

110<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

# H. R. 6323

To establish a research, development, demonstration, and commercial application program to promote research of appropriate technologies for heavy duty plug-in hybrid vehicles, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

JUNE 19, 2008

Mr. SENSENBRENNER (for himself, Mrs. BIGGERT, Mr. MARIO DIAZ-BALART of Florida, Mr. EHLERS, and Mr. SMITH of Texas) introduced the following bill; which was referred to the Committee on Science and Technology

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## A BILL

To establish a research, development, demonstration, and commercial application program to promote research of appropriate technologies for heavy duty plug-in hybrid vehicles, 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,*

1 **SECTION 1. HEAVY DUTY PLUG-IN HYBRID VEHICLE TECH-**  
2 **NOLOGY RESEARCH, DEVELOPMENT, DEM-**  
3 **ONSTRATION, AND COMMERCIAL APPLICA-**  
4 **TION PROGRAM.**

5 (a) ESTABLISHMENT.—The Secretary shall establish  
6 a competitive research, development, demonstration, and  
7 commercial application program (referred to in this Act  
8 as the “development program”) to provide 5 grants to ap-  
9 plicants to carry out projects to advance research and de-  
10 velopment and to demonstrate advanced technologies for  
11 heavy duty plug-in hybrid vehicles and for the production  
12 of such vehicles.

13 (b) APPLICATIONS.—

14 (1) IN GENERAL.—The Secretary shall issue re-  
15 quirements for applying for grants under the devel-  
16 opment program.

17 (2) SELECTION CRITERIA.—The Secretary shall  
18 establish selection criteria for awarding grants under  
19 the development program. In evaluating applications,  
20 the Secretary shall—

21 (A) consider the ability of applicants to  
22 successfully complete both phases described in  
23 subsection (c)(1); and

24 (B) give priority to applicants who are best  
25 able to—

1 (i) fill existing research gaps and ad-  
2 vance current technology; and

3 (ii) achieve the greatest reduction in  
4 fuel consumption in delivery vehicles and  
5 utility vehicles.

6 (3) PARTNERS.—An applicant for a grant  
7 under this section may carry out a project in part-  
8 nership with other entities.

9 (4) SCHEDULE.—

10 (A) APPLICATION REQUEST.—Not later  
11 than 180 days after the date of the enactment  
12 of this Act, the Secretary shall publish in the  
13 Federal Register, and elsewhere as appropriate,  
14 a request for applications to undertake projects  
15 under the development program. Applications  
16 shall be due not later than 90 days after the  
17 date of such publication.

18 (B) APPLICATION SELECTION.—Not later  
19 than 90 days after the date on which applica-  
20 tions for grants under the development program  
21 are due, the Secretary shall select, through a  
22 competitive process, all applicants to be award-  
23 ed a grant under the development program.

24 (c) DEVELOPMENT PROGRAM REQUIREMENTS.—

1           (1) TWO PHASES.—Each grant recipient shall  
2 be required to complete two phases:

3           (A) PHASE ONE.—

4           (i) IN GENERAL.—In phase one, the  
5 recipient shall produce or retrofit one or  
6 more plug-in hybrid delivery vehicles, one  
7 or more plug-in hybrid utility vehicles, or  
8 a combination of such vehicles.

9           (ii) REPORT.—Not later than 60 days  
10 after the completion of phase one, the re-  
11 cipient shall submit to the Secretary a re-  
12 port containing data and analysis of—

13           (I) the performance of each pro-  
14 duced or retrofitted vehicle in carrying  
15 out the testing program established by  
16 the Secretary under clause (iv);

17           (II) the performance during such  
18 testing of each vehicle's components,  
19 including the battery, energy manage-  
20 ment system, and charging system;

21           (III) the projected cost of each  
22 produced or retrofitted vehicle, includ-  
23 ing acquisition, operating, and main-  
24 tenance costs of each vehicle; and

1 (IV) the emissions levels of each  
2 produced or retrofitted vehicle, includ-  
3 ing greenhouse gas levels.

4 (iii) TIMING.—Phase one begins upon  
5 receipt of a grant under the development  
6 program and lasts for one year.

7 (iv) TESTING PROGRAM.—The Sec-  
8 retary shall establish a testing program to  
9 be used by recipients in testing each pro-  
10 duced or retrofitted vehicle. Such testing  
11 program shall include testing a vehicle’s  
12 performance at various driving speeds, dis-  
13 tances, and traffic conditions.

14 (B) PHASE TWO.—

15 (i) IN GENERAL.—In phase two, the  
16 recipient shall demonstrate the advanced  
17 manufacturing processes required for pro-  
18 ducing or retrofitting heavy duty plug-in  
19 hybrid vehicles by producing or retrofitting  
20 50 plug-in hybrid delivery vehicles or plug-  
21 in hybrid utility vehicles.

22 (ii) REPORT.—Not later than 60 days  
23 after the completion of phase two, the re-  
24 cipient shall submit to the Secretary a re-  
25 port containing—

1 (I) an analysis of the main tech-  
2 nological hurdles encountered by the  
3 recipient in the development of the  
4 plug-in hybrid delivery vehicles and  
5 plug-in hybrid utility vehicles;

6 (II) an analysis of the main tech-  
7 nological hurdles involved in mass  
8 producing plug-in hybrid delivery vehi-  
9 cles and plug-in hybrid utility vehicles;  
10 and

11 (III) the manufacturing cost of  
12 each produced or retrofitted vehicle,  
13 the actual or projected sale price of  
14 each produced or retrofitted vehicle,  
15 and the cost of a similar non-hybrid  
16 vehicle.

17 (iii) TIMING.—Phase two begins at  
18 the conclusion of phase one and lasts for  
19 two years.

20 (2) AWARD AMOUNTS.—The Secretary shall  
21 award not more than \$3,000,000 to each recipient  
22 per year for each of the 3 years of the project.

23 (d) RESEARCH ON VEHICLE USAGE AND ALTER-  
24 NATIVE DRIVE TRAINS.—The Secretary shall conduct re-  
25 search into alternative power train designs for use in deliv-

1 ery vehicles and utility vehicles. Such research shall com-  
2 pare the estimated cost and fuel savings of each design  
3 with similar non-hybrid power train designs under the con-  
4 ditions in which these vehicles are typically used, includ-  
5 ing, for each vehicle type—

- 6 (1) number of miles driven;
- 7 (2) time spent with the engine at idle;
- 8 (3) horsepower requirements;
- 9 (4) length of time the maximum or near max-  
10 imum power output of the vehicle is needed; and
- 11 (5) fuel consumption.

12 (e) REPORT TO THE CONGRESS.—Not later than 60  
13 days after the Secretary receives the reports from grant  
14 recipients under subsection (c)(1)(B)(ii), the Secretary  
15 shall submit to the Congress a report containing—

- 16 (1) an identification of the grant recipients and  
17 a description of the projects to be funded;
- 18 (2) an identification of all applicants who sub-  
19 mitted applications for the development program;
- 20 (3) all data contained in reports submitted by  
21 grant recipients under subsection (c)(1);
- 22 (4) a description of the vehicles produced or  
23 retrofitted by recipients in phase one and phase two  
24 of the project, including an analysis of the fuel effi-  
25 ciency of such vehicles; and

1           (5) the results of the research carried out under  
2 subsection (d).

3 (f) DEFINITIONS.—For purposes of this section:

4           (1) DELIVERY VEHICLE.—The term “delivery  
5 vehicle” means a heavy duty vehicle intended to be  
6 used commercially for delivering goods.

7           (2) GREENHOUSE GAS.—The term “greenhouse  
8 gas” means—

9                   (A) carbon dioxide;

10                   (B) methane;

11                   (C) nitrous oxide;

12                   (D) hydrofluorocarbons;

13                   (E) perfluorocarbons; or

14                   (F) sulfur hexafluoride.

15           (3) HEAVY DUTY.—The term “heavy duty”  
16 means, with respect to a vehicle, a vehicle with a  
17 gross weight over 8501 pounds.

18           (4) PLUG-IN HYBRID.—The term “plug-in hy-  
19 brid” means a vehicle fueled, in part, by electrical  
20 power that can be recharged by connecting the vehi-  
21 cle to an electric power source.

22           (5) SECRETARY.—The term “Secretary” means  
23 the Secretary of Energy.

1           (6) RETROFIT.—The term “retrofit” means the  
2           process of creating a plug-in hybrid by converting an  
3           existing, fuel-powered vehicle.

4           (7) UTILITY VEHICLE.—The term “utility vehi-  
5           cle” means a heavy duty vehicle used commercially  
6           by electric utilities.

7           (g) AUTHORIZATION OF APPROPRIATIONS.—

8           (1) There are authorized to be appropriated to  
9           the Secretary \$16,000,000 for each of fiscal years  
10          2009 through 2011 to carry out this section.

11          (2) Of the funds authorized under paragraph  
12          (1), not more than \$1,000,000 per fiscal year may  
13          be used for—

14                (A) carrying out the studies required under  
15                subsection (d); and

16                (B) the administration of the development  
17                program.

18 **SEC. 2. EXPANDING RESEARCH IN HYBRID TECHNOLOGY**  
19 **FOR LARGE VEHICLES.**

20          Subsection (g)(1) of the United States Energy Stor-  
21          age Competitiveness Act of 2007 (enacted as section  
22          641(g)(1) of the Energy Independence and Security Act  
23          of 2007 (42 U.S.C. 17231(g)(1))) is amended by inserting

- 1 “vehicles with a gross weight over 8501 pounds,” before
- 2 “stationary applications”.

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