

119TH CONGRESS  
1ST SESSION

# S. 2214

To promote innovation and advanced manufacturing in the Department of Defense and the defense industrial base, and for other purposes.

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IN THE SENATE OF THE UNITED STATES

JULY 8, 2025

Ms. SLOTKIN introduced the following bill; which was read twice and referred to the Committee on Armed Services

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## A BILL

To promote innovation and advanced manufacturing in the Department of Defense and the defense industrial base, 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 “Future of Defense  
5       Manufacturing Act of 2025”.

1 **SEC. 2. PROHIBITION ON OPERATION, PROCUREMENT, AND**  
2 **CONTRACTING RELATED TO FOREIGN-MADE**  
3 **ADDITIVE MANUFACTURING MACHINES.**

4 (a) PROHIBITION ON AGENCY OPERATION OR PRO-  
5 CUREMENT.—The Secretary of Defense may not operate,  
6 or enter into or renew a contract for the procurement of—

7 (1) a covered additive manufacturing machine  
8 that—

9 (A) is manufactured in a covered foreign  
10 country or by an entity domiciled in a covered  
11 foreign country;

12 (B) uses operating software developed in a  
13 covered foreign country or by an entity domi-  
14 ciled in a covered foreign country; or

15 (C) uses network connectivity or data stor-  
16 age located in or administered by an entity  
17 domiciled in a covered foreign country; or

18 (2) a system or systems that incorporates,  
19 interfaces with, or otherwise uses additive manufac-  
20 turing systems or machines described in paragraph  
21 (1).

22 (b) EXCEPTION.—The prohibition under subsection  
23 (a) does not apply to the operation or procurement of ad-  
24 ditive manufacturing systems or machines for the pur-  
25 poses of testing, analysis, and training related to intel-

1   ligence, electronic warfare, and information warfare oper-  
2   ations.

3       (c) WAIVER.—The Secretary of Defense may waive  
4   the prohibition under subsection (a) on a case by case  
5   basis by certifying in writing to the congressional defense  
6   committees that the operation or procurement of additive  
7   manufacturing systems or machines is required in the na-  
8   tional interest of the United States.

9       (d) DEFINITIONS.—In this section:

10       (1) ADDITIVE MANUFACTURING MACHINE.—

11       The term “additive manufacturing machine” means  
12       a system of integrated hardware and software used  
13       to realize an additive manufacturing process, includ-  
14       ing the deposition of material and the associated  
15       post-processing steps as applicable.

16       (2) ADDITIVE MANUFACTURING PROCESS.—The

17       term “additive manufacturing process” means a  
18       process of joining materials to make parts from 3D  
19       model data, usually layer upon layer, as opposed to  
20       subtractive manufacturing methodologies.

21       (3) COVERED ADDITIVE MANUFACTURING COM-

22       PANY.—The term “covered additive manufacturing  
23       company” means any of the following:

(A) Any entity that produces or provides additive manufacturing machines and is included on—

(i) the Consolidated Screening List maintained by the International Trade Administration of the Department of Commerce; or

(ii) the civil-military fusion list maintained under section 1260H of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283; 10 U.S.C. 113 note).

(B) Any entity that produces or provides additive manufacturing machines and—

(i) is domiciled in a covered foreign country; or

(ii) is subject to unmitigated foreign ownership, control, or influence by a covered foreign country, as determined by the Secretary of Defense in accordance with the National Industrial Security Program or any successor to such program.

(4) COVERED ADDITIVE MANUFACTURING MACHINE.—The term “covered additive manufacturing

1 machine” means additive manufacturing machines  
 2 and any related services and equipment manufac-  
 3 tured by a covered additive manufacturing company.

4 (5) COVERED FOREIGN COUNTRY.—The term  
 5 “covered foreign country” means the People’s Re-  
 6 public of China, Iran, the Democratic People’s Re-  
 7 public of Korea, and the Russian Federation.

8 **SEC. 3. IMPROVEMENTS TO DEMONSTRATION AND PROTO-**  
 9 **TYPING PROGRAM TO ADVANCE INTER-**  
 10 **NATIONAL PRODUCT SUPPORT CAPABILITIES**  
 11 **IN A CONTESTED LOGISTICS ENVIRONMENT.**

12 Section 842(b)(2) of the National Defense Authoriza-  
 13 tion Act for Fiscal Year 2024 (Public Law 118–31; 10  
 14 U.S.C. 2341 note) is amended—

15 (1) in subparagraph (A), by striking “; and”  
 16 and inserting a semicolon;

17 (2) by redesignating subparagraph (B) as sub-  
 18 paragraph (C); and

19 (3) by inserting after subparagraph (A) the fol-  
 20 lowing new subparagraph (B):

21 “(B) commercial advanced, digital manu-  
 22 facturing facilities for rapid, distributed parts  
 23 production closer to the point of use; and”.

1 **SEC. 4. DUAL-USE AND DEFENSE ADVANCED MANUFAC-**  
2 **TURING INNOVATION HUBS.**

3 (a) ESTABLISHMENT.—The Secretary of Defense  
4 shall establish one or more dual-use advanced manufac-  
5 turing hubs that co-locate and share resources among pub-  
6 lic and private stakeholders from industry, academia, gov-  
7 ernment, nongovernment agencies, and workforce and eco-  
8 nomic development resources. The hub or hubs should  
9 span the full spectrum of advanced manufacturing capa-  
10 bilities and cover the full development timeline between  
11 prototyping and fielding.

12 (b) REQUIREMENTS.—A hub established under sub-  
13 section (a) shall—

14 (1) utilize, to the maximum extent possible, the  
15 Department of Defense Manufacturing Innovation  
16 Institutes (MII) and encourage the MIIs to coordi-  
17 nate efforts in a joint manner;

18 (2) provide shared advanced manufacturing in-  
19 frastructure and equipment, such as high-speed  
20 metal printers and material testing laboratories;

21 (3) establish a process to provide advanced  
22 manufacturing capability, including on shared classi-  
23 fied space as needed;

24 (4) utilize, to the maximum extent possible, the  
25 Defense Logistics Agency's Joint Additive Manufac-  
26 turing Model Exchange (JAMMEX) as a central

1 data repository for technical data packages for ad-  
2 vanced manufacturing;

3 (5) build on the Defense Innovation Unit’s Blue  
4 Manufacturing Initiative and Blue Manufacturing  
5 Marketplace to match hardware and software manu-  
6 facturers in defense technology with advanced manu-  
7 facturing providers; and

8 (6) meet annual production benchmarks for de-  
9 fense applications.

10 (c) CONSULTATION.—The Secretary shall consult  
11 with the Under Secretary of Defense for Research and En-  
12 gineering and the Under Secretary of Defense for Acquisi-  
13 tion and Sustainment in establishing a dual-use advanced  
14 manufacturing hub under subsection (a).

15 (d) RECOMMENDATION.—Not later than September  
16 30, 2026, the Secretary shall submit to the congressional  
17 defense committees a recommendation for the appropriate  
18 number of regional hubs to be established under sub-  
19 section (a) for the Department of Defense to meet its  
20 sustainment needs and such requirements, specifications,  
21 and capabilities as the regional hubs may require.

22 **SEC. 5. DEPARTMENT OF DEFENSE ADVANCED MANUFAC-**  
23 **TURING PROGRAM.**

24 Not later than December 31, 2027, the Secretary of  
25 Defense, in coordination with the Secretaries of the mili-

1 tary departments, shall aim to qualify and approve for  
 2 manufacturing and delivery not fewer than 1,000,000  
 3 parts or components of the Department of Defense that  
 4 use advanced manufacturing techniques, with funding  
 5 subject to the availability of appropriations or other funds.  
 6 In doing so, the Secretary shall ensure that expedited  
 7 processes for adoption of advanced manufacturing prod-  
 8 ucts are utilized across the components of the Department  
 9 of Defense and lifecycle phases for new and existing sys-  
 10 tems.

11 **SEC. 6. PROGRAM TO ADDITIVELY MANUFACTURE CERTAIN**  
 12 **TYPES OF UNMANNED AERIAL SYSTEMS.**

13 Not later than September 30, 2026, the Secretary of  
 14 Defense shall carry out a program to certify new materials  
 15 and processes to manufacture 25 to 100 percent of the  
 16 parts of one of each type of the following unmanned aerial  
 17 system (UAS) categories using advanced or additive man-  
 18 ufacturing techniques:

19 (1) Small unmanned aerial systems used as tac-  
 20 tical loitering munitions.

21 (2) Small unmanned aerial systems used for  
 22 surveillance and reconnaissance missions.

23 (3) Small unmanned aerial systems used for lo-  
 24 gistics missions.

1 **SEC. 7. PROGRAM TO CERTIFY ADDITIVELY MANUFAC-**  
2 **TURED PARTS FOR MILITARY SYSTEMS WITH**  
3 **DIMINISHING MANUFACTURING SOURCES**  
4 **AND MATERIAL SHORTAGES.**

5 (a) PROGRAM REQUIRED.—Not later than September  
6 30, 2026, the Under Secretary of Defense for Acquisition  
7 and Sustainment shall, in coordination with the Under  
8 Secretary of Defense for Research and Engineering and  
9 the Secretaries of the military departments, carry out a  
10 program to produce replacement parts for military sys-  
11 tems with diminishing manufacturing sources and mate-  
12 rial shortages using advanced or additive manufacturing  
13 techniques.

14 (b) TESTED PARTS.—In carrying out the program re-  
15 quired by subsection (a), the Under Secretary of Defense  
16 for Acquisition and Sustainment shall select not less than  
17 five parts for test, evaluation, and certification under the  
18 program.

19 (c) TEST AND EVALUATION.—

20 (1) IN GENERAL.—In carrying out the program  
21 required by subsection (a), the Under Secretary  
22 shall use additive manufacturing techniques to man-  
23 ufacture the parts selected pursuant to subsection  
24 (b) and then test and evaluate the manufactured  
25 parts.

1           (2) EVALUATION.—Evaluation under paragraph  
2           (1) shall be based on performance rather than speci-  
3           fications.

4           (d) SHARING OF RESULTS AND DATA.—In carrying  
5           out the program required by subsection (a), the Under  
6           Secretary shall share test data across all military depart-  
7           ments and establish mechanisms for data reciprocity for  
8           test and evaluation results for additively manufactured  
9           parts across all military departments.

10          (e) LIST OF OBSOLETE PARTS.—The Under Sec-  
11          retary shall, in coordination with the Secretaries of the  
12          military departments, make a list of all parts for military  
13          systems with diminishing manufacturing sources and ma-  
14          terial shortages.

15          (f) NEW LICENSING AGREEMENTS.—The Under Sec-  
16          retary shall, in coordination with the Secretaries of the  
17          military departments, create new licensing agreements  
18          with owners of intellectual property for the platforms with  
19          parts included in the list required by subsection (e) that  
20          allow additive manufacture of the parts.

21       **SEC. 8. PROGRAM TO ADDITIVELY MANUFACTURE METAL**  
22               **PARTS.**

23          (a) PROGRAM REQUIRED.—The Under Secretary of  
24          Defense for Acquisition and Sustainment shall carry out  
25          a program across all military departments to additively

1 manufacture three commonly used metal parts of each  
2 military department, such as titanium, stainless steel, and  
3 aluminum.

4 (b) ASSESSMENT REQUIRED.—Not later than Sep-  
5 tember 30, 2026, the Under Secretary shall—

6 (1) complete an assessment to determine how to  
7 additively manufacture 10 metal parts of each mili-  
8 tary department, with a preference for parts that re-  
9 quire long lead times to manufacture or have sole-  
10 source suppliers; and

11 (2) submit to the congressional defense commit-  
12 tees a report on the findings of the Under Secretary  
13 with respect to the assessment completed under  
14 paragraph (1).

15 **SEC. 9. PROGRAM TO ADDITIVELY MANUFACTURE PARTS**  
16 **FOR GROUND COMBAT SYSTEMS.**

17 The Under Secretary of Defense for Acquisition and  
18 Sustainment shall, in coordination with the Secretary of  
19 the Army and the Director of the Defense Logistics Agen-  
20 cy—

21 (1) identify sustainment vulnerabilities in the  
22 ground equipment supply chain of the Army, includ-  
23 ing at the manufacturing arsenals and maintenance  
24 depots of the Army that comprise the Organic In-  
25 dustrial Base, where additive manufacturing could

1 be used to repair, upgrade, or modernize ground  
2 combat systems;

3 (2) choose not less than five parts that have  
4 long lead times for fabricating the greatest degree of  
5 customized specifications or have the most limited  
6 quantity in inventory and additively manufacture re-  
7 placement parts for them;

8 (3) create a critical parts list identifying parts  
9 and components across ground combat systems with  
10 long lead times eligible to be additively manufac-  
11 tured; and

12 (4) develop plans, in coordination with Army  
13 Development Command, to integrate additive manu-  
14 facturing techniques and technologies in the design,  
15 production, and sustainment of next-generation com-  
16 bat vehicles and their technologies. The developed  
17 technologies should prioritize interoperability across  
18 military platforms and integration with other mili-  
19 tary services.

20 **SEC. 10. ENHANCE INTERNATIONAL COORDINATION FOR**  
21 **ADVANCED MANUFACTURING TECHNIQUES,**  
22 **TECHNOLOGIES, AND ADOPTION.**

23 The Under Secretary of Defense for Acquisition and  
24 Sustainment and the Under Secretary of Defense for Re-  
25 search and Engineering shall establish a subordinate

1 working group within the Joint Additive Manufacturing  
 2 Working Group to coordinate and support international  
 3 activities that facilitate information-sharing, enhance  
 4 interoperability, explore joint research and development  
 5 opportunities, identify technology licensing requirements,  
 6 incorporate advanced manufacturing capabilities into com-  
 7 bined trainings and exercises, and set technical expertise  
 8 and training standards for advanced manufacturing tech-  
 9 niques, technologies, and adoption. The countries involved  
 10 should be those with which the United States has recip-  
 11 rocal defense procurement agreements or security of sup-  
 12 ply arrangements.

13 **SEC. 11. COMPOSITION OF JOINT DEFENSE MANUFAC-**  
 14 **TURING TECHNOLOGY PANEL.**

15 Section 4842(b)(2) of title 10, United States Code,  
 16 is amended by inserting “selected by the Under Secretary  
 17 of Defense for Acquisition and Sustainment and one indi-  
 18 vidual” after “one individual”.

19 **SEC. 12. ADVANCED MANUFACTURING GUIDANCE AND**  
 20 **MANUAL.**

21 (a) GUIDANCE, DoD I UPDATE, AND MANUAL RE-  
 22 QUIRED.—Not later than September 30, 2026, the Under  
 23 Secretary of Defense for Acquisition and Sustainment and  
 24 the Under Secretary of Defense for Research and Engi-

1 neering, in consultation with the Secretaries of the mili-  
2 tary departments, shall—

3           (1) develop guidance to incorporate innovations  
4       in advanced manufacturing in such a way that the  
5       Department of Defense can better and faster deliver  
6       capabilities, sustain operations, and protect the  
7       warfighter with the latest technology while still en-  
8       suring quality, reliability, and compatibility;

9           (2) update Department of Defense Instruction  
10      5000.93 (relating to use of additive manufacturing  
11      in the Department of Defense) dated June 10, 2021,  
12      to waive the requirement to maintain records of all  
13      additively produced end-items put into operational  
14      use where the additively produced part meets or ex-  
15      ceeds performance of the traditionally manufactured  
16      end-item;

17          (3) create a manual in accordance with such in-  
18      struction that gets at the technical standards re-  
19      quired to qualify parts, components, or products  
20      that use advanced manufacturing technologies and  
21      techniques; and

22          (4) not later than March 1, 2026, provide the  
23      Committees on Armed Services of the Senate and  
24      the House of Representatives a briefing on plans to

1       update the guidance developed under paragraph (1)  
2       and the updates made under paragraph (2).

3       (b) CONSIDERATIONS.—In carrying out subsection  
4 (a), the Under Secretary of Defense for Acquisition and  
5 Sustainment and the Under Secretary of Defense for Re-  
6 search and Engineering shall consider the most current  
7 versions of Department of Defense Additive Manufac-  
8 turing Roadmap, the Department of Defense Additive  
9 Manufacturing Strategy, the National Strategy for Ad-  
10 vanced Manufacturing, and Department of Defense In-  
11 struction 5000.93.

12       (c) ALIGNMENT.—The Under Secretary of Defense  
13 for Acquisition and Sustainment and the Under Secretary  
14 of Defense for Research and Engineering shall ensure that  
15 the guidance on the use of advanced manufacturing re-  
16 quired by subsection (a)(1)—

17               (1) aligns with Department of Defense acquisi-  
18               tion to prioritize flexibility, interoperability, and do-  
19               mestic sourcing;

20               (2) requires the Department to prefer United  
21               States manufacturers and equipment and document  
22               a justification whenever the Department uses a for-  
23               eign source; and

(3) requires the Department to partner with and direct funds to the Department's Manufacturing Innovation Institutes whenever feasible.

(d) ELEMENTS.—

(1) GUIDANCE.—The guidance required by subsection (a)(1) shall include guidance for all types of advanced manufacturing, including the following:

(A) Additive manufacturing.

(B) Advanced materials.

(C) Advanced composite materials.

(D) Robotics and automation.

(E) Laser, machining, and welding.

(F) Nanotechnology.

(G) Network and information technology integration.

(2) MANUAL.—(A) The guidance required by paragraph (1) of subsection (a) shall utilize expedited qualification and testing procedures established in section 865 of the National Defense Authorization Act for Fiscal Year 2025 and result in a manual under paragraph (3) of such subsection to establish standardized processes to qualify parts and components produced by advanced manufacturing techniques and technologies based on performance, rather than specifications for testing and evaluation.

1           (B) The process described in subparagraph (A)  
2       shall include a methodology for standardizing tech-  
3       nical production specifications, testing processes,  
4       and data reciprocity to share and accept test results  
5       of the same additively manufactured parts across all  
6       military departments.

7           (C) The process described in subparagraph (A)  
8       shall include test and evaluation results that facili-  
9       tate data reciprocity across military departments, re-  
10      moving the need for each military department to  
11      independently validate the same parts another mili-  
12      tary department has already validated.

13          (D) The manual shall include steps to allow for  
14      streamlined incremental qualification, rather than  
15      complete requalification, when the design and manu-  
16      facturing process incorporates changes.

17          (E) The process described in subparagraph (A)  
18      shall explore the option for third-party, external cer-  
19      tification for companies that cannot afford or do not  
20      have the in-house expertise to do this on their own  
21      but have the technology that the Department needs.

22          (3) ADVANCED MATERIALS AND ADVANCED  
23      COMPOSITE MATERIALS RESEARCH.—The guidance  
24      required by subsection (a)(1) and the manual re-  
25      quired by subsection (a)(3)—

1 (A) shall cover requirements for develop-  
2 ment, test, and evaluation of the material prop-  
3 erties of advanced materials and advanced com-  
4 posite materials used in advanced manufac-  
5 turing, including metals, polymers, ceramics,  
6 composites, and hybrid metals;

7 (B) should include how to incorporate inte-  
8 grated computational materials engineering to  
9 predict the material properties and the distribu-  
10 tion of those properties in additively manufac-  
11 tured parts and scale-up additive manufac-  
12 turing; and

13 (C) shall include a list of recommendations  
14 for the types of amounts of critical metals to  
15 stockpile for the Department's use in additive  
16 manufacturing, which should be accessible to  
17 users of the Defense Logistics Agency's Joint  
18 Additive Manufacturing Model Exchange  
19 (JAMMEX).

20 (4) CYBERSECURITY.—(A) The guidance re-  
21 quired by subsection (a)(1) and the manual required  
22 by subsection (a)(3) shall include cybersecurity  
23 standards and guidelines for advanced manufac-  
24 turing developed in consultation with the Chief In-  
25 formation Officer.

1           (B) The guidance and manual should address  
2           the unique challenges that advanced manufacturing  
3           poses to Department information networks.

4           (C) The guidance and manual shall include  
5           matters relating to cybersecurity compliance.

6           (D) The guidance and manual shall call for  
7           periodic security and compliance reviews.

8           (5) MODELING AND SIMULATION.—The guid-  
9           ance and manual required by subsection (a)—

10               (A) shall include software-driven, artificial  
11               intelligence-enabled modeling and simulation  
12               techniques for design, development, test, and  
13               evaluation to the maximum extent possible; and

14               (B) should include integrating modeling  
15               and simulation at every level, from enterprise to  
16               individual operation, including utilizing digital  
17               engineering.

18           (6) INTELLECTUAL PROPERTY.—(A) The guid-  
19           ance required by subsection (a)(1) and the manual  
20           required by subsection (a)(3) shall include processes  
21           and contracting mechanisms to protect and manage  
22           intellectual property.

23               (B) The processes and contracting mechanisms  
24               described in subparagraph (A) shall be designed to  
25               incentivize innovation while allowing the Department

1 to additively manufacture parts and products for  
2 military systems at scale and on demand in case of  
3 contingency or crisis. This can include new licensing  
4 agreements with terms and conditions that allow for  
5 innovative intellectual property strategies.

6 (C) The guidance and manual shall include con-  
7 siderations to incorporate the Defense Logistics  
8 Agency's Joint Additive Manufacturing Model Ex-  
9 change (JAMMEX).

10 (7) QUALITY ASSURANCE.—(A) The guidance  
11 required by subsection (a)(1) and the manual re-  
12 quired by subsection (a)(3) shall include processes,  
13 materials, and technologies to ensure continuous  
14 quality control throughout the entire manufacturing  
15 process and post-production.

16 (B) The guidance and manual shall incorporate  
17 the process window qualification methodology, which  
18 is designed to be machine-agnostic, or independent  
19 of specific machine brands or software providers, as  
20 well as the following:

21 (i) Real-time process monitoring leveraging  
22 machine sensors and software analytics to de-  
23 tect and instantly mitigate deviations prevents  
24 defects and unauthorized parameter changes.

1 (ii) Integration of machine learning algo-  
2 rithms that analyze production data in real-  
3 time allows the identification of anomalies in-  
4 dicative of potential quality or security threats,  
5 enabling proactive mitigation.

6 (iii) Software-defined quality assurance  
7 protocols enforce standardized, repeatable  
8 verification processes, greatly improving reli-  
9 ability and simplifying security audits.

10 (8) PROLIFERATION OF ADDITIVE MANUFAC-  
11 TURING CAPABILITIES.—The guidance required by  
12 subsection (a) shall include a plan that includes  
13 phasing and funding requirements to proliferate ad-  
14 vanced manufacturing technologies and techniques  
15 across the entire Department, at the enterprise level  
16 to tactical operational units. This guidance shall—

17 (A) identify end-user access and oper-  
18 ational needs for advanced manufacturing and  
19 associated resourcing, infrastructure, and bas-  
20 ing requirements;

21 (B) establish logistics models for produc-  
22 tion of additively manufactured parts in the  
23 continental United States and at forward oper-  
24 ating locations;

1 (C) improve supply chain risk manage-  
2 ment; and

3 (D) stimulate supply chain agility within  
4 the Department.

5 (9) TRAINING.—The guidance required by sub-  
6 section (a)(1) shall include training program require-  
7 ments, phasing, and sequencing to ensure each  
8 warfighter is equipped with the knowledge and skills  
9 to use advanced manufacturing techniques and tech-  
10 nologies efficiently and safely. The guidance shall—

11 (A) outline which military occupational  
12 specialty career fields to train in advanced man-  
13 ufacturing equipment, techniques, and proce-  
14 dures with each military service and the degree  
15 of proficiency and training time required;

16 (B) explore partnerships to establish ap-  
17 prenticeships and skilled technician training  
18 pipelines to support Department of Defense re-  
19 search and development programs and pro-  
20 grams of record; and

21 (C) consider creating new initiatives within  
22 existing transition assistance programs to cre-  
23 ate pathways for members of the Armed Forces  
24 to receive the training necessary to adapt their

1 military skills to civilian jobs in advanced man-  
2 ufacturing.

3 (e) MANUAL REQUIRED.—The manual created under  
4 subsection (a)(3) shall be a service-agnostic, vendor-agnos-  
5 tic manual on advanced manufacturing techniques and  
6 technologies for the Department of Defense—

7 (1) to standardize across the military depart-  
8 ments the technical parameters for manufacturing  
9 parts and products using advanced manufacturing  
10 techniques;

11 (2) to outline the categories and levels of risk  
12 associated with such parts and products, including  
13 distinguishing between safety-critical and non-safety-  
14 critical parts and providing expedited approvals for  
15 low-risk parts through standardized material  
16 datasets and pre-qualified manufacturing protocols;

17 (3) to lay out the processes for qualification  
18 and certification across categories of such parts and  
19 products;

20 (4) to establish data reciprocity for test and  
21 evaluation data across all military departments with  
22 respect to qualifying such parts and products;

23 (5) to utilize the Defense Logistics Agency's  
24 Joint Additive Manufacturing Model Exchange  
25 (JAMMEX) as the central data repository for tech-

1 nical data packages for advanced manufacturing;  
2 and

3 (6) to incorporate new proposed qualification  
4 approaches proposed by industry consortiums, Man-  
5 ufacturing Innovation Institutes, and Small Business  
6 Innovation Research (SBIR) and Small Business  
7 Technology Transfer (STTR) programs.

8 (f) TIMELINE.—

9 (1) INITIAL.—The Secretary shall ensure that  
10 the guidance required by subsection (a)(1) goes into  
11 effect in fiscal year 2026 by providing guidance with  
12 respect to the top three essential metals each mili-  
13 tary department needs to maintain its operational  
14 platforms.

15 (2) SUBSEQUENT.—The Secretary shall ensure  
16 that the guidance required by subsection (a)(1) goes  
17 into effect not later than January 1, 2027, for all  
18 essential metals not covered by paragraph (1).

○