

119TH CONGRESS
2D SESSION

S. _____

To establish the Radar Next Program, and for other purposes.

IN THE SENATE OF THE UNITED STATES

Ms. CANTWELL (for herself and Mr. BUDD) introduced the following bill;
which was read twice and referred to the Committee on

A BILL

To establish the Radar Next 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 **["**_____ Act
5 of _____**"]**.

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

7 (a) IN GENERAL.—The Under Secretary, in consulta-
8 tion with the Director of the National Weather Service,
9 shall establish a program to be known as the “Radar Next
10 Program” (in this section referred to as the “program”).

1 (b) REQUIREMENTS.—In carrying out the program,
2 the Under Secretary shall—

3 (1) develop performance and coverage require-
4 ments for the weather radar network of the United
5 States, including for the territories of the United
6 States;

7 (2) collaborate with the weather enterprise to
8 determine potential solutions to update the weather
9 radar network of the United States that meet the re-
10 quirements developed under paragraph (1); and

11 (3) develop a plan in accordance with sub-
12 section (c).

13 (c) PLAN.—

14 (1) IN GENERAL.—The Under Secretary shall
15 develop a plan to replace the Next Generation
16 Weather Radar system of the National Weather
17 Service in existence as of the date of the enactment
18 of this Act (in this subsection referred to as the
19 “NEXRAD system”).

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

24 (A) Estimates of quantifiable improve-
25 ments in performance, coverage, and accuracy

1 to be made from potential options for replace-
2 ment of the NEXRAD system.

3 (B) Development of a phased array radar
4 test article to test and determine the specifica-
5 tions and requirements for such replacement.

6 (C) Expected actions needed to implement
7 the recommendations of the report published by
8 the Environmental Information Services Work-
9 ing Group of the Science Advisory Board of the
10 National Oceanic and Atmospheric Administra-
11 tion on November 15, 2023, and entitled “A
12 NESDIS Observing System Backbone Frame-
13 work” to assist in defining a radar backbone
14 architecture that will best serve the United
15 States.

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

18 (i) Evaluation of commercial radars
19 with the potential to replace or supplement
20 the NEXRAD system.

21 (ii) Providing technical assistance for
22 the use of small, gap-filling radars with
23 private and local partners in regions where
24 geographical topography prevents the full
25 use of large systems or in locations where

1 such systems may not be commercially via-
2 ble.

3 (E) Consultation and input solicited from
4 academia, meteorologists, emergency managers,
5 and public safety or utility officials regarding
6 the specifications and requirements for replace-
7 ment of the NEXRAD system.

8 (F) Prioritized locations for initial deploy-
9 ment of the system that will replace the
10 NEXRAD system.

11 (G) Expected locations of the system that
12 will replace the NEXRAD system, including
13 sites located more than 75 miles away from an
14 existing NEXRAD system station and addi-
15 tional appropriate locations.

16 (H) Expected or planned improvements to
17 data available for weather and water-related
18 forecasts and warnings from the system that
19 will replace the NEXRAD system.

20 (3) PROCUREMENT DEADLINE.—The Under
21 Secretary shall take such actions as may be nec-
22 essary to ensure the plan developed under this sub-
23 section is fully implemented and executed by not
24 later than September 30, 2040.

25 (d) RADAR-AS-A-SERVICE.—

1 (1) IN GENERAL.—The Under Secretary may
2 partner or contract with entities outside of the Na-
3 tional Oceanic and Atmospheric Administration to
4 fill data gaps in weather radar coverage using
5 weather radars and data assimilation technologies in
6 order to—

7 (A) supplement data gaps in weather radar
8 coverage, including at low levels and in wide
9 areas, in existence as of the date of the enact-
10 ment of this Act;

11 (B) ensure the continued performance of
12 the weather radar network of the United
13 States; and

14 (C) better detect significant precipitation
15 and severe weather over a greater area across
16 a population.

17 (2) CONSIDERATIONS.—In carrying out para-
18 graph (1), the Under Secretary may consider—

19 (A) partnering or contracting with entities
20 that have participated in the testbed described
21 in subsection (c)(2)(D), the National Mesonet
22 Program, or cooperative research and develop-
23 ment agreements; and

24 (B) weather camera systems and services,
25 including in consultation with the Federal Avia-

1 tion Administration, as viable technologies to
2 supplement weather forecasting and prediction
3 needs.

4 (e) UPDATES TO CONGRESS.—The Under Secretary
5 shall provide to the Committee on Commerce, Science, and
6 Transportation of the Senate and the Committee on
7 Science, Space, and Technology of the House of Rep-
8 resentatives periodic updates on the implementation of
9 this section.

10 (f) DEFINITIONS.—In this Act, the terms “Under
11 Secretary” and “weather enterprise” have the meanings
12 given such terms in section 2 of the Weather Research
13 and Forecasting Innovation Act of 2017 (15 U.S.C.
14 8501).