

116TH CONGRESS
1ST SESSION

S. 2578

To increase the participation of historically underrepresented demographic groups in science, technology, engineering, and mathematics education and industry.

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 26, 2019

Ms. HIRONO (for herself, Mr. BROWN, Ms. DUCKWORTH, Mr. DURBIN, Mrs. GILLIBRAND, Ms. KLOBUCHAR, and Ms. ROSEN) introduced the following bill; which was read twice and referred to the Committee on Health, Education, Labor, and Pensions

A BILL

To increase the participation of historically underrepresented demographic groups in science, technology, engineering, and mathematics education and industry.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Women and Minorities
5 in STEM Booster Act of 2019”.

1 **SEC. 2. GRANT PROGRAM TO INCREASE THE PARTICIPA-**
2 **TION OF WOMEN AND UNDERREPRESENTED**
3 **MINORITIES IN STEM FIELDS.**

4 (a) FINDINGS.—Congress finds the following:

5 (1) According to the National Academy of
6 Sciences, STEM education at the undergraduate
7 level is vital to developing a workforce that will allow
8 the United States to remain the leader in the 21st
9 century global economy.

10 (2) According to a recent American Community
11 Survey Report on disparities in STEM employment
12 conducted in 2013, women comprise about half of
13 the United States workforce but only make up 26
14 percent of STEM workers.

15 (3) According to the National Science Founda-
16 tion, women only represent 28 percent of all science
17 and engineering workers, comprising 29 percent of
18 physical scientists, 25 percent of computer and
19 mathematical scientists, and 13 percent of engineers.

20 (4) According to the National Center of Edu-
21 cation Statistics (NCES), women were more likely
22 than men to switch out of STEM majors—32 per-
23 cent compared to 26 percent.

24 (5) Additionally, NCES found that while a
25 higher percentage of bachelor's degrees were award-
26 ed to females than to males in 2016, (58 percent

1 compared to 42 percent), within STEM fields a
2 lower percentage of bachelor's degrees were awarded
3 to females than to males (36 percent compared to
4 64 percent).

5 (6) According to the 2010 Association of Amer-
6 ican University Women report "Why So Few?" ap-
7 proximately 52 percent of women in STEM fields
8 quit their jobs about 10 years into their careers. It
9 is important for gender equality to increase the re-
10 tention of women in STEM fields, as women in
11 STEM careers earn 33 percent more than those in
12 non-STEM jobs, and have a smaller wage gap rel-
13 ative to men.

14 (7) According to recent Census Bureau projec-
15 tions, minorities will account for 57 percent of the
16 United States population by 2060.

17 (8) According to the National Action Council
18 for Minorities in Engineering, Inc., as the United
19 States works to remain competitive in the world of
20 technological innovation, the United States should
21 address the need to increase the number of individ-
22 uals from underrepresented minority segments of the
23 population who work in engineering.

24 (9) The Higher Education Research Institute at
25 the University of California, Los Angeles, found

1 that, while freshmen from underrepresented minority
2 groups express an interest in pursuing a STEM un-
3 dergraduate degree at the same rate as all other
4 freshmen, only 22 percent of Latino students, 18
5 percent of African-American students, and 19 per-
6 cent of Native American students studying in STEM
7 fields complete their degree within 5 years, com-
8 pared to around 33 percent and 42 percent 5-year
9 completion rates for White and Asian students, re-
10 spectively.

11 (10) According to the 2015 Asian Americans
12 Advancing Justice report “Making America Work”,
13 data on Asian Americans and Pacific Islanders
14 (AAPIs) on average hide the fact that some sub-
15 groups are underrepresented in STEM fields, with
16 only 9 percent of Cambodian, 8 percent of Laotian,
17 8 percent of Hmong, and 7 percent of Native Ha-
18 waiian and Pacific Islander workers hold STEM
19 jobs, compared to 12 percent of the total American
20 population holding STEM jobs.

21 (11) According to 3-year estimates from the
22 2013 American Community Survey, Southeast Asian
23 Americans and Pacific Islanders have higher poverty
24 rates and lower educational attainment rates com-
25 pared to the overall population.

1 (12) Additionally, while 15 percent of the over-
2 all population lives below the Federal poverty level,
3 several minority populations have significantly high-
4 er poverty rates including 20 percent of Native Ha-
5 waiian and Pacific Islanders, 21 percent of Cam-
6 bodian, 28 percent of Hmong, 17 percent of Lao-
7 tian, and 33 percent of Bhutanese Americans. Com-
8 pared to 30 percent of the overall population with a
9 bachelor's degree or higher, less than 20 percent of
10 Pacific Islanders, Cambodians, Hmong, Laotians,
11 and Bhutanese had a bachelor's degree or higher at
12 rates of 15 percent, 18 percent, 17 percent, 16 per-
13 cent, and 9 percent, respectively. Levels of poverty
14 and postsecondary educational attainment correlate
15 with these groups' underrepresentation in STEM
16 employment. Other Asian American and Pacific Is-
17 lander subgroups with similar poverty and edu-
18 cational attainment rates are similarly underrep-
19 resented in STEM employment.

20 (13) A 2014 National Center for Education
21 Statistics study found that women and underrep-
22 resented minorities leave the STEM fields at higher
23 rates than their counterparts, leading to a need to
24 develop resources to retain these groups in the
25 STEM fields.

1 (b) PROGRAM AUTHORIZED.—The Director of the
2 National Science Foundation shall award grants to eligible
3 entities, on a competitive basis, to enable such eligible en-
4 tities to carry out the activities described in subsection (d),
5 in order to increase the participation of women and under-
6 represented minorities in the fields of science, technology,
7 engineering, and mathematics.

8 (c) APPLICATION.—Each eligible entity that desires
9 to receive a grant under this section shall submit an appli-
10 cation to the National Science Foundation at such time,
11 in such manner, and containing such information as the
12 Director of the National Science Foundation may reason-
13 ably require.

14 (d) AUTHORIZED ACTIVITIES.—An eligible entity
15 that receives a grant under this section shall use such
16 grant funds to carry out one or more of the following ac-
17 tivities designed to increase the participation of women or
18 minorities underrepresented in science and engineering, or
19 both:

20 (1) Online workshops.

21 (2) Mentoring programs that partner science,
22 technology, engineering, or mathematics profes-
23 sionals with students.

1 (3) Internships for undergraduate and graduate
2 students in the fields of science, technology, engi-
3 neering, and mathematics.

4 (4) Conducting outreach programs that provide
5 elementary school and secondary school students
6 with opportunities to increase their exposure to the
7 fields of science, technology, engineering, or mathe-
8 matics.

9 (5) Programs to increase the recruitment and
10 retention of underrepresented faculty.

11 (6) Such additional programs as the Director of
12 the National Science Foundation may determine.

13 (e) DEFINITIONS.—In this Act—

14 (1) the term “minority” means American In-
15 dian, Alaskan Native, Black (not of Hispanic ori-
16 gin), Hispanic (including persons of Mexican, Puerto
17 Rican, Cuban, and Central or South American ori-
18 gin), Asian (including underrepresented subgroups),
19 Native Hawaiian, Pacific Islander origin subgroup,
20 or other ethnic group underrepresented in science
21 and engineering; and

22 (2) the term “underrepresented in science and
23 engineering” means a minority group whose number
24 of scientists and engineers per 10,000 population of
25 that group is substantially below the comparable fig-

1 ure for scientists and engineers who are White and
2 not of Hispanic origin, as determined by the Sec-
3 retary of Education under section 637.4(b) of title
4 34, Code of Federal Regulations.

5 (f) AUTHORIZATION OF APPROPRIATIONS.—There
6 are authorized to be appropriated to carry out this section
7 \$15,000,000 for each of fiscal years 2020, 2021, 2022,
8 2023, and 2024.

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