I

111TH CONGRESS
1ST SESSION

H. R. 1144

To increase awareness of the existence of and to overcome gender bias in academic science and engineering through research and training, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 24, 2009

Ms. EDDIE BERNICE JOHNSON of Texas (for herself, Ms. EDWARDS of Maryland, Mr. REYES, Mrs. DAHLKEMPER, Mr. MILLER of North Carolina, Mr. CARSON of Indiana, Mr. WILSON of Ohio, and Mr. GRAYSON) introduced the following bill; which was referred to the Committee on Science and Technology

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A BILL

To increase awareness of the existence of and to overcome gender bias in academic science and engineering through research and training, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Fulfilling the Potential of Women in Academic Science and Engineering Act''.

SEC. 2. FINDINGS.

The Congress finds the following:

(1) In its 2007 report, Beyond Bias and Barriers, the National Academies state that, to maintain its scientific and engineering leadership amid increasing economic and educational globalization, the United States must aggressively pursue the innovative capacity of all of its people—women and men.

(2) Women make up an increasing proportion of science and engineering majors at all institutions of higher education, including at top-rated programs such as those at the Massachusetts Institute of Technology where women make up 51 percent of its science undergraduates and 35 percent of its engineering undergraduates.

(3) Despite this progress, however, women still receive only 20 percent of all bachelor's degrees awarded in engineering and physics.

(4) For women to participate to their full potential across all science and engineering fields, they must see a career path that allows them to reach their full intellectual potential; much remains to be done to achieve that goal.

(5) The Federal Government provides over 60 percent of research funding at institutions of higher education.

(6) Women are a small portion of the science and engineering faculty members at major research universities, and they typically receive fewer institutional resources for their research activities than their male colleagues.

(7) Unintentional biases and outmoded institutional structures are hindering the access and advancement of women in science and engineering.

(8) Women hold a small portion of leadership positions in our institutions of higher education, scientific and professional societies, and honorary organizations.

(9) Neither our institutions of higher education nor our Nation can afford such underuse of precious human capital in science and engineering.

SEC. 3. DEFINITIONS.

In this Act, the following definitions shall apply:

(1) DIRECTOR.—The term ''Director'' means the Director of the Office of Science and Technology Policy in the Executive Office of the President, acting through the National Science and Technology Council.

(2) FEDERAL SCIENCE AGENCY.—The term ''Federal science agency'' means any Federal agency that is responsible for at least 2 percent of the total

Federal obligation for research and development at institutions of higher education, according to the most recent data available from the National Science Foundation.

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

SEC. 4. WORKSHOPS TO ENHANCE GENDER EQUITY IN ACADEMIC SCIENCE AND ENGINEERING.

(a) IN GENERAL.—Not later than 6 months after the date of enactment of this Act, the Director shall develop a uniform policy for each Federal science agency to carry out a program of workshops that educate program officers, members of grant review panels, institution of higher education mathematics, science, and engineering department chairs, and other federally funded researchers about methods that minimize the effects of gender bias in evaluation of Federal research grants and in the related academic advancement of actual and potential recipients of these grants including hiring, tenure, promotion, and selection for any honor based in part on the recipient's research record.

(b) INTERAGENCY COORDINATION.—The Director shall ensure that programs of workshops across the Fed-

eral science agencies are coordinated and supported jointly as appropriate. As part of this process, the Director shall ensure that at least 1 workshop is supported every 2 years among the Federal science agencies in each of the major science and engineering disciplines supported by those agencies.

(c) SCIENTIFIC AND PROFESSIONAL SOCIETIES.—Federal science agencies may carry out the program of workshops under this section by making grants to eligible organizations. In addition to any other organizations made eligible by the Federal science agencies, the following organizations are eligible for grants under this section:

(1) Nonprofit scientific and professional societies and organizations that represent one or more science and engineering disciplines.

(2) Nonprofit organizations that have the primary mission of advancing the participation of women in science and engineering.

(d) CHARACTERISTICS OF WORKSHOPS.—The workshops shall have the following characteristics:

(1) Invitees to workshops shall include at least—

(A) the chairs of departments in the relevant discipline from at least the top 50 institutions of higher education, as determined by the

amount of Federal research and development funds obligated to each institution of higher education in the prior year based on data available from the National Science Foundation;

(B) members of any standing research grant review panel appointed by the Federal science agencies in the relevant discipline;

(C) in the case of major science and engineering disciplines supported by the Department of Energy, the individuals from each of the Department of Energy National Laboratories with personnel management responsibilities comparable to those of an institution of higher education department chair; and

(D) Federal science agency program officers in the relevant discipline, other than program officers that participate in comparable workshops organized and run specifically for that agency's program officers.

(2) Activities at the workshops shall include research presentations and interactive discussions or other activities that increase the awareness of the existence of gender bias in the grant-making process and the development of the academic record necessary to qualify as a grant recipient including re-

cruitment, hiring, tenure review, promotion, and other forms of formal recognition of individual achievement and provide strategies to overcome such bias.

(3) Research presentations and other workshop programs, as appropriate, shall include a discussion of the unique challenges faced by women from historically underrepresented groups.

(4) Workshop programs shall include information on best practices and the value of mentoring undergraduate and graduate women students as well as outreach to girls earlier in their science, technology, engineering, and mathematics education.

(e) REPORT.—

(1) IN GENERAL.—Not later than 5 years after the date of enactment of this Act, the Director shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report evaluating the impact of the program carried out under this section to reduce gender bias towards women engaged in research funded by the Federal Government. The Director shall include in this report any recommenda-

tions for improving the evaluation process described in paragraph (2).

(2) MINIMUM CRITERIA FOR EVALUATION.—In determining the effectiveness of the program, the Director shall consider, at a minimum—

(A) the rates of participation by invitees in the workshops authorized under this section;

(B) the results of attitudinal surveys conducted on workshop participants before and after the workshops;

(C) any institutional policy or practice changes reported by participants from institutions of higher education; and

(D) for institution of higher education department chairs and Department of Energy National Laboratory employees who participated in at least 1 workshop 3 or more years prior to the due date for the report, trends in the data for the department represented by the chair or employee including—

(i) the number and percent of women faculty;

(ii) the number and percent of women in tenure-track positions by rank;

(iii) tenure promotion outcomes by gender;

(iv) years in rank by gender;

(v) time at institution by gender;

(vi) attrition by gender;

(vii) the number of women who are in nontenure-track positions, including teaching and research;

(viii) the number and percent of women faculty in endowed or named chairs; and

(ix) the number and percent of women faculty on promotion and tenure committees.

(f) MINIMIZING COSTS.—To the extent practicable, workshops shall be held in conjunction with national or regional disciplinary meetings to minimize costs associated with participant travel.

(g) AUTHORIZATION OF APPROPRIATIONS.—Each Federal science agency is authorized to contribute funds, from funds which are otherwise authorized, to support the workshop and evaluation requirements under this section, including—

(1) providing grants to organizations, including the organizations identified under subsection (c), to plan and organize the workshops; and

(2) reimbursing the travel and lodging costs of invited speakers and workshop participants.

SEC. 5. EXTENDED RESEARCH GRANT SUPPORT AND INTERIM TECHNICAL SUPPORT FOR CAREGIVERS.

(a) POLICIES FOR CAREGIVERS.—Not later than 6 months after the date of enactment of this Act, the Director shall develop a uniform policy to—

(1) extend the period of grant support for federally funded researchers who have caregiving responsibilities; and

(2) provide funding for interim technical staff support for federally funded researchers who take a leave of absence for caregiving responsibilities.

(b) REPORT.—Upon developing the policy required under subsection (a), the Director shall transmit a copy of the policy to the Committee on Science and Technology of the House of Representatives and to the Committee on Commerce, Science, and Transportation of the Senate.

SEC. 6. COLLECTION OF DATA ON FEDERAL RESEARCH GRANTS.

(a) IN GENERAL.—Each Federal science agency shall collect standardized annual composite information on demographics, field, award type and budget request, review score, and funding outcome for all applications for research and development grants to institutions of higher education supported by that agency.

(b) REPORTING OF DATA.—

(1) The Director shall establish a policy to ensure uniformity and standardization of data collection required under subsection (a).

(2) Not later than 2 years after the date of enactment of this Act, and annually thereafter, each Federal science agency shall submit data collected under subsection (a) to the National Science Foundation.

(3) The National Science Foundation shall be responsible for storing and publishing all of the grant data submitted under paragraph (2) in conjunction with the biennial report required under section 37 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885d).

SEC. 7. PUBLICATION OF LIST OF INSTITUTIONAL PARTICIPATION IN WORKSHOPS TO ENHANCE GENDER EQUITY IN ACADEMIC SCIENCE AND ENGINEERING.

The Director, on the basis of data reported by the Federal science agencies, shall publish annually a list of institutions of higher education science and engineering departments represented by individuals who attend the workshops described in section 4. The list shall be publicly available through the website of the Office of Science and Technology Policy. Any institution of higher education science and engineering department that is publicized on the list may publicize its receipt of such recognition on its website, in printed materials, or through other means.

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