

# Union Calendar No. 384

111<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

# H. R. 6160

[Report No. 111-644]

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.

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## IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 22, 2010

Mrs. DAHLKEMPER (for herself, Mr. LEWIS of California, Mr. COFFMAN of Colorado, Mr. GORDON of Tennessee, and Mr. CARNAHAN) introduced the following bill; which was referred to the Committee on Science and Technology

SEPTEMBER 28, 2010

Additional sponsors: Mr. MCMAHON and Mr. LIPINSKI

SEPTEMBER 28, 2010

Reported with an amendment, committed to the Committee of the Whole House on the State of the Union, and ordered to be printed

[Strike out all after the enacting clause and insert the part printed in *italic*]

[For text of introduced bill, see copy of bill as introduced on September 20, 2010]

# **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”.*

7 (b) *TABLE OF CONTENTS.*—*The table of contents for*  
 8 *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.*

9 **SEC. 2. DEFINITIONS.**

10 *In this Act:*

11 (1) *APPROPRIATE CONGRESSIONAL COMMIT-*  
 12 *TEES.*—*The term “appropriate Congressional com-*  
 13 *mittees” means the Committee on Science and Tech-*  
 14 *nology of the House of Representatives and the Com-*  
 15 *mittee on Commerce, Science, and Transportation*  
 16 *and the Committee on Energy and Natural Resources*  
 17 *of the Senate.*

18 (2) *DEPARTMENT.*—*The term “Department”*  
 19 *means the Department of Energy.*

1           (3) *RARE EARTH MATERIALS.*—The term “rare  
2           *earth materials*” means any of the following chemical  
3           *elements in any of their physical forms or chemical*  
4           *combinations:*

5                   (A) *Scandium.*

6                   (B) *Yttrium.*

7                   (C) *Lanthanum.*

8                   (D) *Cerium.*

9                   (E) *Praseodymium.*

10                  (F) *Neodymium.*

11                  (G) *Promethium.*

12                  (H) *Samarium.*

13                  (I) *Europium.*

14                  (J) *Gadolinium.*

15                  (K) *Terbium.*

16                  (L) *Dysprosium.*

17                  (M) *Holmium.*

18                  (N) *Erbium.*

19                  (O) *Thulium.*

20                  (P) *Ytterbium.*

21                  (Q) *Lutetium.*

22           (4) *SECRETARY.*—The term “Secretary” means  
23           *the Secretary of Energy.*

1                   **TITLE I—RARE EARTH**  
2                   **MATERIALS**

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

4           (a) *ESTABLISHMENT OF PROGRAM.—*

5                   (1) *IN GENERAL.—There is established in the De-*  
6                   *partment a program of research, development, dem-*  
7                   *onstration, and commercial application to assure the*  
8                   *long-term, secure, and sustainable supply of rare*  
9                   *earth materials sufficient to satisfy the national secu-*  
10                   *urity, economic well-being, and industrial production*  
11                   *needs of the United States.*

12                   (2) *PROGRAM ACTIVITIES.—The program shall*  
13                   *support activities to—*

14                           (A) *better characterize and quantify virgin*  
15                           *stocks of rare earth materials using theoretical*  
16                           *geochemical research;*

17                           (B) *explore, discover, and recover rare earth*  
18                           *materials using advanced science and technology;*

19                           (C) *improve methods for the extraction,*  
20                           *processing, use, recovery, and recycling of rare*  
21                           *earth materials;*

22                           (D) *improve the understanding of the per-*  
23                           *formance, processing, and adaptability in engi-*  
24                           *neering designs of rare earth materials;*

1           (E) identify and test alternative materials  
2           that can be substituted for rare earth materials  
3           in particular applications;

4           (F) engineer and test applications that—

5                 (i) use recycled rare earth materials;

6                 (ii) use alternative materials; or

7                 (iii) seek to minimize rare earth mate-  
8                 rials content; and

9           (G) collect, catalogue, archive, and dissemi-  
10           nate information on rare earth materials, in-  
11           cluding scientific and technical data generated  
12           by the research and development activities sup-  
13           ported under this section.

14           (3)    IMPROVED    PROCESSES    AND    TECH-  
15           NOLOGIES.—To the maximum extent practicable, the  
16           Secretary shall support new or significantly improved  
17           processes and technologies as compared to those cur-  
18           rently in use in the rare earth materials industry.

19           (4)    EXPANDING PARTICIPATION.—The Secretary  
20           shall encourage—

21                 (A) multidisciplinary collaborations among  
22                 program participants; and

23                 (B) extensive opportunities for students at  
24                 institutions of higher education, including insti-

1            *tutions listed under section 371(a) of the Higher*  
2            *Education Act of 1965 (20 U.S.C. 1067q(a)).*

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

7            (6) *INTERNATIONAL COLLABORATION.*—*In car-*  
8            *rying out the program, the Secretary shall collabo-*  
9            *rate, to the extent practicable, with the relevant direc-*  
10           *torates of the European Commission to coordinate ac-*  
11           *tivities of mutual interest and avoid duplication of ef-*  
12           *fort.*

13           (b) *PLAN.*—

14           (1) *IN GENERAL.*—*Within 180 days after the*  
15           *date of enactment of this Act and biennially there-*  
16           *after, the Secretary shall prepare and submit to the*  
17           *appropriate Congressional committees a plan to carry*  
18           *out the program established under subsection (a).*

19           (2) *SPECIFIC REQUIREMENTS.*—*The plan shall*  
20           *include a description of—*

21           (A) *the research and development activities*  
22           *to be carried out by the program during the sub-*  
23           *sequent 2 years;*

24           (B) *the expected contributions of the pro-*  
25           *gram to the creation of innovative methods and*

1           *technologies for the efficient and sustainable pro-*  
2           *vision of rare earth materials to the domestic*  
3           *economy;*

4                   *(C) the criteria to be used to evaluate appli-*  
5           *cations for loan guarantees under section 1706 of*  
6           *the Energy Policy Act of 2005;*

7                   *(D) any projects receiving loan guarantee*  
8           *support under such section and the status of such*  
9           *projects;*

10                   *(E) how the program is promoting the*  
11           *broadest possible participation by academic, in-*  
12           *dustrial, and other contributors; and*

13                   *(F) actions taken or proposed that reflect*  
14           *recommendations from the assessment conducted*  
15           *under subsection (c) or the Secretary's rationale*  
16           *for not taking action pursuant to any rec-*  
17           *ommendation from such assessment for plans*  
18           *submitted following the completion of the assess-*  
19           *ment under such subsection.*

20                   *(3) CONSULTATION.—In preparing each plan*  
21           *under paragraph (1), the Secretary shall consult with*  
22           *appropriate representatives of industry, institutions*  
23           *of higher education, Department of Energy national*  
24           *laboratories, professional and technical societies, and*  
25           *other entities, as determined by the Secretary.*



1       (c) *ASSESSMENT.*—

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

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 com-*  
19 *pletion.*

20 **SEC. 102. RARE EARTH MATERIALS LOAN GUARANTEE PRO-**  
21 **GRAM.**

22               (a) *AMENDMENT.*—*Title XVII of the Energy Policy*  
23 *Act of 2005 (42 U.S.C. 16511 et seq.) is amended by adding*  
24 *at the end the following new section:*

1 **“SEC. 1706. TEMPORARY PROGRAM FOR RARE EARTH MATE-**  
2 **RIALS REVITALIZATION.**

3 “(a) *IN GENERAL.*—As part of the program established  
4 in section 101 of the Rare Earths and Critical Materials  
5 Revitalization Act of 2010, the Secretary is authorized to  
6 make guarantees under this title for the commercial appli-  
7 cation of new or significantly improved technologies (com-  
8 pared to technologies currently in use in the United States  
9 at the time the guarantee is issued) for the following cat-  
10 egories of projects:

11 “(1) *The separation and recovery of rare earth*  
12 *materials from ores or other sources.*

13 “(2) *The preparation of rare earth materials in*  
14 *oxide, metal, alloy, or other forms needed for national*  
15 *security, economic well-being, or industrial produc-*  
16 *tion purposes.*

17 “(3) *The application of rare earth materials in*  
18 *the production of improved—*

19 “(A) *magnets;*

20 “(B) *batteries;*

21 “(C) *refrigeration systems;*

22 “(D) *optical systems;*

23 “(E) *electronics; and*

24 “(F) *catalysis.*

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

1       “(b) *TIMELINESS.*—*The Secretary shall seek to mini-*  
2 *mize delay in approving loan guarantee applications, con-*  
3 *sistent with appropriate protection of taxpayer interests.*

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

10       “(d) *DOMESTIC SUPPLY CHAIN.*—*In support of the ob-*  
11 *jective in subsection (c) to achieve a rare earth materials*  
12 *production capability in the United States that includes the*  
13 *complete value chain described in paragraphs (1) through*  
14 *(4) of subsection (a), the Secretary may not award a guar-*  
15 *antee for a project unless the project’s proponent provides*  
16 *to the Secretary an assurance that the loan or guarantee*  
17 *shall be used to support the separation, recovery, prepara-*  
18 *tion, or manufacturing of rare earth materials in the*  
19 *United States for customers within the United States unless*  
20 *insufficient domestic demand for such materials results in*  
21 *excess capacity.*

22       “(e) *SUNSET.*—*The authority to enter into guarantees*  
23 *under this section shall expire on September 30, 2015.”.*

24       “(b) *TABLE OF CONTENTS AMENDMENT.*—*The table of*  
25 *contents of the Energy Policy Act of 2005 is amended by*

1 *inserting after the item relating to section 1705 the fol-*  
 2 *lowing new item:*

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

3 **TITLE II—NATIONAL MATERIALS**  
 4 **AND MINERALS POLICY, RE-**  
 5 **SEARCH, AND DEVELOPMENT**

6 **SEC. 201. AMENDMENTS TO NATIONAL MATERIALS AND**  
 7 **MINERALS POLICY, RESEARCH AND DEVELOP-**  
 8 **MENT ACT OF 1980.**

9 *(a) PROGRAM PLAN.—Section 5 of the National Mate-*  
 10 *rials and Minerals Policy, Research and Development Act*  
 11 *of 1980 (30 U.S.C. 1604) is amended—*

12 *(1) by striking “date of enactment of this Act”*  
 13 *each place it appears and inserting “date of enact-*  
 14 *ment of the Rare Earths and Critical Materials Revi-*  
 15 *talization Act of 2010”;*

16 *(2) in subsection (b), by striking “Federal Co-*  
 17 *ordinating Council for Science, Engineering, and*  
 18 *Technology” and inserting “National Science and*  
 19 *Technology Council,”;*

20 *(3) in subsection (c)—*

21 *(A) by striking “the Federal Emergency”*  
 22 *and all that follows through “Agency, and”;*

23 *(B) by striking “appropriate shall” and in-*  
 24 *serting “appropriate, shall”;*

25 *(C) by striking paragraph (1);*

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

3           (E) by redesignating paragraph (2) as  
4 paragraph (1); and

5           (F) by amending paragraph (3) to read as  
6 follows:

7           “(2) assess the adequacy, accessibility, and sta-  
8 bility of the supply of materials necessary to main-  
9 tain national security, economic well-being, and in-  
10 dustrial production.”;

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

12           (5) by redesignating subsection (f) as subsection  
13 (d).

14           (b) *POLICY*.—Section 3 of such Act (30 U.S.C. 1602)  
15 is amended—

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

18           (2) by striking “The Congress further declares  
19 that implementation” and inserting “Implementa-  
20 tion”.

21           (c) *IMPLEMENTATION*.—Section 4 of such Act (30  
22 U.S.C. 1603) is amended—

23           (1) by striking “For the purpose” and all that  
24 follows through “declares that the” and inserting  
25 “The”; and

1           (2) by striking “departments and agencies,” and  
2           inserting “departments and agencies to implement the  
3           policies set forth in section 3”.

4 **SEC. 202. REPEAL.**

5           Title II of Public Law 98–373 (30 U.S.C. 1801 et seq.;  
6 98 Stat. 1248), also known as the National Critical Mate-  
7 rials Act of 1984, is repealed.



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11<sup>TH</sup> CONGRESS  
2<sup>D</sup> Session

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## **A BILL**

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