

  
(Original Signature of Member)

115TH CONGRESS  
1ST SESSION

**H. R.**

To provide for the development of a United States strategy for greater human space exploration, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mr. CULBERSON introduced the following bill; which was referred to the Committee on \_\_\_\_\_

**A BILL**

To provide for the development of a United States strategy for greater human space exploration, 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 "Mapping a New and  
5 Innovative Focus on Our Exploration Strategy for Human  
6 Spaceflight Act of 2017" or the "MANIFEST for Human  
7 Spaceflight Act of 2017".

1 **SEC. 2. REAFFIRMATION OF POLICY AND FINDINGS.**

2 (a) **REAFFIRMATION OF POLICY.**—Congress reaf-  
3 firms that the long-term goal of the human space flight  
4 and exploration efforts of the National Aeronautics and  
5 Space Administration shall be to expand permanent  
6 human presence beyond low-Earth orbit and to do so,  
7 where practical, in a manner involving international part-  
8 ners, as stated in section 202(a) of the National Aero-  
9 nautics and Space Administration Authorization Act of  
10 2010 (42 U.S.C. 18312(a)).

11 (b) **FINDINGS.**—Congress makes the following find-  
12 ings:

13 (1) In accordance with section 204 of the Na-  
14 tional Aeronautics and Space Administration Au-  
15 thorization Act of 2010 (Public Law 111–267; 124  
16 Stat. 2813), the National Academy of Sciences,  
17 through its Committee on Human Spaceflight, con-  
18 ducted a review of the goals, core capabilities, and  
19 direction of human space flight, and published the  
20 findings and recommendations in a 2014 report enti-  
21 tled “Pathways to Exploration: Rationales and Ap-  
22 proaches for a U.S. Program of Human Space Ex-  
23 ploration”.

24 (2) The Committee on Human Spaceflight in-  
25 cluded leaders from the aerospace, scientific, secu-  
26 rity, and policy communities. With input from the

1 public, the Committee on Human Spaceflight con-  
2 cluded that many practical and aspirational ration-  
3 ales together constitute a compelling case for human  
4 space exploration. These rationales include economic  
5 benefits, national security, national prestige, inspir-  
6 ing students and other citizens, scientific discovery,  
7 human survival, and a sense of shared destiny.

8 (3) The Committee on Human Spaceflight af-  
9 firmed that Mars is the appropriate long-term goal  
10 for the human space flight program.

11 (4) The Committee on Human Spaceflight rec-  
12 ommended that the National Aeronautics and Space  
13 Administration define a series of sustainable steps  
14 and conduct mission planning and technology devel-  
15 opment as needed to achieve the long-term goal of  
16 placing humans on the surface of Mars.

17 **SEC. 3. HUMAN EXPLORATION STRATEGY.**

18 (a) **HUMAN EXPLORATION OF MARS.**—Section  
19 202(b) of the National Aeronautics and Space Administra-  
20 tion Authorization Act of 2010 (42 U.S.C. 18312(b)) is  
21 amended—

22 (1) in paragraph (3), by striking “and” at the  
23 end;

24 (2) in paragraph (4), by striking the period at  
25 the end and inserting “; and”; and

1 (3) by adding at the end the following:

2 “(5) to achieve human exploration of Mars, in-  
3 cluding the establishment of a capability to extend  
4 human presence to the surface of Mars.”.

5 (b) EXPLORATION STRATEGY.—

6 (1) IN GENERAL.—In accordance with this sub-  
7 section, the Administrator of the National Aero-  
8 nautics and Space Administration shall submit an  
9 interim report and final report setting forth a strat-  
10 egy to achieve the objective in paragraph (5) of sec-  
11 tion 202(b) of the National Aeronautics and Space  
12 Administration Authorization Act of 2010, as  
13 amended by subsection (a) of this section, through  
14 a series of successive, sustainable, free-standing, but  
15 complementary missions making robust utilization of  
16 cis-lunar space and employing the Space Launch  
17 System, Orion crew capsule, and other capabilities  
18 provided under titles III, IV, V, and IX of that Act  
19 (42 U.S.C. 18301 et seq.).

20 (2) STRATEGY REQUIREMENTS.—In developing  
21 the strategy under paragraph (1), the Administrator  
22 shall include—

23 (A) the utility of an expanded human pres-  
24 ence in cis-lunar space toward enabling mis-  
25 sions to various lunar orbits, the lunar surface,

1           asteroids, Mars, the moons of Mars, and other  
2           destinations of interest for future human explo-  
3           ration and development;

4           (B) the utility of an expanded human pres-  
5           ence in cis-lunar space for economic, scientific,  
6           and technological advances;

7           (C) the opportunities for collaboration  
8           with—

9                   (i) international partners;

10                   (ii) private industry; and

11                   (iii) other Federal agencies, including  
12                   missions relevant to national security or  
13                   scientific needs;

14           (D) the opportunities specifically afforded  
15           by the International Space Station (ISS) to  
16           support high priority scientific research and  
17           technological developments useful in expanding  
18           and sustaining a human presence in cis-lunar  
19           space and beyond;

20           (E) a range of exploration mission archi-  
21           tectures and approaches for the missions identi-  
22           fied under paragraph (1), including capabilities  
23           for the Orion crew capsule and the Space  
24           Launch System;

1 (F) a comparison of architectures and ap-  
2 proaches based on—

3 (i) assessed value of factors including  
4 cost effectiveness, schedule resiliency, safe-  
5 ty, sustainability, and opportunities for  
6 international collaboration;

7 (ii) the extent to which certain archi-  
8 tectures and approaches may enable new  
9 markets and opportunities for United  
10 States private industry, provide compelling  
11 opportunities for scientific discovery and  
12 technological excellence, sustain United  
13 States competitiveness and leadership, and  
14 address critical national security consider-  
15 ations and requirements; and

16 (iii) the flexibility of such architec-  
17 tures and approaches to adjust to evolving  
18 technologies, partners, priorities, and  
19 budget projections and constraints;

20 (G) measures for setting standards for en-  
21 suring crew health and safety, including limits  
22 regarding radiation exposure and counter-  
23 measures necessary to meet those limits, means  
24 and methods for addressing urgent medical con-  
25 ditions or injuries, and other such safety,

1 health, and medical issues that can be antici-  
2 pated in the conduct of the missions identified  
3 under paragraph (1);

4 (II) a description of crew training needs  
5 and capabilities (including space suits and life  
6 support systems) necessary to support the con-  
7 duct of missions identified under paragraph (1);

8 (I) a detailed plan for prioritizing and  
9 phasing near-term intermediate destinations  
10 and missions identified under paragraph (1);

11 (J) an assessment of the recommendations  
12 of the report prepared in compliance with sec-  
13 tion 204 of the National Aeronautics and Space  
14 Administration Authorization Act of 2010  
15 (Public Law 111-267; 124 Stat. 2813), includ-  
16 ing a detailed explanation of how the Adminis-  
17 trator has ensured such recommendations have  
18 been, to the extent practicable, incorporated  
19 into the strategy under paragraph (1); and

20 (K) technical information as needed to  
21 identify interest from potential stakeholder or  
22 partner communities.

23 (3) INDEPENDENT REVIEW.—

24 (A) IN GENERAL.—The Administrator  
25 shall enter into an arrangement with the Na-

1            tional Academy of Sciences to review and com-  
2            ment on each interim report pursuant to para-  
3            graph (1). Under the arrangement, the Na-  
4            tional Academy of Sciences shall review each in-  
5            terim report on the strategy described in para-  
6            graph (1) and identify the following:

7                    (i) Matters in such interim report  
8                    agreed upon by the National Academy of  
9                    Sciences.

10                   (ii) Matters in such interim report  
11                   raising concerns for the National Academy  
12                   of Sciences.

13                   (iii) Such further recommendations  
14                   with respect to matters covered by such in-  
15                   terim report as the National Academy of  
16                   Sciences considers appropriate.

17            (B) TIMING OF REVIEW AND COMMENT.—  
18            The Administrator shall ensure that the review  
19            and comment on an interim report provided for  
20            pursuant to subparagraph (A) is conducted in  
21            a timely manner to comply with the require-  
22            ments of this subsection and, to the maximum  
23            extent practicable, to facilitate the incorporation  
24            of the comments of the National Academy of  
25            Sciences pursuant to subparagraph (A) into the



1 applicable final report required by this sub-  
2 section.

3 (4) DEADLINES.—

4 (A) INTERIM REPORTS.—Not later than 90  
5 days after the date of the enactment of this  
6 Act, and not less than every five years there-  
7 after, the Administrator shall submit to the Na-  
8 tional Academy of Sciences an interim report  
9 on the strategy required by paragraph (1) in  
10 order to facilitate the independent review and  
11 comment on the strategy as provided for by  
12 paragraph (3).

13 (B) FINAL REPORTS.—Not later than one  
14 year after the date of the enactment of this Act,  
15 and not less than every five years thereafter,  
16 the Administrator shall submit to Congress a  
17 final report on the strategy required by para-  
18 graph (1), which shall include and incorporate  
19 the response of the National Academy of  
20 Sciences to the most recent interim report pur-  
21 suant to paragraph (3).