

114TH CONGRESS
1ST SESSION

H. R. 2687

To authorize an energy critical elements program, to amend the National Materials and Minerals Policy, Research and Development Act of 1980, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JUNE 8, 2015

Mr. SWALWELL of California introduced the following bill; which was referred to the Committee on Science, Space, and Technology

A BILL

To authorize an energy critical elements 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.**

4 This Act may be cited as the “Securing Energy Crit-
5 ical Elements and American Jobs Act of 2015”.

6 **SEC. 2. DEFINITIONS.**

7 In this Act:

8 (1) APPROPRIATE CONGRESSIONAL COMMIT-
9 TEES.—The term “appropriate Congressional com-

1 mittees” means the Committee on Science, Space,
2 and Technology of the House of Representatives and
3 the Committee on Commerce, Science, and Trans-
4 portation and the Committee on Energy and Natural
5 Resources of the Senate.

6 (2) CENTER.—The term “Center” means the
7 Critical Materials Information Center established
8 under section 102(b).

9 (3) DEPARTMENT.—The term “Department”
10 means the Department of Energy.

11 (4) ENERGY CRITICAL ELEMENT.—The term
12 “energy critical element” means any of a class of
13 chemical elements that have a high risk of a supply
14 disruption and are critical to one or more new, en-
15 ergy-related technologies such that a shortage of
16 such element would significantly inhibit large-scale
17 deployment of technologies that produce, transmit,
18 store, or conserve energy.

19 (5) HUB.—The term “Hub” means the Critical
20 Materials Energy Innovation Hub authorized in sec-
21 tion 102(a).

22 (6) INSTITUTION OF HIGHER EDUCATION.—The
23 term “institution of higher education” has the
24 meaning given such term in section 101(a) of the
25 Higher Education Act of 1965 (20 U.S.C. 1001(a)).

1 (7) PROGRAM.—The term “program” means
2 the program authorized in section 101(a).

3 (8) SECRETARY.—The term “Secretary” means
4 the Secretary of Energy.

5 **TITLE I—ENERGY CRITICAL**
6 **ELEMENTS**

7 **SEC. 101. ENERGY CRITICAL ELEMENTS PROGRAM.**

8 (a) AUTHORIZATION OF PROGRAM.—

9 (1) IN GENERAL.—There is authorized in the
10 Department a program of research, development,
11 demonstration, and commercial application to assure
12 the long-term, secure, and sustainable supply of en-
13 ergy critical elements sufficient to satisfy the na-
14 tional security, economic well-being, and industrial
15 production needs of the United States. This program
16 may be carried out primarily by the Critical Mate-
17 rials Energy Innovation Hub authorized in section
18 102(a).

19 (2) PROGRAM ACTIVITIES.—The program shall
20 focus on areas that the private sector by itself is not
21 likely to undertake because of technical and financial
22 uncertainty and support activities to—

23 (A) improve methods for the extraction,
24 processing, use, recovery, and recycling of en-
25 ergy critical elements;

1 (B) improve the understanding of the per-
2 formance, processing, and adaptability in engi-
3 neering designs using energy critical elements;

4 (C) identify and test alternative materials
5 that can be substituted for energy critical ele-
6 ments and maintain or exceed current perform-
7 ance; and

8 (D) engineer and test applications that—

9 (i) use recycled energy critical ele-
10 ments;

11 (ii) use alternative materials; or

12 (iii) seek to minimize energy critical
13 element content.

14 (3) EXPANDING PARTICIPATION.—In carrying
15 out the program, the Secretary shall encourage mul-
16 tidisciplinary collaborations of participants, including
17 opportunities for students at institutions of higher
18 education.

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

23 (5) INTERNATIONAL COLLABORATION.—In car-
24 rying out the program, the Secretary shall collabo-
25 rate, to the extent practicable, on activities of mu-

1 tual interest with the relevant agencies of foreign
2 countries with interests relating to energy critical
3 elements.

4 (b) PLAN.—

5 (1) IN GENERAL.—Within 180 days after the
6 date of enactment of this Act and biennially there-
7 after, the Secretary shall prepare and submit to the
8 appropriate Congressional committees a plan to
9 carry out the program.

10 (2) SPECIFIC REQUIREMENTS.—The plan re-
11 quired under paragraph (1) shall include a descrip-
12 tion of—

13 (A) the research and development activities
14 to be carried out by the program during the
15 subsequent 2 years;

16 (B) the expected contributions of the pro-
17 gram to the creation of innovative methods and
18 technologies for the efficient and sustainable
19 provision of energy critical elements to the do-
20 mestic economy; and

21 (C) how the program is promoting the
22 broadest possible participation by academic, in-
23 dustrial, and other contributors.

24 (3) CONSULTATION.—In preparing each plan
25 under paragraph (1), the Secretary shall consult

1 with appropriate representatives of industry, institu-
2 tions of higher education, Department of Energy na-
3 tional laboratories, professional and technical soci-
4 eties, other Federal agencies, and other entities, as
5 determined by the Secretary.

6 (c) COORDINATION AND NONDUPLICATION.—To the
7 maximum extent practicable, the Secretary shall ensure
8 that the activities carried out under this title are coordi-
9 nated with, and do not unnecessarily duplicate the efforts
10 of, other programs within the Federal Government.

11 (d) AUTHORIZATION OF APPROPRIATIONS.—

12 (1) IN GENERAL.—There are authorized to be
13 appropriated to the Secretary to carry out this Act
14 the following sums:

15 (A) For fiscal year 2016, \$25,000,000.

16 (B) For fiscal year 2017, \$25,000,000.

17 (C) For fiscal year 2018, \$25,000,000.

18 (D) For fiscal year 2019, \$25,000,000.

19 (E) For fiscal year 2020, \$25,000,000.

20 (2) AVAILABILITY.—Such sums shall remain
21 available until expended.

22 **SEC. 102. CRITICAL MATERIALS ENERGY INNOVATION HUB.**

23 (a) CRITICAL MATERIALS ENERGY INNOVATION
24 HUB.—To carry out the program, the Secretary is author-

1 ized to maintain a Critical Materials Energy Innovation
2 Hub.

3 (b) CRITICAL MATERIALS INFORMATION CENTER.—

4 (1) IN GENERAL.—To collect, catalogue, dis-
5 seminate, and archive information on energy critical
6 elements in coordination with the Department of
7 Energy Office of Scientific and Technical Informa-
8 tion, the Hub shall establish and maintain a Critical
9 Materials Information Center.

10 (2) CENTER ACTIVITIES.—

11 (A) IN GENERAL.—The Center shall—

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

16 (ii) assist scientists and engineers in
17 making the fullest possible use of the Cen-
18 ter’s data holdings;

19 (iii) seek and incorporate other infor-
20 mation on energy critical elements to en-
21 hance the Center’s utility for program par-
22 ticipants and other users;

23 (iv) provide advice to the Secretary
24 concerning the program; and

1 (v) host meetings, at least annually,
2 for participants in the program and other
3 interested parties to promote information
4 sharing and encourage new collaborative
5 activities.

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

10 (c) REVIEW AND REPORT TO CONGRESS.—An award
11 made to operate the Hub shall be for a period not to ex-
12 ceed 5 years, after which the award may be renewed, sub-
13 ject to a rigorous merit review. A Hub already in existence
14 on the date of enactment of this Act may continue to re-
15 ceive support for a period of 5 years beginning on the date
16 of establishment of that Hub. Following this process, if
17 the Secretary determines that award renewal for the Hub
18 is justified, then the Secretary must submit a report to
19 the appropriate Congressional committees at least 30 days
20 prior to the award renewal which explains the Secretary's
21 determination and describes the Department's review
22 process.

23 (d) PROHIBITION ON CONSTRUCTION.—No funds
24 provided pursuant to this section may be used for con-
25 struction of new buildings or facilities for the Hub. Con-

1 construction of new buildings or facilities shall not be consid-
2 ered as part of the non-Federal share of a Hub cost-shar-
3 ing agreement.

4 **SEC. 103. SUPPLY OF ENERGY CRITICAL ELEMENTS.**

5 The President, acting through the Critical Material
6 Supply Chain Subcommittee of the Committee on Envi-
7 ronment, Natural Resources, and Sustainability of the Na-
8 tional Science and Technology Council, shall—

9 (1) coordinate the actions of applicable Federal
10 agencies to promote an adequate and stable supply
11 of energy critical elements necessary to maintain na-
12 tional security, economic well-being, and industrial
13 production with appropriate attention to a long-term
14 balance between resource production, energy use, a
15 healthy environment, natural resources conservation,
16 and social needs;

17 (2) identify energy critical elements and estab-
18 lish scenario modeling systems for supply problems
19 of energy critical elements;

20 (3) establish a mechanism for the coordination
21 and evaluation of Federal programs with energy crit-
22 ical element needs, including Federal programs in-
23 volving research and development, in a manner that
24 complements related efforts carried out by the pri-

1 vate sector and other domestic and international
2 agencies and organizations;

3 (4) promote and encourage private enterprise in
4 the development of an economically sound and stable
5 domestic energy critical elements supply chain;

6 (5) promote and encourage the recycling of en-
7 ergy critical elements, taking into account the logis-
8 tics, economic viability, environmental sustainability,
9 and research and development needs for completing
10 the recycling process;

11 (6) assess the need for and make recommenda-
12 tions concerning the availability and adequacy of the
13 supply of technically trained personnel necessary for
14 energy critical elements research, development, ex-
15 traction, and industrial production, with a particular
16 focus on the problem of attracting and maintaining
17 high-quality professionals for maintaining an ade-
18 quate supply of energy critical elements; and

19 (7) report to the appropriate Congressional
20 committees on activities and findings under this sec-
21 tion.

1 **TITLE II—NATIONAL MATERIALS**
2 **AND MINERALS POLICY, RE-**
3 **SEARCH, AND DEVELOPMENT**

4 **SEC. 201. AMENDMENTS TO NATIONAL MATERIALS AND**
5 **MINERALS POLICY, RESEARCH AND DEVEL-**
6 **OPMENT ACT OF 1980.**

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

10 (1) by striking “date of enactment of this Act”
11 each place it appears and inserting “date of enact-
12 ment of the Securing Energy Critical Elements and
13 American Jobs Act of 2015”;

14 (2) in subsection (b)(1), by striking “Federal
15 Coordinating Council for Science, Engineering, and
16 Technology” and inserting “National Science and
17 Technology Council”;

18 (3) in subsection (c)—

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

21 (B) by striking “appropriate shall” and in-
22 serting “appropriate, shall”;

23 (C) by striking paragraph (1);

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

4 (E) by redesignating paragraph (2) as
5 paragraph (1);

6 (F) by redesignating paragraph (3) as
7 paragraph (2); and

8 (G) by amending paragraph (2), as red-
9 igned, to read as follows:

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

14 (4) by striking subsection (d); and

15 (5) by redesignating subsections (e) and (f) as
16 subsections (d) and (e), respectively.

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

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

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

1 (c) IMPLEMENTATION.—The matter before para-
2 graph (1) of section 4 of such Act (30 U.S.C. 1603) is
3 amended—

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

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

10 **SEC. 202. REPEAL.**

11 The National Critical Materials Act of 1984 (30
12 U.S.C. 1801 et seq.) is repealed.

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