

(B) the Foundation's grants address societal needs through basic research findings or through related activities; and

(4) as evidenced by the Foundation's contributions to scientific advancement, economic growth, human health, and national security, its peer review and merit review processes have identified and funded scientifically and societally relevant basic research and should be preserved.

(b) Merit review criteria

The Foundation shall maintain the intellectual merit and broader impacts criteria, among other specific criteria as appropriate, as the basis for evaluating grant proposals in the merit review process.

(c) Updates

If after January 6, 2017, a change is made to the merit-review process, the Director shall submit a report to the appropriate committees of Congress not later than 30 days after the date of the change.

(Pub. L. 114-329, title I, §101, Jan. 6, 2017, 130 Stat. 2970.)

CODIFICATION

Section was enacted as part of the American Innovation and Competitiveness Act, and not as part of the National Science Foundation Act of 1950 which comprises this chapter.

DEFINITIONS

Pub. L. 114-329, §2, Jan. 6, 2017, 130 Stat. 2970, provided that: "In this Act [see Short Title of 2017 Amendment note set out under section 1861 of this title and Tables], unless expressly provided otherwise:

"(1) APPROPRIATE COMMITTEES OF CONGRESS.—The term 'appropriate committees of Congress' means the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives.

"(2) FEDERAL SCIENCE AGENCY.—The term 'Federal science agency' has the meaning given the term in section 103 of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 6623).

"(3) FOUNDATION.—The term 'Foundation' means the National Science Foundation.

"(4) INSTITUTION OF HIGHER EDUCATION.—The term 'institution of higher education' has the meaning given the term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

"(5) NIST.—The term 'NIST' means the National Institute of Standards and Technology.

"(6) STEM.—The term 'STEM' has the meaning given the term in section 2 of the American [sic] COMPETES Reauthorization Act of 2010 [Pub. L. 111-358] (42 U.S.C. 6621 note).

"(7) STEM EDUCATION.—The term 'STEM education' has the meaning given the term in section 2 of the STEM Education Act of 2015 [Pub. L. 114-59] (42 U.S.C. 6621 note)."

§ 1862s-1. Transparency and accountability

(a) Findings

(1)¹ building the understanding of and confidence in investments in basic research is essential to public support for sustained, predictable Federal funding;

(2) the Foundation has improved transparency and accountability of the outcomes made

¹ So in original. Probably should be preceded by introductory text.

through the merit review process, but additional transparency into individual grants is valuable in communicating and assuring the public value of federally funded research; and

(3) the Foundation should commit to transparency and accountability and to clear, consistent public communication regarding the national interest for each Foundation-awarded grant and cooperative agreement.

(b) Guidance

(1) In general

The Director of the Foundation shall issue and periodically update, as appropriate, policy guidance for both Foundation staff and other Foundation merit review process participants on the importance of transparency and accountability to the outcomes made through the merit review process.

(2) Requirements

The guidance under paragraph (1) shall require that each public notice of a Foundation-funded research project justify the expenditure of Federal funds by—

(A) describing how the project—

(i) reflects the statutory mission of the Foundation, as established in the National Science Foundation Act of 1950 (42 U.S.C. 1861 et seq.); and

(ii) addresses the Foundation's intellectual merit and broader impacts criteria; and

(B) clearly identifying the research goals of the project in a manner that can be easily understood by both technical and non-technical audiences.

(Pub. L. 114-329, title I, §102, Jan. 6, 2017, 130 Stat. 2971.)

REFERENCES IN TEXT

The National Science Foundation Act of 1950, referred to in subsec. (b)(2)(A)(i), is act May 10, 1950, ch. 171, 64 Stat. 149, which is classified generally to this chapter. For complete classification of this Act to the Code, see Short Title note set out under section 1861 of this title and Tables.

CODIFICATION

Section was enacted as part of the American Innovation and Competitiveness Act, and not as part of the National Science Foundation Act of 1950 which comprises this chapter.

Section is comprised of section 102 of Pub. L. 114-329. Subsec. (c) of section 102 of Pub. L. 114-329 amended section 1862p-14 of this title.

DEFINITIONS

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

§ 1862s-2. Oversight of NSF major multi-user research facility projects

(a) Facilities oversight

(1) In general

The Director of the Foundation shall strengthen oversight and accountability over the full life-cycle of each major multi-user research facility project, including planning, development, procurement, construction, oper-

ations, and support, and shut-down of the facility, in order to maximize research investment.

(2) Requirements

In carrying out paragraph (1), the Director shall—

(A) prioritize the scientific outcomes of a major multi-user research facility project and the internal management and financial oversight of the major multi-user research facility project;

(B) clarify the roles and responsibilities of all organizations, including offices, panels, committees, and directorates, involved in supporting a major multi-user research facility project, including the role of the Major Research Equipment and Facilities Construction Panel;

(C) establish policies and procedures for the planning, management, and oversight of a major multi-user research facility project at each phase of the life-cycle of the major multi-user research facility project;

(D) ensure that policies for estimating and managing costs and schedules are consistent with the best practices described in the Government Accountability Office Cost Estimating and Assessment Guide, the Government Accountability Office Schedule Assessment Guide, and the Office of Management and Budget Uniform Guidance (2 C.F.R. Part 200);

(E) establish the appropriate project management and financial management expertise required for Foundation staff to oversee each major multi-user research facility project effectively, including by improving project management training and certification;

(F) coordinate the sharing of the best management practices and lessons learned from each major multi-user research facility project;

(G) continue to maintain a Large Facilities Office to support the research directorates in the development, implementation, and oversight of each major multi-user research facility project, including by—

(i) serving as the Foundation's primary resource for all policy or process issues related to the development, implementation, and oversight of a major multi-user research facility project;

(ii) serving as a Foundation-wide resource on project management, including providing expert assistance on non-scientific and nontechnical aspects of project planning, budgeting, implementation, management, and oversight;

(iii) coordinating and collaborating with research directorates to share best management practices and lessons learned from prior major multi-user research facility projects; and

(iv) assessing each major multi-user research facility project for cost and schedule risk; and

(H) appoint a senior agency official whose responsibility is oversight of the development, construction, and operations of major

multi-user research facilities across the Foundation.

(b) Facilities full life-cycle costs

(1) In general

Subject to subsection (c)(1), the Director of the Foundation shall require that any pre-award analysis of a major multi-user research facility project includes the development and consideration of the full life-cycle cost (as defined in section 2 of the National Science Foundation Authorization Act of 1998 (42 U.S.C. 1862k note)) in accordance with section 1862n-4 of this title.

(2) Implementation

Based on the pre-award analysis described in paragraph (1), the Director of the Foundation shall include projected operational costs within the Foundation's out-years as part of the President's annual budget submission to Congress under section 1105 of title 31.

(c) Cost oversight

(1) Pre-award analysis

(A) In general

The Director of the Foundation and the National Science Board may not approve or execute any agreement to start construction on any proposed major multi-user research facility project unless—

(i) an external analysis of the proposed budget has been conducted to ensure the proposal is complete and reasonable;

(ii) the analysis under clause (i) follows the Government Accountability Office Cost Estimating and Assessment Guide;

(iii) except as provided under subparagraph (C), an analysis of the accounting systems has been conducted;

(iv) an independent cost estimate of the construction of the project has been conducted using the same detailed technical information as the project proposal estimate to determine whether the estimate is well-supported and realistic; and

(v) the Foundation and the National Science Board have considered the analyses under clauses (i) and (iii) and the independent cost estimate under clause (iv) and resolved any major issues identified therein.

(B) Audits

An external analysis under subparagraph (A)(i) may include an audit.

(C) Exception

The Director of the Foundation, at the Director's discretion, may waive the requirement under subparagraph (A)(iii) if a similar analysis of the accounting systems was conducted in the prior years.

(2) Construction oversight

The Director of the Foundation shall require for each major multi-user research facility project—

(A) periodic external reviews on project management and performance;

(B) adequate internal controls, policies, and procedures, and reliable accounting sys-

tems in preparation for the incurred cost audits under subparagraph (D);

(C) annual incurred cost submissions of financial expenditures; and

(D) an incurred cost audit of the major multi-user research facility project in accordance with Government Accountability Office Government Auditing Standards—

(i) at least once during construction at a time determined based on risk analysis and length of the award, except that the length of time between audits may not exceed 3 years; and

(ii) at the completion of the construction phase.

(3) Operations cost analysis

The Director of the Foundation shall require an independent cost analysis of the operational proposal for each major multi-user research facility project.

(d) Contingency

(1) In general

The Director of the Foundation shall strengthen internal controls to improve oversight of contingency on a major multi-user research facility project.

(2) Requirements

In carrying out paragraph (1), the Director of the Foundation shall—

(A) only include contingency amounts in an award in accordance with section 200.433 of title 2, Code of Federal Regulations (relating to contingency provisions), or any successor regulation;

(B) retain control over funds budgeted for contingency, except that the Director may disburse budgeted contingency funds incrementally to the awardee to ensure project stability and continuity;

(C) track contingency use; and

(D) ensure that contingency amounts allocated to the performance baseline are reasonable and allowable.

(e) Use of fees

(1) Sense of Congress

It is the sense of Congress that—

(A) the use of taxpayer-funded award fees should be transparent and explicable; and

(B) the Foundation should implement an award fee policy that ensures more transparency and accountability in the funding of necessary and appropriate expenses directly related to the construction and operation of major multi-user research facilities.

(2) Reporting and recordkeeping

The Director of the Foundation shall establish guidelines for awardees regarding inappropriate expenditures associated with all fee types used in cooperative agreements, including for alcoholic beverages, lobbying, meals or entertainment for non-business purposes, non-business travel, and any other purpose the Director determines is inappropriate.

(f) Oversight implementation progress

The Director of the Foundation shall—

(1) not later than 90 days after January 6, 2017, and periodically thereafter until the com-

pletion date, provide a briefing to the appropriate committees of Congress on the response to or progress made toward implementation of—

(A) this section;

(B) all of the issues and recommendations identified in cooperative agreement audit reports and memoranda issued by the Inspector General of the Foundation in the last 5 years; and

(C) all of the issues and recommendations identified by a panel of the National Academy of Public Administration in the December 2015 report entitled “National Science Foundation: Use of Cooperative Agreements to Support Large Scale Investment in Research”; and

(2) not later than 1 year after January 6, 2017, notify the appropriate committees of Congress when the Foundation has implemented the recommendations identified in a panel of the National Academy of Public Administration report issued December 2015.

(g) Definitions

In this section:

(1) Appropriate committees of Congress

The term “appropriate committees of Congress” means the Committee on Commerce, Science, and Transportation and the Committee on Appropriations of the Senate and the Committee on Science, Space, and Technology and the Committee on Appropriations of the House of Representatives.

(2) Major multi-user research facility project

The term “major multi-user research facility project”¹ means a science and engineering facility project that—

(A) exceeds the lesser of—

(i) 10 percent of a Directorate’s annual budget; or

(ii) \$100,000,000 in total project costs; or

(B) is funded by the major research equipment and facilities construction account, or any successor account.

(Pub. L. 114-329, title I, §110, Jan. 6, 2017, 130 Stat. 2988.)

REFERENCES IN TEXT

Section 2 of the National Science Foundation Authorization Act of 1998, referred to in subsec. (b)(1), is section 2 of Pub. L. 105-207, July 29, 1998, 112 Stat. 869, which is set out as a note under section 1862k of this title.

CODIFICATION

Section was enacted as part of the American Innovation and Competitiveness Act, and not as part of the National Science Foundation Act of 1950 which comprises this chapter.

DEFINITIONS

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

¹So in original. The single quotation marks probably should not appear.

§ 1862s–3. Personnel oversight

(a) Conflicts of interest

The Director of the Foundation shall update the policy and procedure of the Foundation relating to conflicts of interest to improve documentation and management of any known conflict of interest of an individual on temporary assignment at the Foundation, including an individual on assignment under the Intergovernmental Personnel Act of 1970 (42 U.S.C. 4701 et seq.).

(b) Justifications

The Deputy Director of the Foundation shall submit annually to the appropriate committees of Congress written justification for each rotator employed under the Intergovernmental Personnel Act of 1970 (42 U.S.C. 4701 et seq.), or other rotator employed, by the Foundation that year that is paid at a rate that exceeds the maximum rate of pay for the Senior Executive Service, including, if applicable, the level of adjustment for the certified Senior Executive Service Performance Appraisal System.

(c) Report

Not later than 1 year after January 6, 2017, the Director of the Foundation shall submit to the appropriate committees of Congress a report on the Foundation's efforts to control costs associated with employing rotators, including the results of and participation in the Foundation's cost-sharing pilot program and the Foundation's progress in responding to the findings and implementing the recommendations of the Office of Inspector General of the Foundation related to the employment of rotators.

(Pub. L. 114–329, title I, §111, Jan. 6, 2017, 130 Stat. 2992.)

REFERENCES IN TEXT

The Intergovernmental Personnel Act of 1970, referred to in subsecs. (a) and (b), is Pub. L. 91–648, Jan. 5, 1971, 84 Stat. 1909, which is classified principally to chapter 62 (§4701 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 4701 of this title and Tables.

CODIFICATION

Section was enacted as part of the American Innovation and Competitiveness Act, and not as part of the National Science Foundation Act of 1950 which comprises this chapter.

DEFINITIONS

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

§ 1862s–4. Brain Research through Advancing Innovative Neurotechnologies Initiative

(a) In general

The Foundation shall support research activities related to the interagency Brain Research through Advancing Innovative Neurotechnologies Initiative.

(b) Sense of Congress

It is the sense of Congress that the Foundation should work in conjunction with the Interagency Working Group on Neuroscience estab-

lished by the National Science and Technology Council, Committee on Science to determine how to use the data infrastructure of the Foundation and other applicable Federal science agencies to help neuroscientists collect, standardize, manage, and analyze the large amounts of data that result from research attempting to understand how the brain functions.

(Pub. L. 114–329, title I, §117, Jan. 6, 2017, 130 Stat. 2995.)

CODIFICATION

Section was enacted as part of the American Innovation and Competitiveness Act, and not as part of the National Science Foundation Act of 1950 which comprises this chapter.

DEFINITIONS

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

§ 1862s–5. Programs to expand STEM opportunities

(a) Findings

Congress makes the following findings:

(1) Economic projections by the Bureau of Labor Statistics indicate that by 2018, there could be 2,400,000 unfilled STEM jobs.

(2) Women represent slightly more than half the United States population, and projections indicate that 54 percent of the population will be a member of a racial or ethnic minority group by 2050.

(3) Despite representing half the population, women comprise only about 30 percent of STEM workers according to a 2015 report by the National Center for Science and Engineering Statistics.

(4) A 2014 National Center for Education Statistics study found that underrepresented populations leave the STEM fields at higher rates than their counterparts.

(5) The representation of women in STEM drops significantly at the faculty level. Overall, women hold only 25 percent of all tenured and tenure-track positions and 17 percent of full professor positions in STEM fields in our Nation's universities and 4-year colleges.

(6) Black and Hispanic faculty together hold about 6.5 percent of all tenured and tenure-track positions and 5 percent of full professor positions.

(7) Many of the numbers in the American Indian or Alaskan Native and Native Hawaiian or Other Pacific Islander categories for different faculty ranks were too small for the Foundation to report publicly without potentially compromising confidential information about the individuals being surveyed.

(b) Sense of Congress

It is the sense of Congress that—

(1) it is critical to our Nation's economic leadership and global competitiveness that the United States educate, train, and retain more scientists, engineers, and computer scientists;

(2) there is currently a disconnect between the availability of and growing demand for STEM-skilled workers;

(3) historically, underrepresented populations are the largest untapped STEM talent pools in the United States; and