

118TH CONGRESS  
2D SESSION

# S. 5251

To establish a pilot program to support domestic critical material processing,  
and for other purposes.

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IN THE SENATE OF THE UNITED STATES

SEPTEMBER 25, 2024

Mr. HICKENLOOPER (for himself, Mr. GRAHAM, Mr. YOUNG, and Mr. COONS)  
introduced the following bill; which was read twice and referred to the  
Committee on Energy and Natural Resources

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## A BILL

To establish a pilot program to support domestic critical  
material processing, 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 “Critical Materials Fu-  
5 ture Act of 2024”.

6 **SEC. 2. DEFINITIONS.**

7 In this Act:

8 (1) COUNTRY OF RISK.—The term “country of  
9 risk” has the meaning given the term in section

1 10114(a) of the Research and Development, Com-  
2 petition, and Innovation Act (42 U.S.C. 18912(a)).

3 (2) CRITICAL MATERIAL.—The term “critical  
4 material” has the meaning given the term in section  
5 7002(a) of the Energy Act of 2020 (30 U.S.C.  
6 1606(a)).

7 (3) DOMESTIC.—The term “domestic” means  
8 facilities operating within the United States or with-  
9 in any territory or possession of the United States.

10 (4) ELIGIBLE PROJECT.—The term “eligible  
11 project” means a project that refines and processes  
12 or recycles raw critical materials into purified forms  
13 suitable for first-use applications.

14 (5) ENTITY OF CONCERN.—

15 (A) IN GENERAL.—The term “entity of  
16 concern” has the meaning given the term in  
17 section 10114(a) of the Research and Develop-  
18 ment, Competition, and Innovation Act (42  
19 U.S.C. 18912(a)); and

20 (B) INCLUSION.—The term “entity of con-  
21 cern” includes an entity that the Secretary has  
22 determined, using a risk-based approach, is  
23 subject to the control or influence of a foreign  
24 nation whose strategic interests concerning crit-

1           ical materials does not align with the strategic  
2           interests of the United States.

3           (6) INNOVATIVE FINANCIAL TOOLS.—The term  
4           “innovative financial tools” means financial instru-  
5           ments to support demand-side economic mecha-  
6           nisms, including—

7                   (A) pricing support mechanisms, such as  
8                   contracts for difference and price floors, ad-  
9                   vanced market commitments, and forward con-  
10                  tracts; and

11                   (B) other transactions that the Secretary  
12                  may enter into under section 646 of the De-  
13                  partment of Energy Organization Act (42  
14                  U.S.C. 7256).

15           (7) PILOT PROGRAM.—The term “Pilot Pro-  
16           gram” means the Domestic Critical Material Proc-  
17           essing Pilot Program established under section 4(a).

18           (8) RELIABLE SOURCES.—

19                   (A) IN GENERAL.—The term “reliable  
20                   source” has the meaning given the term in sec-  
21                   tion 12 of the Strategic and Critical Materials  
22                   Stock Piling Act (50 U.S.C. 98h-3).

23                   (B) INCLUSIONS.—The term “reliable  
24                   source” includes facilities owned by, controlled

1 by, or subject to the jurisdiction of any coun-  
2 try—

3 (i) with which the United States has  
4 a free trade agreement in effect; and

5 (ii) designated a major non-NATO  
6 ally under section 517 of the Foreign As-  
7 sistance Act of 1961 (22 U.S.C. 2321k).

8 (9) SECRETARY.—The term “Secretary” means  
9 the Secretary of Energy.

10 **SEC. 3. PURPOSES.**

11 The purposes of this Act are—

12 (1) to support domestic critical material proc-  
13 essing with innovative financial tools to reduce sup-  
14 ply chain vulnerabilities and enhance energy and na-  
15 tional security; and

16 (2) to evaluate the effectiveness of innovative fi-  
17 nancial tools in supporting investment in and ex-  
18 panding domestic critical materials processing, in-  
19 cluding the impact of different support mechanisms  
20 on project development for various critical materials  
21 and fostering more liquid, transparent, and predict-  
22 able markets for critical materials.

1 **SEC. 4. DOMESTIC CRITICAL MATERIAL PROCESSING**  
2 **PILOT PROGRAM.**

3 (a) **ESTABLISHMENT.**—Not later than 180 days after  
4 the date of enactment of this Act, the Secretary shall es-  
5 tablish a pilot program, to be known as the “Domestic  
6 Critical Material Processing Pilot Program”, to support  
7 not fewer than 3 domestic critical material processing  
8 projects.

9 (b) **OBJECTIVES.**—The objectives of the Pilot Pro-  
10 gram are—

11 (1) to provide financial stability and attract pri-  
12 vate investment in eligible domestic critical material  
13 processing projects;

14 (2) to analyze how different financial tools in-  
15 fluence critical material market dynamics and  
16 projects and the estimated level of financial support  
17 needed to secure reliable United States supply  
18 chains for various critical materials and support a  
19 sufficient domestic critical materials processing in-  
20 dustry; and

21 (3) to reduce supply chain vulnerabilities and  
22 enhance energy security and national security.

23 (c) **REQUIREMENTS.**—

24 (1) **IMPLEMENTATION.**—

25 (A) **REGULATIONS.**—Not later than 180  
26 days after the date of enactment of this Act,

1 the Secretary shall issue regulations to imple-  
2 ment the Pilot Program.

3 (B) OTHER TRANSACTION AUTHORITY.—In  
4 carrying out the Pilot Program, the Secretary  
5 shall have the authority to enter into other  
6 transactions in the same manner and subject to  
7 the same terms and conditions as transactions  
8 that the Secretary may enter into under section  
9 646 of the Department of Energy Organization  
10 Act (42 U.S.C. 7256).

11 (C) FLEXIBLE HIRING AUTHORITY.—The  
12 Secretary may appoint and fix the compensa-  
13 tion of such temporary personnel as may be  
14 necessary to carry out and implement the Pilot  
15 Program, without regard to the provisions of  
16 subchapter I of chapter 33 of title 5, United  
17 States Code, governing appointments in com-  
18 petitive service and compensation of personnel.

19 (D) CONSULTATION.—The Secretary shall  
20 consult outside stakeholders and experts, in-  
21 cluding mining and critical material processing  
22 industry representatives, financial experts, and  
23 academic researchers, during development of  
24 the Pilot Program for purposes of improving

1           the effectiveness and efficiency of the Pilot Pro-  
2           gram.

3           (2) DIVERSITY.—The Pilot Program shall pro-  
4           vide support for the processing of not fewer than 3  
5           different types of critical materials in order to gain  
6           insight into the impact of innovative financial tools  
7           on different critical material markets.

8           (3) SUNSET.—The Pilot Program shall termi-  
9           nate on the date that is not later than 5 years after  
10          the date the Pilot Program is established under sub-  
11          section (a).

12          (d) APPLICATIONS.—

13           (1) IN GENERAL.—Applications under the Pilot  
14          Program for eligible projects shall be submitted to  
15          the Secretary at such time, in such manner, and  
16          containing such information as the Secretary may  
17          require.

18           (2) SELECTION CRITERIA.—

19           (A) IN GENERAL.—The Secretary shall se-  
20          lect applications under the Pilot Program for el-  
21          igible projects based on—

22                   (i) the potential of the eligible project  
23                   to enhance the energy and national secu-  
24                   rity of the United States;

1                   (ii) the economic competitiveness of  
2                   the eligible project;

3                   (iii) the prioritization requirements  
4                   described in subparagraph (B); and

5                   (iv) other factors, as determined by  
6                   the Secretary, in coordination with the  
7                   agencies described in subsection (e).

8                   (B) PRIORITY.—In selecting applications  
9                   under the Pilot Program for eligible projects,  
10                  the Secretary shall prioritize eligible projects—

11                  (i) that use feedstock from domestic  
12                  and reliable sources, with higher priority  
13                  given to eligible projects that have greater  
14                  use of feedstock from those sources; and

15                  (ii) the applicants of which have  
16                  offtake agreements with domestic and reli-  
17                  able sources for at least a majority of their  
18                  processed products.

19                  (3) TIMELINE.—The Secretary shall select ap-  
20                  plications under the Pilot Program for eligible  
21                  projects not later than 1 year after the date of en-  
22                  actment of this Act.

23                  (e) COORDINATION.—



1           (1) IN GENERAL.—To ensure the efficient im-  
2           plementation and operation of the Pilot Program,  
3           the Secretary shall coordinate with—

4                   (A) the Secretary of Commerce;

5                   (B) the Secretary of Defense;

6                   (C) the Secretary of the Interior;

7                   (D) the Secretary of State;

8                   (E) the Director of the United States Geo-  
9           logical Survey;

10                  (F) the United States Trade Representa-  
11           tive; and

12                  (G) the heads of other Federal depart-  
13           ments and agencies, as determined by the Sec-  
14           retary.

15           (2) SECURITY RESEARCH AND DEVELOP-  
16           MENT.—When selecting applications and deter-  
17           mining the level of financial support for each project  
18           under the Pilot Program, the Secretary shall coordi-  
19           nate with the Secretary of Defense to incorporate in-  
20           sights from the Open Price Exploration for National  
21           Security research and development program of the  
22           Defense Advanced Research Projects Agency.

23           (f) STUDY.—

24                  (1) IN GENERAL.—Not later than 2 years after  
25           the date on which the Pilot Program terminates

1 under subsection (c)(3), the Secretary shall conduct  
2 and publish a study on—

3 (A) the impact of innovative financial tools  
4 on the critical materials sector and the relative  
5 cost-effectiveness of those tools in supporting  
6 domestic critical materials processing projects  
7 and developing more liquid, transparent, and  
8 predictable markets for critical materials;

9 (B) the estimated level of financial support  
10 needed to secure reliable United States supply  
11 chains for various critical materials and support  
12 a sufficient domestic critical materials proc-  
13 essing industry;

14 (C) the potential of critical material recy-  
15 cling to support the domestic critical materials  
16 market;

17 (D) the effectiveness of the Pilot Program,  
18 including an evaluation of each eligible project  
19 supported by the Pilot Program; and

20 (E) whether the models of the Open Price  
21 Exploration for National Security research and  
22 development program of the Defense Advanced  
23 Research Projects Agency allowed the Pilot  
24 Program to better anticipate market trends, op-  
25 timize resource allocation, and provide the ap-

1           appropriate level of support based on current and  
2           future critical material market needs.

3           (2) INSIGHTS.—The study under paragraph (1)  
4           shall include insights into concerns of private inves-  
5           tors in different critical material markets and the  
6           impact of innovative financial tools on catalyzing  
7           final investment decisions.

8           (3) STAKEHOLDER ENGAGEMENT.—The study  
9           under paragraph (1) shall be carried out in consulta-  
10          tion with relevant stakeholders, as determined by the  
11          Secretary, including mining and critical material  
12          processing industry representatives, financial ex-  
13          perts, and academic researchers.

14          (4) DARPA OPEN PROGRAM.—The Secretary  
15          shall share the results of the study under paragraph  
16          (1) with the Open Price Exploration for National  
17          Security research and development program of the  
18          Defense Advanced Research Projects Agency to in-  
19          form ongoing research and development of tools to  
20          support transparency in domestic critical materials  
21          markets.

22          (g) REPORT.—

23                 (1) IN GENERAL.—The Secretary shall submit  
24                 to the Committees on Energy and Natural Re-  
25                 sources, Foreign Relations, and Armed Services of

1 the Senate, and the Committees on Natural Re-  
2 sources, Energy and Commerce, and Armed Services  
3 of the House of Representatives, an annual report  
4 for each year that the Pilot Program is carried out.

5 (2) CONTENTS.—The report under paragraph  
6 (1) shall include—

7 (A) activities, expenditures, and outcomes  
8 of the Pilot Program;

9 (B) recommendations to Congress on the  
10 continuation or expansion of the Pilot Program;  
11 and

12 (C) recommendations for how the Federal  
13 Government should use innovative financial  
14 tools—

15 (i) to increase domestic critical mate-  
16 rials processing capacity;

17 (ii) to mitigate market volatility;

18 (iii) to boost price transparency in  
19 critical materials markets;

20 (iv) to leverage market indices in  
21 countries other than those designated as  
22 countries of risk;

23 (v) to ensure long-term adequate sup-  
24 plies of critical materials for the economy  
25 of the United States; and

1 (vi) to increase the domestic recycling  
2 of critical materials.

3 (h) FUNDING.—

4 (1) FINANCIAL MECHANISMS.—

5 (A) IN GENERAL.—In establishing and car-  
6 rying out the Pilot Program, the Secretary shall  
7 enter into agreements, including contracts,  
8 grants, and cooperative agreements, and other  
9 transactions, as determined by the Secretary, to  
10 enable the use of innovative financial tools to  
11 support domestic critical material processing  
12 projects.

13 (B) AUTHORITY.—In carrying out sub-  
14 paragraph (A), the Secretary may use innova-  
15 tive financial tools, including price support such  
16 as contracts for differences, and leverage func-  
17 tions to develop and drive critical materials  
18 processing to entities that are not entities of  
19 concern, under such terms and conditions as  
20 the Secretary determines to be necessary or ap-  
21 propriate.

22 (2) REINVESTMENT OF REVENUE.—

23 (A) ESTABLISHMENT.—There is estab-  
24 lished in the Treasury of the United States a  
25 fund, to be known as the “Critical Materials

1           Revolving Fund” (referred to in this paragraph  
2           as the “Fund”).

3                   (B) PURPOSES.—The Fund shall be avail-  
4           able to the Secretary as a revolving fund—

5                           (i) to reinvest amounts generated  
6                           from eligible projects into new critical ma-  
7                           terials processing projects under the Pilot  
8                           Program; and

9                           (ii) to further enhance the objectives  
10                          of the Pilot Program.

11                   (3) AUTHORIZATION OF APPROPRIATIONS.—

12           There is authorized to be appropriated to the Sec-  
13           retary to carry out this Act \$750,000,000, to remain  
14           available until expended.

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