(B) a list of all anticipated reimbursable, non-reimbursable, and funded transaction agreements for the upcoming fiscal year.

(g) Rule of construction

Nothing in this section may be construed as limiting the authority of the National Oceanic and Atmospheric Administration to use cooperative research and development agreements, grants, procurement contracts, or cooperative agreements.

(Pub. L. 115-25, title III, §301, Apr. 18, 2017, 131 Stat. 101; Pub. L. 115-423, §§6, 7(a), Jan. 7, 2019, 132 Stat. 5459, 5461; Pub. L. 116-259, title V, §503, Dec. 23, 2020, 134 Stat. 1179.)

Amendments

2020—Subsec. (c)(1)(D). Pub. L. 116–259, 503(1), added subpar. (D) and struck out former subpar. (D) which read as follows: "improve weather forecasting and predictions."

Subsec. (d)(1). Pub. L. 116–259, 503(2)(A), substituted "data, satellite, and other observing systems" for "data and satellite systems" and "to carry out—" and subpars. (A) and (B) for "to carry out basic, applied, and advanced research projects to meet the objectives described in subparagraphs (A) through (D) subsection (c)(1)."

Subsec. (d)(2)(B)(i). Pub. L. 116-259, §503(2)(B), substituted "systems, including satellites, instrumentation, ground stations, data, and data processing;" for "satellites, instrumentation, ground stations, and data;".

Subsec. (d)(3). Pub. L. 116–259, §503(2)(C), substituted "2030" for "2023".

2019—Subsec. (a)(2)(C). Pub. L. 115–423, 7(a), added subpar. (C).

Subsecs. (c) to (g). Pub. L. 115–423, §6, added subsecs. (c) to (g).

§8532. Commercial weather data

(a) Data and hosted satellite payloads

Notwithstanding any other provision of law, the Secretary of Commerce may enter into agreements for—

(1) the purchase of weather data through contracts with commercial providers; and

(2) the placement of weather satellite instruments on cohosted government or private payloads.

(b) Strategy

(1) In general

Not later than 180 days after April 18, 2017, the Secretary of Commerce, in consultation with the Under Secretary, shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a strategy to enable the procurement of quality commercial weather data. The strategy shall assess the range of commercial opportunities, including publicprivate partnerships, for obtaining surfacebased, aviation-based, and space-based weather observations. The strategy shall include the expected cost-effectiveness of these opportunities as well as provide a plan for procuring data, including an expected implementation timeline. from $_{\mathrm{these}}$ nongovernmental sources, as appropriate.

(2) Requirements

The strategy shall include—

(A) an analysis of financial or other benefits to, and risks associated with, acquiring commercial weather data or services, including through multiyear acquisition approaches;

(B) an identification of methods to address planning, programming, budgeting, and execution challenges to such approaches, including—

(i) how standards will be set to ensure that data is reliable and effective;

(ii) how data may be acquired through commercial experimental or innovative techniques and then evaluated for integration into operational use;

(iii) how to guarantee public access to all forecast-critical data to ensure that the United States weather industry and the public continue to have access to information critical to their work; and

(iv) in accordance with section 50503 of title 51, methods to address potential termination liability or cancellation costs associated with weather data or service contracts; and

(C) an identification of any changes needed in the requirements development and approval processes of the Department of Commerce to facilitate effective and efficient implementation of such strategy.

(3) Authority for agreements

The Assistant Administrator for National¹ Environmental Satellite, Data, and Information Service may enter into multiyear agreements necessary to carry out the strategy developed under this subsection.

(c) Pilot program

(1) Criteria

Not later than 30 days after April 18, 2017, the Under Secretary shall publish data and metadata standards and specifications for space-based commercial weather data, including radio occultation data, and, as soon as possible, geostationary hyperspectral sounder data.

(2) Pilot contracts

(A) Contracts

Not later than 90 days after April 18, 2017, the Under Secretary shall, through an open competition, enter into at least one pilot contract with one or more private sector entities capable of providing data that meet the standards and specifications set by the Under Secretary for providing commercial weather data in a manner that allows the Under Secretary to calibrate and evaluate the data for its use in National Oceanic and Atmospheric Administration meteorological models.

(B) Assessment of data viability

Not later than the date that is 3 years after the date on which the Under Secretary enters into a contract under subparagraph (A), the Under Secretary shall assess and submit to the Committee on Commerce,

¹So in original. Probably should be preceded by "the".

Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives the results of a determination of the extent to which data provided under the contract entered into under subparagraph (A) meet the criteria published under paragraph (1) and the extent to which the pilot program has demonstrated—

(i) the viability of assimilating the commercially provided data into National Oceanic and Atmospheric Administration meteorological models;

(ii) whether, and by how much, the data add value to weather forecasts; and

(iii) the accuracy, quality, timeliness, validity, reliability, usability, information technology security, and cost-effectiveness of obtaining commercial weather data from private sector providers.

(3) Authorization of appropriations

For each of fiscal years 2019 through 2023, there are authorized to be appropriated for procurement, acquisition, and construction at the National Environmental Satellite, Data, and Information Service, \$6,000,000 to carry out this subsection.

(d) Obtaining future data

If an assessment under subsection (c)(2)(B) demonstrates the ability of commercial weather data to meet data and metadata standards and specifications published under subsection (c)(1), the Under Secretary shall—

(1) where appropriate, cost-effective, and feasible, obtain commercial weather data from private sector providers;

(2) as early as possible in the acquisition process for any future National Oceanic and Atmospheric Administration meteorological space system, consider whether there is a suitable, cost-effective, commercial capability available or that will be available to meet any or all of the observational requirements by the planned operational date of the system;

(3) if a suitable, cost-effective, commercial capability is or will be available as described in paragraph (2), determine whether it is in the national interest to develop a governmental meteorological space system; and

(4) submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report detailing any determination made under paragraphs (2) and (3).

(e) Data sharing practices

The Under Secretary shall continue to meet the international meteorological agreements into which the Under Secretary has entered, including practices set forth through World Meteorological Organization Resolution 40.

(Pub. L. 115-25, title III, §302, Apr. 18, 2017, 131 Stat. 103; Pub. L. 115-423, §7(b), Jan. 7, 2019, 132 Stat. 5461.)

Amendments

2019—Subsec. (c)(3). Pub. L. 115-423 substituted "2019 through 2023" for "2017 through 2020" and inserted "the" before "National".

§8533. Unnecessary duplication

In meeting the requirements under this subchapter, the Under Secretary shall avoid unnecessary duplication between public and private sources of data and the corresponding expenditure of funds and employment of personnel.

(Pub. L. 115-25, title III, §303, Apr. 18, 2017, 131 Stat. 105.)

SUBCHAPTER III—FEDERAL WEATHER COORDINATION

§8541. Environmental Information Services Working Group

(a) Establishment

The National Oceanic and Atmospheric Administration Science Advisory Board shall continue to maintain a standing working group named the Environmental Information Services Working Group (in this section referred to as the "Working Group")—

(1) to provide advice for prioritizing weather research initiatives at the National Oceanic and Atmospheric Administration to produce real improvement in weather forecasting;

(2) to provide advice on existing or emerging technologies or techniques that can be found in private industry or the research community that could be incorporated into forecasting at the National Weather Service to improve forecasting skill;

(3) to identify opportunities to improve—

(A) communications between weather forecasters, Federal, State, local, tribal, and other emergency management personnel, and the public; and

(B) communications and partnerships among the National Oceanic and Atmospheric Administration and the private and academic sectors; and

(4) to address such other matters as the Science Advisory Board requests of the Working Group.

(b) Composition

(1) In general

The Working Group shall be composed of leading experts and innovators from all relevant fields of science and engineering including atmospheric chemistry, atmospheric physics, meteorology, hydrology, social science, risk communications, electrical engineering, and computer sciences. In carrying out this section, the Working Group may organize into subpanels.

(2) Number

The Working Group shall be composed of no fewer than 15 members. Nominees for the Working Group may be forwarded by the Working Group for approval by the Science Advisory Board. Members of the Working Group may choose a chair (or co-chairs) from among their number with approval by the Science Advisory Board.

(c) Annual report

Not less frequently than once each year, the Working Group shall transmit to the Science Advisory Board for submission to the Under Sec-