

119TH CONGRESS
1ST SESSION

H. R. 2646

To require the evaluation of certain criteria relating to locations for deployment of successor radar systems of the National Weather Service, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

APRIL 3, 2025

Mr. MOORE of North Carolina (for himself, Ms. ROSS, and Mr. HARRIGAN) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

A BILL

To require the evaluation of certain criteria relating to locations for deployment of successor radar systems of the National Weather Service, 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 “Radar Gap Elimination Act”.

6 **SEC. 2. RADAR NEXT PROGRAM.**

7 (a) IN GENERAL.—The Under Secretary of Commerce for Oceans and Atmosphere, in consultation with
8 the Director of the National Weather Service, shall estab-

lish a program to be known as the “Radar Next Program”
(in this section referred to as the “program”).

(b) REQUIREMENTS.—In carrying out the program,
the Under Secretary of Commerce for Oceans and Atmos-
phere shall carry out the following:

(1) Develop performance and coverage require-
ments for the weather radar network of the United
States, including the territories of the United States.

(2) Collaborate with the weather enterprise (as
such term is defined in section 2 of the Weather Re-
search and Forecasting Innovation Act of 2017 (15
U.S.C. 8501)) to determine potential solutions to
update the weather radar network of the United
States that meets the requirements developed under
paragraph (1).

(3) Develop a plan in accordance with sub-
section (c).

(c) PLAN.—

(1) IN GENERAL.—The Under Secretary of
Commerce for Oceans and Atmosphere shall develop
a plan to replace the Next Generation Weather
Radar of the National Weather Service system in ex-
istence as of the date of the enactment of this Act
(in this subsection referred to as the “NEXRAD
system”).

1 (2) ELEMENTS.—The plan developed under this
2 subsection shall seek to continue and improve weath-
3 er radar coverage in the United States and its terri-
4 tories, and include the following:

5 (A) Estimates of quantifiable improve-
6 ments in performance, coverage, and accuracy
7 to be made from potential options for replace-
8 ment of the NEXRAD system.

9 (B) Development of a proof-of-concept
10 phased array radar to test and determine the
11 specifications and requirements for such re-
12 placement.

13 (C) Expected actions needed to implement
14 the recommendations of the report published by
15 the Environmental Information Services Work-
16 ing Group of the Science Advisory Board of the
17 National Oceanic and Atmospheric Administra-
18 tion in November 2023 and entitled “A
19 NESDIS Observing System Backbone Frame-
20 work” to assist in defining a radar backbone
21 architecture that will best serve the United
22 States.

23 (D) Establishment of a weather surveil-
24 lance radar testbed for the following:

1 (i) Evaluation of commercial radars
2 with the potential to replace or supplement
3 the NEXRAD system.

4 (ii) Providing technical assistance for
5 the use of small, gap-filling radars with
6 private and local partners in regions where
7 geographical topography prevents the full
8 use of large systems or in locations where
9 such systems may not be commercially via-
10 ble.

11 (E) Consultation and input solicited from
12 academia, meteorologists, emergency managers,
13 and public safety or utility officials regarding
14 the specifications and requirements for replace-
15 ment of the NEXRAD system.

16 (F) Prioritized locations for initial deploy-
17 ment of the system that will replace the
18 NEXRAD system.

19 (G) Expected locations of the system that
20 will replace the NEXRAD system, including
21 sites located more than 75 miles away from an
22 existing NEXRAD system station and addi-
23 tional appropriate locations.

24 (H) Expected or planned improvements to
25 data available for weather and water-related

1 forecasts and warnings from the system that
2 will replace the NEXRAD system.

3 (3) PROCUREMENT DEADLINE.—The Under
4 Secretary of Commerce for Oceans and Atmosphere
5 shall take such actions as may be necessary to en-
6 sure the plan developed under this subsection is fully
7 implemented and executed by not later than Sep-
8 tember 30, 2040.

9 (d) RADAR-AS-A-SERVICE.—

10 (1) IN GENERAL.—The Under Secretary of
11 Commerce for Oceans and Atmosphere may partner
12 or contract with entities outside of the National Oce-
13 anic and Atmospheric Administration to fill data
14 gaps in weather radar coverage using diverse weath-
15 er radars and data assimilation technologies in order
16 to accomplish the following:

17 (A) Supplement data gaps in weather
18 radar coverage, including at low levels and wide
19 areas, in existence as of the date of the enact-
20 ment of this Act.

21 (B) Ensure the continued performance of
22 the United States' weather radar network.

23 (C) Better detect significant precipitation
24 and severe weather over a greater area across
25 a population.

1 (2) CONSIDERATIONS.—In carrying out para-
2 graph (1), the Under Secretary of Commerce for
3 Oceans and Atmosphere may consider the following:

4 (A) Partnering or contracting with entities
5 that have participated in the testbed described
6 in subsection (c)(2)(D), the National Mesonet
7 Program, or Cooperative Research and Develop-
8 ment Agreements.

9 (B) Weather camera systems and services,
10 including in consultation with the Federal Avia-
11 tion Administration, as viable technologies to
12 supplement weather forecasting and prediction
13 needs.

14 (e) UPDATES TO CONGRESS.—The Under Secretary
15 of Commerce for Oceans and Atmosphere shall provide to
16 the Committee on Science, Space, and Technology of the
17 House of Representatives and the Committee on Com-
18 merce, Science, and Transportation of the Senate periodic
19 updates on the implementation of this section.

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