

SECTION 1. *Establishment.* The National Quantum Initiative Advisory Committee (Committee) is hereby established. The Committee shall consist of the Director of the Office of Science and Technology Policy or the Director's designee (Director) and not more than 22 members appointed by the Secretary of Energy (Secretary). Committee members shall represent industry, universities, Federal laboratories, and other Federal Government agencies. Committee members must be qualified to provide advice and information on quantum information science and technology research, development, demonstrations, standards, education, technology transfers, commercial application, and national security economic concerns. The Director shall serve as a Co-Chair of the Committee. The Secretary shall designate at least one of the Committee members to serve as Co-Chair with the Director.

SEC. 2. *Functions.* (a) The Committee shall advise the Secretary and the Subcommittee on Quantum Information Science of the National Science and Technology Council (Subcommittee) and make recommendations to the Secretary to consider when reviewing and revising the National Quantum Initiative Program (Program) established pursuant to section 101 of the Act [15 U.S.C. 8811]. The Committee shall also carry out all responsibilities set forth in section 104 of the Act.

(b) The Committee shall meet at least twice a year and shall:

(i) respond to requests from the Co-Chairs of the Committee for information, analysis, evaluation, or advice relating to quantum information science and technology applications;

(ii) solicit information and ideas from a broad range of stakeholders on quantum information science in order to inform policy making. Stakeholders include the research community, the private sector, universities, national laboratories, executive departments and agencies (agencies), State and local governments, foundations, and nonprofit organizations; and

(iii) respond to requests from the Subcommittee.

SEC. 3. *Administration.* (a) The heads of agencies shall, to the extent permitted by law, provide the Committee with information concerning quantum information science and supporting technologies and applications when requested by a Co-Chair of the Committee.

(b) In consultation with the Director, the Committee may create standing subcommittees and ad hoc groups, including technical advisory groups, to assist and provide preliminary information to the Committee.

(c) The Director may request that members of the Committee, its standing subcommittees, or ad hoc groups who do not hold a current clearance for access to classified information, receive appropriate clearances and access determinations pursuant to Executive Order 13526 of December 29, 2009 (Classified National Security 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 Committee may require.

(e) Committee members shall serve without any compensation for their work on the Committee, 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).

SEC. 4. *General Provisions.* (a) Insofar as the Federal Advisory Committee Act, as amended (5 U.S.C. App.) (FACA), may apply to the Committee, any functions of the President under the FACA, except for those in section 6 of the FACA, shall be performed by the Secretary of Energy, in consultation with the Director, in accordance with the guidelines and procedures established by the Administrator of General Services.

(b) 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.

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

(d) 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.

§ 8815. Sunset

(a) In general

Except as provided in subsection (b), the authority to carry out sections 8811, 8812, 8813, and 8814 of this title shall terminate on the date that is 11 years after December 21, 2018.

(b) Extension

The President may continue the activities under such sections if the President determines that such activities are necessary to meet national economic or national security needs.

(Pub. L. 115–368, title I, §105, Dec. 21, 2018, 132 Stat. 5097.)

SUBCHAPTER II—NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY QUANTUM ACTIVITIES

§ 8831. National Institute of Standards and Technology activities and quantum consortium

(a) National Institute of Standards and Technology activities

As part of the Program, the Director of the National Institute of Standards and Technology—

(1) shall continue to support and expand basic and applied quantum information science and technology research and development of measurement and standards infrastructure necessary to advance commercial development of quantum applications;

(2) shall use the existing programs of the National Institute of Standards and Technology, in collaboration with other Federal departments and agencies, as appropriate, to train scientists in quantum information science and technology to increase participation in the quantum fields;

(3) shall establish or expand collaborative ventures or consortia with other public or private sector entities, including industry, universities, and Federal laboratories for the purpose of advancing the field of quantum information science and engineering; and

(4) may enter into and perform such contracts, including cooperative research and development arrangements and grants and cooperative agreements or other transactions, as may be necessary in the conduct of the work of the National Institute of Standards and Technology and on such terms as the Director considers appropriate, in furtherance of the purposes of this chapter.

(b) Quantum consortium

(1) In general

Not later than 1 year after December 21, 2018, the Director of the National Institute of Standards and Technology shall convene a consortium of stakeholders to identify the fu-

ture measurement, standards, cybersecurity, and other appropriate needs for supporting the development of a robust quantum information science and technology industry in the United States.

(2) Goals

The goals of the consortium shall be—

(A) to assess the current research on the needs identified in paragraph (1);

(B) to identify any gaps in the research necessary to meet the needs identified in paragraph (1); and

(C) to provide recommendations on how the National Institute of Standards and Technology and the Program can address the gaps in the necessary research identified in subparagraph (B).

(3) Report to Congress

Not later than 2 years after December 21, 2018, the Director of the National Institute of Standards and Technology shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report summarizing the findings of the consortium.

(c) Funding

The Director of the National Institute of Standards and Technology shall allocate up to \$80,000,000 to carry out the activities under this section for each of fiscal years 2019 through 2023, subject to the availability of appropriations. Amounts made available to carry out this section shall be derived from amounts appropriated or otherwise made available to the National Institute of Standards and Technology.

(Pub. L. 115-368, title II, §201, Dec. 21, 2018, 132 Stat. 5098.)

SUBCHAPTER III—NATIONAL SCIENCE FOUNDATION QUANTUM ACTIVITIES

§ 8841. Quantum information science research and education program

(a) In general

The Director of the National Science Foundation shall carry out a basic research and education program on quantum information science and engineering, including the competitive award of grants to institutions of higher education or eligible nonprofit organizations (or consortia thereof).

(b) Program components

(1) In general

In carrying out the program under subsection (a), the Director of the National Science Foundation shall carry out activities that—

(A) support basic interdisciplinary quantum information science and engineering research; and

(B) support human resources development in all aspects of quantum information science and engineering.

(2) Requirements

The activities described in paragraph (1) shall include—

(A) using the existing programs of the National Science Foundation, in collaboration with other Federal departments and agencies, as appropriate—

(i) to improve the teaching and learning of quantum information science and engineering at the undergraduate, graduate, and postgraduate levels; and

(ii) to increase participation in the quantum fields, including by individuals identified in sections 1885a and 1885b of title 42;

(B) formulating goals for quantum information science and engineering research and education activities to be supported by the National Science Foundation;

(C) leveraging the collective body of knowledge from existing quantum information science and engineering research and education activities;

(D) coordinating research efforts funded through existing programs across the directorates of the National Science Foundation; and

(E) engaging with other Federal departments and agencies, research communities, and potential users of information produced under this section.

(c) Graduate traineeships

The Director of the National Science Foundation may establish a program to provide traineeships to graduate students at institutions of higher education within the United States who are citizens of the United States and who choose to pursue masters or doctoral degrees in quantum information science.

(Pub. L. 115-368, title III, §301, Dec. 21, 2018, 132 Stat. 5099.)

§ 8842. Multidisciplinary centers for quantum research and education

(a) In general

The Director of the National Science Foundation, in consultation with other Federal departments and agencies, as appropriate, shall award grants to institutions of higher education or eligible nonprofit organizations (or consortia thereof) to establish at least 2, but not more than 5, Multidisciplinary Centers for Quantum Research and Education (referred to in this section as “Centers”).

(b) Collaborations

A collaboration receiving an award under this subsection may include institutions of higher education, nonprofit organizations, and private sector entities.

(c) Purpose

The purpose of the Centers shall be to conduct basic research and education activities in support of the goals and priorities established under section 8813(d)(2) of this title, including by—

(1) continuing to advance quantum information science and engineering;

(2) supporting curriculum and workforce development in quantum information science and engineering; and

(3) fostering innovation by bringing industry perspectives to quantum research and work-