

112TH CONGRESS
1ST SESSION

H. R. 2090

To improve assessments of and research about energy critical elements, and
for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JUNE 2, 2011

Mr. HULTGREN (for himself, Mrs. BIGGERT, and Mr. LIPINSKI) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committees on Natural Resources and Energy and Commerce, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To improve assessments of and research about energy critical
elements, 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 “Energy Critical Ele-
5 ments Advancement Act of 2011”.

1 **SEC. 2. INFORMATION GATHERING, ANALYSIS, AND DIS-**
2 **SEMINATION.**

3 (a) ESTABLISHMENT.—The Secretary of the Interior,
4 acting through the Director of the USGS, and the Sec-
5 retary of Energy, acting through the Administrator of the
6 Energy Information Administration, shall collaborate to
7 improve assessments of energy critical elements that in-
8 cludes—

- 9 (1) discovered and potential resources;
- 10 (2) production;
- 11 (3) use;
- 12 (4) trade;
- 13 (5) disposal; and
- 14 (6) recycling.

15 (b) DUTIES.—The entity within the USGS that gath-
16 ers the information for the assessments under subsection
17 (a) shall—

- 18 (1) regularly survey emerging energy tech-
19 nologies and the supply chain for elements through-
20 out the periodic table necessary for those tech-
21 nologies in order to forecast potential supply disrup-
22 tions; and
- 23 (2) make available such information in the ag-
24 gregate, with appropriate protection of proprietary
25 information, to the United States scientific commu-
26 nity, including industry, institutions of higher edu-

1 cation, and the United States Department of Energy
2 National Laboratories and Technology Centers.

3 (c) DESIGNATION.—The Director of the USGS shall
4 designate the entity within the USGS that gathers the in-
5 formation for the assessments under subsection (a) as a
6 “Principal Statistical Agency”.

7 **SEC. 3. RESEARCH.**

8 (a) ESTABLISHMENT.—The Secretary of Energy, in
9 coordination with the Secretary of the Interior, shall es-
10 tablish a research program to advance basic knowledge
11 and enable expanded availability of energy critical ele-
12 ments, including research on basic materials science,
13 chemistry, physics, and engineering associated with energy
14 critical elements, including materials characterization and
15 substitution, recycling, and life-cycle analysis.

16 (b) RESEARCH PLAN.—In consultation with the Crit-
17 ical and Strategic Mineral Supply Chain Subcommittee of
18 the National Science and Technology Council, the Sec-
19 retary shall develop and update biennially an integrated
20 research plan to guide program activities.

21 (c) LIMITATION.—Research under subsection (a)
22 shall be limited to areas that industry is not likely to un-
23 dertake due to technical and financial uncertainty.

1 **SEC. 4. REPORT.**

2 Within 1 year after the date of enactment of this Act,
3 the Critical and Strategic Mineral Supply Chain Sub-
4 committee of the National Science and Technology Council
5 shall submit to the Committee on Science, Space, and
6 Technology of the House of Representatives and the Com-
7 mittee on Commerce, Science, and Transportation of the
8 Senate a report on the recycling of energy critical ele-
9 ments, including—

10 (1) the logistics, economic viability, and re-
11 search and development needs for completing the re-
12 cycling process;

13 (2) options for both the Federal Government
14 and industry, including an assessment of the
15 strengths and weaknesses of such options, for im-
16 proving the rates of collection of post-consumer
17 products containing energy critical elements; and

18 (3) an analysis of the methods explored and im-
19 plemented in various states and countries, such as
20 Japan and South Korea.

21 **SEC. 5. DEFINITIONS.**

22 In this Act, the following definitions apply:

23 (1) **ENERGY CRITICAL ELEMENT.**—The term
24 “energy critical element” means each of the fol-
25 lowing:

26 (A) Helium.

- 1 (B) Lithium.
- 2 (C) Scandium.
- 3 (D) Cobalt.
- 4 (E) Gallium.
- 5 (F) Germanium.
- 6 (G) Selenium.
- 7 (H) Yttrium.
- 8 (I) Ruthenium.
- 9 (J) Rhodium.
- 10 (K) Palladium.
- 11 (L) Silver.
- 12 (M) Indium.
- 13 (N) Tellurium.
- 14 (O) Lanthanum.
- 15 (P) Rhenium.
- 16 (Q) Osmium.
- 17 (R) Iridium.
- 18 (S) Platinum.
- 19 (T) Cerium.
- 20 (U) Praseodymium.
- 21 (V) Neodymium.
- 22 (W) Samarium.
- 23 (X) Europium.
- 24 (Y) Gadolinium.
- 25 (Z) Terbium.

1 (AA) Dysprosium.

2 (BB) Ytterbium.

3 (CC) Lutetium.

4 (DD) Any other element designated as an
5 energy critical element by the Critical and Stra-
6 tegic Mineral Supply Chain Subcommittee of
7 the National Science and Technology Council.

8 (2) USGS.—The term “USGS” means the
9 United States Geological Survey.

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