

**AMENDMENT OFFERED BY MS. EDDIE BERNICE  
JOHNSON OF TEXAS AND MR. VEASEY OF  
TEXAS TO THE AMENDMENT IN THE NATURE  
OF A SUBSTITUTE**

At the end of title II, insert the following new sub-  
title:

1                   **Subtitle B—Broadening**  
2                   **Participation in STEM**

3 **SEC. 211. SHORT TITLE.**

4           This subtitle may be cited as the “STEM Opportuni-  
5 ties Act of 2014”.

6 **SEC. 212. PURPOSE.**

7           (a) **IN GENERAL.**—The Director of the Office of  
8 Science and Technology Policy, acting through the Fed-  
9 eral science agencies, shall carry out programs and activi-  
10 ties with the purpose of ensuring that Federal science  
11 agencies and institutions of higher education receiving  
12 Federal research and development funding are fully en-  
13 gaging their entire talent pool.

14           (b) **PURPOSES.**—The purposes of this subtitle are as  
15 follows:

16                   (1) To promote research on and increase under-  
17 standing of the participation and trajectories of  
18 women and underrepresented minorities in STEM

1 careers at institutions of higher education and Fed-  
2 eral science agencies, including Federal laboratories.

3 (2) To raise awareness within Federal science  
4 agencies, including Federal laboratories, and institu-  
5 tions of higher education about cultural and institu-  
6 tional barriers limiting the recruitment, retention,  
7 promotion, and other indicators of participation and  
8 achievement of women and underrepresented minori-  
9 ties in academic and Government STEM research  
10 careers at all levels.

11 (3) To identify, disseminate, and implement  
12 best practices at Federal science agencies, including  
13 Federal laboratories, and at institutions of higher  
14 education to remove or reduce cultural and institu-  
15 tional barriers limiting the recruitment, retention,  
16 and success of women and underrepresented minori-  
17 ties in academic and Government STEM research  
18 careers.

19 (4) To provide grants to institutions of higher  
20 education to recruit, retain, and advance STEM fac-  
21 ulty members from underrepresented minority  
22 groups and to implement or expand reforms in un-  
23 dergraduate STEM education in order to increase  
24 the number of students from underrepresented mi-  
25 nority groups receiving degrees in these fields.

1 **SEC. 213. FEDERAL SCIENCE AGENCY POLICIES FOR CARE-**  
2 **GIVERS.**

3 (a) OSTP GUIDANCE.—Not later than 6 months  
4 after the date of enactment of this Act, the Director of  
5 the Office of Science and Technology Policy shall provide  
6 guidance to Federal science agencies to establish policies  
7 that—

8 (1) apply to all—

9 (A) intramural and extramural research  
10 awards; and

11 (B) primary investigators who have  
12 caregiving responsibilities, including care for a  
13 newborn or newly adopted child and care for an  
14 immediate family member who is sick or dis-  
15 abled; and

16 (2) provide—

17 (A) flexibility in timing for the initiation of  
18 approved research awards;

19 (B) no-cost extensions of research awards;

20 (C) grant supplements as appropriate to  
21 research awards for research technicians or  
22 equivalent to sustain research activities; and

23 (D) any other appropriate accommodations  
24 at the discretion of the head of each agency.

25 (b) UNIFORMITY OF GUIDANCE.—In providing such  
26 guidance, the Director of the Office of Science and Tech-

1 nology Policy shall encourage uniformity and consistency  
2 in the policies across all agencies.

3 (c) ESTABLISHMENT OF POLICIES.—Consistent with  
4 the guidance provided under this section, Federal science  
5 agencies shall maintain or develop and implement policies  
6 for caregivers and shall broadly disseminate such policies  
7 to current and potential grantees.

8 (d) DATA ON USAGE.—Federal science agencies  
9 shall—

10 (1) collect data on the usage of the policies  
11 under subsection (c), by gender, at both institutions  
12 of higher education and Federal laboratories; and

13 (2) report such data on an annual basis to the  
14 Director of the Office of Science and Technology  
15 Policy in such form as required by the Director.

16 **SEC. 214. COLLECTION AND REPORTING OF DATA ON FED-**  
17 **ERAL RESEARCH GRANTS.**

18 (a) COLLECTION OF DATA.—

19 (1) IN GENERAL.—Each Federal science agency  
20 shall collect standardized record-level annual infor-  
21 mation on demographics, primary field, award type,  
22 budget request, funding outcome, and awarded  
23 budget for all applications for merit-reviewed re-  
24 search and development grants to institutions of

1 higher education and Federal laboratories supported  
2 by that agency.

3 (2) UNIFORMITY AND STANDARDIZATION.—The  
4 Director of the Office of Science and Technology  
5 Policy shall establish a policy to ensure uniformity  
6 and standardization of the data collection required  
7 under paragraph (1).

8 (3) RECORD-LEVEL DATA.—

9 (A) REQUIREMENT.—On an annual basis,  
10 beginning with the deadline under subpara-  
11 graph (C), each Federal science agency shall  
12 submit to the Director of the National Science  
13 Foundation record-level data collected under  
14 paragraph (1) in the form required by such Di-  
15 rector.

16 (B) PREVIOUS DATA.—As part of the first  
17 submission under subparagraph (A), each Fed-  
18 eral science agency, to the extent practicable,  
19 shall also submit comparable record-level data  
20 for the 5 years preceding the deadline under  
21 subparagraph (C).

22 (C) DEADLINE.—The deadline under this  
23 paragraph is 2 years after the date of enact-  
24 ment of this Act.

1 (b) REPORTING OF DATA.—The Director of the Na-  
2 tional Science Foundation shall publish statistical sum-  
3 mary data collected under this section, disaggregated and  
4 cross-tabulated by race, ethnicity, gender, age, and years  
5 since completion of doctoral degree, including in conjunc-  
6 tion with the National Science Foundation’s report re-  
7 quired by section 37 of the Science and Technology Equal  
8 Opportunities Act (42 U.S.C. 1885d; Public Law 96–  
9 516).

10 **SEC. 215. POLICIES FOR REVIEW OF FEDERAL RESEARCH**  
11 **GRANTS.**

12 (a) IN GENERAL.—The Director of the Office of  
13 Science and Technology Policy, in collaboration with the  
14 Director of the National Science Foundation, shall identify  
15 information and best practices useful for educating pro-  
16 gram officers and members of standing peer review com-  
17 mittees at Federal science agencies about—

18 (1) research on implicit bias based on gender,  
19 race, or ethnicity; and

20 (2) methods to minimize the effect of such bias  
21 in the review of extramural and intramural Federal  
22 research grants.

23 (b) GUIDANCE TO ALL FEDERAL SCIENCE AGEN-  
24 CIES.—The Director of the Office of Science and Tech-  
25 nology Policy shall disseminate the information and best

1 practices identified in subsection (a) to all Federal science  
2 agencies and provide guidance as necessary on policies to  
3 implement such practices within each agency.

4 (c) ESTABLISHMENT OF POLICIES.—Consistent with  
5 the guidance provided in subsection (b), Federal science  
6 agencies shall maintain or develop and implement policies  
7 and practices to minimize the effects of implicit bias in  
8 the review of extramural and intramural Federal research  
9 grants.

10 (d) REPORT TO CONGRESS.—Not later than 2 years  
11 after the date of enactment of this Act, the Director of  
12 the Office of Science and Technology Policy shall report  
13 to Congress on what steps all Federal science agencies  
14 have taken to implement policies and practices to minimize  
15 the effects of bias in the review of extramural and intra-  
16 mural Federal research grants.

17 **SEC. 216. COLLECTION OF DATA ON DEMOGRAPHICS OF**  
18 **FACULTY.**

19 (a) COLLECTION OF DATA.—

20 (1) IN GENERAL.—Not later than 3 years after  
21 the date of enactment of this Act, and at least every  
22 5 years thereafter, the Director of the National  
23 Science Foundation shall carry out a survey to col-  
24 lect institution-level data on the demographics of

1       STEM faculty, by broad fields of STEM, at dif-  
2       ferent types of institutions of higher education.

3           (2) CONSIDERATIONS.—To the extent prac-  
4       ticable, the Director of the National Science Foun-  
5       dation shall consider, by gender, race, ethnicity, citi-  
6       zenship status, age, and years since completion of  
7       doctoral degree—

8           (A) the number and percentage of faculty;

9           (B) the number and percentage of faculty  
10       at each rank;

11          (C) the number and percentage of faculty  
12       who are in nontenure-track positions, including  
13       teaching and research;

14          (D) the number and percentage of faculty  
15       who are reviewed for promotion, including ten-  
16       ure, and the percentage of that number who are  
17       promoted, including being awarded tenure;

18          (E) faculty years in rank;

19          (F) the number and percentage of faculty  
20       to leave tenure-track positions;

21          (G) the number and percentage of faculty  
22       hired, by rank; and

23          (H) the number and percentage of faculty  
24       in leadership positions.



1           (b) EXISTING SURVEYS.—The Director of the Na-  
2 tional Science Foundation—

3           (1) may carry out the requirements under sub-  
4 section (a) by collaborating with statistical centers  
5 at other Federal agencies to modify or expand, as  
6 necessary, existing Federal surveys of higher edu-  
7 cation; or

8           (2) may award a grant or contract to an insti-  
9 tution of higher education or other nonprofit organi-  
10 zation to design and carry out the requirements  
11 under subsection (a).

12          (c) REPORTING DATA.—The Director of the National  
13 Science Foundation shall publish statistical summary data  
14 collected under this section, including as part of the Na-  
15 tional Science Foundation's report required by section 37  
16 of the Science and Technology Equal Opportunities Act  
17 (42 U.S.C. 1885d; Public Law 96–516).

18          (d) AUTHORIZATION OF APPROPRIATIONS.—There  
19 are authorized to be appropriated to the Director of the  
20 National Science Foundation \$3,000,000 for each of fiscal  
21 years 2014 through 2016 to develop and carry out the  
22 initial survey required in subsection (a).

1 **SEC. 217. CULTURAL AND INSTITUTIONAL BARRIERS TO EX-**  
2 **PANDING THE ACADEMIC AND FEDERAL**  
3 **STEM WORKFORCE.**

4 (a) BEST PRACTICES AT INSTITUTIONS OF HIGHER  
5 EDUCATION.—

6 (1) DEVELOPMENT OF GUIDANCE.—Not later  
7 than 6 months after the date of enactment of this  
8 Act, the Director of the National Science Founda-  
9 tion shall develop written guidance for institutions of  
10 higher education on the best practices for—

11 (A) conducting periodic campus culture  
12 surveys of STEM departments, with a par-  
13 ticular focus on identifying any cultural or in-  
14 stitutional barriers to or successful enablers for  
15 the recruitment, retention, promotion, and  
16 other indicators of participation and achieve-  
17 ment, of women and underrepresented minori-  
18 ties in STEM degree programs and academic  
19 STEM careers; and

20 (B) providing educational opportunities, in-  
21 cluding workshops as described in subsection  
22 (c), for STEM faculty and administrators to  
23 learn about current research on implicit bias in  
24 recruitment, evaluation, and promotion of fac-  
25 ulty in STEM and recruitment and evaluation

1 of undergraduate and graduate students in  
2 STEM degree programs.

3 (2) EXISTING GUIDANCE.—In developing the  
4 guidance in paragraph (1), the Director of the Na-  
5 tional Science Foundation shall utilize guidance al-  
6 ready developed by the National Aeronautics and  
7 Space Administration, the Department of Energy,  
8 and the Department of Education.

9 (3) DISSEMINATION OF GUIDANCE.—The Direc-  
10 tor of the National Science Foundation shall broadly  
11 disseminate the guidance developed in paragraph (1)  
12 to institutions of higher education that receive Fed-  
13 eral research funding.

14 (4) REPORTS TO THE NATIONAL SCIENCE  
15 FOUNDATION.—The Director of the National Science  
16 Foundation shall develop a policy that—

17 (A) applies to, at a minimum, the institu-  
18 tions classified by the Carnegie Foundation for  
19 the Advancement of Teaching on January 1,  
20 2013, as a doctorate-granting university with a  
21 very high level of research activity; and

22 (B) requires each institution identified in  
23 subparagraph (A), not later than 3 years after  
24 the date of enactment of this Act, to report to  
25 the Director of the National Science Founda-

1           tion on activities and policies developed and im-  
2           plemented based on the guidance provided in  
3           paragraph (1).

4           (b) BEST PRACTICES AT FEDERAL LABORA-  
5           TORIES.—

6           (1) DEVELOPMENT OF GUIDANCE.—Not later  
7           than 6 months after the date of enactment of this  
8           Act, the Director of the Office of Science and Tech-  
9           nology Policy shall develop written guidance for Fed-  
10          eral laboratories to develop and implement practices  
11          and policies to—

12                   (A) conduct periodic laboratorywide culture  
13                   surveys of research personnel at all levels, with  
14                   a particular focus on identifying any cultural or  
15                   institutional barriers to the recruitment, reten-  
16                   tion, and success of women and underrep-  
17                   resented minorities in STEM careers at Federal  
18                   laboratories; and

19                   (B) provide educational opportunities, in-  
20                   cluding workshops as described in subsection  
21                   (c), for STEM research personnel to learn  
22                   about current research in implicit bias in re-  
23                   cruitment, evaluation, and promotion of re-  
24                   search personnel at Federal laboratories.

1           (2) ESTABLISHMENT OF POLICIES.—Consistent  
2           with the guidance provided in paragraph (1), Fed-  
3           eral science agencies with Federal laboratories shall  
4           maintain or develop and implement policies for their  
5           respective Federal laboratories.

6           (c) WORKSHOPS TO ADDRESS CULTURAL BARRIERS  
7           TO EXPANDING THE ACADEMIC AND FEDERAL STEM  
8           WORKFORCE.—

9           (1) IN GENERAL.—Not later than 6 months  
10          after the date of enactment of this Act, the Director  
11          of the National Science Foundation shall recommend  
12          a uniform policy for Federal science agencies to  
13          carry out a program of workshops that educate  
14          STEM department chairs at institutions of higher  
15          education, senior managers at Federal laboratories,  
16          and other federally funded researchers about meth-  
17          ods that minimize the effects of implicit bias in the  
18          career advancement, including hiring, tenure, pro-  
19          motion, and selection for any honor based in part on  
20          the recipient’s research record, of academic and Fed-  
21          eral STEM researchers.

22          (2) INTERAGENCY COORDINATION.—The Direc-  
23          tor of the National Science Foundation shall ensure  
24          that workshops supported under this subsection are

1 coordinated across Federal science agencies and  
2 jointly supported as appropriate.

3 (3) MINIMIZING COSTS.—To the extent prac-  
4 ticable, workshops shall be held in conjunction with  
5 national or regional STEM disciplinary meetings to  
6 minimize costs associated with participant travel.

7 (4) PRIORITY FIELDS FOR ACADEMIC PARTICI-  
8 PANTS.—In considering the participation of STEM  
9 department chairs and other academic researchers,  
10 the Director of the National Science Foundation  
11 shall prioritize workshops for the broad fields of  
12 STEM in which the national rate of representation  
13 of women among tenured or tenure-track faculty or  
14 non-faculty researchers at doctorate-granting institu-  
15 tions of higher education is less than 25 percent, ac-  
16 cording to the most recent data available from the  
17 National Center for Science and Engineering Statis-  
18 tics.

19 (5) ORGANIZATIONS ELIGIBLE TO CARRY OUT  
20 WORKSHOPS.—Federal science agencies may carry  
21 out the program of workshops under this subsection  
22 by making grants to eligible organizations. In addi-  
23 tion to any other organizations made eligible by the  
24 Federal science agencies, the following organizations  
25 are eligible for grants under this subsection:

1 (A) Nonprofit scientific and professional  
2 societies and organizations that represent one  
3 or more STEM disciplines.

4 (B) Nonprofit organizations that have the  
5 primary mission of advancing the participation  
6 of women or underrepresented minorities in  
7 STEM.

8 (6) CHARACTERISTICS OF WORKSHOPS.—The  
9 workshops shall have the following characteristics:

10 (A) Invitees to workshops shall include at  
11 least—

12 (i) the chairs of departments in the  
13 relevant STEM discipline or disciplines  
14 from at least the top 50 institutions of  
15 higher education, as determined by the  
16 amount of Federal research and develop-  
17 ment funds obligated to each institution of  
18 higher education in the prior year based on  
19 data available from the National Science  
20 Foundation; and

21 (ii) in the case of Federal laboratories,  
22 individuals with personnel management re-  
23 sponsibilities comparable to those of an in-  
24 stitution of higher education department  
25 chair.

1           (B) Activities at the workshops shall in-  
2           clude research presentations and interactive dis-  
3           cussions or other activities that increase the  
4           awareness of the existence of implicit bias in re-  
5           cruitment, hiring, tenure review, promotion, and  
6           other forms of formal recognition of individual  
7           achievement for faculty and other federally  
8           funded STEM researchers and shall provide  
9           strategies to overcome such bias.

10          (C) Research presentations and other  
11          workshop programs, as appropriate, shall in-  
12          clude a discussion of the unique challenges  
13          faced by underrepresented subgroups, including  
14          minority women, minority men, and first gen-  
15          eration minority graduates in research.

16          (D) Workshop programs shall include in-  
17          formation on best practices for mentoring un-  
18          dergraduate and graduate women and under-  
19          represented minority students.

20          (7) DATA ON WORKSHOPS.—Any proposal for  
21          funding by an organization seeking to carry out a  
22          workshop under this subsection shall include a de-  
23          scription of how such organization will—

24                  (A) collect data on the rates of attendance  
25                  by invitees in workshops, including information



1 on the home institution and department of  
2 attendees, and the rank of faculty attendees;

3 (B) conduct attitudinal surveys on work-  
4 shop attendees before and after the workshops;  
5 and

6 (C) collect follow-up data on any relevant  
7 institutional policy or practice changes reported  
8 by attendees not later than 1 year after attend-  
9 ance in such a workshop.

10 (8) REPORT TO NSF.—Organizations receiving  
11 funding to carry out workshops under this sub-  
12 section shall report the data required in paragraph  
13 (7) to the Director of the National Science Founda-  
14 tion in such form as required by such Director.

15 (d) REPORT TO CONGRESS.—Not later than 4 years  
16 after the date of enactment of this Act, the Director of  
17 the National Science Foundation shall submit a report to  
18 Congress that includes—

19 (1) a summary and analysis of the types and  
20 frequency of activities and policies developed and  
21 carried out under subsection (a) based on the re-  
22 ports submitted under paragraph (4) of such sub-  
23 section; and

24 (2) a description and evaluation of the status  
25 and effectiveness of the program of workshops re-

1       quired under subsection (c), including a summary of  
2       any data reported under paragraph (8) of such sub-  
3       section.

4       (e) AUTHORIZATION OF APPROPRIATIONS.—There  
5       are authorized to be appropriated to the Director of the  
6       National Science Foundation \$2,000,000 for each of fiscal  
7       years 2014 through 2018 to carry out this section.

8       **SEC. 218. RESEARCH AND DISSEMINATION AT THE NA-**  
9       **TIONAL SCIENCE FOUNDATION.**

10       (a) IN GENERAL.—The Director of the National  
11       Science Foundation shall award research grants and carry  
12       out dissemination activities consistent with the purposes  
13       of this subtitle, including—

14               (1) research grants to analyze the record-level  
15               data collected under section 214 and section 216,  
16               consistent with policies to ensure the privacy of indi-  
17               viduals identifiable by such data;

18               (2) research grants to study best practices for  
19               work-life accommodation;

20               (3) research grants to study the impact of poli-  
21               cies and practices that are implemented under this  
22               subtitle or that are otherwise consistent with the  
23               purposes of this subtitle;

24               (4) collaboration with other Federal science  
25               agencies and professional associations to exchange

1 best practices, harmonize work-life accommodation  
2 policies and practices, and overcome common bar-  
3 riers to work-life accommodation; and

4 (5) collaboration with institutions of higher  
5 education in order to clarify and catalyze the adop-  
6 tion of a coherent and consistent set of work-life ac-  
7 commodation policies and practices.

8 (b) AUTHORIZATION OF APPROPRIATIONS.—There  
9 are authorized to be appropriated to the Director of the  
10 National Science Foundation \$5,000,000 for each of fiscal  
11 years 2014 through 2018 to carry out this section.

12 **SEC. 219. REPORT TO CONGRESS.**

13 Not later than 4 years after the date of enactment  
14 of this Act, the Director of the Office of Science and Tech-  
15 nology Policy shall submit a report to Congress that in-  
16 cludes—

17 (1) a description and evaluation of the status  
18 and usage of caregiver policies at all Federal science  
19 agencies, including any recommendations for revis-  
20 ing or expanding such policies;

21 (2) a description of any significant updates to  
22 the policies for review of Federal research grants re-  
23 quired under section 215, and any evidence of the  
24 impact of such policies on the review or awarding of  
25 Federal research grants; and

1           (3) a description and evaluation of the status of  
2       Federal laboratory policies and practices required  
3       under section 217(b), including any recommenda-  
4       tions for revising or expanding such policies.

5       **SEC. 220. NATIONAL SCIENCE FOUNDATION SUPPORT FOR**  
6                       **INCREASING DIVERSITY AMONG STEM FAC-**  
7                       **ULTY AT INSTITUTIONS OF HIGHER EDU-**  
8                       **CATION.**

9       (a) GRANTS.—The Director of the National Science  
10      Foundation shall award grants to institutions of higher  
11      education (or consortia thereof) for the development of in-  
12      novative reform efforts designed to increase the recruit-  
13      ment, retention, and advancement of individuals from  
14      underrepresented minority groups in academic STEM ca-  
15      reers.

16      (b) MERIT REVIEW; COMPETITION.—Grants shall be  
17      awarded under this section on a merit-reviewed, competi-  
18      tive basis.

19      (c) USE OF FUNDS.—Activities supported by grants  
20      under this section may include—

21           (1) institutional assessment activities, such as  
22           data analyses and policy review, in order to identify  
23           and address specific issues in the recruitment, reten-  
24           tion, and advancement of faculty members from  
25           underrepresented minority groups;

1           (2) implementation of institution-wide improve-  
2           ments in workload distribution, such that faculty  
3           members from underrepresented minority groups are  
4           not disadvantaged in the amount of time available to  
5           focus on research, publishing papers, and engaging  
6           in other activities required to achieve tenure status  
7           and run a productive research program;

8           (3) development and implementation of training  
9           courses for administrators and search committee  
10          members to ensure that candidates from underrep-  
11          resented minority groups are not subject to implicit  
12          biases in the search and hiring process;

13          (4) development and hosting of intra- or inter-  
14          institutional workshops to propagate best practices  
15          in recruiting, retaining, and advancing faculty mem-  
16          bers from underrepresented minority groups;

17          (5) professional development opportunities for  
18          faculty members from underrepresented minority  
19          groups;

20          (6) activities aimed at making undergraduate  
21          STEM students from underrepresented minority  
22          groups aware of opportunities for academic careers  
23          in STEM fields;

24          (7) activities to identify and engage exceptional  
25          graduate students from underrepresented minority

1 groups at various stages of their studies and to en-  
2 courage them to enter academic careers; and

3 (8) other activities consistent with subsection  
4 (a), as determined by the Director of the National  
5 Science Foundation.

6 (d) SELECTION PROCESS.—

7 (1) APPLICATION.—An institution of higher  
8 education (or consortia thereof) seeking funding  
9 under this section shall submit an application to the  
10 Director of the National Science Foundation at such  
11 time, in such manner, and containing such informa-  
12 tion and assurances as such Director may require.  
13 The application shall include, at a minimum, a de-  
14 scription of—

15 (A) the reform effort that is being pro-  
16 posed for implementation by the institution of  
17 higher education;

18 (B) any available evidence of specific dif-  
19 ficulties in the recruitment, retention, and ad-  
20 vancement of faculty members from underrep-  
21 resented minority groups in STEM academic  
22 careers within the institution of higher edu-  
23 cation submitting an application, and how the  
24 proposed reform effort would address such  
25 issues;

1 (C) how the institution of higher education  
2 submitting an application plans to sustain the  
3 proposed reform effort beyond the duration of  
4 the grant; and

5 (D) how the success and effectiveness of  
6 the proposed reform effort will be evaluated and  
7 assessed in order to contribute to the national  
8 knowledge base about models for catalyzing in-  
9 stitutional change.

10 (2) REVIEW OF APPLICATIONS.—In selecting  
11 grant recipients under this section, the Director of  
12 the National Science Foundation shall consider, at a  
13 minimum—

14 (A) the likelihood of success in under-  
15 taking the proposed reform effort at the institu-  
16 tion of higher education submitting the applica-  
17 tion, including the extent to which the adminis-  
18 trators of the institution are committed to mak-  
19 ing the proposed reform effort a priority;

20 (B) the degree to which the proposed re-  
21 form effort will contribute to change in institu-  
22 tional culture and policy such that greater value  
23 is placed on the recruitment, retention, and ad-  
24 vancement of faculty members from underrep-  
25 resented minority groups;

1 (C) the likelihood that the institution of  
2 higher education will sustain or expand the pro-  
3 posed reform effort beyond the period of the  
4 grant; and

5 (D) the degree to which evaluation and as-  
6 sessment plans are included in the design of the  
7 proposed reform effort.

8 (3) GRANT DISTRIBUTION.—The Director of  
9 the National Science Foundation shall ensure, to the  
10 extent practicable, that grants awarded under this  
11 section are made to a variety of types of institutions  
12 of higher education.

13 (e) AUTHORIZATION OF APPROPRIATIONS.—There  
14 are authorized to be appropriated to the Director of the  
15 National Science Foundation \$10,000,000 for each of fis-  
16 cal years 2014 through 2018 to carry out this section.

17 **SEC. 221. NATIONAL SCIENCE FOUNDATION SUPPORT FOR**  
18 **BROADENING PARTICIPATION IN UNDER-**  
19 **GRADUATE STEM EDUCATION.**

20 (a) GRANTS.—The Director of the National Science  
21 Foundation shall award grants to institutions of higher  
22 education (or consortia thereof) to implement or expand  
23 research-based reforms in undergraduate STEM edu-  
24 cation for the purpose of recruiting and retaining students  
25 from minority groups who are underrepresented in STEM



1 fields, with a priority focus on natural science and engi-  
2 neering fields.

3 (b) MERIT REVIEW; COMPETITION.—Grants shall be  
4 awarded under this section on a merit-reviewed, competi-  
5 tive basis.

6 (c) USE OF FUNDS.—Activities supported by grants  
7 under this section may include—

8 (1) implementation or expansion of innovative,  
9 research-based approaches to broaden participation  
10 of underrepresented minority groups in STEM  
11 fields;

12 (2) implementation or expansion of bridge, co-  
13 hort, tutoring, or mentoring programs designed to  
14 enhance the recruitment and retention of students  
15 from underrepresented minority groups in STEM  
16 fields;

17 (3) implementation or expansion of outreach  
18 programs linking institutions of higher education  
19 and K–12 school systems in order to heighten  
20 awareness among pre-college students from under-  
21 represented minority groups of opportunities in col-  
22 lege-level STEM fields and STEM careers;

23 (4) implementation or expansion of faculty de-  
24 velopment programs focused on improving retention

1 of undergraduate STEM students from underrep-  
2 resented minority groups;

3 (5) implementation or expansion of mechanisms  
4 designed to recognize and reward faculty members  
5 who demonstrate a commitment to increasing the  
6 participation of students from underrepresented mi-  
7 nority groups in STEM fields;

8 (6) expansion of successful reforms aimed at in-  
9 creasing the number of STEM students from under-  
10 represented minority groups beyond a single course  
11 or group of courses to achieve reform within an en-  
12 tire academic unit, or expansion of successful reform  
13 efforts beyond a single academic unit to other  
14 STEM academic units within an institution of high-  
15 er education;

16 (7) expansion of opportunities for students from  
17 underrepresented minority groups to conduct STEM  
18 research in industry, at Federal laboratories, and at  
19 international research institutions or research sites;

20 (8) provision of stipends for students from  
21 underrepresented minority groups participating in  
22 research;

23 (9) development of research collaborations be-  
24 tween research-intensive universities and primarily  
25 undergraduate minority-serving institutions;

1           (10) support for graduate students and post-  
2           doctoral fellows from underrepresented minority  
3           groups to participate in instructional or assessment  
4           activities at primarily undergraduate institutions, in-  
5           cluding primarily undergraduate minority-serving in-  
6           stitutions and two-year institutions of higher edu-  
7           cation; and

8           (11) other activities consistent with subsection  
9           (a), as determined by the Director of the National  
10          Science Foundation.

11          (d) SELECTION PROCESS.—

12           (1) APPLICATION.—An institution of higher  
13           education (or consortium thereof) seeking a grant  
14           under this section shall submit an application to the  
15           Director of the National Science Foundation at such  
16           time, in such manner, and containing such informa-  
17           tion and assurances as such Director may require.  
18           The application shall include, at a minimum—

19                   (A) a description of the proposed reform  
20                   effort;

21                   (B) a description of the research findings  
22                   that will serve as the basis for the proposed re-  
23                   form effort or, in the case of applications that  
24                   propose an expansion of a previously imple-  
25                   mented reform, a description of the previously

1 implemented reform effort, including data about  
2 the recruitment, retention, and academic  
3 achievement of students from underrepresented  
4 minority groups;

5 (C) evidence of an institutional commit-  
6 ment to, and support for, the proposed reform  
7 effort, including a long-term commitment to im-  
8 plement successful strategies from the current  
9 reform beyond the academic unit or units in-  
10 cluded in the grant proposal;

11 (D) a description of existing or planned in-  
12 stitutional policies and practices regarding fac-  
13 ulty hiring, promotion, tenure, and teaching as-  
14 signment that reward faculty contributions to  
15 improving the education of students from  
16 underrepresented minority groups in STEM;  
17 and

18 (E) how the success and effectiveness of  
19 the proposed reform effort will be evaluated and  
20 assessed in order to contribute to the national  
21 knowledge base about models for catalyzing in-  
22 stitutional change.

23 (2) REVIEW OF APPLICATIONS.—In selecting  
24 grant recipients under this section, the Director of

1 the National Science Foundation shall consider, at a  
2 minimum—

3 (A) the likelihood of success of the pro-  
4 posed reform effort at the institution submit-  
5 ting the application, including the extent to  
6 which the faculty, staff, and administrators of  
7 the institution are committed to making the  
8 proposed institutional reform a priority of the  
9 participating academic unit or units;

10 (B) the degree to which the proposed re-  
11 form effort will contribute to change in institu-  
12 tional culture and policy such that greater value  
13 is placed on faculty engagement in the retention  
14 of students from underrepresented minority  
15 groups;

16 (C) the likelihood that the institution will  
17 sustain or expand the proposed reform effort  
18 beyond the period of the grant; and

19 (D) the degree to which evaluation and as-  
20 sessment plans are included in the design of the  
21 proposed reform effort.

22 (3) PRIORITY.—For applications that include  
23 an expansion of existing reforms beyond a single  
24 academic unit, the Director of the National Science  
25 Foundation shall give priority to applications for

1       which a senior institutional administrator, such as a  
2       dean or other administrator of equal or higher rank,  
3       serves as the principal investigator.

4           (4) GRANT DISTRIBUTION.—The Director of  
5       the National Science Foundation shall ensure, to the  
6       extent practicable, that grants awarded under this  
7       section are made to a variety of types of institutions  
8       of higher education, including two-year and minor-  
9       ity-serving institutions of higher education.

10       (e) EDUCATION RESEARCH.—

11           (1) IN GENERAL.—All grants made under this  
12       section shall include an education research compo-  
13       nent that will support the design and implementa-  
14       tion of a system for data collection and evaluation  
15       of proposed reform efforts in order to build the  
16       knowledge base on promising models for increasing  
17       recruitment and retention of students from under-  
18       represented minority groups in STEM education at  
19       the undergraduate level across a diverse set of insti-  
20       tutions.

21           (2) DISSEMINATION.—The Director of the Na-  
22       tional Science Foundation shall coordinate with rel-  
23       evant Federal agencies in disseminating the results  
24       of the research under this subsection to ensure that  
25       best practices in broadening participation in STEM

1 education at the undergraduate level are made read-  
2 ily available to all institutions of higher education,  
3 other Federal agencies that support STEM pro-  
4 grams, non-Federal funders of STEM education,  
5 and the general public.

6 (f) AUTHORIZATION OF APPROPRIATIONS.—There  
7 are authorized to be appropriated to the Director of the  
8 National Science Foundation \$15,000,000 for each of fis-  
9 cal years 2014 through 2018 to carry out this section.

10 **SEC. 222. DEFINITIONS.**

11 (a) THIS SUBTITLE.—In this subtitle:

12 (1) FEDERAL LABORATORY.—The term “Fed-  
13 eral laboratory” has the meaning given such term in  
14 section 4 of the Stevenson-Wydler Technology Inno-  
15 vation Act of 1980 (15 U.S.C. 3703).

16 (2) FEDERAL SCIENCE AGENCY.—The term  
17 “Federal science agency” means any Federal agency  
18 with at least \$100,000,000 in research and develop-  
19 ment expenditures in fiscal year 2012.

20 (3) INSTITUTION OF HIGHER EDUCATION.—The  
21 term “institution of higher education” has the  
22 meaning given such term in section 101(a) of the  
23 Higher Education Act of 1965 (20 U.S.C. 1001(a)).

1           (4) STEM.—The term “STEM” means science,  
2           technology, engineering, and mathematics, including  
3           computer science.

4           (b) NATIONAL SCIENCE FOUNDATION AUTHORIZA-  
5           TION ACT OF 2002.—Section 4 of the National Science  
6           Foundation Authorization Act of 2002 (42 U.S.C. 1862n  
7           note) is amended—

8           (1) by redesignating paragraph (16) as para-  
9           graph (17); and

10          (2) by inserting after paragraph (15) the fol-  
11          lowing new paragraph:

12          “(16) STEM.—The term ‘STEM’ means  
13          science, technology, engineering, and mathematics,  
14          including computer science.”.

