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(Original Signature of Member)

110TH CONGRESS
2D SESSION

H. R. _____

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.

IN THE HOUSE OF REPRESENTATIVES

M. _____ introduced the following bill; which was referred to the
Committee on _____

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) STUDY ON VEHICLE USAGE AND ALTERNATIVE
24 DRIVE TRAINS.—

1 (1) The Secretary shall carry out a study of the
2 conditions under which delivery vehicles and utility
3 vehicles are generally used, including, for each type
4 of vehicle, the average—

5 (A) number of miles driven;

6 (B) time spent with the engine at idle;

7 (C) horsepower requirements;

8 (D) length of time the maximum or near
9 maximum power output of the vehicle is needed;
10 and

11 (E) fuel consumption.

12 (2) The Secretary shall carry out a study of al-
13 ternative power train designs for use in non-hybrid
14 and plug-in hybrid delivery vehicles and utility vehi-
15 cles. The study shall compare the estimated cost and
16 fuel savings of each design.

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

21 (1) an identification of the grant recipients and
22 a description of the projects to be funded;

23 (2) an identification of all applicants who sub-
24 mitted applications for the development program;

1 (3) all data contained in reports submitted by
2 grant recipients under subsection (c)(1);

3 (4) a description of the vehicles produced or
4 retrofitted by recipients in phase one and phase two
5 of the project, including an analysis of the fuel effi-
6 ciency of such vehicles; and

7 (5) the results of the studies carried out under
8 subsection (d).

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

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

13 (2) GREENHOUSE GAS.—The term “greenhouse
14 gas” means—

15 (A) carbon dioxide;

16 (B) methane;

17 (C) nitrous oxide;

18 (D) hydrofluorocarbons;

19 (E) perfluorocarbons; or

20 (F) sulfur hexafluoride.

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

24 (4) PLUG-IN HYBRID.—The term “plug-in hy-
25 brid” means a vehicle fueled, in part, by electrical

1 power that can be recharged by connecting the vehi-
2 cle to an electric power source.

3 (5) SECRETARY.—The term “Secretary” means
4 the Secretary of Energy.

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

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

11 (g) AUTHORIZATION OF APPROPRIATIONS.—

12 (1) There are authorized to be appropriated to
13 the Secretary \$16,000,000 for each of fiscal years
14 2009 through 2011 to carry out this section.

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

18 (A) carrying out the studies required under
19 subsection (d); and

20 (B) the administration of the development
21 program.

22 **SEC. 2. EXPANDING RESEARCH IN HYBRID TECHNOLOGY**
23 **FOR LARGE VEHICLES.**

24 Subsection (g)(1) of the United States Energy Stor-
25 age Competitiveness Act of 2007 (enacted as section

1 641(g)(1) of the Energy Independence and Security Act
2 of 2007 (42 U.S.C. 17231(g)(1)) is amended by inserting
3 “vehicles with a gross weight over 8501 pounds,” before
4 “stationary applications”.