

Union Calendar No. 103

110TH CONGRESS
1ST SESSION

H. R. 632

[Report No. 110-171]

To authorize the Secretary of Energy to establish monetary prizes for achievements in overcoming scientific and technical barriers associated with hydrogen energy.

IN THE HOUSE OF REPRESENTATIVES

JANUARY 23, 2007

Mr. LIPINSKI (for himself, Mr. INGLIS of South Carolina, Mr. DOYLE, Mr. BROWN of South Carolina, Mr. DENT, Mr. EHLERS, Ms. LORETTA SANCHEZ of California, Ms. EDDIE BERNICE JOHNSON of Texas, Mr. TERRY, Mr. MCCAUL of Texas, Mr. GERLACH, Mr. CAMP of Michigan, Mr. BARRETT of South Carolina, Mr. WILSON of South Carolina, Mr. REICHERT, Mr. WOLF, Mr. WICKER, Mr. JOHNSON of Illinois, Mr. SOUDER, Mr. KUHL of New York, Mr. WYNN, Mr. LARSON of Connecticut, Mr. KINGSTON, Mr. LINCOLN DAVIS of Tennessee, Mr. ARCURI, and Mr. WAMP) introduced the following bill; which was referred to the Committee on Science and Technology

JUNE 5, 2007

Additional sponsors: Mr. CALVERT, Mr. JOHNSON of Georgia, Ms. JACKSON-LEE of Texas, Mr. LINCOLN DIAZ-BALART of Florida, Mr. JEFFERSON, Mr. BOOZMAN, Mr. MCCOTTER, Mr. HARE, Mr. GOODLATTE, Mr. MARIO DIAZ-BALART of Florida, and Mr. TIAHRT

JUNE 5, 2007

Reported with an amendment, committed to the Committee of the Whole House on the State of the Union, and ordered to be printed

[Strike out all after the enacting clause and insert the part printed in italic]
[For text of introduced bill, see copy of bill as introduced on January 23, 2007]

A BILL

To authorize the Secretary of Energy to establish monetary prizes for achievements in overcoming scientific and technical barriers associated with hydrogen energy.

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 “H-Prize Act of 2007”.*

5 **SEC. 2. DEFINITIONS.**

6 *In this Act:*

7 (1) *ADMINISTERING ENTITY.—The term “admin-*
8 *istering entity” means the entity with which the Sec-*
9 *retary enters into an agreement under section 3(c).*

10 (2) *DEPARTMENT.—The term “Department”*
11 *means the Department of Energy.*

12 (3) *SECRETARY.—The term “Secretary” means*
13 *the Secretary of Energy.*

14 **SEC. 3. PRIZE AUTHORITY.**

15 (a) *IN GENERAL.—The Secretary shall carry out a*
16 *program to competitively award cash prizes in conformity*
17 *with this Act to advance the research, development, dem-*

1 *onstration, and commercial application of hydrogen energy*
2 *technologies.*

3 (b) *ADVERTISING AND SOLICITATION OF COMPETI-*
4 *TORS.—*

5 (1) *ADVERTISING.—The Secretary shall widely*
6 *advertise prize competitions to encourage broad par-*
7 *ticipation, including by individuals, universities (in-*
8 *cluding historically Black colleges and universities*
9 *and other minority serving institutions), and large*
10 *and small businesses (including businesses owned or*
11 *controlled by socially and economically disadvantaged*
12 *persons).*

13 (2) *ANNOUNCEMENT THROUGH FEDERAL REG-*
14 *ISTER NOTICE.—The Secretary shall announce each*
15 *prize competition by publishing a notice in the Fed-*
16 *eral Register. This notice shall include essential ele-*
17 *ments of the competition such as the subject of the*
18 *competition, the duration of the competition, the eligi-*
19 *bility requirements for participation in the competi-*
20 *tion, the process for participants to register for the*
21 *competition, the amount of the prize, and the criteria*
22 *for awarding the prize.*

23 (c) *ADMINISTERING THE COMPETITIONS.—The Sec-*
24 *retary shall enter into an agreement with a private, non-*
25 *profit entity to administer the prize competitions, subject*

1 *to the provisions of this Act. The duties of the administering*
2 *entity under the agreement shall include—*

3 *(1) advertising prize competitions and their re-*
4 *sults;*

5 *(2) raising funds from private entities and indi-*
6 *viduals to pay for administrative costs and to con-*
7 *tribute to cash prizes, including funds provided in ex-*
8 *change for the right to name a prize awarded under*
9 *this section;*

10 *(3) developing, in consultation with and subject*
11 *to the final approval of the Secretary, the criteria for*
12 *selecting winners in prize competitions, based on*
13 *goals provided by the Secretary;*

14 *(4) determining, in consultation with the Sec-*
15 *retary, the appropriate amount and funding sources*
16 *for each prize to be awarded, subject to the final ap-*
17 *proval of the Secretary with respect to Federal fund-*
18 *ing;*

19 *(5) providing advice and consultation to the Sec-*
20 *retary on the selection of judges in accordance with*
21 *section 4(d), using criteria developed in consultation*
22 *with and subject to the final approval of the Sec-*
23 *retary; and*

24 *(6) protecting against the entity's unauthorized*
25 *use or disclosure of a registered participant's trade se-*

1 crets and confidential business information. Any in-
2 formation properly identified as trade secrets or con-
3 fidential business information that is submitted by a
4 participant as part of a competitive program under
5 this Act may be withheld from public disclosure.

6 (d) *FUNDING SOURCES.*—Prizes under this Act shall
7 consist of Federal appropriated funds and any funds pro-
8 vided by the administering entity (including funds raised
9 pursuant to subsection (c)(2)) for such cash prize programs.
10 The Secretary may accept funds from other Federal agen-
11 cies for such cash prizes and, notwithstanding section
12 3302(b) of title 31, United States Code, may use such funds
13 for the cash prize program. Other than publication of the
14 names of prize sponsors, the Secretary may not give any
15 special consideration to any private sector entity or indi-
16 vidual in return for a donation to the Secretary or admin-
17 istering entity.

18 (e) *ANNOUNCEMENT OF PRIZES.*—The Secretary may
19 not issue a notice required by subsection (b)(2) until all
20 the funds needed to pay out the announced amount of the
21 prize have been appropriated or committed in writing by
22 the administering entity. The Secretary may increase the
23 amount of a prize after an initial announcement is made
24 under subsection (b)(2) if—

1 (1) *notice of the increase is provided in the same*
2 *manner as the initial notice of the prize; and*

3 (2) *the funds needed to pay out the announced*
4 *amount of the increase have been appropriated or*
5 *committed in writing by the administering entity.*

6 (f) *SUNSET.—The authority to announce prize com-*
7 *petitions under this Act shall terminate on September 30,*
8 *2018.*

9 **SEC. 4. PRIZE CATEGORIES.**

10 (a) *CATEGORIES.—The Secretary shall establish prizes*
11 *for—*

12 (1) *advancements in technologies, components, or*
13 *systems related to—*

14 (A) *hydrogen production;*

15 (B) *hydrogen storage;*

16 (C) *hydrogen distribution; and*

17 (D) *hydrogen utilization;*

18 (2) *prototypes of hydrogen-powered vehicles or*
19 *other hydrogen-based products that best meet or exceed*
20 *objective performance criteria, such as completion of*
21 *a race over a certain distance or terrain or genera-*
22 *tion of energy at certain levels of efficiency; and*

23 (3) *transformational changes in technologies for*
24 *the distribution or production of hydrogen that meet*
25 *or exceed far-reaching objective criteria, which shall*

1 *include minimal carbon emissions and which may in-*
2 *clude cost criteria designed to facilitate the eventual*
3 *market success of a winning technology.*

4 *(b) AWARDS.—*

5 *(1) ADVANCEMENTS.—To the extent permitted*
6 *under section 3(e), the prizes authorized under sub-*
7 *section (a)(1) shall be awarded biennially to the most*
8 *significant advance made in each of the four subcat-*
9 *egories described in subparagraphs (A) through (D) of*
10 *subsection (a)(1) since the submission deadline of the*
11 *previous prize competition in the same category*
12 *under subsection (a)(1) or the date of enactment of*
13 *this Act, whichever is later, unless no such advance is*
14 *significant enough to merit an award. No one such*
15 *prize may exceed \$1,000,000. If less than \$4,000,000*
16 *is available for a prize competition under subsection*
17 *(a)(1), the Secretary may omit one or more subcat-*
18 *egories, reduce the amount of the prizes, or not hold*
19 *a prize competition.*

20 *(2) PROTOTYPES.—To the extent permitted*
21 *under section 3(e), prizes authorized under subsection*
22 *(a)(2) shall be awarded biennially in alternate years*
23 *from the prizes authorized under subsection (a)(1).*
24 *The Secretary is authorized to award up to one prize*
25 *in this category in each 2-year period. No such prize*

1 *may exceed \$4,000,000. If no registered participants*
2 *meet the objective performance criteria established*
3 *pursuant to subsection (c) for a competition under*
4 *this paragraph, the Secretary shall not award a*
5 *prize.*

6 (3) *TRANSFORMATIONAL TECHNOLOGIES.—To*
7 *the extent permitted under section 3(e), the Secretary*
8 *shall announce one prize competition authorized*
9 *under subsection (a)(3) as soon after the date of en-*
10 *actment of this Act as is practicable. A prize offered*
11 *under this paragraph shall be not less than*
12 *\$10,000,000, paid to the winner in a lump sum, and*
13 *an additional amount paid to the winner as a match*
14 *for each dollar of private funding raised by the win-*
15 *ner for the hydrogen technology beginning on the date*
16 *the winner was named. The match shall be provided*
17 *for 3 years after the date the prize winner is named*
18 *or until the full amount of the prize has been paid*
19 *out, whichever occurs first. A prize winner may elect*
20 *to have the match amount paid to another entity that*
21 *is continuing the development of the winning tech-*
22 *nology. The Secretary shall announce the rules for re-*
23 *ceiving the match in the notice required by section*
24 *3(b)(2). The Secretary shall award a prize under this*
25 *paragraph only when a registered participant has*

1 *met the objective criteria established for the prize pur-*
2 *suant to subsection (c) and announced pursuant to*
3 *section 3(b)(2). Not more than \$10,000,000 in Federal*
4 *funds may be used for the prize award under this*
5 *paragraph. The administering entity shall seek to*
6 *raise \$40,000,000 toward the matching award under*
7 *this paragraph.*

8 *(c) CRITERIA.—In establishing the criteria required by*
9 *this Act, the Secretary—*

10 *(1) shall consult with the Department’s Hydro-*
11 *gen Technical and Fuel Cell Advisory Committee;*

12 *(2) shall consult with other Federal agencies, in-*
13 *cluding the National Science Foundation; and*

14 *(3) may consult with other experts such as pri-*
15 *ivate organizations, including professional societies,*
16 *industry associations, and the National Academy of*
17 *Sciences and the National Academy of Engineering.*

18 *(d) JUDGES.—For each prize competition, the Sec-*
19 *retary in consultation with the administering entity shall*
20 *assemble a panel of qualified judges to select the winner*
21 *or winners on the basis of the criteria established under sub-*
22 *section (c). Judges for each prize competition shall include*
23 *individuals from outside the Department, including from*
24 *the private sector. A judge, spouse, minor children, and*
25 *members of the judge’s household may not—*

1 (1) *have personal or financial interests in, or be*
2 *an employee, officer, director, or agent of, any entity*
3 *that is a registered participant in the prize competi-*
4 *tion for which he or she will serve as a judge; or*

5 (2) *have a familial or financial relationship*
6 *with an individual who is a registered participant in*
7 *the prize competition for which he or she will serve*
8 *as a judge.*

9 **SEC. 5. ELIGIBILITY.**

10 *To be eligible to win a prize under this Act, an indi-*
11 *vidual or entity—*

12 (1) *shall have complied with all the requirements*
13 *in accordance with the Federal Register notice re-*
14 *quired under section 3(b)(2);*

15 (2) *in the case of a private entity, shall be incor-*
16 *porated in and maintain a primary place of business*
17 *in the United States, and in the case of an indi-*
18 *vidual, whether participating singly or in a group,*
19 *shall be a citizen of, or an alien lawfully admitted for*
20 *permanent residence in, the United States; and*

21 (3) *shall not be a Federal entity, a Federal em-*
22 *ployee acting within the scope of his employment, or*
23 *an employee of a national laboratory acting within*
24 *the scope of his employment.*

1 **SEC. 6. INTELLECTUAL PROPERTY.**

2 *The Federal Government shall not, by virtue of offering*
3 *or awarding a prize under this Act, be entitled to any intel-*
4 *lectual property rights derived as a consequence of, or direct*
5 *relation to, the participation by a registered participant*
6 *in a competition authorized by this Act. This section shall*
7 *not be construed to prevent the Federal Government from*
8 *negotiating a license for the use of intellectual property de-*
9 *veloped for a prize competition under this Act.*

10 **SEC. 7. LIABILITY.**

11 (a) *WAIVER OF LIABILITY.*—*The Secretary may re-*
12 *quire registered participants to waive claims against the*
13 *Federal Government and the administering entity (except*
14 *claims for willful misconduct) for any injury, death, dam-*
15 *age, or loss of property, revenue, or profits arising from*
16 *the registered participants' participation in a competition*
17 *under this Act. The Secretary shall give notice of any waiv-*
18 *er required under this subsection in the notice required by*
19 *section 3(b)(2). The Secretary may not require a registered*
20 *participant to waive claims against the administering enti-*
21 *ty arising out of the unauthorized use or disclosure by the*
22 *administering entity of the registered participant's trade*
23 *secrets or confidential business information.*

24 (b) *LIABILITY INSURANCE.*—

25 (1) *REQUIREMENTS.*—*Registered participants*
26 *shall be required to obtain liability insurance or dem-*

1 *onstrate financial responsibility, in amounts deter-*
2 *mined by the Secretary, for claims by—*

3 *(A) a third party for death, bodily injury,*
4 *or property damage or loss resulting from an ac-*
5 *tivity carried out in connection with participa-*
6 *tion in a competition under this Act; and*

7 *(B) the Federal Government for damage or*
8 *loss to Government property resulting from such*
9 *an activity.*

10 *(2) FEDERAL GOVERNMENT INSURED.—The Fed-*
11 *eral Government shall be named as an additional in-*
12 *sured under a registered participant’s insurance pol-*
13 *icy required under paragraph (1)(A), and registered*
14 *participants shall be required to agree to indemnify*
15 *the Federal Government against third party claims*
16 *for damages arising from or related to competition*
17 *activities.*

18 **SEC. 8. REPORT TO CONGRESS.**

19 *Not later than 60 days after the awarding of the first*
20 *prize under this Act, and annually thereafter, the Secretary*
21 *shall transmit to the Congress a report that—*

22 *(1) identifies each award recipient;*

23 *(2) describes the technologies developed by each*
24 *award recipient; and*

1 (3) *specifies actions being taken toward commer-*
2 *cial application of all technologies with respect to*
3 *which a prize has been awarded under this Act.*

4 **SEC. 9. AUTHORIZATION OF APPROPRIATIONS.**

5 (a) *AUTHORIZATION OF APPROPRIATIONS.—*

6 (1) *AWARDS.—There are authorized to be appro-*
7 *priated to the Secretary for the period encompassing*
8 *fiscal years 2008 through 2017 for carrying out this*
9 *Act—*

10 (A) *\$20,000,000 for awards described in sec-*
11 *tion (4)(a)(1);*

12 (B) *\$20,000,000 for awards described in*
13 *section 4(a)(2); and*

14 (C) *\$10,000,000 for the award described in*
15 *section 4(a)(3).*

16 (2) *ADMINISTRATION.—In addition to the*
17 *amounts authorized in paragraph (1), there are au-*
18 *thorized to be appropriated to the Secretary for each*
19 *of fiscal years 2008 and 2009 \$2,000,000 for the ad-*
20 *ministrative costs of carrying out this Act.*

21 (b) *CARRYOVER OF FUNDS.—Funds appropriated for*
22 *prize awards under this Act shall remain available until*
23 *expended, and may be transferred, reprogrammed, or ex-*
24 *pended for other purposes only after the expiration of 10*
25 *fiscal years after the fiscal year for which the funds were*

1 *originally appropriated. No provision in this Act permits*
2 *obligation or payment of funds in violation of section 1341*
3 *of title 31 of the United States Code (commonly referred*
4 *to as the Anti-Deficiency Act).*

5 **SEC. 10. NONSUBSTITUTION.**

6 *The programs created under this Act shall not be con-*
7 *sidered a substitute for Federal research and development*
8 *programs.*

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