

117TH CONGRESS
2D SESSION

H. R. 9432

To establish the Airborne Wind Energy Research and Development Program,
and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

DECEMBER 6, 2022

Mr. BOWMAN (for himself and Mr. WEBER of Texas) introduced the following
bill; which was referred to the Committee on Science, Space, and Technology

A BILL

To establish the Airborne Wind Energy Research and
Development Program, 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 “Airborne Wind Energy
5 Research and Development Act”.

6 **SEC. 2. AIRBORNE WIND ENERGY RESEARCH AND DEVEL-**
7 **OPMENT PROGRAM.**

8 (a) ESTABLISHMENT.—Not later than 120 days after
9 the date of the enactment of this Act, the Secretary of
10 Energy shall establish a research, development, dem-

1 onstration, and commercial application program to be
2 known as the “Airborne Wind Energy Research and De-
3 velopment Program” (in this section referred to as the
4 “Program”) to improve understanding of the following:

5 (1) The quantity, quality, and complementary
6 nature of wind resources at elevations above 200 me-
7 ters.

8 (2) Various airborne wind energy concepts
9 through modeling and simulation, including power
10 density, robust controls, and scaling potential.

11 (3) Potential benefits of airborne wind energy,
12 such as portability, low material inputs, viewshed,
13 and existing grid interconnections.

14 (4) Environmental impacts of airborne wind en-
15 ergy technology.

16 (5) Noise and visual impacts, as well as any
17 other human impacts of airborne wind energy tech-
18 nology.

19 (b) ACTIVITIES.—In carrying out the Program, the
20 Secretary of Energy shall carry out research, development,
21 demonstration, and commercial application activities to
22 improve the following:

23 (1) Wind resource data capabilities in the
24 200m–800m elevation range onshore and offshore,
25 including mesoscale modeling techniques.

1 (2) Airborne wind energy designs and tech-
2 nologies, including the following:

3 (A) Generators and generator placement.

4 (B) Design load and structural integrity
5 across varying concepts, including soft and rigid
6 wings.

7 (C) Tether technologies.

8 (D) Flight operation, such as flying cross-
9 wind or remaining stationary.

10 (E) Takeoff and landing, including autono-
11 mous landings.

12 (3) Understanding of social and environmental
13 impacts of airborne wind energy on wildlife, nearby
14 communities, radar, and airspace, as well as any
15 other concerns.

16 (c) AUTHORIZATION OF APPROPRIATIONS.—The fol-
17 lowing are authorized to be appropriated to carry out the
18 Program:

19 (1) \$5,000,000 for fiscal year 2023.

20 (2) \$5,250,000 for fiscal year 2024.

21 (3) \$5,512,500 for fiscal year 2025.

22 (4) \$5,788,125 for fiscal year 2026.

23 (5) \$6,077,531 for fiscal year 2027.

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