

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

# H. R. 6160

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## AN ACT

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,*

1 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

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

5 (b) TABLE OF CONTENTS.—The table of contents for  
6 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.

7 **SEC. 2. DEFINITIONS.**

8 In this Act:

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

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

18 (3) RARE EARTH MATERIALS.—The term “rare  
19 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 (4) 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;

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 (G) collect, catalogue, archive, and dissemi-  
6 nate information on rare earth materials, in-  
7 cluding scientific and technical data generated  
8 by the research and development activities sup-  
9 ported under this section, and assist scientists  
10 and engineers in making the fullest possible use  
11 of the data holdings; and

12 (H) facilitate information sharing and col-  
13 laboration among program participants and  
14 stakeholders.

15 (3) IMPROVED PROCESSES AND TECH-  
16 NOLOGIES.—To the maximum extent practicable, the  
17 Secretary shall support new or significantly im-  
18 proved processes and technologies as compared to  
19 those currently in use in the rare earth materials in-  
20 dustry.

21 (4) EXPANDING PARTICIPATION.—The Sec-  
22 retary shall encourage—

23 (A) multidisciplinary collaborations among  
24 program participants; and

1 (B) extensive opportunities for students at  
2 institutions of higher education, including insti-  
3 tutions listed under section 371(a) of the High-  
4 er Education Act of 1965 (20 U.S.C.  
5 1067q(a)).

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

10 (6) INTERNATIONAL COLLABORATION.—In car-  
11 rying out the program, the Secretary may collabo-  
12 rate, to the extent practicable, on activities of mu-  
13 tual interest with the relevant agencies of foreign  
14 countries with interests relating to rare earth mate-  
15 rials.

16 (b) PLAN.—

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

23 (2) SPECIFIC REQUIREMENTS.—The plan shall  
24 include a description of—

1           (A) the research and development activities  
2           to be carried out by the program during the  
3           subsequent 2 years;

4           (B) the expected contributions of the pro-  
5           gram to the creation of innovative methods and  
6           technologies for the efficient and sustainable  
7           provision of rare earth materials to the domes-  
8           tic economy;

9           (C) the criteria to be used to evaluate ap-  
10          plications for loan guarantees under section  
11          1706 of the Energy Policy Act of 2005;

12          (D) any projects receiving loan guarantee  
13          support under such section and the status of  
14          such projects;

15          (E) how the program is promoting the  
16          broadest possible participation by academic, in-  
17          dustrial, and other contributors; and

18          (F) actions taken or proposed that reflect  
19          recommendations from the assessment con-  
20          ducted under subsection (c) or the Secretary's  
21          rationale for not taking action pursuant to any  
22          recommendation from such assessment for  
23          plans submitted following the completion of the  
24          assessment under such subsection.

1           (3) CONSULTATION.—In preparing each plan  
2       under paragraph (1), the Secretary shall consult  
3       with appropriate representatives of industry, institu-  
4       tions of higher education, Department of Energy na-  
5       tional laboratories, professional and technical soci-  
6       eties, and other entities, as determined by the Sec-  
7       retary.

8       (c) ASSESSMENT.—

9           (1) IN GENERAL.—After the program has been  
10      in operation for 4 years, the Secretary shall offer to  
11      enter into a contract with the National Academy of  
12      Sciences under which the National Academy shall  
13      conduct an assessment of the program under sub-  
14      section (a).

15          (2) INCLUSIONS.—The assessment shall include  
16      the recommendation of the National Academy of  
17      Sciences that the program should be—

18                (A) continued, accompanied by a descrip-  
19              tion of any improvements needed in the pro-  
20              gram; or

21                (B) terminated, accompanied by a descrip-  
22              tion of the lessons learned from the execution of  
23              the program.



1           (3) AVAILABILITY.—The assessment shall be  
2       made available to Congress and the public upon  
3       completion.

4   **SEC. 102. RARE EARTH MATERIALS LOAN GUARANTEE PRO-**  
5                           **GRAM.**

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

9   **“SEC. 1706. TEMPORARY PROGRAM FOR RARE EARTH MA-**  
10                           **TERIALS REVITALIZATION.**

11       “(a) IN GENERAL.—As part of the program estab-  
12   lished in section 101 of the Rare Earths and Critical Ma-  
13   terials Revitalization Act of 2010, the Secretary is author-  
14   ized, only to the extent provided in advance in a subse-  
15   quent appropriations act, to make guarantees under this  
16   title for the commercial application of new or significantly  
17   improved technologies (compared to technologies currently  
18   in use in the United States at the time the guarantee is  
19   issued) for the following categories of projects:

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

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

1           “(3) The application of rare earth materials in  
2           the production of improved—

3                   “(A) magnets;

4                   “(B) batteries;

5                   “(C) refrigeration systems;

6                   “(D) optical systems;

7                   “(E) electronics; and

8                   “(F) catalysis.

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

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

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

20          “(d) DOMESTIC SUPPLY CHAIN.—In support of the  
21          objective in subsection (c) to achieve a rare earth materials  
22          production capability in the United States that includes  
23          the complete value chain described in paragraphs (1)  
24          through (4) of subsection (a), the Secretary may not  
25          award a guarantee for a project unless the project’s pro-

ponent provides to the Secretary an assurance that the loan or guarantee shall be used to support the separation, recovery, preparation, or manufacturing of rare earth materials in the United States for customers within the United States unless insufficient domestic demand for such materials results in excess capacity.

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

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

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

## **TITLE II—NATIONAL MATERIALS AND MINERALS POLICY, RE- SEARCH, AND DEVELOPMENT**

### **SEC. 201. AMENDMENTS TO NATIONAL MATERIALS AND MINERALS POLICY, RESEARCH AND DEVELOPMENT ACT OF 1980.**

(a) PROGRAM PLAN.—Section 5 of the National Materials and Minerals Policy, Research and Development Act of 1980 (30 U.S.C. 1604) is amended—

(1) by striking “date of enactment of this Act” each place it appears and inserting “date of enact-

1       ment of the Rare Earths and Critical Materials Re-  
2       vitalization Act of 2010”;

3               (2) in subsection (b), by striking “Federal Co-  
4       ordinating Council for Science, Engineering, and  
5       Technology” and inserting “National Science and  
6       Technology Council,”;

7               (3) in subsection (c)—

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

10                      (B) by striking “appropriate shall” and in-  
11       serting “appropriate, shall”;

12                      (C) by striking paragraph (1);

13                      (D) in paragraph (2), by striking “in the  
14       case” and all that follows through “sub-  
15       section,”;

16                      (E) by redesignating paragraph (2) as  
17       paragraph (1); and

18                      (F) by amending paragraph (3) to read as  
19       follows:

20                      “(2) assess the adequacy, accessibility, and sta-  
21       bility of the supply of materials necessary to main-  
22       tain national security, economic well-being, and in-  
23       dustrial production.”;

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

1           (5) by redesignating subsection (f) as sub-  
2       section (d).

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

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

7           (2) by striking “The Congress further declares  
8       that implementation” and inserting “Implementa-  
9       tion”.

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

12           (1) by striking “For the purpose” and all that  
13       follows through “declares that the” and inserting  
14       “The”; and

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

1 **SEC. 202. REPEAL.**

2 Title II of Public Law 98–373 (30 U.S.C. 1801 et  
3 seq.; 98 Stat. 1248), also known as the National Critical  
4 Materials Act of 1984, is repealed.

Passed the House of Representatives September 29,  
2010.

Attest:

*Clerk.*



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

# H. R. 6160

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## AN ACT

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.