

AMENDMENT IN THE NATURE OF A SUBSTITUTE TO

H.R. 6323

OFFERED BY Mr. Sensenbrenner

Strike all after the enacting clause and insert the following:

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Heavy Duty Hybrid
3 Vehicle Research, Development, and Demonstration Act of
4 2008”.

5 **SEC. 2. ADVANCED HEAVY DUTY HYBRID VEHICLE TECH-**
6 **NOLOGY RESEARCH, DEVELOPMENT, DEM-**
7 **ONSTRATION, AND COMMERCIAL APPLICA-**
8 **TION PROGRAM.**

9 (a) **ESTABLISHMENT.**—The Secretary shall establish
10 a competitive research, development, demonstration, and
11 commercial application program (referred to in this Act
12 as the “program”) to provide grants to applicants to carry
13 out projects to advance research and development and to
14 demonstrate technologies for advanced heavy duty hybrid
15 vehicles.

16 (b) **APPLICATIONS.**—

1 (1) IN GENERAL.—The Secretary shall issue re-
2 quirements for applying for grants under the pro-
3 gram.

4 (2) SELECTION CRITERIA.—The Secretary shall
5 establish selection criteria for awarding grants under
6 the program. In evaluating applications, the Sec-
7 retary shall—

8 (A) consider the ability of applicants to
9 successfully complete both phases described in
10 subsection (c); and

11 (B) give priority to applicants who are best
12 able to—

13 (i) fill existing research gaps and
14 achieve the greatest advances beyond the
15 state of current technology; and

16 (ii) achieve the greatest reduction in
17 fuel consumption and emissions.

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

21 (4) SCHEDULE.—

22 (A) APPLICATION REQUEST.—Not later
23 than 180 days after the date of the enactment
24 of this Act, the Secretary shall publish in the
25 Federal Register, and elsewhere as appropriate,

1 a request for applications to undertake projects
2 under the program. Applications shall be due
3 not later than 90 days after the date of such
4 publication.

5 (B) APPLICATION SELECTION.—Not later
6 than 90 days after the date on which applica-
7 tions for grants under the program are due, the
8 Secretary shall select, through a competitive
9 process, all applicants to be awarded a grant
10 under the program.

11 (5) NUMBER OF GRANTS.—The Secretary shall
12 determine the number of grants to be awarded
13 under the program based on the technical merits of
14 the applications received. The number of grants
15 awarded under the program shall not be less than 3
16 or more than 7, and at least half of the grants
17 awarded shall be for plug-in hybrid technology.

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

21 (c) PROGRAM REQUIREMENTS; TWO PHASES.—Each
22 grant recipient shall be required to complete two phases:

23 (1) PHASE ONE.—

24 (A) IN GENERAL.—In phase one, the re-
25 cipient shall research and demonstrate ad-

1 vanced hybrid technology by producing or retro-
2 fitting one or more advanced heavy duty hybrid
3 vehicles.

4 (B) REPORT.—Not later than 60 days
5 after the completion of phase one, the recipient
6 shall submit to the Secretary a report con-
7 taining data and analysis of—

8 (i) the performance of each vehicle in
9 carrying out the testing procedures devel-
10 oped by the Secretary under subparagraph
11 (E);

12 (ii) the performance during such test-
13 ing of each vehicle’s components, including
14 the battery, energy management system,
15 charging system, and power controls;

16 (iii) the projected cost of each vehicle,
17 including acquisition, operating, and main-
18 tenance costs; and

19 (iv) the emissions levels of each vehi-
20 cle, including greenhouse gas levels.

21 (C) TERMINATION.—The Secretary may
22 terminate the grant program with respect to the
23 project of a recipient at the conclusion of phase
24 one if the Secretary determines that the recipi-

1 ent cannot successfully complete the require-
2 ments of phase two.

3 (D) TIMING.—Phase one begins upon re-
4 ceipt of a grant under the program and has a
5 duration of one year.

6 (E) TESTING PROCEDURES.—The Sec-
7 retary shall develop standard testing procedures
8 to be used by recipients in testing each vehicle.
9 Such procedures shall include testing a vehicle's
10 performance under typical operating conditions.

11 (2) PHASE TWO.—

12 (A) IN GENERAL.—In phase two, the re-
13 cipient shall demonstrate advanced manufac-
14 turing processes and technologies by producing
15 or retrofitting 50 advanced heavy duty hybrid
16 vehicles.

17 (B) REPORT.—Not later than 60 days
18 after the completion of phase two, the recipient
19 shall submit to the Secretary a report con-
20 taining—

21 (i) an analysis of the technological
22 challenges encountered by the recipient in
23 the development of the vehicles;

1 (ii) an analysis of the technological
2 challenges involved in mass producing the
3 vehicles; and

4 (iii) the manufacturing cost of each
5 vehicle, the estimated sale price of each ve-
6 hicle, and the cost of a comparable non-hy-
7 brid vehicle.

8 (C) TIMING.—Phase two begins at the con-
9 clusion of phase one and has a duration of two
10 years.

11 (d) RESEARCH ON VEHICLE USAGE AND ALTER-
12 NATIVE DRIVE TRAINS.—The Secretary shall conduct re-
13 search into alternative power train designs for use in ad-
14 vanced heavy duty hybrid vehicles. Such research shall
15 compare the estimated cost, including operating and main-
16 tenance costs, emissions reductions, and fuel savings of
17 each design with similar non-hybrid power train designs
18 under the conditions in which these vehicles are typically
19 used, including, for each vehicle type—

- 20 (1) number of miles driven;
21 (2) time spent with the engine at idle;
22 (3) horsepower requirements;
23 (4) length of time the maximum or near max-
24 imum power output of the vehicle is needed; and

1 (5) any other factors that the Secretary con-
2 siders appropriate.

3 (e) REPORT TO THE CONGRESS.—Not later than 60
4 days after the Secretary receives the reports from grant
5 recipients under subsection (c)(2)(B), the Secretary shall
6 submit to the Congress a report containing—

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

9 (2) an identification of all applicants who sub-
10 mitted applications for the program;

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

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

17 (5) the results of the research carried out under
18 subsection (d).

19 (f) COORDINATION AND NONDUPLICATION.—To the
20 maximum extent practicable, the Secretary shall coordi-
21 nate, and not duplicate, activities under this Act with
22 other programs and laboratories of the Department of En-
23 ergy and other Federal research programs.

1 (g) COST SHARING.—Section 988 of the Energy Pol-
2 icy Act of 2005 (42 U.S.C. 16352) shall apply to the pro-
3 gram established pursuant to this section.

4 (h) DEFINITIONS.—For purposes of this section:

5 (1) ADVANCED HEAVY DUTY HYBRID VEHI-
6 CLE.—The term “advanced heavy duty hybrid vehi-
7 cle” means a vehicle with a gross weight between
8 14,000 pounds and 33,000 pounds that is fueled, in
9 part, by a rechargeable energy storage system.

10 (2) GREENHOUSE GAS.—The term “greenhouse
11 gas” means—

- 12 (A) carbon dioxide;
13 (B) methane;
14 (C) nitrous oxide;
15 (D) hydrofluorocarbons;
16 (E) perfluorocarbons; or
17 (F) sulfur hexafluoride.

18 (3) 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 (4) RETROFIT.—The term “retrofit” means the
23 process of creating an advanced heavy duty hybrid
24 vehicle by converting an existing, fuel-powered vehi-
25 cle.

1 (5) SECRETARY.—The term “Secretary” means
2 the Secretary of Energy.

3 (i) AUTHORIZATION OF APPROPRIATIONS.—

4 (1) There are authorized to be appropriated to
5 the Secretary \$16,000,000 for each of fiscal years
6 2009 through 2011 to carry out this section.

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

10 (A) carrying out the studies required under
11 subsection (d); and

12 (B) the administration of the program.

13 **SEC. 3. EXPANDING RESEARCH IN HYBRID TECHNOLOGY**
14 **FOR LARGE VEHICLES.**

15 Subsection (g)(1) of the United States Energy Stor-
16 age Competitiveness Act of 2007 (enacted as section
17 641(g)(1) of the Energy Independence and Security Act
18 of 2007 (42 U.S.C. 17231(g)(1))) is amended by inserting
19 “vehicles with a gross weight over 16,000 pounds,” before
20 “stationary applications”.



**AMENDMENT TO THE AMENDMENT IN THE
NATURE OF A SUBSTITUTE TO H.R. 6323
OFFERED BY MR. REICHERT OF WASHINGTON**

Insert the following after section 2(g) and redesignate succeeding subsections accordingly:

1 (h) ELECTRICAL GRID RESEARCH PILOT PRO-
2 GRAM.—The Secretary shall establish a pilot program
3 through the National Laboratories and Technology Cen-
4 ters of the Department of Energy to research and test
5 the effects on the domestic electric power grid of the wide-
6 spread use of plug-in hybrid vehicles, including plug-in hy-
7 brid vehicles that are advanced heavy duty hybrid vehicles.

In section 2(e)(5), strike “subsection (d)” and insert “subsection (d) and (h)”.

In section 2(j)(2)(A) (as redesignated) strike “and”.

In section 2(j)(2) (as redesignated) redesignate subparagraph (B) as subparagraph (C) and insert after subparagraph (A) the following:

8 (B) carrying out the pilot program re-
9 quired under subsection (h); and

