

111TH CONGRESS  
1ST SESSION

# H. R. 3523

To direct the Secretary of Energy to provide for the establishment of accreditation standards relating to biofuel engineering, to provide support for undergraduate and graduate degree programs that create the engineering skills necessary to support biofuel production, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

JULY 31, 2009

Mr. TEAGUE (for himself and Mr. BILBRAY) introduced the following bill;  
which was referred to the Committee on Science and Technology

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## A BILL

To direct the Secretary of Energy to provide for the establishment of accreditation standards relating to biofuel engineering, to provide support for undergraduate and graduate degree programs that create the engineering skills necessary to support biofuel production, and for other purposes.

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 “Biofuel Engineering  
5 Training Act”.

1 **SEC. 2. DEFINITION.**

2 In this Act—

3 (1) the term “biofuel engineering” means the  
4 discipline concerned with utilization of harvested liv-  
5 ing plant material to produce fuels; and

6 (2) the term “Secretary” means the Secretary  
7 of Energy.

8 **SEC. 3. STUDY AND DEVELOPMENT OF STANDARDS.**

9 The Secretary shall make a grant to an appropriate  
10 standard-setting or other entity to conduct a study of, and  
11 develop appropriate standards for, accreditation of under-  
12 graduate and graduate biofuel engineering programs at in-  
13 stitutions of higher education, and to study and the needs  
14 of the biofuel industry for engineering support. Such study  
15 shall include—

16 (1) a determination of subspecialty require-  
17 ments for engineers who will concentrate on creating  
18 other products in addition to fuel, including animal  
19 feed and other consumer products;

20 (2) consideration of the interaction of biological  
21 feedstock with the structural material in the produc-  
22 tion and distribution systems, the carbon footprint  
23 of the production and distribution of biofuels, and  
24 related genetic challenges; and

1           (3) supplemental courses of study that could be  
2           used by experienced engineers for transition into the  
3           new biofuel engineering discipline.

4 **SEC. 4. CENTERS OF EXCELLENCE FOR BIOFUELS RE-**  
5 **SEARCH AND TRAINING.**

6           (a) ESTABLISHMENT.—The Secretary shall establish,  
7 through the Office of Science, Centers of Excellence for  
8 Biofuels Research and Training at institutions of higher  
9 education or consortia of such institutions across the  
10 country.

11          (b) SELECTION.—

12           (1) IN GENERAL.—The Secretary shall award  
13 grants for the establishment of Centers of Excellence  
14 to eligible institutions through a competitive applica-  
15 tion process.

16           (2) CRITERIA.—The Secretary shall establish  
17 selection criteria for awarding grants under para-  
18 graph (1). These criteria shall require participating  
19 institutions to—

20           (A) effectively integrate biofuels research,  
21 training, and instruction;

22           (B) bring together the study and practice  
23 of a broad range of disciplines with relevance to  
24 biofuel engineering;

1 (C) work with companies that are in the  
2 process of commercializing biofuels technology;  
3 and

4 (D) work with local communities to assist  
5 with economic development and job creation in  
6 the biofuels sector.

7 (c) AUTHORIZATION OF APPROPRIATIONS.—There  
8 are authorized to be appropriated to the Secretary for car-  
9 rying out this section \$10,000,000 for each of fiscal years  
10 2010 through 2014.

11 **SEC. 5. BIOFUEL ENGINEERING GRADUATE FELLOWSHIP**  
12 **PROGRAM.**

13 (a) DEFINITION OF ELIGIBLE STUDENT.—In this  
14 section, the term “eligible student” means a student who  
15 attends an institution of higher education that offers a  
16 doctoral or masters degree in the biofuel engineering field.

17 (b) ESTABLISHMENT.—The Secretary shall establish  
18 a graduate fellowship program for eligible students pur-  
19 suing a doctoral degree in the biofuel engineering field.

20 (c) SELECTION.—

21 (1) IN GENERAL.—The Secretary shall award  
22 fellowships to eligible students under this section  
23 through a competitive merit review process, involving  
24 written and oral interviews.

1           (2) CRITERIA.—The Secretary shall establish  
2 selection criteria for awarding fellowships under this  
3 section that require an eligible student—

4           (A) to pursue a field of science or engi-  
5 neering of importance to a mission area of the  
6 Department;

7           (B) to demonstrate to the Secretary—

8           (i) the capacity of the eligible student  
9 to understand technical topics relating to  
10 the fellowship that can be derived from the  
11 first principles of the technical topics;

12           (ii) imagination and creativity;

13           (iii) leadership skills in organizations  
14 or intellectual endeavors, demonstrated  
15 through awards and past experience;

16           (iv) excellent verbal and communica-  
17 tion skills to explain, defend, and dem-  
18 onstrate an understanding of technical  
19 subjects relating to the fellowship; and

20           (v) an understanding of how the many  
21 disciplines relevant to biofuel engineering  
22 interact in the biofuel engineering field;  
23 and

24           (C) to be a citizen or legal permanent resi-  
25 dent of the United States.

1 (d) AWARDS.—

2 (1) AMOUNT.—A fellowship awarded under this  
3 section shall—

4 (A) provide an annual living stipend; and

5 (B) cover—

6 (i) graduate tuition at an institution  
7 of higher education described in subsection  
8 (a); and

9 (ii) incidental expenses associated  
10 with curricula and research at the institu-  
11 tion of higher education (including books,  
12 computers, and software).

13 (2) DURATION.—A fellowship awarded under  
14 this section shall be for up to 3 years of study within  
15 a 5-year period.

16 (3) PORTABILITY.—A fellowship awarded under  
17 this section shall be portable with the eligible stu-  
18 dent.

19 (e) ADMINISTRATION.—The Secretary—

20 (1) shall administer the program established  
21 under this section through the Office of Science; and

22 (2) may enter into a contract with a nonprofit  
23 entity to administer the program, including the se-  
24 lection and award of fellowships.

1 (f) AUTHORIZATION OF APPROPRIATIONS.—There  
2 are authorized to be appropriated to the Secretary to carry  
3 out this section \$3,500,000 for each fiscal year.

4 **SEC. 6. AVAILABILITY OF FEDERAL FACILITIES.**

5 Agencies of the Federal Government, including na-  
6 tional laboratories, shall make research facilities available  
7 to accredited biofuel engineering programs for faculty and  
8 students to enhance education and training opportunities.

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