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(Original Signature of Member)

111TH CONGRESS
2D SESSION

H. R.

To develop a rare earth materials program, to amend the National Materials and Minerals Policy, Research and Development Act of 1980, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mrs. DAHLKEMPER (for herself and [see ATTACHED LIST of cosponsors]) introduced the following bill; which was referred to the Committee on

A BILL

To develop a rare earth materials program, to amend the National Materials and Minerals Policy, Research and Development Act of 1980, 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; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the
5 “Rare Earths and Critical Materials Revitalization Act of
6 2010”.

1 (b) TABLE OF CONTENTS.—The table of contents for
2 this Act is as follows:

Sec. 1. Short title; table of contents.
Sec. 2. Definitions.

TITLE I—RARE EARTH MATERIALS

Sec. 101. Rare earth materials program.
Sec. 102. Rare earth materials loan guarantee program.

TITLE II—NATIONAL MATERIALS AND MINERALS POLICY, RESEARCH, AND DEVELOPMENT

Sec. 201. Amendments to National Materials and Minerals Policy, Research
and Development Act of 1980.
Sec. 202. Repeal.

3 **SEC. 2. DEFINITIONS.**

4 In this Act:

5 (1) APPROPRIATE CONGRESSIONAL COMMIT-
6 TEES.—The term “appropriate Congressional com-
7 mittees” means the Committee on Science and Tech-
8 nology of the House of Representatives and the
9 Committee on Commerce, Science, and Transpor-
10 tation and the Committee on Energy and Natural
11 Resources of the Senate.

12 (2) CENTER.—The term “Center” means the
13 Research and Development Information Center es-
14 tablished in section 101(b).

15 (3) DEPARTMENT.—The term “Department”
16 means the Department of Energy.

17 (4) RARE EARTH MATERIALS.—The term “rare
18 earth materials” means any of the following chem-

1 ical elements in any of their physical forms or chem-
2 ical combinations:

3 (A) Scandium.

4 (B) Yttrium.

5 (C) Lanthanum.

6 (D) Cerium.

7 (E) Praseodymium.

8 (F) Neodymium.

9 (G) Promethium.

10 (H) Samarium.

11 (I) Europium.

12 (J) Gadolinium.

13 (K) Terbium.

14 (L) Dysprosium.

15 (M) Holmium.

16 (N) Erbium.

17 (O) Thulium.

18 (P) Ytterbium.

19 (Q) Lutetium.

20 (5) SECRETARY.—The term “Secretary” means
21 the Secretary of Energy.

22 **TITLE I—RARE EARTH**
23 **MATERIALS**

24 **SEC. 101. RARE EARTH MATERIALS PROGRAM.**

25 (a) ESTABLISHMENT OF PROGRAM.—

1 (1) IN GENERAL.—There is established in the
2 Department a program of research, development,
3 demonstration, and commercial application to assure
4 the long-term, secure, and sustainable supply of rare
5 earth materials sufficient to satisfy the national se-
6 curity, economic well-being, and industrial produc-
7 tion needs of the United States.

8 (2) PROGRAM ACTIVITIES.—The program shall
9 support activities to—

10 (A) better characterize and quantify virgin
11 stocks of rare earth materials using theoretical
12 geochemical research;

13 (B) explore, discover, and recover rare
14 earth materials using advanced science and
15 technology;

16 (C) improve methods for the extraction,
17 processing, use, recovery, and recycling of rare
18 earth materials;

19 (D) improve the understanding of the per-
20 formance, processing, and adaptability in engi-
21 neering designs of rare earth materials;

22 (E) identify and test alternative materials
23 that can be substituted for rare earth materials
24 in particular applications; and

25 (F) engineer and test applications that—

- 1 (i) use recycled rare earth materials;
2 (ii) use alternative materials; or
3 (iii) seek to minimize rare earth mate-
4 rials content.

5 (3) IMPROVED PROCESSES AND TECH-
6 NOLOGIES.—To the maximum extent practicable, the
7 Secretary shall support new or significantly im-
8 proved processes and technologies as compared to
9 those currently in use in the rare earth materials in-
10 dustry.

11 (4) EXPANDING PARTICIPATION.—The Sec-
12 retary shall encourage multidisciplinary collabora-
13 tions of participants, extensive opportunities for stu-
14 dents at institutions of higher education, or both.

15 (5) CONSISTENCY.—The program shall be con-
16 sistent with the policies and programs in the Na-
17 tional Materials and Minerals Policy, Research and
18 Development Act of 1980 (30 U.S.C. 1601 et seq.).

19 (6) INTERNATIONAL COLLABORATION.—In car-
20 rying out the program, the Secretary shall collabo-
21 rate, to the extent practicable, with the relevant di-
22 rectorates of the European Commission to coordi-
23 nate activities of mutual interest and avoid duplica-
24 tion of effort.

1 (b) RESEARCH AND DEVELOPMENT INFORMATION
2 CENTER.—

3 (1) IN GENERAL.—To collect, catalogue, dis-
4 seminate, and archive information on rare earth ma-
5 terials, the Secretary shall establish, through a com-
6 petitive process, a Research and Development Infor-
7 mation Center.

8 (2) CENTER ACTIVITIES.—

9 (A) IN GENERAL.—The Center shall—

10 (i) serve as the repository for sci-
11 entific and technical data generated by the
12 research and development activities funded
13 under this section;

14 (ii) assist scientists and engineers in
15 making the fullest possible use of the Cen-
16 ter's data holdings;

17 (iii) seek and incorporate other infor-
18 mation on rare earth materials to enhance
19 the Center's utility for program partici-
20 pants and other users;

21 (iv) provide advice to the Secretary
22 concerning the research and development
23 program under subsection (a); and

24 (v) host conferences, at least annually,
25 for participants in the rare earth materials

1 program and other interested parties to
2 promote information sharing and encour-
3 age new collaborative activities.

4 (B) RESTRICTION.—Not more than 2.5
5 percent of the amounts made available pursuant
6 to this section may be used for hosting con-
7 ferences under subparagraph (A)(v).

8 (c) PLAN.—

9 (1) IN GENERAL.—Within 180 days after the
10 date of enactment of this Act and biennially there-
11 after, the Secretary shall prepare and submit to the
12 appropriate Congressional committees a plan to
13 carry out the program established under subsection
14 (a) and the Center established under subsection (b).

15 (2) SPECIFIC REQUIREMENTS.—The plan shall
16 include a description of—

17 (A) the research and development activities
18 to be carried out by the program during the
19 subsequent 2 years;

20 (B) the expected contributions of the pro-
21 gram and the Center to the creation of innova-
22 tive methods and technologies for the efficient
23 and sustainable provision of rare earth mate-
24 rials to the domestic economy;

1 (C) the technical criteria to be used to
2 evaluate applications for loan guarantees under
3 section 1706 of the Energy Policy Act of 2005;

4 (D) any projects receiving loan guarantee
5 support under such section and the status of
6 such projects;

7 (E) how the program is promoting the
8 broadest possible participation by academic, in-
9 dustrial, and other contributors; and

10 (F) actions taken or proposed that reflect
11 recommendations from the assessment con-
12 ducted under subsection (d) or the Secretary's
13 rationale for not taking action pursuant to any
14 recommendation from such assessment for
15 plans submitted following the completion of the
16 assessment under such subsection.

17 (3) CONSULTATION.—In preparing each plan
18 under paragraph (1), the Secretary shall consult
19 with appropriate representatives of industry, institu-
20 tions of higher education, Department of Energy na-
21 tional laboratories, professional and technical soci-
22 eties, and other entities, as determined by the Sec-
23 retary.

24 (d) ASSESSMENT.—

1 (1) IN GENERAL.—After the program has been
2 in operation for 4 years, the Secretary shall offer to
3 enter into a contract with the National Academy of
4 Sciences under which the National Academy shall
5 conduct an assessment of the program under sub-
6 section (a), including the operations and activities of
7 the Center under subsection (b).

8 (2) INCLUSIONS.—The assessment shall include
9 the recommendation of the National Academy of
10 Sciences that the program should be—

11 (A) continued, accompanied by a descrip-
12 tion of any improvements needed in the pro-
13 gram; or

14 (B) terminated, accompanied by a descrip-
15 tion of the lessons learned from the execution of
16 the program.

17 (3) AVAILABILITY.—The assessment shall be
18 made available to Congress and the public upon
19 completion.

20 (e) AUTHORIZATION OF APPROPRIATIONS.—

21 (1) IN GENERAL.—There are authorized to be
22 appropriated to the Secretary to carry out this sec-
23 tion the following sums:

24 (A) For fiscal year 2011, \$10,000,000.

25 (B) For fiscal year 2012, \$15,000,000.

1 (C) For fiscal year 2013, \$15,000,000.

2 (D) For fiscal year 2014, \$15,000,000.

3 (E) For fiscal year 2015, \$15,000,000.

4 (2) ASSESSMENT.—From the amounts author-
5 ized under paragraph (1), there are authorized to be
6 appropriated to the Secretary \$700,000 to enter into
7 a contract under subsection (d)(1).

8 (3) AVAILABILITY.—Such sums shall remain
9 available until expended.

10 **SEC. 102. RARE EARTH MATERIALS LOAN GUARANTEE PRO-**
11 **GRAM.**

12 (a) AMENDMENT.—Title XVII of the Energy Policy
13 Act of 2005 (42 U.S.C. 16511 et seq.) is amended by add-
14 ing at the end the following new section:

15 **“SEC. 1706. TEMPORARY PROGRAM FOR RARE EARTH MA-**
16 **TERIALS REVITALIZATION.**

17 “(a) IN GENERAL.—As part of the program estab-
18 lished in section 101 of the Rare Earths and Critical Ma-
19 terials Revitalization Act of 2010, the Secretary is author-
20 ized to make guarantees under this title for the commer-
21 cial application of new or significantly improved tech-
22 nologies (compared to technologies currently in use in the
23 United States) for the following categories of projects:

24 “(1) The separation and recovery of rare earth
25 materials from ores or other sources.

1 “(2) The preparation of rare earth materials in
2 oxide, metal, alloy, or other forms needed for na-
3 tional security, economic well-being, or industrial
4 production purposes.

5 “(3) The application of rare earth materials in
6 the production of improved—

7 “(A) magnets;

8 “(B) batteries;

9 “(C) refrigeration systems;

10 “(D) optical systems;

11 “(E) electronics; and

12 “(F) catalysis.

13 “(4) The application of rare earth materials in
14 other uses, as determined by the Secretary.

15 “(b) TIMELINESS.— The Secretary shall seek to min-
16 imize delay in approving loan guarantee applications, con-
17 sistent with appropriate protection of taxpayer interests.

18 “(c) COOPERATION.—To the maximum extent prac-
19 ticable, the Secretary shall cooperate with appropriate pri-
20 vate sector participants to achieve a complete rare earth
21 materials production capability in the United States with-
22 in 5 years after the date of enactment of the Rare Earths
23 and Critical Materials Revitalization Act of 2010.

1 “(d) SUNSET.—The authority to enter into guaran-
2 tees under this section shall expire on September 30,
3 2018.”.

4 (b) TABLE OF CONTENTS AMENDMENT.—The table
5 of contents for the Energy Policy Act of 2005 is amended
6 by inserting after the item relating to section 1705 the
7 following new item:

“Sec. 1706. Temporary program for rare earth materials revitalization.”.

8 **TITLE II—NATIONAL MATERIALS**
9 **AND MINERALS POLICY, RE-**
10 **SEARCH, AND DEVELOPMENT**

11 **SEC. 201. AMENDMENTS TO NATIONAL MATERIALS AND**
12 **MINERALS POLICY, RESEARCH AND DEVEL-**
13 **OPMENT ACT OF 1980.**

14 (a) PROGRAM PLAN.—Section 5 of the National Ma-
15 terials and Minerals Policy, Research and Development
16 Act of 1980 (30 U.S.C. 1604) is amended—

17 (1) by striking “date of enactment of this Act”
18 each place it appears and inserting “date of enact-
19 ment of the Rare Earths and Critical Materials Re-
20 vitalization Act of 2010”;

21 (2) in subsection (b), by striking “Federal Co-
22 ordinating Council for Science, Engineering, and
23 Technology” and inserting “National Science and
24 Technology Council,”;

25 (3) in subsection (c)—

1 (A) by striking “the Federal Emergency”
2 and all that follows through “Agency, and”;

3 (B) by striking “appropriate shall” and in-
4 serting “appropriate, shall”;

5 (C) by striking paragraph (1);

6 (D) in paragraph (2), by striking “in the
7 case” and all that follows through “subsection,”

8 (E) by redesignating paragraph (2) as
9 paragraph (1); and

10 (F) by redesignating and amending para-
11 graph (3) to read as follows:

12 “(2) assess the adequacy and stability of the
13 supply of materials necessary to maintain national
14 security, economic well-being, and industrial produc-
15 tion.”;

16 (4) by striking subsections (d) and (e); and

17 (5) by redesignating subsection (f) as sub-
18 section (d).

19 (b) POLICY.—Section 3 of such Act (30 U.S.C. 1602)
20 is amended—

21 (1) by striking “The Congress declares that it”
22 and inserting “It”;

23 (2) by striking “The Congress further declares
24 that implementation” and inserting “Implementa-
25 tion”.

1 (c) IMPLEMENTATION.—Section 4 of such Act (30
2 U.S.C. 1603) is amended—

3 (1) by striking “For the purpose” and all that
4 follows through “declares that the” and inserting
5 “The”; and

6 (2) by striking “departments and agencies,”
7 and inserting “departments and agencies to imple-
8 ment the policies set forth in section 3”.

9 **SEC. 202. REPEAL.**

10 Title II of Public Law 98-373 (30 U.S.C. 1801; 98
11 Stat. 1248), also known as the National Critical Materials
12 Act of 1984, is repealed.

AMENDMENT TO H.R. _____
(RARE EARTHS AND CRITICAL MATERIALS
REVITALIZATION ACT OF 2010)
OFFERED BY MRS. DAHLKEMPER OF
PENNSYLVANIA

Page 8, line 1, strike “technical”.

Page 10, line 23, strike “United States” and insert
“United States at the time the guarantee is issued”.

Page 13, line 12, strike “adequacy” and insert “ade-
quacy, accessibility,”.



AMENDMENT TO H.R. _____
(RARE EARTHS AND CRITICAL MATERIALS
REVITALIZATION ACT OF 2010)
OFFERED BY M^r. Olson

Page 4, line 24, strike “and”.

Page 5, line 4, strike the period at the end and insert “; and”.

Page 5, after line 4, insert the following:

1 (G) collect, catalogue, archive, and dissemi-
2 nate information on rare earth materials, in-
3 cluding scientific and technical data generated
4 by the research and development activities sup-
5 ported under this section.

Page 6, strike line 1 and all that follows through line 7 on page 7 (and redesignate subsequent subsections accordingly and correct internal cross-references).

Page 7, line 14, strike “and the Center established under subsection (b)”.

Page 7, line 21, strike “and the Center”.

Page 9, beginning on line 6, strike “, including the operations and activities of the Center under subsection (b)”.



AMENDMENT TO H.R. _____
(RARE EARTHS AND CRITICAL MATERIALS
REVITALIZATION ACT OF 2010)
OFFERED BY MS. EDDIE BERNICE JOHNSON OF
TEXAS

Page 5, strike lines 11 through 14 and insert the following:

- 1 (4) EXPANDING PARTICIPATION.—The Sec-
2 retary shall encourage—
- 3 (A) multidisciplinary collaborations among
4 program participants; and
- 5 (B) extensive opportunities for students at
6 institutions of higher education, including insti-
7 tutions listed under section 371(a) of the High-
8 er Education Act of 1965 (20 U.S.C.1067q(a)).



AMENDMENT TO H.R. _____
(RARE EARTHS AND CRITICAL MATERIALS
REVITALIZATION ACT OF 2010)
OFFERED BY MR. ROHRABACHER OF CALIFORNIA

Strike section 101(e) of the bill.



AMENDMENT TO H.R. _____
(RARE EARTHS AND CRITICAL MATERIALS
REVITALIZATION ACT OF 2010)
OFFERED BY MR. ROHRABACHER OF CALIFORNIA
AND MR. GARAMENDI OF CALIFORNIA

Page 11, after line 23, insert the following (and re-designate the subsequent subsection accordingly):

1 “(d) DOMESTIC SUPPLY CHAIN.—In support of the
2 objective in subsection (c) to achieve a rare earth materials
3 production capability in the United States that includes
4 the complete value chain described in paragraphs (1)
5 through (4) of subsection (a), the Secretary may not
6 award a guarantee for a project unless the project’s pro-
7 ponent provides to the Secretary an assurance that the
8 loan or guarantee shall be used to support the separation,
9 recovery, preparation, or manufacturing of rare earth ma-
10 terials in the United States for customers within the
11 United States unless insufficient domestic demand for
12 such materials results in excess capacity.”



AMENDMENT TO H.R. _____
(RARE EARTHS AND CRITICAL MATERIALS
REVITALIZATION ACT OF 2010)

OFFERED BY Mrs. Biggert of Illinois

Page 12, line 3, strike "2018" and insert "2015".

