

Calendar No. 669

117TH CONGRESS }
2d Session }

SENATE

{ REPORT
117-270

ADVANCING AMERICAN AI ACT

REPORT

OF THE

COMMITTEE ON HOMELAND SECURITY AND
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

TO ACCOMPANY

S. 1353

TO PROMOTE UNITED STATES VALUES AND FULFILL
AGENCY MISSIONS THROUGH THE USE OF INNOVATIVE
APPLIED ARTIFICIAL INTELLIGENCE TECHNOLOGIES, AND FOR
OTHER PURPOSES



DECEMBER 19, 2022.—Ordered to be printed

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Mr. PETERS, from the Committee on Homeland Security and
Governmental Affairs, submitted the following

R E P O R T

[To accompany S. 1353]

The Committee on Homeland Security and Governmental Affairs, to which was referred the bill (S. 1353), to promote United States values and fulfill agency missions through the use of innovative applied artificial intelligence technologies, and for other purposes, having considered the same, reports favorably thereon with an amendment, in the nature of a substitute, and recommends that the bill, as amended, do pass.

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I. PURPOSE AND SUMMARY

S. 1353, the *Advancing American AI Act*, seeks to bolster the security and competitiveness of the United States. The bill requires specified federal agencies to rapidly deploy and scale leading edge, commercially proven artificial intelligence (AI). The bill emphasizes the use of entrepreneurial AI developed in the United States to solve challenges that require collaboration across agencies and data sources. Further, the bill requires agencies to inventory and publish AI use cases to inform leaders, the public, and those wishing to do business with the government about common challenges. The bill establishes mechanisms to guide the acquisition and use of AI

in government and safeguard privacy, civil rights, and civil liberties.

II. BACKGROUND AND NEED FOR THE LEGISLATION

The race to research, develop, and deploy AI and associated technologies underpins a wider strategic competition. The United States still retains advantages in critical areas, but current trends are concerning. Experts have expressed concern about the capability of near-peer competitors, especially China, to surpass the United States as the world's leader in AI in the next decade if current trends do not change.¹ At stake are the goals and values to which AI system development and AI system behavior are aligned. At this critical juncture, the United States must leverage its strengths of innovation and entrepreneurialism to develop AI systems that are aligned with American values such as freedom of speech and assembly, and upholding privacy and civil liberties—values shared by most democracies.

To remain the world's leader in AI, the federal government must renew its commitment to investing in innovation. Innovation must be supported in the private and academic sectors, but also within the federal government. Many AI solutions used by federal agencies involve machine learning models built for one use case at a time with curated datasets. These models work for some applications, but are limited in addressing many cross-agency requirements. By leveraging breakthroughs by United States entrepreneurs to improve federal government missions and processes, this bill would, for example, enable agencies to work across organizational boundaries more quickly, with less dependence on manual data cleansing and standardization, and find innovative solutions to efficient and effective governing.

S. 1353 advances United States interests by leveraging our nation's strengths of innovation, entrepreneurialism, and democratic values.

III. LEGISLATIVE HISTORY

Senator Gary Peters (D–MI) introduced S. 1353 on April 22, 2021. Senator Rob Portman (R–OH) joined as a cosponsor on May 12, 2021. The bill was referred to the Senate Homeland Security and Governmental Affairs Committee.

The Committee considered S. 1353 at a business meeting on May 12, 2021. During the meeting, a substitute amendment that added clarifying language and technical edits was offered by Chairman Peters and adopted by unanimous consent as modified.

An amendment to add the *GOOD Act* (S.628) onto the bill was offered by Senator Johnson (R–WI), and was not adopted. Senators Johnson, Paul, Lankford, Romney, Scott, and Hawley voted in the affirmative. Senators Peters, Carper, Hassan, Sinema, Rosen, Padilla, Ossoff, and Portman voted in the negative.

The Committee ordered the bill reported favorably as amended by the modified Peters substitute amendment by a roll call vote of 11 yeas to 3 nays. Senators Peters, Carper, Hassan, Sinema, Rosen, Padilla, Ossoff, Portman, Lankford, Romney, and Scott

¹National Security Commission on Artificial Intelligence, *Final Report*, at 11 (Mar. 1, 2021) (www.nsc.gov/2021-final-report/).

voted in the affirmative. Senators Johnson, Paul, and Hawley voted in the negative.

IV. SECTION-BY-SECTION ANALYSIS OF THE BILL, AS REPORTED

Section 1. Short title

This section provides that the bill may be cited as the “Advancing American AI Act.”

Section 2. Purpose

This section provides that the purposes of this bill are to encourage artificial intelligence-related programs and initiatives at agencies, enhance the ability of the federal government to translate research advances into artificial intelligence applications, promote government-wide adoption of modernized business practices and advanced technologies, and test and harness applied artificial intelligence to enhance mission effectiveness and business practice efficiency.

Section 3. Definitions

This section defines the terms “agency,” “appropriate congressional committees,” “artificial intelligence,” “artificial intelligence system,” and “Department.”

Section 4. Principles and policies for use of Artificial Intelligence in Government

The first part of this section references the AI in Government Act passed by the Homeland Security and Governmental Affairs Committee in the 116th Congress and enacted into law last year as part of the Consolidated Appropriations Act of 2021.² When the OMB Director issues guidance for use of AI that is required under the *AI in Government Act*,³ the Director must also consider the “Key Considerations and Practices” published in April 2021 by the National Security Commission on Artificial Intelligence, the principles articulated in the Trump Administration’s December 2020 Executive Order related to the use of trustworthy AI in government, and the input of other enumerated councils and experts.⁴

Second, the Secretary of the Department of Homeland Security (DHS) is required to issue policies for use of AI at DHS within 180 days of the Act’s enactment, in consultation with other specified DHS officials. This includes policies pertaining to AI acquisition, as well as considerations for the privacy, civil rights, and civil liberties impacts of AI-enabled systems and security against misuse of these systems. If additional staffing or funding resources are required to carry out this work, the Chief Privacy Officer and the Officer for Civil Rights and Civil Liberties at DHS are required to submit a report to Congress regarding these needs.

Third, the DHS Inspector General is required to assess, not later than 180 days after enactment, training and investments that are needed to advance the understanding of AI by employees to ensure

²Pub. L. No. 116–260, Division U, Title I (2020).

³*Id.*

⁴National Security Commission on Artificial Intelligence, *Final Report* (Mar. 1, 2021) (www.nscai.gov/2021-final-report/); Exec. Order No. 13960, 85 Fed. Reg. 78939 (Dec. 3, 2020).

the integrity of audits and investigations and guard against bias in the selection and conduct of audits and investigations.

Fourth, the OMB Director, working with interagency councils, is required to develop a means by which to ensure that federal contracts for the acquisition of an AI system or service address the protection of privacy, civil rights, civil liberties, and the security and ownership of government information. The Director is required to consult with the Secretary of Homeland Security, the Director of the National Institute of Standards and Technology, and the Director of National Intelligence when developing this strategy, to update it regularly, and to brief the appropriate congressional committees on it within 90 days of this Act's enactment.

Finally, there is a sunset clause of five years from enactment.

Section 5. Agency inventories and artificial intelligence use cases

This section requires OMB and agency heads to inventory AI use cases, share use cases across agencies, and make these inventories available to the public. These inventories must be prepared within 60 days of the Act's enactment, and maintained continuously for five years.

The OMB Director is encouraged to establish a central, online public directory to make use cases available to the public and those wishing to do business with the federal government.

There is a sunset clause of five years from enactment.

Section 6. Rapid pilot, deployment and scale of applied artificial intelligence capabilities to demonstrate modernization activities related to use cases

This section requires the OMB Director, along with relevant interagency councils, to identify and pilot four new use cases to apply AI in support of interagency or intra-agency modernization initiatives that require linking multiple siloed data sources within 270 days of the Act's enactment.

The Director must ensure that the pilots leverage commercially available technologies and systems to support the use cases. Priority for selection of pilots goes to those that would benefit from privacy-preserving AI or otherwise take into account considerations of civil rights and civil liberties.

Of the four use case pilots, at least one must drive agency productivity and efficiency in predictive supply chain and logistics (e.g., predictive logistics for disaster response), and at least one must address management challenges, such as workforce upskilling, tasks requiring laborious analysis, compliance, or portfolio management.

Within three years, the Director and agencies are required, in each of the four pilot programs, to establish an AI capability that enables collaboration across agencies and leapfrogs the current need for manual scrubbing and harmonization of data.

There are reporting requirements throughout, and there is a sunset clause of five years after enactment.

Section 7. Enabling entrepreneurs and agency missions

This section seeks to facilitate the ability of agencies to appropriately acquire entrepreneurial AI capabilities.

The section amends Section 880 of the National Defense Authorization Act for Fiscal Year 2017 to extend General Services Administration (GSA) and DHS authority to use commercial solutions opening pilot program procedures through 2027, increase the dollar threshold for use of the authority from \$10 million to \$25 million, and revise definitions to align with revised statutory definitions of commercial products and services. This section also extends DHS other transaction authority to carry out research and development and prototype projects through 2024.

Finally, the section encourages GSA to pilot commercial off the shelf supply chain risk management tools to improve the ability of the federal government to characterize, monitor, predict, and respond to supply chain threats and vulnerabilities using applied entrepreneurial AI.

V. EVALUATION OF REGULATORY IMPACT

Pursuant to the requirements of paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee has considered the regulatory impact of this bill and determined that the bill will have no regulatory impact within the meaning of the rules. The Committee agrees with the Congressional Budget Office's statement that the bill contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments.

VI. CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows: (existing law proposed to be omitted is enclosed in brackets, new matter is printed in *italic*, and existing law in which no change is proposed is shown in roman):

UNITED STATES CODE

* * * * *

TITLE 41—PUBLIC CONTRACTS

* * * * *

Subtitle I— Federal Procurement Policy

* * * * *

Division C—Procurement

* * * * *

CHAPTER 33—PLANNING AND SOLICITATION

* * * * *

SEC. 3301. FULL AND OPEN COMPETITION.

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EDITORIAL NOTES

* * * * *

PILOT PROGRAMS FOR AUTHORITY TO ACQUIRE INNOVATIVE COMERCIAL ITEMS USING GENERAL SOLICITATION COMPETITIVE PROCEDURES

(a) * * *

(b) * * *

(c) **LIMITATION.**—The head of an agency may not enter into a contract under the pilot program for an amount in excess of **[\$10,000,000] \$25,000,000.**

(d) * * *

(e) * * *

(f) **[INNOVATIVE DEFINED.**—In this section, the term ‘innovative’ means—

(1) any new technology, process, or method, including research and development; or

(2) any new application of an existing technology, process, or method.]

DEFINITIONS.—In this section—

(1) the term ‘commercial product’—

(A) has the meaning given the term ‘commercial item’ in section 2.101 of the Federal Acquisition Regulation; and

(B) includes a commercial product or a commercial service, as defined in sections 103 and 103a, respectively, of title 41, United States Code; and

(2) the term ‘innovative’ means—

(A) any new technology, process, or method, including research and development; or

(B) any new application of an existing technology, process, or method.

(g) **TERMINATION.**—The authority to enter into a contract under a pilot program under this section terminates on September 30, **[2022] 2027.**

HOMELAND SECURITY ACT OF 2002

* * * * *

TITLE VIII—COORDINATION WITH NON-FEDERAL ENTITIES; INSPECTOR GENERAL; UNITED STATES SECRET SERVICE; COAST GUARD; GENERAL PROVISIONS

* * * * *

Subtitle D—Acquisitions

* * * * *

SEC. 831. RESEARCH AND DEVELOPMENT PROJECTS.

(a) **AUTHORITY.**—Until **【September 30, 2017】** *September 30, 2024*, and subject to subsection (d), the Secretary may carry out a pilot program under which the Secretary may exercise the following authorities:

(1) * * *

(2) **PROTOTYPE PROJECTS.**—**【The Secretary may, under the authority of paragraph (1), carry out prototype projects in accordance with the requirements and conditions provided for carrying out prototype projects under section 845 of the National Defense Authorization Act for Fiscal Year 1994 (PUBLIC LAW 103–160). In applying the authorities of that section 845, subsection (c) of that section shall apply with respect to prototype projects under this paragraph, and the Secretary shall perform the functions of the Secretary of Defense under subsection (d) thereof.】**

The Secretary—

(A) may, under the authority of paragraph (1), carry out prototype projects under section 2371b of title 10, United States Code; and

(B) in applying the authorities of such section 2371b, the Secretary shall perform the functions of the Secretary of Defense as prescribed in such section.

(b) * * *

(c) **ADDITIONAL REQUIREMENTS**

(1) **IN GENERAL.**—The authority of the Secretary under this section shall terminate **【September 30, 2017】** *September 30, 2024*, unless before that date the Secretary—

(A) * * *

(B) * * *

(2) * * *

(d) **DEFINITION OF NONTRADITIONAL GOVERNMENT CONTRACTOR**

In this section, the term “nontraditional Government contractor” has the same meaning as the term “nontraditional defense contractor” as defined in **【section 845(e) of the National Defense Authorization Act for Fiscal Year 1994 (PUBLIC LAW 103–160; 10 U.S.C. 2371 note)】** *section 2371b(e) of title 10, United States Code.*