

109TH CONGRESS
2^D SESSION

H. R. 5357

To authorize the National Science Foundation and the research, development, demonstration, and commercial application programs of the Department of Energy to provide grants to early career researchers to conduct high-risk, high-return research in areas relevant to industry.

IN THE HOUSE OF REPRESENTATIVES

MAY 11, 2006

Mr. McCAUL of Texas (for himself, Mr. BOEHLERT, Mr. SMITH of Texas, Mr. CALVERT, Mr. EHLERS, Mrs. BIGGERT, Mr. INGLIS of South Carolina, and Mr. SCHWARZ of Michigan) introduced the following bill; which was referred to the Committee on Science

A BILL

To authorize the National Science Foundation and the research, development, demonstration, and commercial application programs of the Department of Energy to provide grants to early career researchers to conduct high-risk, high-return research in areas relevant to 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 “Research for Competi-
5 tiveness Act”.

1 **SEC. 2. NATIONAL SCIENCE FOUNDATION INDUSTRIALLY-**
2 **RELEVANT RESEARCH AWARDS.**

3 (a) IN GENERAL.—The Director of the National
4 Science Foundation shall carry out a program to award
5 competitive grants to scientists and engineers at the early
6 stage of their careers at institutions of higher education
7 and research institutions to conduct high-risk, high-return
8 research in areas relevant to industry.

9 (b) SIZE AND DURATION OF AWARD.—The duration
10 of awards under this section shall be 5 years, and the
11 amount per year shall be \$50,000. Additionally, if an
12 award recipient receives funding from United States in-
13 dustry for work in the area described in the recipient's
14 application for the award, then up to an additional
15 \$50,000 may be provided each year as a one-to-one match
16 to such industry funding.

17 (c) ELIGIBILITY.—Award recipients shall be individ-
18 uals who are employed in a tenure-track position as an
19 assistant professor or equivalent title, or who hold an
20 equivalent position, at—

21 (1) an institution of higher education in the
22 United States; or

23 (2) an organization in the United States that is
24 a nonprofit, nondegree-granting research organiza-
25 tion such as a museum, observatory, or research lab-
26 oratory.

1 (d) APPLICATION AND SELECTION PROCESS.—

2 (1) INITIAL APPLICATION.—Applicants for
3 awards under this section shall submit to the Direc-
4 tor—

5 (A) a curriculum vitae or resume, includ-
6 ing a list of publications and a description of
7 any activities demonstrating leadership or edu-
8 cational activities;

9 (B) a description of research areas of in-
10 terest;

11 (C) letters of recommendation; and

12 (D) any other materials the Director re-
13 quires.

14 (2) FURTHER CONSIDERATION AND SELEC-
15 TION.—The Director shall convene review panels to
16 make recommendations, based on application mate-
17 rials received under paragraph (1), of which can-
18 didates are qualified to be finalists for the award.
19 Based on these recommendations, the Director shall
20 select finalists, who shall then be interviewed by
21 panels of experts who shall make recommendations
22 to the Director on the recipients of the awards. The
23 Director shall make awards based on these rec-
24 ommendations.

1 (e) COMPOSITION OF REVIEW PANELS.—The panels
2 reviewing applications and interviewing finalists as de-
3 scribed in subsection (d) shall include representatives from
4 a range of industries.

5 (f) CRITERIA FOR AWARDS.—In establishing criteria
6 for evaluation of applications for grants under this section,
7 the Director shall include—

8 (1) the potential of the applicant for leadership
9 at the frontiers of knowledge;

10 (2) the potential innovative or transformative
11 nature of research in the areas of interest described
12 in the application;

13 (3) the creativity demonstrated in the appli-
14 cant's past research activities; and

15 (4) the potential relevance to industry of re-
16 search in the areas of interest described in the appli-
17 cation.

18 (g) AUTHORIZATION OF APPROPRIATIONS.—There
19 are authorized to be appropriated to the Director of the
20 National Science Foundation to carry out this section—

21 (1) \$3,000,000 for fiscal year 2007;

22 (2) \$6,000,000 for fiscal year 2008;

23 (3) \$9,000,000 for fiscal year 2009;

24 (4) \$12,000,000 for fiscal year 2010; and

25 (5) \$15,000,000 for fiscal year 2011.

1 **SEC. 3. DEPARTMENT OF ENERGY INDUSTRIALLY-REL-**
2 **EVANT RESEARCH AWARDS.**

3 (a) IN GENERAL.—The Under Secretary for Science
4 of the Department of Energy shall carry out a program
5 to award competitive grants to scientists and engineers at
6 the early stage of their careers at institutions of higher
7 education and research institutions to conduct high-risk,
8 high-return research in areas relevant to energy produc-
9 tion, storage, and use.

10 (b) PARTICIPATION OF DEPARTMENT OF ENERGY
11 ORGANIZATIONS.—The research, development, demonstra-
12 tion, and commercial application programs of the Office
13 of Science, the Office of Nuclear Energy Research and De-
14 velopment, the Office of Fossil Energy, and the Office of
15 Energy Efficiency and Renewables may participate in the
16 program established under subsection (a).

17 (c) SIZE AND DURATION OF AWARD.—The duration
18 of awards under this section shall be up to 5 years, and
19 the amount per year shall be \$50,000. Additionally, if an
20 award recipient receives funding from United States in-
21 dustry for work in the area described in the recipient's
22 application for the award, then up to an additional
23 \$50,000 may be provided each year as a one-to-one match
24 to such industry funding.

25 (d) ELIGIBILITY.—Award recipients shall be individ-
26 uals who are employed in a tenure-track position as an

1 assistant professor or equivalent title, or who hold an
2 equivalent position, at—

3 (1) an institution of higher education in the
4 United States; or

5 (2) an organization in the United States that is
6 a nonprofit, nondegree-granting research organiza-
7 tion such as a museum, observatory, or research lab-
8 oratory.

9 (e) APPLICATION AND SELECTION PROCESS.—

10 (1) INITIAL APPLICATION.—Applicants for
11 awards under this section shall submit to the Under
12 Secretary—

13 (A) a curriculum vitae or resume, includ-
14 ing a list of publications and a description of
15 any activities demonstrating leadership or edu-
16 cational activities;

17 (B) a description of research areas of in-
18 terest;

19 (C) letters of recommendation; and

20 (D) any other materials the Under Sec-
21 retary requires.

22 (2) FURTHER CONSIDERATION AND SELEC-
23 TION.—The Under Secretary shall convene review
24 panels to make recommendations, based on applica-
25 tion materials received under paragraph (1), of

1 which candidates are qualified to be finalists for the
2 award. Based on these recommendations, the Under
3 Secretary shall select finalists, who shall then be
4 interviewed by panels of experts who shall make rec-
5 ommendations to the Under Secretary on the recipi-
6 ents of the awards. The Under Secretary shall make
7 awards based on these recommendations.

8 (f) COMPOSITION OF REVIEW PANELS.—The panels
9 reviewing applications and interviewing finalists as de-
10 scribed in subsection (e) shall include representatives from
11 a range of industries.

12 (g) CRITERIA FOR AWARDS.—In establishing criteria
13 for evaluation of applications for the grants awarded
14 under section (a), the Under Secretary shall include—

15 (1) the potential for leadership at the frontiers
16 of knowledge by the applicant;

17 (2) the potential innovative or transformative
18 nature of research in the areas of interest described
19 in the application;

20 (3) the creativity demonstrated in the appli-
21 cant’s past research activities; and

22 (4) the potential relevance to industry of re-
23 search in the areas of interest described in the appli-
24 cation.

1 (h) COLLABORATION WITH NATIONAL LABORA-
2 TORIES.—In awarding grants under this section, the
3 Under Secretary may give priority to applications in which
4 the proposed work includes collaboration with the Depart-
5 ment of Energy National Laboratories.

6 (i) AUTHORIZATION OF APPROPRIATIONS.—There
7 are authorized to be appropriated to the Secretary of En-
8 ergy to carry out this section—

- 9 (1) \$2,000,000 for fiscal year 2007;
- 10 (2) \$4,000,000 for fiscal year 2008;
- 11 (3) \$6,000,000 for fiscal year 2009;
- 12 (4) \$8,000,000 for fiscal year 2010; and
- 13 (5) \$10,000,000 for fiscal year 2011.

14 **SEC. 4. DEFINITION.**

15 In this Act, the term “institution of higher edu-
16 cation” has the meaning given such term in section 101(a)
17 of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

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