

certificates, veteran post service opportunities, and mentoring.

(D) To facilitate partnerships with employers, employer consortia or other private sector organizations that offer apprenticeships, internships, or applied learning experiences in the field of microelectronics.

(E) To develop shared infrastructure available to institutions of higher education, two-year colleges, and private organizations to enable experiential learning activities and provide physical or digital access to training facilities and industry-standard tools and processes.

(F) To create and disseminate public outreach to support awareness of microelectronics education and career opportunities, including through outreach to PreK–12 schools and STEM-related organizations.

(G) To collaborate and coordinate with industry and existing public and private organizations conducting microelectronics education and workforce development activities, as practicable.

(3) Network coordination hub

The Director shall make an award on a competitive, merit-reviewed basis to an institution of higher education or nonprofit organization (or a consortium thereof) to establish a national network of partnerships (referred to in this section as the “National Network for Microelectronics Education”) to coordinate activities, best practice sharing, and access to facilities across the partnerships established in accordance with paragraph (1).

(4) Incentivizing participation

To the extent practicable, the Director shall encourage participation in the National Network for Microelectronics Education through the coordination of activities and distribution of awards described in subsection (a).

(5) Partnerships

The Director shall encourage the submission of proposals that are led by historically Black colleges and universities, Tribal Colleges or Universities, and minority-serving institutions or that include partnerships with or among such institutions to increase the recruitment of students from groups historically underrepresented in STEM to pursue graduate studies in microelectronics.

(6) Outreach

In addition to any other requirements as determined appropriate by the Director, the Director shall require that proposals for awards under this section shall include a description of how the applicant will develop and implement outreach activities to increase the participation of women and other students from groups historically underrepresented in STEM.

(7) Coordination across foundation programs

In carrying out the activities under this section, the Director shall ensure awardees coordinate with, and avoid unnecessary duplication of, the activities carried out under this Section¹ with the activities of the 21st Century Nanotechnology Research and Develop-

ment Act (Public Law 108–153), the National Quantum Initiative Act (Public Law 115–368), and Division E of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, and other related programs, as appropriate.

(8) Interagency coordination

In carrying out activities under this section, the Director shall collaborate with the Subcommittee on Microelectronics Leadership of the National Science and Technology Council, established in subsection (a) of section 4656 of title 15 and the National Semiconductor Technology Center established in subsection (c) of section 4656 of title 15.

(Pub. L. 117–167, div. B, title III, §10318, Aug. 9, 2022, 136 Stat. 1532.)

Editorial Notes

REFERENCES IN TEXT

The Scientific and Advanced-Technology Act of 1992, referred to in subsec. (a)(5), is Pub. L. 102–476, Oct. 23, 1992, 106 Stat. 2297, which enacted sections 1862h to 1862j of this title and amended section 1862 of this title. For complete classification of this Act to the Code, see Short Title of 1992 Amendment note set out under section 1861 of this title and Tables.

Section 1862p–11 of this title, referred to in subsec. (a)(6)(B), was in the original “section 522 of the America COMPETES Act of 2010”, and was translated as meaning section 522 of Pub. L. 111–358, the America COMPETES Reauthorization Act of 2010, to reflect the probable intent of Congress.

The 21st Century Nanotechnology Research and Development Act, referred to in subsec. (b)(7), is Pub. L. 108–153, Dec. 3, 2003, 117 Stat. 1923, which is classified generally to chapter 101 (§7501 et seq.) of Title 15, Commerce and Trade. For complete classification of this Act to the Code, see Short Title note set out under section 7501 of Title 15 and Tables.

The National Quantum Initiative Act, referred to in subsec. (b)(7), is Pub. L. 115–368, Dec. 21, 2018, 132 Stat. 5092, which is classified generally to chapter 114 (§8801 et seq.) of Title 15, Commerce and Trade. For complete classification of this Act to the Code, see Short Title note set out under section 8801 of Title 15 and Tables.

The William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, referred to in subsec. (b)(7), is Pub. L. 116–283, Jan. 1, 2021, 134 Stat. 3388. Division E (§§5001–5501) of the Act, also known as the National Artificial Intelligence Initiative Act of 2020, is classified principally to chapter 119 (§9401 et seq.) of Title 15, Commerce and Trade. For complete classification of this Act to the Code, see Short Title note set out under section 9401 of Title 15 and Tables.

§ 18998. Mandatory cost-sharing

(a) Waiver

The cost-sharing requirements under section 1862o–14(c) of this title for the Major Research Instrumentation Program and under section 1862n–1a(i) of this title for teaching fellowships administered within the Robert Noyce Teacher Scholarship Program are waived for a period of 5 years following August 9, 2022.

(b) Assessment

Not later than 5 years following August 9, 2022, the Director shall submit to Congress an assessment, that includes feedback from the research community, of the impacts of the waivers provided under subsection (a), including—

- (1) programmatic and scientific goals;
- (2) institutional commitment and stewardship of Federal resources;
- (3) institutional strategic planning and administrative burden;
- (4) equity among recipient institutions; and
- (5) recommendations for or against extending or making permanent such waivers.

(Pub. L. 117-167, div. B, title III, §10320, Aug. 9, 2022, 136 Stat. 1536.)

§ 18999. Programs to address the STEM workforce

(a) In general

The Director shall issue undergraduate scholarships, including at community colleges, graduate fellowships and traineeships, postdoctoral awards, and, as appropriate, other awards, to address STEM workforce gaps, including for programs that recruit, retain, and advance students to a bachelor's degree in a STEM discipline concurrent with a secondary school diploma, such as through existing and new partnerships with State educational agencies.

(b) Postdoctoral professional development

In carrying out this section, the Director shall encourage innovation in postdoctoral professional development, support the development and diversity of the STEM workforce, and study the impacts of such innovation and support. To do so, the Director may use postdoctoral awards established under subsection (a) or leveraged under subsection (d)(1) for fellowships or other temporary rotational postings of not more than 2 years. Such fellowships or temporary rotational postings shall be awarded—

- (1) to qualified individuals who have a doctoral degree and received such degree not earlier than 5 years before the date that the fellowship or temporary rotational posting begins; and
- (2) to carry out research at Federal, State, local, and Tribal government research facilities.

(c) Direct hire authority

(1) In general

The head of any Federal agency may appoint, without regard to the provisions of subchapter I of chapter 33 of title 5, other than sections 3303 and 3328 of that title, a qualified candidate described in paragraph (2) directly to a position in the competitive service with the Federal agency for which the candidate meets Office of Personnel Management qualification standards.

(2) Fellowship or temporary rotational posting

Paragraph (1) applies with respect to a former recipient of an award under this subsection who—

- (A) earned a doctoral degree in a STEM field from an institution of higher education; and
- (B) successfully fulfilled the requirements of the fellowship or temporary rotational posting within a Federal agency.

(3) Limitation

The direct hire authority under this subsection shall be exercised with respect to a

specific qualified candidate not later than 2 years after the date that the candidate completed the requirements related to the fellowship or temporary rotational posting described under this subsection.

(d) Existing programs

In carrying out this section, the Director may leverage existing programs, including programs that issue—

- (1) postdoctoral awards;
- (2) graduate fellowships and traineeships, inclusive of the NSF Research Traineeships and fellowships awarded under the Graduate Research Fellowship Program;
- (3) scholarships, research experiences, and internships, including—
 - (A) scholarships to attend community colleges; and
 - (B) research experiences and internships under sections 1862p-5, 1862p-6, and 1862p-7 of this title; and
- (4) awards to institutions of higher education to enable the institutions to fund innovation in undergraduate and graduate education, increased educational capacity, and the development and establishment of new or specialized programs of study for graduate, undergraduate, or technical college students, and the evaluation of the effectiveness of the programs of study.

(Pub. L. 117-167, div. B, title III, §10321, Aug. 9, 2022, 136 Stat. 1537.)

PART C—BROADENING PARTICIPATION

§ 19011. Robert Noyce Teacher Scholarship program update

(a) Sense of Congress

It is the sense of Congress that over the next five years the Foundation should increase the number of scholarships awarded under the Robert Noyce Teacher Scholarship program established under section 1862n-1 of this title by 50 percent.

(b) Outreach

To increase the diversity of participants, the Director shall support symposia, forums, conferences, and other activities to expand and enhance outreach to—

- (1) historically Black colleges and universities;
- (2) Tribal Colleges or Universities;
- (3) minority-serving institutions;
- (4) institutions of higher education that are located near or serve rural communities, including EPSCoR institutions;
- (5) labor organizations;
- (6) emerging research institutions; and
- (7) higher education programs that serve or support veterans.

(Pub. L. 117-167, div. B, title III, §10322, Aug. 9, 2022, 136 Stat. 1538.)

§ 19012. NSF Eddie Bernice Johnson INCLUDES Initiative

(a) In general

The Director shall make awards, on a competitive basis, to institutions of higher education or