technology and related activities functions under Section 401(e) of the Act (42 U.S.C. 6651(e)), which were transferred to the President (see Section 1(b) of this Order), are delegated to the Director of the Office of Science and Technology Policy.

SEC. 5. There is hereby established the Federal Coordinating Council for Science, Engineering, and Technology. The Council shall be composed of the Director of the Office of Science and Technology Policy, who shall be Chairman, and representatives of such other Executive agencies designated by the Chairman. The head of an agency so designated shall designate an appropriate individual to serve on the Council. The Council shall advise and assist the Director of the Office of Science and Technology Policy in the performance of those functions delegated under Section 4 of this Order.

SEC. 6. The records, property, personnel, and unexpended balances of appropriations, available or to be made available, which relate to the functions transferred, reassigned, or redelegated by this Order are hereby transferred to the Director of the Office of Management and Budget, the Director of the Office of Science and Technology Policy, or the Director of the National Science Foundation, as appropriate.

SEC. 7. The Director of the Office of Management and Budget shall make such determinations, issue such orders, and take all actions necessary or appropriate to effectuate the transfers or reassignments provided by this Order, including the transfer of funds, records, property, and personnel.

SEC. 8. This Order shall be effective on February 26, 1978.

EXECUTIVE ORDER NO. 12700

Ex. Ord. No. 12700, Jan. 19, 1990, 55 F.R. 2219, as amended by Ex. Ord. No. 12768, June 28, 1991, 56 F.R. 30302, which established the President's Council of Advisors on Science and Technology and provided for its functions, administration, and termination on June 30,

1993, was revoked by section 4(c) of Ex. Ord. No. 12882, §4(c), Nov. 23, 1993, 58 F.R. 62493. Ex. Ord. No. 12869, Sept. 30, 1993, §2, 58 F.R. 51751, formerly set out as a note under section 1013 of Title 5, Government Organization and Employees, which reestablished the President's Council of Advisors on Science and Technology in accordance with the provisions of Ex. Ord. No. 12700 and extended its term until Sept. 30, 1995, was also revoked by Ex. Ord. 12882, §4(c).

EX. ORD. NO. 12881. ESTABLISHMENT OF NATIONAL SCIENCE AND TECHNOLOGY COUNCIL

Ex. Ord. No. 12881, Nov. 23, 1993, 58 F.R. 62491; Ex. Ord. No. 13284, §9, Jan. 23, 2003, 68 F.R. 4076, provided:

By the authority vested in me as President by the Constitution and the laws of the United States of America, including section 301 of title 3, United States Code, it is hereby ordered as follows:

SECTION 1. *Establishment.* There is established the National Science and Technology Council ("the Council").

SEC. 2. *Membership.* The Council shall comprise the:

(a) President, who shall serve as Chairman of the Council;

(b) Vice President;

(c) Secretary of Commerce;

(d) Secretary of Defense;

(e) Secretary of Energy;

(f) Secretary of Health and Human Services;

(g) Secretary of State;

(h) Secretary of the Interior;

(i) Secretary of Homeland Security;

(j) Administrator, National Aeronautics and Space Administration;

(k) Director, National Science Foundation;

(l) Director of the Office of Management and Budget;

(m) Administrator, Environmental Protection Agency;

(n) Assistant to the President for Science and Technology;

(o) National Security Adviser;

(p) Assistant to the President for Economic Policy;

(q) Assistant to the President for Domestic Policy;

and

(r) Such other officials of executive departments and agencies as the President may, from time to time, designate.

SEC. 3. *Meetings of the Council.* The President or, upon his direction, the Assistant to the President for Science and Technology ("the Assistant"), may convene meetings of the Council. The President shall preside over the meetings of the Council, provided that in his absence the Vice President, and in his absence the Assistant, will preside.

SEC. 4. *Functions.* (a) The principal functions of the Council are, to the extent permitted by law: (1) to coordinate the science and technology policy-making process; (2) to ensure science and technology policy decisions and programs are consistent with the President's stated goals; (3) to help integrate the President's science and technology policy agenda across the Federal Government; (4) to ensure science and technology are considered in development and implementation of Federal policies and programs; and (5) to further international cooperation in science and technology. The Assistant may take such actions, including drafting a Charter, as may be necessary or appropriate to implement such functions.

(b) All executive departments and agencies, whether or not represented on the Council, shall coordinate science and technology policy through the Council and shall share information on research and development budget requests with the Council.

(c) The Council shall develop for submission to the Director of the Office of Management and Budget recommendations on research and development budgets that reflect national goals. In addition, the Council shall provide advice to the Director of the Office of Management and Budget concerning the agencies' research and development budget submissions.

(d) The Assistant will, when appropriate, work in conjunction with the Assistant to the President for Economic Policy, the Assistant to the President for Domestic Policy, the Director of the Office of Management and Budget, and the National Security Adviser.

SEC. 5. *Administration.* (a) The Council will oversee the duties of the Federal Coordinating Council for Science, Engineering, and Technology, the National Space Council, and the National Critical Materials Council.

(b) The Council may function through established or ad hoc committees, task forces, or interagency groups.

(c) To the extent practicable and permitted by law, executive departments and agencies shall make resources, including, but not limited to, personnel, office support, and printing, available to the Council as requested by the Assistant.

(d) All executive departments and agencies shall cooperate with the Council and provide such assistance, information, and advice to the Council as the Council may request, to the extent permitted by law.

EXECUTIVE ORDER NO. 12882

Ex. Ord. No. 12882, Nov. 23, 1993, 58 F.R. 62493, as amended by Ex. Ord. No. 12907, Apr. 14, 1994, 59 F.R. 18291, which established the President's Committee of Advisors on Science and Technology, was revoked by Ex. Ord. No. 13226, §4(c), Sept. 30, 2001, 66 F.R. 50524, formerly set out below.

EXECUTIVE ORDER NO. 12975

Ex. Ord. No. 12975, Oct. 3, 1995, 60 F.R. 52063, as amended by Ex. Ord. No. 13018, Sept. 16, 1996, 61 F.R. 49045; Ex. Ord. No. 13046, May 16, 1997, 62 F.R. 27685; Ex. Ord. No. 13137, Sept. 15, 1999, 64 F.R. 50733, which provided for the protection of human research subjects and created the National Bioethics Advisory Commission, was revoked by Ex. Ord. No. 13316, §3(b), Sept. 17, 2003, 68 F.R. 55256, eff. Sept. 30, 2003.

EXECUTIVE ORDER NO. 13226

Ex. Ord. No. 13226, Sept. 30, 2001, 66 F.R. 50523, as amended by Ex. Ord. No. 13305, May 28, 2003, 68 F.R. 32323; Ex. Ord. No. 13349, July 23, 2004, 69 F.R. 44891; Ex. Ord. No. 13385, §8, Sept. 29, 2005, 70 F.R. 57991, which established the President's Council of Advisors on Science and Technology, was revoked by Ex. Ord. No. 13539, §6, Apr. 21, 2010, 75 F.R. 21975, formerly set out below.

EXTENSION OF TERM OF PRESIDENT'S COUNCIL OF ADVISORS ON SCIENCE AND TECHNOLOGY

Term of President's Council of Advisors on Science and Technology extended until Sept. 30, 2011, by Ex. Ord. No. 13511, Sept. 29, 2009, 74 F.R. 50909, formerly set out as a note under section 1013 of Title 5, Government Organization and Employees.

Previous extensions of term of President's Council of Advisors on Science and Technology were contained in the following prior Executive Orders:

Ex. Ord. No. 13446, Sept. 28, 2007, 72 F.R. 56175, extended term until Sept. 30, 2009.

Ex. Ord. No. 13385, Sept. 29, 2005, 70 F.R. 57989, extended term until Sept. 30, 2007.

EXECUTIVE ORDER NO. 13237

Ex. Ord. No. 13237, Nov. 28, 2001, 66 F.R. 59851, which created the President's Council on Bioethics, was superseded by Ex. Ord. No. 13521, §6(a), Nov. 24, 2009, 74 F.R. 62672, set out below.

EXTENSION OF TERM OF PRESIDENT'S COUNCIL ON BIOETHICS

Term of President's Council on Bioethics extended until Sept. 30, 2009, by Ex. Ord. No. 13446, Sept. 28, 2007, 72 F.R. 56175, formerly set out as a note under section 1013 of Title 5, Government Organization and Employees.

Previous extensions of term of President's Council on Bioethics were contained in the following prior Executive Orders:

Ex. Ord. No. 13385, Sept. 29, 2005, 70 F.R. 57989, extended term until Sept. 30, 2007.

Ex. Ord. No. 13316, Sept. 17, 2003, 68 F.R. 55255, extended term until Sept. 30, 2005.

EX. ORD. NO. 13521. ESTABLISHING THE PRESIDENTIAL COMMISSION FOR THE STUDY OF BIOETHICAL ISSUES

Ex. Ord. No. 13521, Nov. 24, 2009, 74 F.R. 62671, provided:

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

SECTION 1. *Establishment.* There is established within the Department of Health and Human Services the Presidential Commission for the Study of Bioethical Issues (Commission).

SEC. 2. *Mission.*

(a) The Commission shall advise the President on bioethical issues that may emerge as a consequence of advances in biomedicine and related areas of science and technology. The Commission shall pursue its work with the goal of identifying and promoting policies and practices that ensure scientific research, healthcare delivery, and technological innovation are conducted in an ethically responsible manner. To achieve this goal, the Commission shall:

(i) identify and examine specific bioethical, legal, and social issues related to the potential impacts of advances in biomedical and behavioral research, healthcare delivery, or other areas of science and technology;

(ii) recommend any legal, regulatory, or policy actions it deems appropriate to address these issues; and

(iii) critically examine diverse perspectives and explore possibilities for useful international collaboration on these issues.

(b) In support of its mission, the Commission may examine issues linked to specific technologies, including but not limited to the creation of stem cells by novel means; intellectual property issues involving genetic sequencing, biomarkers, and other screening tests used for risk assessment; and the application of neuro- and robotic sciences. It may also examine broader issues not linked to specific technologies, including but not limited to the protection of human research participants; scientific integrity and conflicts of interest in research; and the intersection of science and human rights.

(c) The Commission shall not be responsible for the review and approval of specific projects.

(d) The Commission may accept suggestions of issues for consideration from executive departments and agencies and the public as it deems appropriate in support of its mission.

(e) In establishing priorities for its activities, the Commission shall consider, among other things, the significance of particular issues; the need for legal, regulatory, and policy guidance with respect to such issues; the connection of the issues to the goal of Federal advancement of science and technology; and the availability of other appropriate entities or fora for deliberating on the issues.

(f) The Commission is authorized to conduct original empirical and conceptual research, commission papers and studies, hold hearings, and establish committees and subcommittees, as necessary. The Commission is authorized to develop reports or other materials.

SEC. 3. *Membership.*

(a) The Commission shall be an expert panel composed of not more than 13 members appointed by the President, drawn from the fields of bioethics, science, medicine, technology, engineering, law, philosophy, theology, or other areas of the humanities or social sciences, at least one and not more than three of whom may be bioethicists or scientists drawn from the executive branch, as designated by the President.

(b) The President shall designate a Chair and Vice Chair from among the members of the Commission.

The Chair shall convene and preside at meetings of the Commission, determine its agenda, and direct its work. The Vice Chair shall perform the duties of the Chair in the absence or disability of the Chair and shall perform such other functions as the Chair may from time to time assign.

(c) Members shall serve for a term of 2 years and shall be eligible for reappointment. Members may continue to serve after the expiration of their terms until the appointment of a successor.

SEC. 4. *Administration.*

(a) The Department of Health and Human Services shall provide funding and administrative support for the Commission to the extent permitted by law and within existing appropriations.

(b) All executive departments and agencies and all entities within the Executive Office of the President shall provide information and assistance to the Commission as the Chair may request for purposes of carrying out the Commission's functions, to the extent permitted by law.

(c) The Commission shall have a staff headed by an Executive Director, who shall be appointed by the Secretary of Health and Human Services in consultation with the Chair and Vice Chair.

(d) Members of the Commission shall serve without compensation, but shall be allowed travel expenses, including per diem in lieu of subsistence, as authorized by law for persons serving intermittently in Government service (5 U.S.C. 5701-5707), consistent with the availability of funds.

SEC. 5. *Termination.* The Commission shall terminate 2 years after the date of this order unless extended by the President.

SEC. 6. *General Provisions.*

(a) This order supersedes Executive Order 13237 of November 28, 2001.

(b) Insofar as the Federal Advisory Committee Act, as amended ([former] 5 U.S.C. App.) [see 5 U.S.C. 1001 et seq.], may apply to the Commission, any functions of the President under that Act, except that of reporting to the Congress, shall be performed by the Secretary of Health and Human Services in accordance with the guidelines that have been issued by the Administrator of General Services.

(c) Nothing in this order shall be construed to impair or otherwise affect:

(i) authority granted by law to an executive department, agency, or the head thereof; or

(ii) functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(d) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(e) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

BARACK OBAMA.

EXTENSION OF TERM OF PRESIDENTIAL COMMISSION FOR THE STUDY OF BIOETHICAL ISSUES

Term of Presidential Commission for the Study of Bioethical Issues extended until Sept. 30, 2017, by Ex. Ord. No. 13708, Sept. 30, 2015, 80 F.R. 60271, formerly set out as a note under section 1013 of Title 5, Government Organization and Employees.

Previous extensions of term of Presidential Commission for the Study of Bioethical Issues were contained in the following prior Executive Orders:

Ex. Ord. No. 13652, Sept. 30, 2013, 78 F.R. 61817, extended term until Sept. 30, 2015.

Ex. Ord. No. 13591, Nov. 23, 2011, 76 F.R. 74623, extended term until Sept. 30, 2013.

EXECUTIVE ORDER NO. 13539

Ex. Ord. No. 13539, Apr. 21, 2010, 75 F.R. 21973, as amended by Ex. Ord. No. 13596, § 2, Dec. 19, 2011, 76 F.R.

80725, which established the President's Council of Advisors on Science and Technology, was revoked by Ex. Ord. No. 13895, §7, Oct. 22, 2019, 84 F.R. 57311, formerly set out below.

EXTENSION OF TERM OF PRESIDENT'S COUNCIL OF ADVISORS ON SCIENCE AND TECHNOLOGY

Term of President's Council of Advisors on Science and Technology (established by Ex. Ord. No. 13539) extended until Sept. 30, 2021, by Ex. Ord. No. 13889, Sept. 27, 2019, 84 F.R. 52743, formerly set out as a note under section 1013 of Title 5, Government Organization and Employees.

Previous extensions of term of President's Council of Advisors on Science and Technology were contained in the following prior Executive Orders:

Ex. Ord. No. 13811, Sept. 29, 2017, 82 F.R. 46363, extended term until Sept. 30, 2019.

Ex. Ord. No. 13708, Sept. 30, 2015, 80 F.R. 60271, extended term until Sept. 30, 2017.

Ex. Ord. No. 13652, Sept. 30, 2013, 78 F.R. 61817, extended term until Sept. 30, 2015.

Ex. Ord. No. 13591, Nov. 23, 2011, 76 F.R. 74623, extended term until Sept. 30, 2013.

EX. ORD. NO. 13859. MAINTAINING AMERICAN LEADERSHIP IN ARTIFICIAL INTELLIGENCE

Ex. Ord. No. 13859, Feb. 11, 2019, 84 F.R. 3967, provided: By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

SECTION 1. *Policy and Principles.* Artificial Intelligence (AI) promises to drive growth of the United States economy, enhance our economic and national security, and improve our quality of life. The United States is the world leader in AI research and development (R&D) and deployment. Continued American leadership in AI is of paramount importance to maintaining the economic and national security of the United States and to shaping the global evolution of AI in a manner consistent with our Nation's values, policies, and priorities. The Federal Government plays an important role in facilitating AI R&D, promoting the trust of the American people in the development and deployment of AI-related technologies, training a workforce capable of using AI in their occupations, and protecting the American AI technology base from attempted acquisition by strategic competitors and adversarial nations. Maintaining American leadership in AI requires a concerted effort to promote advancements in technology and innovation, while protecting American technology, economic and national security, civil liberties, privacy, and American values and enhancing international and industry collaboration with foreign partners and allies. It is the policy of the United States Government to sustain and enhance the scientific, technological, and economic leadership position of the United States in AI R&D and deployment through a coordinated Federal Government strategy, the American AI Initiative (Initiative), guided by five principles:

(a) The United States must drive technological breakthroughs in AI across the Federal Government, industry, and academia in order to promote scientific discovery, economic competitiveness, and national security.

(b) The United States must drive development of appropriate technical standards and reduce barriers to the safe testing and deployment of AI technologies in order to enable the creation of new AI-related industries and the adoption of AI by today's industries.

(c) The United States must train current and future generations of American workers with the skills to develop and apply AI technologies to prepare them for today's economy and jobs of the future.

(d) The United States must foster public trust and confidence in AI technologies and protect civil liberties, privacy, and American values in their application in order to fully realize the potential of AI technologies for the American people.

(e) The United States must promote an international environment that supports American AI research and innovation and opens markets for American AI industries, while protecting our technological advantage in AI and protecting our critical AI technologies from acquisition by strategic competitors and adversarial nations.

SEC. 2. *Objectives.* Artificial Intelligence will affect the missions of nearly all executive departments and agencies (agencies). Agencies determined to be implementing agencies pursuant to section 3 of this order shall pursue six strategic objectives in furtherance of both promoting and protecting American advancements in AI:

(a) Promote sustained investment in AI R&D in collaboration with industry, academia, international partners and allies, and other non-Federal entities to generate technological breakthroughs in AI and related technologies and to rapidly transition those breakthroughs into capabilities that contribute to our economic and national security.

(b) Enhance access to high-quality and fully traceable Federal data, models, and computing resources to increase the value of such resources for AI R&D, while maintaining safety, security, privacy, and confidentiality protections consistent with applicable laws and policies.

(c) Reduce barriers to the use of AI technologies to promote their innovative application while protecting American technology, economic and national security, civil liberties, privacy, and values.

(d) Ensure that technical standards minimize vulnerability to attacks from malicious actors and reflect Federal priorities for innovation, public trust, and public confidence in systems that use AI technologies; and develop international standards to promote and protect those priorities.

(e) Train the next generation of American AI researchers and users through apprenticeships; skills programs; and education in science, technology, engineering, and mathematics (STEM), with an emphasis on computer science, to ensure that American workers, including Federal workers, are capable of taking full advantage of the opportunities of AI.

(f) Develop and implement an action plan, in accordance with the National Security Presidential Memorandum of February 11, 2019 (Protecting the United States Advantage in Artificial Intelligence and Related Critical Technologies) (the NSPM) to protect the advantage of the United States in AI and technology critical to United States economic and national security interests against strategic competitors and foreign adversaries.

SEC. 3. *Roles and Responsibilities.* The Initiative shall be coordinated through the National Science and Technology Council (NSTC) Select Committee on Artificial Intelligence (Select Committee). Actions shall be implemented by agencies that conduct foundational AI R&D, develop and deploy applications of AI technologies, provide educational grants, and regulate and provide guidance for applications of AI technologies, as determined by the co-chairs of the NSTC Select Committee (implementing agencies).

SEC. 4. *Federal Investment in AI Research and Development.*

(a) Heads of implementing agencies that also perform or fund R&D (AI R&D agencies), shall consider AI as an agency R&D priority, as appropriate to their respective agencies' missions, consistent with applicable law and in accordance with the Office of Management and Budget (OMB) and the Office of Science and Technology Policy (OSTP) R&D priorities memoranda. Heads of such agencies shall take this priority into account when developing budget proposals and planning for the use of funds in Fiscal Year 2020 and in future years. Heads of these agencies shall also consider appropriate administrative actions to increase focus on AI for 2019.

(b) Heads of AI R&D agencies shall budget an amount for AI R&D that is appropriate for this prioritization.

(1) Following the submission of the President's Budget request to the Congress, heads of such agencies shall

communicate plans for achieving this prioritization to the OMB Director and the OSTP Director each fiscal year through the Networking and Information Technology Research and Development (NITRD) Program.

(i) Within 90 days of the enactment of appropriations for their respective agencies, heads of such agencies shall identify each year, consistent with applicable law, the programs to which the AI R&D priority will apply and estimate the total amount of such funds that will be spent on each such program. This information shall be communicated to the OMB Director and OSTP Director each fiscal year through the NITRD Program.

(c) To the extent appropriate and consistent with applicable law, heads of AI R&D agencies shall explore opportunities for collaboration with non-Federal entities, including: the private sector; academia; non-profit organizations; State, local, tribal, and territorial governments; and foreign partners and allies, so all collaborators can benefit from each other's investment and expertise in AI R&D.

SEC. 5. Data and Computing Resources for AI Research and Development.

(a) Heads of all agencies shall review their Federal data and models to identify opportunities to increase access and use by the greater non-Federal AI research community in a manner that benefits that community, while protecting safety, security, privacy, and confidentiality. Specifically, agencies shall improve data and model inventory documentation to enable discovery and usability, and shall prioritize improvements to access and quality of AI data and models based on the AI research community's user feedback.

(i) Within 90 days of the date of this order [Feb. 11, 2019], the OMB Director shall publish a notice in the Federal Register inviting the public to identify additional requests for access or quality improvements for Federal data and models that would improve AI R&D and testing. Additionally, within 90 days of the date of this order, OMB, in conjunction with the Select Committee, shall investigate barriers to access or quality limitations of Federal data and models that impede AI R&D and testing. Collectively, these actions by OMB will help to identify datasets that will facilitate non-Federal AI R&D and testing.

(ii) Within 120 days of the date of this order, OMB, including through its interagency councils and the Select Committee, shall update implementation guidance for Enterprise Data Inventories and Source Code Inventories to support discovery and usability in AI R&D.

(iii) Within 180 days of the date of this order, and in accordance with the implementation of the Cross-Agency Priority Goal: Leveraging Federal Data as a Strategic Asset, from the March 2018 President's Management Agenda, agencies shall consider methods of improving the quality, usability, and appropriate access to priority data identified by the AI research community. Agencies shall also identify any associated resource implications.

(iv) In identifying data and models for consideration for increased public access, agencies, in coordination with the Senior Agency Officials for Privacy established pursuant to Executive Order 13719 of February 9, 2016 (Establishment of the Federal Privacy Council) [42 U.S.C. 2000ee-2 note], the heads of Federal statistical entities, Federal program managers, and other relevant personnel shall identify any barriers to, or requirements associated with, increased access to and use of such data and models, including:

(A) privacy and civil liberty protections for individuals who may be affected by increased access and use, as well as confidentiality protections for individuals and other data providers;

(B) safety and security concerns, including those related to the association or compilation of data and models;

(C) data documentation and formatting, including the need for interoperable and machine-readable data formats;

(D) changes necessary to ensure appropriate data and system governance; and

(E) any other relevant considerations.

(v) In accordance with the President's Management Agenda and the Cross-Agency Priority Goal: Leveraging Data as a Strategic Asset, agencies shall identify opportunities to use new technologies and best practices to increase access to and usability of open data and models, and explore appropriate controls on access to sensitive or restricted data and models, consistent with applicable laws and policies, privacy and confidentiality protections, and civil liberty protections.

(b) The Secretaries of Defense, Commerce, Health and Human Services, and Energy, the Administrator of the National Aeronautics and Space Administration, and the Director of the National Science Foundation shall, to the extent appropriate and consistent with applicable law, prioritize the allocation of high-performance computing resources for AI-related applications through:

(i) increased assignment of discretionary allocation of resources and resource reserves; or

(ii) any other appropriate mechanisms.

(c) Within 180 days of the date of this order, the Select Committee, in coordination with the General Services Administration (GSA), shall submit a report to the President making recommendations on better enabling the use of cloud computing resources for federally funded AI R&D.

(d) The Select Committee shall provide technical expertise to the American Technology Council on matters regarding AI and the modernization of Federal technology, data, and the delivery of digital services, as appropriate.

SEC. 6. Guidance for Regulation of AI Applications.

(a) Within 180 days of the date of this order, the OMB Director, in coordination with the OSTP Director, the Director of the Domestic Policy Council, and the Director of the National Economic Council, and in consultation with any other relevant agencies and key stakeholders as the OMB Director shall determine, shall issue a memorandum to the heads of all agencies that shall:

(i) inform the development of regulatory and non-regulatory approaches by such agencies regarding technologies and industrial sectors that are either empowered or enabled by AI, and that advance American innovation while upholding civil liberties, privacy, and American values; and

(ii) consider ways to reduce barriers to the use of AI technologies in order to promote their innovative application while protecting civil liberties, privacy, American values, and United States economic and national security.

(b) To help ensure public trust in the development and implementation of AI applications, OMB shall issue a draft version of the memorandum for public comment before it is finalized.

(c) Within 180 days of the date of the memorandum described in subsection (a) of this section, the heads of implementing agencies that also have regulatory authorities shall review their authorities relevant to applications of AI and shall submit to OMB plans to achieve consistency with the memorandum.

(d) Within 180 days of the date of this order, the Secretary of Commerce, through the Director of the National Institute of Standards and Technology (NIST), shall issue a plan for Federal engagement in the development of technical standards and related tools in support of reliable, robust, and trustworthy systems that use AI technologies. NIST shall lead the development of this plan with participation from relevant agencies as the Secretary of Commerce shall determine.

(i) Consistent with OMB Circular A-119, this plan shall include:

(A) Federal priority needs for standardization of AI systems development and deployment;

(B) identification of standards development entities in which Federal agencies should seek membership with the goal of establishing or supporting United States technical leadership roles; and

(C) opportunities for and challenges to United States leadership in standardization related to AI technologies.

(ii) This plan shall be developed in consultation with the Select Committee, as needed, and in consultation with the private sector, academia, non-governmental entities, and other stakeholders, as appropriate.

SEC. 7. *AI and the American Workforce.*

(a) Heads of implementing agencies that also provide educational grants shall, to the extent consistent with applicable law, consider AI as a priority area within existing Federal fellowship and service programs.

(i) Eligible programs for prioritization shall give preference to American citizens, to the extent permitted by law, and shall include:

(A) high school, undergraduate, and graduate fellowship; alternative education; and training programs;

(B) programs to recognize and fund early-career university faculty who conduct AI R&D, including through Presidential awards and recognitions;

(C) scholarship for service programs;

(D) direct commissioning programs of the United States Armed Forces; and

(E) programs that support the development of instructional programs and curricula that encourage the integration of AI technologies into courses in order to facilitate personalized and adaptive learning experiences for formal and informal education and training.

(ii) Agencies shall annually communicate plans for achieving this prioritization to the co-chairs of the Select Committee.

(b) Within 90 days of the date of this order, the Select Committee shall provide recommendations to the NSTC Committee on STEM Education regarding AI-related educational and workforce development considerations that focus on American citizens.

(c) The Select Committee shall provide technical expertise to the National Council for the American Worker on matters regarding AI and the American workforce, as appropriate.

SEC. 8. *Action Plan for Protection of the United States Advantage in AI Technologies.*

(a) As directed by the NSPM, the Assistant to the President for National Security Affairs, in coordination with the OSTP Director and the recipients of the NSPM, shall organize the development of an action plan to protect the United States advantage in AI and AI technology critical to United States economic and national security interests against strategic competitors and adversarial nations.

(b) The action plan shall be provided to the President within 120 days of the date of this order, and may be classified in full or in part, as appropriate.

(c) Upon approval by the President, the action plan shall be implemented by all agencies who are recipients of the NSPM, for all AI-related activities, including those conducted pursuant to this order.

SEC. 9. *Definitions.* As used in this order:

(a) the term “artificial intelligence” means the full extent of Federal investments in AI, to include: R&D of core AI techniques and technologies; AI prototype systems; application and adaptation of AI techniques; architectural and systems support for AI; and cyberinfrastructure, data sets, and standards for AI; and

(b) the term “open data” shall, in accordance with OMB Circular A-130 and memorandum M-13-13, mean “publicly available data structured in a way that enables the data to be fully discoverable and usable by end users.”

SEC. 10. *General Provisions.*

(a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of OMB relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP.

EXECUTIVE ORDER NO. 13895

Ex. Ord. No. 13895, Oct. 22, 2019, 84 F.R. 57309, which established the President’s Council of Advisors on Science and Technology, was revoked by Ex. Ord. No. 14007, § 6, Jan. 27, 2021, 86 F.R. 7616, set out below.

EX. ORD. NO. 14007. PRESIDENT’S COUNCIL OF ADVISORS ON SCIENCE AND TECHNOLOGY

Ex. Ord. No. 14007, Jan. 27, 2021, 86 F.R. 7615, as amended by Ex. Ord. No. 14044, Sept. 13, 2021, 86 F.R. 51579, provided:

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in order to establish an advisory council on science, technology, and innovation, it is hereby ordered as follows:

SECTION 1. *Policy.* As directed in the Presidential Memorandum of January 27, 2021 (Scientific Integrity and Evidence-Based Policymaking) [set out below], it is the policy of my Administration to make evidence-based decisions guided by the best available science and data. Officials and employees across my Administration shall seek from scientists, engineers, and other experts the best available scientific and technological information and advice.

SEC. 2. *Establishment.* (a) There is hereby established the President’s Council of Advisors on Science and Technology (PCAST).

(b) The PCAST shall be composed of not more than 32 members. The Assistant to the President for Science and Technology (the “Science Advisor”) shall be a member of the PCAST. The Science Advisor, if also serving as the Director of the Office of Science and Technology Policy, may designate the U.S. Chief Technology Officer as a member. The remaining members shall be distinguished individuals and representatives from sectors outside of the Federal Government appointed by the President. These non-Federal members shall have diverse perspectives and expertise in science, technology, and innovation.

(c) The Science Advisor shall serve as a Co-Chair of the PCAST. The President shall also designate at least one, but not more than two, of the non-Federal members to serve as a Co-Chair, or Co-Chairs, of the PCAST with the Science Advisor. The Science Advisor may designate up to three Vice Chairs of the PCAST from among the non-Federal members of the PCAST, to support the Co-Chairs in the leadership and organization of the PCAST.

SEC. 3. *Functions.* (a) The PCAST shall advise the President on matters involving policy affecting science, technology, and innovation, as well as on matters involving scientific and technological information that is needed to inform public policy relating to the economy, worker empowerment, education, energy, the environment, public health, national and homeland security, racial equity, and other topics.

(b) The PCAST shall meet regularly and shall:

(i) respond to requests from the President or the Science Advisor for information, analysis, evaluation, or advice;

(ii) solicit information and ideas from a broad range of stakeholders, including the research community; the private sector; universities; national laboratories; State, local, and Tribal governments; foundations; and nonprofit organizations;

(iii) serve as the advisory committee identified in section 101(b) of the High-Performance Computing Act of 1991 (Public Law 102-194), as amended (15 U.S.C. 5511(b)), in which capacity the PCAST shall be known as the President’s Innovation and Technology Advisory Committee; and

(iv) serve as the advisory panel identified in section 4 of the 21st Century Nanotechnology Research and Development Act (Public Law 108-153), as amended (15 U.S.C. 7503), in which capacity the PCAST shall be known as the National Nanotechnology Advisory Panel.

(c) The PCAST shall provide advice from the non-Federal sector to the National Science and Technology Council (NSTC) in response to requests from the NSTC.

SEC. 4. *Administration.* (a) The heads of executive departments and agencies shall, to the extent permitted by law, provide the PCAST with information concerning scientific and technological matters when requested by the PCAST Co-Chairs and as required for the purpose of carrying out the PCAST's functions.

(b) In consultation with the Science Advisor, the PCAST is authorized to create standing subcommittees and ad hoc groups, including technical advisory groups, to assist the PCAST and provide preliminary information directly to the PCAST.

(c) In order to allow the PCAST to provide advice and analysis regarding classified matters, the Science Advisor may request that members of the PCAST, its standing subcommittees, or ad hoc groups, who do not hold a current clearance for access to classified information, receive security clearance and access determinations pursuant to Executive Order 12968 of August 2, 1995 (Access to Classified Information) [50 U.S.C. 3161 note], as amended, or any successor order.

(d) The Department of Energy shall provide such funding and administrative and technical support as the PCAST may require, to the extent permitted by law and within existing appropriations.

(e) Members of the PCAST shall serve without any compensation for their work on the PCAST, but may receive travel expenses, including per diem in lieu of subsistence, as authorized by law for persons serving intermittently in the government service (5 U.S.C. 5701-5707).

(f) Insofar as the Federal Advisory Committee Act, as amended ([former] 5 U.S.C. App.) [see 5 U.S.C. 1001 et seq.], may apply to the PCAST, any functions of the President under that Act, except that of reporting to the Congress, shall be performed by the Secretary of Energy, in accordance with the guidelines and procedures established by the Administrator of General Services.

SEC. 5. *Termination.* The PCAST shall terminate 2 years from the date of this order [Jan. 27, 2021] unless extended by the President.

SEC. 6. *Revocation.* Executive Order 13895 of October 22, 2019 (President's Council of Advisors on Science and Technology) [formerly set out above], is hereby revoked.

SEC. 7. *General Provisions.* (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

J.R. BIDEN, JR.

EXTENSION OF TERM OF PRESIDENT'S COUNCIL OF
ADVISORS ON SCIENCE AND TECHNOLOGY

Term of President's Council of Advisors on Science and Technology (established by Ex. Ord. No. 14007) extended until Sept. 30, 2023, by Ex. Ord. No. 14048, Sept. 30, 2021, 86 F.R. 55465, set out as a note under section 1013 of Title 5, Government Organization and Employees.

STRENGTHENED PROTECTIONS FOR HUMAN SUBJECTS OF
CLASSIFIED RESEARCH

Memorandum of President of the United States, Mar. 27, 1997, 62 F.R. 26369, provided:

Memorandum for the Secretary of Defense, the Attorney General, the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Labor, the Secretary of Health and Human Services, the Secretary of Housing and Urban Development, the Secretary of Transportation, the Secretary of Energy, the Secretary of Education, the Secretary of Veterans Affairs, the Director of Central Intelligence, the Administrator of the Environmental Protection Agency, the Administrator of the Agency for International Development, the Administrator of the National Aeronautics and Space Administration, the Director of the National Science Foundation, the Chair of the Nuclear Regulatory Commission, the Director of the Office of Science and Technology Policy, [and] the Chair of the Consumer Product Safety Commission

I have worked hard to restore trust and ensure openness in government. This memorandum will further our progress toward these goals by strengthening the Federal Government's protections for human subjects of classified research.

In January 1994, I established the Advisory Committee on Human Radiation Experiments (the "Advisory Committee") to examine reports that the government had funded and conducted unethical human radiation experiments during the Cold War [see Ex. Ord. No. 12891, formerly set out as a note under section 2210 of this title]. I directed the Advisory Committee to uncover the truth, recommend steps to right past wrongs, and propose ways to prevent unethical human subjects research from occurring in the future. In its October 1995 final report, the Advisory Committee recommended, among other things, that the government modify its policy governing classified research on human subjects ("Recommendations for Balancing National Security Interests and the Rights of the Public," Recommendation 15, Final Report, Advisory Committee on Human Radiation Experiments). This memorandum sets forth policy changes in response to those recommendations.

The Advisory Committee acknowledged that it is in the Nation's interest to continue to allow the government to conduct classified research involving human subjects where such research serves important national security interests. The Advisory Committee found, however, that classified human subjects research should be a "rare event" and that the "subjects of such research, as well as the interests of the public in openness in science and in government, deserve special protections." The Advisory Committee was concerned about "exceptions to informed consent requirements and the absence of any special review and approval process for human research that is to be classified." The Advisory Committee recommended that in all classified research projects the agency conducting or sponsoring the research meet the following requirements:

—obtain informed consent from all human subjects;
—inform subjects of the identity of the sponsoring agency;
—inform subjects that the project involves classified research;

—obtain approval by an "independent panel of non-governmental experts and citizen representatives, all with the necessary security clearances" that reviews scientific merit, risk-benefit tradeoffs, and ensures subjects have enough information to make informed decisions to give valid consent; and

—maintain permanent records of the panel's deliberations and consent procedures.

This memorandum implements these recommendations with some modifications. For classified research, it prohibits waiver of informed consent and requires researchers to disclose that the project is classified. For all but minimal risk studies, it requires researchers to inform subjects of the sponsoring agency. It also requires permanent recordkeeping.

The memorandum also responds to the Advisory Committee's call for a special review process for classified human subjects research. It requires that institutional review boards for secret projects include a nongovernmental member, and establishes an appeals process so that any member of a review board who believes a project should not go forward can appeal the boards' decision to approve it.

Finally, this memorandum sets forth additional steps to ensure that classified human research is rare. It requires the heads of Federal agencies to disclose annually the number of secret human research projects undertaken by their agency. It also prohibits any agency from conducting secret human research without first promulgating a final rule applying the Federal Policy for the Protection of Human Subjects, as modified in this memorandum, to the agency.

These steps, set forth in detail below, will preserve the government's ability to conduct any necessary classified research involving human subjects while ensuring adequate protection of research participants.

1. *Modifications to the Federal Policy for the Protection of Human Subjects as it Affects Classified Research.* All agencies that may conduct or support classified research that is subject to the 1991 Federal Policy for the Protection of Human Subjects ("Common Rule") (56 Fed. Reg. 28010-28018) shall promptly jointly publish in the Federal Register the following proposed revisions to the Common Rule as it affects classified research. The Office for Protection from Research Risks in the Department of Health and Human Services shall be the lead agency and, in consultation with the Office of Management and Budget, shall coordinate the joint rulemaking.

(a) The agencies shall jointly propose to prohibit waiver of informed consent for classified research.

(b) The agencies shall jointly propose to prohibit the use of expedited review procedures under the Common Rule for classified research.

(c) The joint proposal should request comment on whether all research exemptions under the Common Rule should be maintained for classified research.

(d) The agencies shall jointly propose to require that in classified research involving human subjects, two additional elements of information be provided to potential subjects when consent is sought from subjects:

(i) the identity of the sponsoring Federal agency. Exceptions are allowed if the head of the sponsoring agency determines that providing this information could compromise intelligence sources or methods and that the research involves no more than minimal risk to subjects. The determination about sources and methods is to be made in consultation with the Director of Central Intelligence and the Assistant to the President for National Security Affairs. The determination about risk is to be made in consultation with the Director of the White House Office of Science and Technology Policy.

(ii) a statement that the project is "classified" and an explanation of what classified means.

(e) The agencies shall jointly propose to modify the institutional review board ("IRB") approval process for classified human subjects research as follows:

(i) The Common Rule currently requires that each IRB "include at least one member who is not otherwise affiliated with the institution and who is not part of the immediate family of a person who is affiliated with the institution." For classified research, the agencies shall define "not otherwise affiliated with the institution," as a nongovernmental member with the appropriate security clearance.

(ii) Under the Common Rule, research projects are approved by the IRB if a "majority of those (IRB) members present at a meeting" approved the project. For classified research, the agencies shall propose to permit any member of the IRB who does not believe a specific project should be approved by the IRB to appeal a majority decision to approve the project to the head of the sponsoring agency. If the agency head affirms the IRB's decision to approve the project, the dissenting IRB

member may appeal the IRB's decisions to the Director of OSTP. The Director of OSTP shall review the IRB's decision and approve or disapprove the project, or, at the Director's discretion, convene an IRB made up of nongovernmental officials, each with the appropriate security clearances, to approve or disapprove the project.

(iii) IRBs for classified research shall determine whether potential subjects need access to classified information to make a valid informed consent decision.

2. *Final Rules.* Agencies shall, within 1 year, after considering any comments, promulgate final rules on the protection of human subjects of classified research.

3. *Agency Head Approval of Classified Research Projects.* Agencies may not conduct any classified human research project subject to the Common Rule unless the agency head has personally approved the specific project.

4. *Annual Public Disclosure of the Number of Classified Research Projects.* Each agency head shall inform the Director of OSTP by September 30 of each year of the number of classified research projects involving human subjects underway on that date, the number completed in the previous 12-month period, and the number of human subjects in each project. The Director of OSTP shall report the total number of classified research projects and participating subjects to the President and shall then report to the congressional armed services and intelligence committees and further shall publish the numbers in the Federal Register.

5. *Definitions.* For purposes of this memorandum, the terms "research" and "human subject" shall have the meaning set forth in the Common Rule. "Classified human research" means research involving "classified information" as defined in [former] Executive Order 12958.

6. *No Classified Human Research Without Common Rule.* Beginning one year after the date of this memorandum, no agency shall conduct or support classified human research without having proposed and promulgated the Common Rule, including the changes set forth in this memorandum and any subsequent amendments.

7. *Judicial Review.* This memorandum is not intended to create any right or benefit, substantive or procedural, enforceable at law by a party against the United States, its agencies, its officers, or any other persons.

8. The Secretary of Health and Human Services shall publish this memorandum in the Federal Register.

WILLIAM J. CLINTON.

RESTORING TRUST IN GOVERNMENT THROUGH SCIENTIFIC INTEGRITY AND EVIDENCE-BASED POLICYMAKING

Memorandum of President of the United States, Jan. 27, 2021, 86 F.R. 8845, provided:

Memorandum for the Heads of Executive Departments and Agencies

It is the policy of my Administration to make evidence-based decisions guided by the best available science and data. Scientific and technological information, data, and evidence are central to the development and iterative improvement of sound policies, and to the delivery of equitable programs, across every area of government. Scientific findings should never be distorted or influenced by political considerations. When scientific or technological information is considered in policy decisions, it should be subjected to well-established scientific processes, including peer review where feasible and appropriate, with appropriate protections for privacy. Improper political interference in the work of Federal scientists or other scientists who support the work of the Federal Government and in the communication of scientific facts undermines the welfare of the Nation, contributes to systemic inequities and injustices, and violates the trust that the public places in government to best serve its collective interests.

This memorandum reaffirms and builds on the Presidential Memorandum of March 9, 2009 (Scientific Integrity) [74 F.R. 10671], and the Director of the Office of Science and Technology Policy's Memorandum of December 17, 2010 (Scientific Integrity).

By the authority vested in me as President by the Constitution and the laws of the United States of America, I direct as follows:

SECTION 1. *Role of the Director of the Office of Science and Technology Policy.* The Director of the Office of Science and Technology Policy (Director) shall ensure the highest level of integrity in all aspects of executive branch involvement with scientific and technological processes. This responsibility shall include ensuring that executive departments and agencies (agencies) establish and enforce scientific-integrity policies that ban improper political interference in the conduct of scientific research and in the collection of scientific or technological data, and that prevent the suppression or distortion of scientific or technological findings, data, information, conclusions, or technical results. In implementing this memorandum, the Director shall, as appropriate, convene and confer with the heads of agencies and with personnel within the offices of the Executive Office of the President, including the Office of Management and Budget.

SEC. 2. *Task Force on Scientific Integrity.* (a) The Director shall convene an interagency task force (the “Task Force”) of the National Science and Technology Council (NSTC) to conduct a thorough review of the effectiveness of agency scientific-integrity policies developed since the issuance of the Presidential Memorandum of March 9, 2009.

(b) The Task Force shall complete its review within 120 days of the date of the appointment of its members, and shall take the following actions when completing its review.

(i) The Task Force shall ensure its review considers whether existing Federal scientific-integrity policies prevent improper political interference in the conduct of scientific research and the collection of scientific or technological data; prevent the suppression or distortion of scientific or technological findings, data, information, conclusions, or technical results; support scientists and researchers of all genders, races, ethnicities, and backgrounds; and advance the equitable delivery of the Federal Government’s programs.

(ii) The Task Force’s review shall include an analysis of any instances in which existing scientific-integrity policies have not been followed or enforced, including whether such deviations from existing policies have resulted in improper political interference in the conduct of scientific research and the collection of scientific or technological data; led to the suppression or distortion of scientific or technological findings, data, information, conclusions, or technical results; disproportionately harmed Federal scientists and researchers from groups that are historically underrepresented in science, technology, and related fields; or impeded the equitable delivery of the Federal Government’s programs. The scope of this review shall include the work of scientific and technological advisory committees, boards, and similar bodies. The existing policies examined by this review shall include those issued pursuant to the Presidential Memorandum of March 9, 2009, and the Director’s Memorandum of December 17, 2010; any other scientific-integrity policies published on agency websites; and commonly accepted scientific-integrity practices.

(iii) The Task Force shall identify effective practices regarding engagement of Federal scientists, as well as contractors working on scientific matters for agencies, with news media and on social media; effective policies that protect scientific independence during clearance and review, and that avoid improper political interference in research or data collection; effective approaches for handling any disagreements about scientific methods and conclusions; effective reporting practices that promote transparency in the implementation of agency scientific-integrity policies and in the handling of any allegations of misconduct; effective practices for educating and informing employees and contractors of their rights and re-

sponsibilities related to agency scientific-integrity policies; promising opportunities to address gaps in current scientific-integrity policies related to emerging technologies, such as artificial intelligence and machine-learning, and evolving scientific practices, such as citizen science and community-engaged research; effective approaches to minimizing conflicts of interest in Federal Government science; and policies that support the professional development of Federal scientists in accordance with, and building on, section IV of the Director’s Memorandum of December 17, 2010.

(iv) To inform the review, the Task Force shall gather input from stakeholders and the public regarding scientific-integrity practices. The Task Force shall consider obtaining such input through various means, which may include holding a virtual stakeholder summit hosted by the Office of Science and Technology Policy (OSTP), issuing a public request for information, and conducting a virtual listening tour or open forums.

(v) Upon the conclusion of its review, the Director shall publish a report on the OSTP website synthesizing the Task Force’s findings. The report shall include a description of agencies’ strengths and weaknesses regarding scientific-integrity policies, as well as a description of best practices and lessons learned.

(c) Within 120 days of the publication of the Task Force’s initial 120-day review of existing scientific-integrity policies, the Task Force shall develop a framework to inform and support the regular assessment and iterative improvement of agency scientific-integrity policies and practices, to support the Director and OSTP in ensuring that agencies adhere to the principles of scientific integrity. This framework shall include assessment criteria that OSTP and agencies can use to inform, review, and improve the design and implementation of agency scientific-integrity policies. The Director shall publish this framework on the OSTP website.

SEC. 3. *Agency Scientific-Integrity Policies.* (a) Heads of agencies shall ensure that all agency activities associated with scientific and technological processes are conducted in accordance with the 6 principles set forth in section 1 of the Presidential Memorandum of March 9, 2009, and the 4 foundations of scientific integrity in government set forth in part I of the Director’s Memorandum of December 17, 2010.

(b) Heads of agencies shall ensure that their agency scientific-integrity policies reflect the findings in the Task Force report produced under section 2(b)(v) of this memorandum and apply to all agency employees, regardless of the nature of their appointment, as well as contractors who perform scientific activities for agencies. Heads of agencies shall coordinate with the Director in the development, updating, and implementation of any agency-specific policies or procedures deemed necessary to ensure the integrity of scientific decision-making. The following time frames shall apply when completing the activities described in this subsection:

(i) The head of each agency with an existing scientific-integrity policy shall submit an updated policy to the Director within 180 days of the publication of the Task Force’s report.

(ii) The head of each agency without an existing scientific-integrity policy shall submit a draft agency scientific-integrity policy to the Director within 180 days of the publication of the Task Force’s report.

(iii) The Director shall expeditiously review scientific-integrity policies submitted by the agencies to ensure that the policies respond to the Task Force’s analysis, adhere to the policy directives in this memorandum, and uphold the highest standards of scientific practice.

(iv) The Director shall notify agencies of any deficiencies in the scientific-integrity policies and collaborate with agencies to expeditiously correct those deficiencies.

(c) In implementing this section, heads of agencies shall:

(i) Provide the Director with any information the Director deems necessary to conduct the Director's duties under this memorandum;

(ii) Publish the agency's scientific-integrity policy on the agency's website, and disseminate information about the policy through the agency's social media channels;

(iii) Develop and publish procedures, as appropriate and consistent with applicable law, for implementing the agency's scientific-integrity policy, including establishing and publishing an administrative process for reporting, investigating, and appealing allegations of deviations from the agency's policy, and for resolving any disputes or disagreements about scientific methods and conclusions;

(iv) Review and, as needed, update within 60 days of the date of this memorandum [Jan. 27, 2021] any website content, and within 300 days of the date of this memorandum any agency reports, data, and other agency materials issued or published since January 20, 2017, that are inconsistent with the principles set forth in this memorandum and that remain in use by the agency or its stakeholders;

(v) Educate agency employees, as well as contractors who perform scientific activities for the agency, on their rights and responsibilities related to scientific integrity, including by conducting routine training on the agency's scientific-integrity policy for all employees, and by ensuring any new employees are made aware of their responsibilities under the agency's scientific-integrity policy shortly after they are hired; and

(vi) Publish, consistent with any requirements related to national security and privacy, as well as any other applicable law, an annual report on the agency's website that includes the number of administrative investigations and appeals involving alleged deviations from the agency's scientific-integrity policies, as described in section (3)(c)(iii) of this memorandum, for the year covered by the report, and the number of investigations and appeals pending from years prior to the year covered by the report, if any.

SEC. 4. *Publication of Scientific-Integrity Policies and Ongoing Biennial Reporting.* (a) The Director shall publish on the OSTP website, and disseminate via social media, information about this memorandum, related OSTP and NSTC reports on scientific integrity, and links to the scientific-integrity policies posted on agency websites, to ensure such information and policies can be easily accessed by the public.

(b) The Director shall publish on the OSTP website, and disseminate via social media, a biennial report on the status of the implementation of this memorandum across the executive branch. This report shall include a review of the impact on scientific integrity of diversity, equity, and inclusion practices related to the Federal scientific and engineering workforce and scientific Federal advisory committees.

SEC. 5. *Evidence-Based Policymaking.* (a) Heads of agencies shall ensure that the scientific-integrity policies of their agencies consider, supplement, and support their plans for forming evidence-based policies, including the evidence-building plans required by 5 U.S.C. 312(a) and the annual evaluation plans required by 5 U.S.C. 312(b).

(b) Within 120 days of the date of this memorandum, after consultation with the Director, the Director of the Office of Management and Budget (OMB) shall issue guidance to improve agencies' evidence-building plans and annual evaluation plans. Specifically, the Director of OMB shall consider whether, consistent with, and building upon, Executive Order 13707 of September 15, 2015 (Using Behavioral Science Insights to Better Serve the American People) [5 U.S.C. 601 note], agencies' evidence-building plans and annual evaluation plans shall include a broad set of methodological approaches for the evidence-based and iterative development and the equitable delivery of policies, programs, and agency operations. Relevant approaches might include use of pilot projects, randomized control trials, quantitative-

survey research and statistical analysis, qualitative research, ethnography, research based on data linkages in which records from two or more datasets that refer to the same entity are joined, well-established processes for community engagement and inclusion in research, and other approaches that may be informed by the social and behavioral sciences and data science.

(c) The statutory positions required to be designated by agencies by the Foundations for Evidence-Based Policymaking Act of 2018 (Public Law 115-435) [see Tables for classification], which include the Evaluation Officer, the Chief Data Officer, and a senior statistical official, shall incorporate scientific-integrity principles consistent with this memorandum into agencies' data governance and evaluation approaches. Similarly, the Chief Data Officers Council shall incorporate scientific-integrity principles consistent with this memorandum into its efforts to establish government-wide best practices for the use, protection, dissemination, and generation of data, and both the Chief Data Officers Council and the Evaluation Officer Council shall identify ways in which agencies can improve upon the production of evidence for use in policymaking.

(d) Consistent with the provisions of the Foundations for Evidence-Based Policymaking Act of 2018, heads of agencies shall, as appropriate and consistent with applicable law, expand open and secure access to Federal data routinely collected in the course of administering Federal, State, local, Tribal, or territorial government programs or fulfilling Federal, State, local, Tribal, or territorial government mandates, such as tax data, vital records, other statistical data, and Social Security Administration earnings and employment reports, to ensure governmental and non-governmental researchers can use Federal data to assess and evaluate the effectiveness and equitable delivery of policies and to suggest improvements. In implementing this provision, heads of agencies shall:

(i) Make these data available by default in a machine-readable format and in a manner that protects privacy and confidential or classified information, and any other information protected from disclosure by law;

(ii) Publish an agency data plan that provides a consistent framework for data stewardship, use, and access. If publishing such a plan is not feasible, then the head of the agency shall publish guidelines outlining how the data were collected, metadata on data use, any limitations on data use, and ways for researchers to provide feedback on data shared;

(iii) Follow the mandates of the Information Quality Act (section 515 of [H.R. 5658 of the 106th Congress, as enacted by section 1(a)(3) of] Public Law 106-554) [44 U.S.C. 3516 note] in assessing and making available to researchers information on the quality of the data being provided; and

(iv) Where possible, provide such data disaggregated by gender, race, ethnicity, age, income, and other demographic factors that support researchers in understanding the effects of policies and programs on equity and justice.

(e) The Director of OMB shall review whether guidance to agencies on implementation of the Information Quality Act needs to be updated and reissued.

(f) Heads of agencies shall review and expeditiously update any agency policies, processes, and practices issued or published since January 20, 2017, that prevent the best available science and data from informing the agency's evidence-based and iterative development and equitable delivery of policies and programs.

SEC. 6. *Agency Chief Science Officers and Scientific Integrity Officials.* (a) Within 120 days of the date of this memorandum, the heads of agencies that fund, conduct, or oversee scientific research shall, to the extent consistent with applicable law, designate a senior agency employee for the role of chief science officer, science advisor, or chief scientist ("Chief Science Officer"), who shall:

(i) Serve as the principal advisor to the head of the agency on scientific issues and ensure that the agen-

cy's research programs are scientifically and technologically well-founded and conducted with integrity; and

(ii) Oversee the implementation and iterative improvement of policies and processes affecting the integrity of research funded, conducted, or overseen by the agency, as well as policies affecting the Federal and non-Federal scientists who support the research activities of the agency, including scientific-integrity policies consistent with the provisions of this memorandum.

(b) Because science, facts, and evidence are vital to addressing policy and programmatic issues across the Federal Government, the heads of all agencies (not only those that fund, conduct, or oversee scientific research) shall designate expeditiously a senior career employee as the agency's lead scientific-integrity official ("Scientific Integrity Official") to oversee implementation and iterative improvement of scientific-integrity policies and processes consistent with the provisions of this memorandum, including implementation of the administrative and dispute resolution processes described in section (3)(c)(iii) of this memorandum. For agencies with a Chief Science Officer, the Scientific Integrity Official shall report to the Chief Science Officer on all matters involving scientific-integrity policies.

(c) To the extent necessary to fully implement the provisions of this memorandum, heads of agencies may designate additional scientific-integrity points of contact in different offices and components, who shall coordinate with the agency's Scientific Integrity Official in implementing the agency's scientific-integrity policies and processes.

(d) Heads of agencies should ensure those designated to serve in the roles described in this section, along with their respective staffs, are selected based on their scientific and technological knowledge, skills, experience, and integrity, including experience conducting and overseeing scientific research and utilizing scientific and technological information and data in agency decision-making, prioritizing experience with evidence-based, equitable, inclusive, and participatory practices and structures for the conduct of scientific research and the communication of scientific results.

(e) The Director or a designee of the Director shall regularly convene Chief Science Officers and Scientific Integrity Officials to encourage the discussion and expansion of effective scientific-integrity policies and practices among agencies.

SEC. 7. *Scientific Advisory Committees.* (a) Within 90 days of the date of this memorandum, heads of agencies shall review their current and future needs for independent scientific and technological advice from Federal advisory committees, commissions, and boards. The review should include an evaluation of those advisory bodies established by law, and should consider both current and anticipated needs.

(b) This review shall assess which Federal scientific and technological advisory committees should be rechartered or recreated to ensure that relevant and highly qualified external experts, with proper safeguards against conflicts of interest, can contribute to critical Federal regulations and other agency actions and decision-making. The review shall also identify any agency policies, processes, or practices that may currently prevent or inhibit relevant and highly qualified external experts from serving on such committees.

(c) In conducting this review, heads of agencies shall take steps to review the membership of scientific and technological advisory committees and, as appropriate and consistent with applicable law, ensure that members and future nominees reflect the diversity of America in terms of gender, race, ethnicity, geography, and other characteristics; represent a variety of backgrounds, areas of expertise, and experiences; provide well-rounded and expert advice to agencies; and are selected based on their scientific and technological knowledge, skills, experience, and integrity, including prioritization of experience with evidence-based, equitable, inclusive, and participatory practices and struc-

tures for the conduct of scientific research and the communication of scientific results.

(d) Upon completion of their 90-day review, heads of agencies shall provide a summary report to the Director and the Director of OMB with recommendations on which Federal scientific and technological advisory committees should be rechartered or recreated in accordance with subsection (b) of this section; which scientific and technological advisory committees should be prioritized for membership appointments to ensure they provide well-rounded and expert advice reflecting diverse perspectives, in accordance with subsection (c) of this section; and which agency policies, processes, or practices, if any, should be updated to encourage relevant and highly qualified external experts to serve on such committees.

SEC. 8. *General Provisions.* (a) Nothing in this memorandum shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This memorandum shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

J.R. BIDEN, JR.

§ 6602. Congressional declaration of policy

(a) Principles

In view of the foregoing, the Congress declares that the United States shall adhere to a national policy for science and technology which includes the following principles:

(1) The continuing development and implementation of strategies for determining and achieving the appropriate scope, level, direction, and extent of scientific and technological efforts based upon a continuous appraisal of the role of science and technology in achieving goals and formulating policies of the United States, and reflecting the views of State and local governments and representative public groups.

(2) The enlistment of science and technology to foster a healthy economy in which the directions of growth and innovation are compatible with the prudent and frugal use of resources and with the preservation of a benign environment.

(3) The conduct of science and technology operations so as to serve domestic needs while promoting foreign policy objectives.

(4) The recruitment, education, training, retraining, and beneficial use of adequate numbers of scientists, engineers, and technologists, and the promotion by the Federal Government of the effective and efficient utilization in the national interest of the Nation's human resources in science, engineering, and technology.

(5) The development and maintenance of a solid base for science and technology in the United States, including: (A) strong participation of and cooperative relationships with State and local governments and the private sector; (B) the maintenance and strengthening