

119TH CONGRESS
1ST SESSION

H. R. 2295

To research the impact of obstructions on radar detection and prediction capabilities, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MARCH 24, 2025

Mr. FEENSTRA (for himself, Mrs. BICE, Mr. NEGUSE, Mr. HARIDOPOLOS, Mrs. RADEWAGEN, Mrs. MILLER-MEEKS, Mr. FITZPATRICK, and Mr. MOYLAN) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

A BILL

To research the impact of obstructions on radar detection and prediction capabilities, 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 “Weather Innovation
5 for the Next Generation Act of 2025” or the “WING Act
6 of 2025”.

1 **SEC. 2. RADAR OBSTRUCTION RESEARCH, DEVELOPMENT,**
2 **TEST, AND EVALUATION PROGRAM.**

3 (a) ESTABLISHMENT.—The Director of the National
4 Weather Service, in coordination with the Assistant Ad-
5 ministrator for Oceanic and Atmospheric Research, shall
6 establish a Research, Development, Test, and Evaluation
7 Program (in this section referred to as the “Program”)
8 to ensure the continued performance of weather radar de-
9 tection and prediction capabilities with physical obstruc-
10 tions in the line of sight of such radar.

11 (b) REQUIREMENTS.—In carrying out the Program,
12 the Director, in consultation with the Interagency Council
13 for Advancing Meteorological Services, shall—

14 (1) partner with industry, academia, Federal,
15 State, and local government entities, and any other
16 entity the Director considers appropriate;

17 (2) identify and test existing or near-commer-
18 cial technologies and solutions that mitigate the po-
19 tential impact of obstructions on weather radar;

20 (3) research additional solutions that could
21 mitigate the effects of an obstruction on weather
22 radar, including—

23 (A) signal processing algorithms;

24 (B) short-term forecasting algorithms to
25 replace contaminated data; and

1 (C) the use of dual polarization character-
2 istics in mitigating the effects of wind turbines
3 on weather radar; and

4 (4) develop commercially viable technical miti-
5 gation solutions for obstructions to weather radar
6 capabilities.

7 (c) PRIORITY.—In carrying out the requirements de-
8 scribed in subsection (b), the Director shall prioritize con-
9 sideration of the following technology-based mitigation so-
10 lutions:

11 (1) Multifunction phased array radar.

12 (2) The replacement of contaminated data with
13 commercial radar data.

14 (3) The utilization of data from private-sector-
15 associated meteorological towers.

16 (4) Providing wind farm boundaries and con-
17 solidated wind farm areas to display on local fore-
18 casting equipment.

19 (5) Installing and providing access to rain
20 gauges.

21 (6) Any other technology-based mitigation solu-
22 tion the Director determines could overcome beam
23 blockage or ghost echoes.

24 (d) TERMINATION.—The authority of the Director to
25 carry out the Program shall terminate on the earlier of—

1 (1) September 30, 2030; or

2 (2) one year after date on which the final rec-
3 ommendation required by subsection (e)(2) is sub-
4 mitted by the Director.

5 (e) REPORT; RECOMMENDATION.—

6 (1) IN GENERAL.—Not later than two years
7 after the date of the enactment of this section and
8 annually thereafter until the Program terminates
9 pursuant to subsection (d), the Director shall submit
10 to Congress a report on the implementation of the
11 Program, including an evaluation of each tech-
12 nology-based mitigation solution identified for pri-
13 ority consideration pursuant to subsection (c), and a
14 recommendation regarding additional identification
15 and testing of new technologies based on such con-
16 sideration.

17 (2) FINAL RECOMMENDATION.—Not later than
18 five years after the date of the enactment of this
19 section, the Director shall provide to Congress a rec-
20 ommendation on whether additional research, test-
21 ing, and development through the Program estab-
22 lished under subsection (a) is needed, and a deter-
23 mination of whether a cessation of field research, de-
24 velopment, testing, and evaluation is appropriate.

25 (f) DEFINITIONS.—In this section:

1 (1) BEAM BLOCKAGE.—The term “beam block-
2 age” means a signal that is partially or fully blocked
3 due to an obstruction.

4 (2) DIRECTOR.—The term “Director” means
5 the Director of the National Weather Service.

6 (3) GHOST ECHO.—The term “ghost echo”
7 means radar signal reflectivity or velocity return er-
8 rors in radar data due to the close proximity of an
9 obstruction.

10 (4) OBSTRUCTION.—The term obstruction in-
11 cludes—

12 (A) a wind turbine that could limit the ef-
13 fectiveness of a weather radar system; and

14 (B) any building that disrupts or limits the
15 effectiveness of a weather radar system.

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