

119TH CONGRESS
1ST SESSION

S. 596

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

IN THE SENATE OF THE UNITED STATES

FEBRUARY 13, 2025

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

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 2025”.

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.—

4 (A) IN GENERAL.—Subject to subpara-
5 graph (B), the Pilot Program shall provide sup-
6 port for the processing of not fewer than 3 dif-
7 ferent critical materials in order to gain insight
8 into the impact of innovative financial tools on
9 different critical material markets.

10 (B) LIMITATION.—Support provided under
11 subparagraph (A) to a single critical material
12 shall not exceed 50 percent of any funding pro-
13 vided to the Pilot Program under subsection
14 (h).

15 (3) SUNSET.—The Pilot Program shall termi-
16 nate on the date that is not later than 5 years after
17 the date the Pilot Program is established under sub-
18 section (a).

19 (d) APPLICATIONS.—

20 (1) IN GENERAL.—Applications under the Pilot
21 Program for eligible projects shall be submitted to
22 the Secretary at such time, in such manner, and
23 containing such information as the Secretary may
24 require.

25 (2) ELIGIBILITY CRITERIA.—

1 (A) IN GENERAL.—The Secretary shall re-
2 view and select applications under the Pilot
3 Program for eligible projects based on—

4 (i) the potential of the eligible project
5 to enhance the economic, energy, and na-
6 tional security of the United States;

7 (ii) the economic competitiveness of
8 the eligible project;

9 (iii) the economic and financial sus-
10 tainability of the eligible project, using in-
11 formation such as—

12 (I) the potential for the applicant
13 of the eligible project to secure an
14 offtake agreement if the eligible
15 project is selected; and

16 (II) an analysis of the estimated
17 production costs of the eligible project
18 and prevailing or anticipated market
19 prices;

20 (iv) the potential of the eligible project
21 to mitigate risks associated with importing
22 critical materials from entities of concern;

23 (v) the prioritization requirements de-
24 scribed in subparagraph (B); and

1 (vi) other factors, as determined by
2 the Secretary, in coordination with the
3 agencies described in subsection (e).

4 (B) PRIORITY.—In selecting applications
5 under the Pilot Program for eligible projects,
6 the Secretary shall prioritize eligible projects—

7 (i) that use feedstock from domestic
8 or reliable sources, with higher priority
9 given to eligible projects that have greater
10 use of feedstock from domestic sources;

11 (ii) the selection of which would sup-
12 port the ability of the applicant to secure
13 an offtake agreement with domestic or reli-
14 able sources; and

15 (iii) that are the most economically
16 competitive, as determined by the Sec-
17 retary, based on factors including—

18 (I) the potential for the applicant
19 of the eligible project to secure an
20 offtake agreement if selected; and

21 (II) the difference between the
22 estimated production costs of the eli-
23 gible project and prevailing or antici-
24 pated market prices.

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

5 (e) COORDINATION.—

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

9 (A) the Secretary of Commerce;

10 (B) the Secretary of Defense;

11 (C) the Secretary of the Interior;

12 (D) the Secretary of State;

13 (E) the Director of the United States Geo-
14 logical Survey;

15 (F) the United States Trade Representa-
16 tive; and

17 (G) the heads of other Federal depart-
18 ments and agencies, as determined by the Sec-
19 retary.

20 (2) SECURITY RESEARCH AND DEVELOP-
21 MENT.—When selecting applications and deter-
22 mining the level of financial support for each project
23 under the Pilot Program, the Secretary shall coordi-
24 nate with the Secretary of Defense to incorporate in-
25 sights from the Open Price Exploration for National

1 Security research and development program of the
2 Defense Advanced Research Projects Agency.

3 (f) STUDY.—

4 (1) IN GENERAL.—Not later than 2 years after
5 the date on which the Pilot Program terminates
6 under subsection (c)(3), the Secretary shall conduct
7 and publish a study on—

8 (A) the impact of innovative financial tools
9 on the critical materials sector and the relative
10 cost-effectiveness of those tools in supporting
11 domestic critical materials processing projects
12 and developing more liquid, transparent, and
13 predictable markets for critical materials;

14 (B) the estimated level of financial support
15 needed to secure reliable United States supply
16 chains for various critical materials and support
17 a sufficient domestic critical materials proc-
18 essing industry;

19 (C) the potential of critical material recy-
20 cling to support the domestic critical materials
21 market;

22 (D) the effectiveness of the Pilot Program,
23 including an evaluation of each eligible project
24 supported by the Pilot Program; and

1 (E) whether the models of the Open Price
2 Exploration for National Security research and
3 development program of the Defense Advanced
4 Research Projects Agency allowed the Pilot
5 Program to better anticipate market trends, op-
6 timize resource allocation, and provide the ap-
7 propriate level of support based on current and
8 future critical material market needs.

9 (2) INSIGHTS.—The study under paragraph (1)
10 shall include insights into concerns of private inves-
11 tors in different critical material markets and the
12 impact of innovative financial tools on catalyzing
13 final investment decisions.

14 (3) STAKEHOLDER ENGAGEMENT.—The study
15 under paragraph (1) shall be carried out in consulta-
16 tion with relevant stakeholders, as determined by the
17 Secretary, including mining and critical material
18 processing industry representatives, financial ex-
19 perts, local governments hosting critical material
20 processing projects, and academic researchers.

21 (4) DARPA OPEN PROGRAM.—The Secretary
22 shall share the results of the study under paragraph
23 (1) with the Open Price Exploration for National
24 Security research and development program of the
25 Defense Advanced Research Projects Agency to in-

1 form ongoing research and development of tools to
2 support transparency in domestic critical materials
3 markets.

4 (g) REPORT.—

5 (1) IN GENERAL.—The Secretary shall submit
6 to the Committees on Energy and Natural Re-
7 sources, Foreign Relations, and Armed Services of
8 the Senate, and the Committees on Natural Re-
9 sources, Energy and Commerce, and Armed Services
10 of the House of Representatives, an annual report
11 for each year that the Pilot Program is carried out.

12 (2) CONTENTS.—The report under paragraph
13 (1) shall include—

14 (A) activities, expenditures, and outcomes
15 of the Pilot Program;

16 (B) recommendations to Congress on the
17 continuation or expansion of the Pilot Program;
18 and

19 (C) recommendations for how the Federal
20 Government should use innovative financial
21 tools—

22 (i) to increase domestic critical mate-
23 rials processing capacity;

24 (ii) to strengthen domestic critical
25 material supply chains by increasing

- 1 United States processing capacity using
2 domestic feedstock;
- 3 (iii) to mitigate market volatility;
- 4 (iv) to boost price transparency in
5 critical materials markets;
- 6 (v) to leverage market indices in coun-
7 tries other than those designated as coun-
8 tries of risk;
- 9 (vi) to ensure long-term adequate sup-
10 plies of critical materials for the economy
11 of the United States; and
- 12 (vii) to increase the domestic recycling
13 of critical materials.

14 (h) FUNDING.—

15 (1) FINANCIAL MECHANISMS.—

16 (A) IN GENERAL.—In establishing and car-
17 rying out the Pilot Program, the Secretary shall
18 enter into agreements, including contracts,
19 grants, and cooperative agreements, and other
20 transactions, as determined by the Secretary, to
21 enable the use of innovative financial tools to
22 support domestic critical material processing
23 projects.

24 (B) AUTHORITY.—In carrying out sub-
25 paragraph (A), the Secretary may use innova-

1 tive financial tools, including price support such
2 as contracts for differences, and leverage func-
3 tions to develop and drive critical materials
4 processing to entities that are not entities of
5 concern, under such terms and conditions as
6 the Secretary determines to be necessary or ap-
7 propriate.

8 (2) REINVESTMENT OF REVENUE.—

9 (A) ESTABLISHMENT.—There is estab-
10 lished in the Treasury of the United States a
11 fund, to be known as the “Critical Materials
12 Revolving Fund” (referred to in this paragraph
13 as the “Fund”).

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

16 (i) to reinvest amounts generated
17 from eligible projects into new critical ma-
18 terials processing projects under the Pilot
19 Program; and

20 (ii) to further enhance the objectives
21 of the Pilot Program.

22 (3) AUTHORIZATION OF APPROPRIATIONS.—

23 There is authorized to be appropriated to the Sec-

- 1 retary to carry out this Act \$750,000,000, to remain
- 2 available until expended.

