

115TH CONGRESS  
2D SESSION

# H. R. 5031

To direct the Secretary of Energy to provide for prize competitions relating to climate and energy, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 15, 2018

Mr. LIPINSKI (for himself, Mr. FASO, Mr. CRIST, Mr. CURBELO of Florida, Mrs. MURPHY of Florida, and Ms. ROS-LEHTINEN) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

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## A BILL

To direct the Secretary of Energy to provide for prize competitions relating to climate and energy, 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 “Challenges & Prizes  
5 for Climate Act of 2018”.

6 **SEC. 2. CLIMATE SOLUTIONS CHALLENGES.**

7 (a) AUTHORITY.—Not later than 180 days after the  
8 date of enactment of this Act, the Secretary of Energy  
9 shall establish a program to be known as “Climate Solu-

1 tions Challenges” for carrying out prize competitions de-  
2 scribed under subsection (d) pursuant to section 24 of the  
3 Stevenson-Wydler Technology Innovation Act of 1980 (15  
4 U.S.C. 3719) relating to the climate and energy.

5 (b) PRIZE COMMITTEES.—

6 (1) IN GENERAL.—The Secretary shall assem-  
7 ble a prize committee with respect to each prize  
8 competition that shall define the scope and detail of,  
9 and provide the requirements for, the prize competi-  
10 tions under this section. Such committee shall be  
11 composed of—

12 (A) members from the Federal agency, de-  
13 partment, or office that most appropriately cor-  
14 responds with the topic of the prize competi-  
15 tion, including—

16 (i) with respect to a prize competition  
17 under subsection (c)(4), the Administrator  
18 of the National Aeronautics and Space Ad-  
19 ministration and the Director of the Na-  
20 tional Oceanic and Atmospheric Adminis-  
21 tration; and

22 (ii) with respect to a prize competition  
23 under subsection (c)(5), the Director of the  
24 National Oceanic and Atmospheric Admin-

1                   istration and the Director of the National  
2                   Technical Information Service; and

3                   (B) representatives of any other entities,  
4                   as determined appropriate by the Secretary, in-  
5                   cluding State and local governments and the  
6                   private sector.

7                   (2) DEFINING TOPIC AREAS.—The prize com-  
8                   mittee may modify and define the scope of the prize  
9                   areas described under subsection (c), so long as such  
10                  modification is in accordance with descriptions in  
11                  such subsection.

12                  (3) INCENTIVE FOR PRIZE COMPETITION.—The  
13                  prize committee for each prize competition shall de-  
14                  termine the incentive for the prize competition. In  
15                  determining the incentive, the committee shall con-  
16                  sider—

17                         (A) a cash prize;

18                         (B) access to Government facilities, such  
19                         as through a lab-embedded entrepreneurship  
20                         program of the Department of Energy, a coop-  
21                         erative research and development agreement, or  
22                         other method;

23                         (C) advance market commitments for tech-  
24                         nologies of use or promise to the Federal Gov-  
25                         ernment; and

1 (D) any other incentive provided for by  
2 law.

3 (4) JUDGING CRITERIA.—The prize committee  
4 for each prize competition shall establish judging cri-  
5 teria for the competition that shall include, at a min-  
6 imum—

7 (A) potential for the solution to become a  
8 commercial product or service or advance  
9 knowledge to further the public good;

10 (B) consideration of how likely the solution  
11 is to lead to subsequent research, development,  
12 or manufacturing in the United States;

13 (C) the degree to which the solution will  
14 lower the climate footprint of the United States;  
15 and

16 (D) the degree to which the solution will  
17 lower the global climate footprint.

18 (5) CONSIDERATION.—In carrying out this sec-  
19 tion, the committee shall take into consideration the  
20 best practices provided for in the challenges and  
21 prizes toolkit made publicly available on December  
22 15, 2016, by the General Services Administration.

23 (6) DEFINITION OF ADVANCE MARKET COMMIT-  
24 MENT.—In this subsection, the term “advance mar-  
25 ket commitment” means a commitment by the Fed-

1       eral Government to purchase a set number of units  
2       of a product from a private sector entity at an  
3       agreed-upon price, assuming pre-specified criteria  
4       are met.

5       (c) PRIZE COMPETITIONS.—In carrying out the pro-  
6       gram, the Secretary shall provide for prize competitions,  
7       including at least one prize competition on each of the fol-  
8       lowing:

9               (1) CARBON CAPTURE AND BENEFICIAL USE.—  
10       Solutions to capture carbon directly from the atmos-  
11       phere or from sources that would otherwise be emit-  
12       ted to the atmosphere, and convert it to a beneficial  
13       use that does not result in near-term re-release into  
14       the atmosphere, unless such re-release offsets the  
15       emission of additional carbon into the atmosphere,  
16       such that the net effect of the solution is to reduce  
17       the overall amount of carbon being emitted to the  
18       atmosphere.

19               (2) ENERGY EFFICIENCY.—Solutions to achieve  
20       transformative increases in energy efficiency, defined  
21       as an increase in energy efficiency of 2 times or  
22       more over commonly-available technology without a  
23       proportional increase in cost.

1           (3) ENERGY STORAGE.—Solutions to achieve  
2           implementation or grid integration of advanced en-  
3           ergy storage technology.

4           (4) CLIMATE RESILIENCY.—Solutions to pro-  
5           vide new or improved approaches to mitigating or  
6           adapting to the effects of climate change (such as  
7           floods, drought, excessive heat and cold, and severe  
8           weather) in rural or urban areas.

9           (5) DATA ANALYTICS.—Solutions to—

10                   (A) provide new or improved tools that use  
11                   data to better model Earth’s climate at a glob-  
12                   al, regional, or local scale;

13                   (B) forecast climate-related phenomena  
14                   (such as weather, seasonal trends, oceanic and  
15                   atmospheric circulation); or

16                   (C) provide actionable information on the  
17                   climate and related phenomena to government,  
18                   industry, and members of the public.

19           (d) ACCEPTANCE OF FUNDS.—In addition to such  
20           sums as may be appropriated or otherwise made available  
21           to the Secretary to award prizes under this section, the  
22           Secretary may accept funds from other Federal agencies,  
23           private sector entities, and State and local governments  
24           to award prizes under this section. The Secretary may not  
25           give any special consideration relating to the selection of

1 awards under the prize competition to any private sector  
2 entity or individual in return for a donation to the Sec-  
3 retary or prize committee.

4 (e) ELIGIBILITY.—Notwithstanding section 24(g)(3)  
5 of the Stevenson-Wydler Technology Innovation Act of  
6 1980 (15 U.S.C. 3719(g)(3)), for a group to be eligible  
7 for an award under this section, at least one member of  
8 such group shall be a citizen or permanent resident of the  
9 United States.

10 (f) COMPLETION OF PRIZE COMPETITIONS.—The  
11 prize competitions carried out under this section shall be  
12 completed not later than the date that is 5 years after  
13 the program is established under subsection (a).

14 (g) GAO REPORT.—Not later than the date of com-  
15 pletion under subsection (f), the Comptroller General of  
16 the United States shall submit to Congress a report on  
17 the impact and the effectiveness of the program carried  
18 out under this section.

19 (h) AUTHORIZATION OF APPROPRIATIONS.—There is  
20 authorized to be appropriated \$10,000,000 to carry out  
21 this Act, to remain available until expended.

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