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(Original Signature of Member)

111TH CONGRESS
2D SESSION

# H. R. 4866

To reestablish a competitive domestic rare earths minerals production industry; a domestic rare earth processing, refining, purification, and metals production industry; a domestic rare earth metals alloying industry; and a domestic rare earth based magnet production industry and supply chain in the United States.

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IN THE HOUSE OF REPRESENTATIVES

Mr. COFFMAN of Colorado introduced the following bill; which was referred to the Committee on _____

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# A BILL

To reestablish a competitive domestic rare earths minerals production industry; a domestic rare earth processing, refining, purification, and metals production industry; a domestic rare earth metals alloying industry; and a domestic rare earth based magnet production industry and supply chain in the United States.

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.**

2 This Act may be cited as the "Rare Earths Supply-
3 Chain Technology and Resources Transformation Act of
4 2010" or the "RESTART Act".

5 **SEC. 2. FINDINGS.**

6 Congress finds that:

7 (1) Many modern defense technologies such as
8 radar and sonar systems, precision guided weapons,
9 cruise missiles, and lasers cannot be built, as de-
10 signed and specified, without the use of rare earth
11 elements ("REEs") and materials produced from
12 them.

13 (2) Significant quantities of REE are used in
14 the production of renewable energy technologies, in-
15 cluding advanced automotive propulsion batteries,
16 electric motors, high efficiency light bulbs, solar pan-
17 els, and wind turbines. These technologies are used
18 to advance the United States' energy policy of reduc-
19 ing dependence on foreign oil and decreasing green-
20 house gas emissions through expansion of renewable
21 sources of energy.

22 (3) Though the United States owns at least 15
23 percent of the world's REEs reserves, it now de-
24 pends nearly 100 percent upon imports for rare
25 earth elements, oxides, and alloys because there are
26 virtually no active REE producers in the United

1 States. More than 97 percent of all REEs for world
2 consumption are produced in China.
3 (4) China's ability—and willingness—to export
4 REEs is eroding due to its growing domestic de-
5 mand, its enforcement of environmental law on cur-
6 rent producers, and its mandate to consolidate the
7 industry by decreasing its number of mining per-
8 mits. The Chinese Ministry of Industry and Infor-
9 mation Technology draft rare earths plan for 2009
10 to 2015 proposes an immediate ban on the export of
11 dysprosium, terbium, thulium, lutetium and yttrium,
12 the "heavy" REE and a restriction on the exports
13 of all the other, light, rare earth metals to a level
14 well below that of Japan's 2008 demand alone.
15 (5) Furthermore, the United States has no ac-
16 tive heavy group rare earth production capabilities
17 or refining capabilities for heavy rare earth ele-
18 ments. Thus, should the United States begin to mine
19 its heavy rare earth oxides, it would still be depend-
20 ent on overseas refineries for further elemental and
21 alloy processing. Nor does the United States cur-
22 rently maintain a "strategic reserve" of rare earth
23 compounds, metals or alloys.
24 (6) REE's should qualify as materials either
25 strategic or critical to national security. The United

1 States Government should take measures to reintro-
2 duce a globally competitive domestic strategic mate-
3 rials industry that is self-sufficient in the United
4 States domestic market with multiple sources of
5 mining, processing, alloying and manufacturing.
6 (7) This self-sufficiency requires an uninter-
7 rupted supply of strategic materials critical to na-
8 tional security and innovative commercial product
9 development, including rare earth materials, to sup-
10 port the defense supply-chain.
11 (8) The United States currently cannot reclaim
12 valuable rare earth resources and permanent
13 magnets from scrapped military or consumer prod-
14 ucts, industrial materials or equipment, which allows
15 entities in overseas nations to identify and recover
16 such materials for resale to United States manufac-
17 turers at considerable cost.
18 (9) There is an urgent need to identify the cur-
19 rent global market situation regarding rare earth
20 materials, the strategic value placed on them by for-
21 eign nations including China, and the Department of
22 Defense's and domestic manufacturing industry's
23 supply-chain vulnerability related to rare earths and
24 end items containing rare earths such as neodymium

1 iron boron and other specialty magnets, and rare
2 earth "doped" lasers.
3 (10) It is the policy of the United States to
4 take any and all actions necessary to ensure the re-
5 introduction of a competitive domestic rare earth
6 supply chain, to include the reintroduction of the ca-
7 pacity to conduct mining, refining/processing,
8 alloying and manufacturing operations using domes-
9 tic suppliers to provide a secure source of rare earth
10 materials as a vital component of national security
11 and economic policy.

12 **SEC. 3. REQUIREMENT TO ESTABLISH EXECUTIVE AGENTS**
13 **FOR RARE EARTH RELATED MATTERS.**

14 No later than 30 days after the enactment of this
15 Act—
16 (1) the Secretaries of Commerce, Defense, En-
17 ergy, Interior, and State shall appoint an Executive
18 Agent, at the Assistant Secretary level of each af-
19 fected agency, to serve as a representative on an
20 interagency working group for the purposes of rees-
21 tablishing a competitive domestic rare earth supply
22 chain; and
23 (2) the United States Trade Representative and
24 the Office of Science and Technology Policy shall ap-

1 point representation to the interagency working
2 group in paragraph (1) above.

3 **SEC. 4. REQUIREMENT TO ESTABLISH A BASELINE FOR**
4 **RARE EARTH MATERIAL SUPPLY-CHAIN VUL-**
5 **NERABILITY.**

6 No later than 180 days after the enactment of this
7 Act, the Secretaries of Commerce, Defense, Energy, Inte-
8 rior, and State shall undertake an assessment of the rare
9 earth supply-chain and determine which rare earth ele-
10 ments are critical to national and economic security and
11 submit the findings of the review to Congress. Such as-
12 sessment shall be in coordination with the United States
13 Trade Representative and the Executive Office of the
14 President's, Office of Science and Technology Policy.

15 **SEC. 5. REQUIREMENT TO ESTABLISH A NATIONAL STOCK-**
16 **PILE FOR RARE EARTH MATERIALS.**

17 (a) In accordance with 50 U.S.C. 98 et seq., the Sec-
18 retary of Defense shall commence the procurement of rare
19 earth materials designated as "critical" in section 4 of this
20 Act and place such rare earth materials in the national
21 stockpile within one-year after enactment of this Act.

22 (b) The Defense Logistics Agency, Defense National
23 Stockpile Center, shall serve as Administrator of the rare
24 earth stockpile and shall issue an annual report to Con-

1 gress describing which rare earth materials shall be added
2 to or subtracted from the stockpile.
3 (c) In accordance with section 98h–6 of title 50,
4 United States Code, the Administrator shall purchase, or
5 make a commitment to purchase, rare earth materials or
6 for the processing or refining of rare earth materials, to
7 support national defense and the economic needs of the
8 United States.
9 (d) Notwithstanding any other provision of law, for
10 a period of five years after the date of enactment of this
11 Act, the Administrator shall be authorized to purchase
12 necessary rare earth materials from the People's Republic
13 of China, if required to meet national security and eco-
14 nomic needs of the United States.
15 (e) Upon the joint determination of the Secretaries
16 of Commerce, Defense, Energy, Interior, and State, in co-
17 ordination with the United States Trade Representative
18 and the Executive Office of the President's, Office of
19 Science and Technology Policy, that rare earth materials
20 are no longer critical to supporting national defense or the
21 economic well-being of the United States, the requirement
22 to stockpile rare earth materials shall terminate by issuing
23 a report of such determination to Congress. Such report
24 shall be submitted to Congress no earlier than April 1,
25 2015.

1 **SEC. 6. ESTABLISHMENT OF FAIR MARKET CONDITIONS**
2 **FOR THE REESTABLISHMENT OF A DOMESTIC**
3 **RARE EARTH SUPPLY CHAIN.**

4 (a) Not later than 30 days after the enactment of
5 the Act, the United States Trade Representative shall ini-
6 tiate a comprehensive review of international trade prac-
7 tices in the rare earth materials market. Such review shall
8 include actions by foreign producers of rare earth ele-
9 ments, rare earth metals, rare earth alloys and compo-
10 nents used in the defense or energy markets containing
11 rare earth elements, as it relates to dumping, export
12 quotas and other relevant mechanisms used to manipulate
13 the rare earth market.

14 (b) Upon completion of the review, the United States
15 Trade Representative shall—

16 (1) initiate an action before the World Trade
17 Organization; or

18 (2) issue a report to Congress describing the re-
19 sults of the comprehensive review and why it was de-
20 termined that international markets are free from
21 market manipulation such as dumping or export
22 quotas.

23 **SEC. 7. CONSIDERATION OF LOAN GUARANTEES FOR RARE**
24 **EARTH SUPPLY-CHAIN DEVELOPMENT.**

25 Not later than 90 days after the enactment of the
26 Act—

1 (1) the Secretaries of Commerce, Interior, and
2 State shall issue a report to industry describing
3 mechanisms for obtaining current and future year
4 government loan guarantees to reestablish a domes-
5 tic rare earth supply-chain;
6 (2) the Secretary of Defense shall issue guid-
7 ance for the rare earth industry related to obtaining
8 loan guarantees under 50 U.S.C. 98 and any other
9 available mechanism for obtaining loan guarantees
10 to support the reestablishment of mining, refining,
11 alloying and manufacturing operations in the United
12 States that will support the domestic defense supply-
13 chain; and
14 (3) the Secretary of Energy shall issue guidance
15 for the rare earth industry related to obtaining loan
16 guarantees under the American Recovery and Rein-
17 vestment Act of 2009, Energy Efficiency and Re-
18 newable Energy sponsored programs and any other
19 available mechanism for obtaining loan guarantees
20 to support the reestablishment of mining, refining,
21 alloying and manufacturing operations in the United
22 States that will support the domestic supply-chain.

1 **SEC. 8. DEFENSE PRODUCTION ACT PRIORITY FOR RARE**
2 **EARTH SUPPLY-CHAIN DEVELOPMENT.**

3 (a) It is the sense of Congress that the urgent need
4 to reintroduce a domestic rare earth supply chain war-
5 rants a prioritization of such Defense Production Act
6 projects. The United States faces a shortage of key mate-
7 rials that form the backbone of both the defense and en-
8 ergy supply-chains.

9 (b) Not later than 180 days after the enactment of
10 this Act, the Secretary of Defense shall issue a report de-
11 scribing past, current and future Defense Production Act
12 projects to address the domestic rare earth supply chain.
13 If no rare earth supply-chain Defense Production Act
14 projects are in process or planned, the report shall justify
15 the lack of action to support establishment of domestic
16 rare earth supply-chain initiatives, particularly those to es-
17 tablish domestic manufacturing capability in critical seg-
18 ments of the rare earth market.

19 **SEC. 9. RESEARCH AND DEVELOPMENT TO SUPPORT THE**
20 **DOMESTIC RARE EARTH SUPPLY CHAIN.**

21 It is the sense of Congress that, in order to reestab-
22 lish the United States as the preeminent supplier of rare
23 earth materials, components and associated technologies,
24 there is a pressing need to support innovation, training
25 and workforce development of the rare earth supply chain.
26 Therefore, base budget funding should be provided by the

1 Secretaries of Commerce, Defense, Energy, and Interior
2 to fund academic institutions, government laboratories,
3 corporate research and development, not-for-profit re-
4 search and development, and industry associations.

5 **SEC. 10. RESTRICTIONS.**

6 (a) LIMITATION ON DIVESTMENT OF FACILITIES
7 CREATED.—No recipient of United States Government
8 appropriated funds, for the purposes of supporting the re-
9 establishment of a domestic rare earth supply-chain, may
10 divest resources funded, in whole or in part, to any for-
11 eign-owned or controlled entity without the concurrence of
12 the Secretaries of Energy, Commerce, and Defense.

13 (b) ENHANCING NATIONAL SECURITY.—Any recipi-
14 ent of United States Government appropriated funds ob-
15 tained in connection with the reestablishment of a domes-
16 tic rare-earth supply-chain shall be subject to the restric-
17 tions of 10 U.S.C. 2538. In order to ensure the availability
18 of rare earth materials for Department of Defense needs,
19 this obligation extends to all materials sold by such recipi-
20 ents in the commercial marketplace.

21 **SEC. 11. DEFINITIONS.**

22 In this Act:

23 (1) RARE EARTH.—The term "rare earth"
24 means the chemical elements, all metals, beginning
25 with lanthanum, atomic number 57, and including

1 all of the natural chemical elements in the periodic
2 table following lanthanum up to and including lute-
3 tium, element number 71. The definition shall fur-
4 ther include the elements yttrium and scandium,
5 which are usually found with the rare earth elements
6 in nature.

7 (2) REFINE.—The reestablishment of a domes-
8 tic rare earth element refinery capabilities within the
9 United States whereby rare earths, once extracted
10 from rock, are separated and purified to commercial
11 grades of oxides or other salts such as oxalates or
12 chlorides.

13 (3) PROCESS.—The support of heavy rare earth
14 processing and production facilities capable of con-
15 verting rare earth oxides into usable rare earth met-
16 als and specialty alloys and powders for domestic
17 magnet and other manufacturing within the United
18 States.

19 (4) PRODUCE.—The advancement of domestic
20 manufacturing efforts of U.S. magnet producers and
21 other domestic innovation industries that rely on
22 rare earth materials.

23 (5) RECYCLE.—The establishment of an initia-
24 tive to recycle and strip used consumer products,
25 and used or obsolete declassified military products,

1 of rare earth elements and strategic magnets within
2 the United States for eventual reuse by domestic
3 manufacturers.

4 (6) STOCKPILE.—The creation and mainte-
5 nance of a "strategic reserve" of rare earth oxides,
6 and storable forms of rare earth elements, and alloys
7 for national defense purposes.

8 (7) ALLOY AND ALLOYING.—An alloy is a par-
9 tial or complete solid solution of one or more ele-
10 ments in a metallic matrix. Alloying is the process
11 of melting of metals to create the metallic matrix.

12 (8) SINTERING.—Sintering is a method for
13 making objects from powder, by heating the material
14 in a sintering furnace below its melting point (solid
15 state sintering) until its particles adhere to each
16 other.