

118TH CONGRESS
1ST SESSION

H. R. 4996

To establish a Critical Materials Processing Technology Testbed Capability,
and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JULY 27, 2023

Mr. FOSTER introduced the following bill; which was referred to the
Committee on Science, Space, and Technology

A BILL

To establish a Critical Materials Processing Technology
Testbed Capability, 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
5 Processing Technology Testbed Act”.

6 **SEC. 2. CRITICAL MATERIALS PROCESSING TECHNOLOGY**
7 **TESTBED.**

8 (a) ESTABLISHMENT.—

9 (1) IN GENERAL.—The Secretary, in consulta-
10 tion with other appropriate Federal agencies, shall

1 administer a competitive, merit reviewed process to
2 establish a Critical Materials Processing Technology
3 Testbed Capability (referred to in this section as the
4 “Testbed”) that allows for—

5 (A) research, development, and demonstra-
6 tion of novel critical materials processing tech-
7 nologies; and

8 (B) scalable performance testing to be con-
9 ducted on feedstock materials.

10 (2) SELECTION.—In administering the process
11 referred to in paragraph (1), the Secretary shall con-
12 sider applications from National Laboratories, insti-
13 tutions of higher education, private companies,
14 multi-institutional collaborations, and other entities
15 the Secretary determines appropriate. The Secretary
16 may implement the Testbed as a single site or more
17 than one site as necessary to carry out the mission
18 of the Testbed as described in subsections (a) and
19 (b).

20 (b) FOCUS AREAS.—The Testbed shall include a
21 focus on substantive and innovative improvements to crit-
22 ical materials processing technologies, including relating
23 to the following:

24 (1) Reduced energy intensity.

25 (2) Reduced pollutants.

1 (3) Reduced water consumption.

2 (4) Lower environmental and societal impacts.

3 (5) Lower lifecycle costs.

4 (6) Improved recovery efficiencies.

5 (7) Process improvement beyond traditional
6 thermal or pyro chemical techniques.

7 (8) Reduced volumes and toxicity of waste.

8 (9) Noise reduction.

9 (10) Worker safety.

10 (11) Processing techniques and technologies
11 which have applicability to a wide range of material
12 sources.

13 (c) DURATION.—

14 (1) IN GENERAL.—The Testbed shall receive
15 support for a period of not more than five years,
16 subject to the availability of appropriations.

17 (2) RENEWAL.—Upon the expiration of any pe-
18 riod of support of the Testbed, the Secretary may
19 renew support for the Testbed, on a merit-reviewed
20 process, for a period of not more than five years.

21 (d) TECHNOLOGY TRANSFER.—The Secretary, in co-
22 ordination with the Director of the Office of Technology
23 Transitions of the Department, shall facilitate the trans-
24 lation and secure transfer to industry of research results
25 produced at the Testbed.

1 (e) INTELLECTUAL PROPERTY.—The Secretary shall
2 ensure the intellectual property and value proposition gen-
3 erated by research, development, and demonstration ac-
4 tivities at the Testbed are retained within the United
5 States.

6 (f) INTERAGENCY ENGAGEMENT.—In carrying out
7 this section, the Secretary shall—

8 (1) consult with the Administrator of the Envi-
9 ronmental Protection Agency to ensure the goals
10 and objectives of the Testbed align with applicable
11 laws and regulations and environmental justice pri-
12 orities; and

13 (2) ensure appropriate cooperation with, and
14 avoid unnecessary duplication of, the activities of the
15 Testbed with the activities of—

16 (A) other research entities of the Depart-
17 ment;

18 (B) the National Laboratories;

19 (C) other Federal agencies;

20 (D) institutions of higher education;

21 (E) United States industry;

22 (F) nongovernmental organizations; and

23 (G) other relevant individuals or entities.

24 (g) AUTHORIZATION OF APPROPRIATIONS.—

1 (1) IN GENERAL.—There is authorized to be
2 appropriated to the Secretary—

3 (A) \$150,000,000 for fiscal year 2024 to
4 establish the Testbed; and

5 (B) \$25,000,000 for each of fiscal years
6 2025 through 2028 to carry out the activities of
7 the Testbed.

8 (2) COST SHARE.—The Secretary may require
9 that funds made available pursuant to the authoriza-
10 tion under paragraph (1)(B) be cost-shared by enti-
11 ties other than a National Laboratory seeking to
12 conduct research, development, or demonstration ac-
13 tivities at the Testbed.

14 (h) DEFINITIONS.—In this section:

15 (1) CRITICAL MATERIAL.—The term “critical
16 material” means any of the following:

17 (A) A critical material, as such term is de-
18 fined in section 7002(a)(2) of the Energy Act
19 of 2020 (30 U.S.C. 1606(a)(2); enacted as divi-
20 sion Z of the Consolidated Appropriations Act,
21 2021 (Public Law 116–260)).

22 (B) A strategic mineral as determined by
23 the Secretary of Defense pursuant to Presi-
24 dential Determination 2022–11.

1 (2) DEPARTMENT.—The term “Department”
2 means the Department of Energy.

3 (3) INSTITUTION OF HIGHER EDUCATION.—The
4 term “institution of higher education” has the
5 meaning given such term in section 101(a) of the
6 Higher Education Act of 1965 (20 U.S.C. 1001(a)).

7 (4) NATIONAL LABORATORY.—The term “Na-
8 tional Laboratory” has the meaning given such term
9 in section 3 of the Energy Policy Act of 2005 (42
10 U.S.C. 15801(3)).

11 (5) SECRETARY.—The term “Secretary” means
12 the Secretary of Energy.

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