

110TH CONGRESS
2D SESSION

S. 3680

To amend the Atomic Energy Act of 1954 to provide for thorium fuel cycle nuclear power generation.

IN THE SENATE OF THE UNITED STATES

OCTOBER 2 (legislative day, SEPTEMBER 17), 2008

Mr. HATCH (for himself and Mr. REID) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

A BILL

To amend the Atomic Energy Act of 1954 to provide for thorium fuel cycle nuclear power generation.

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 “Thorium Energy Inde-
5 pendence and Security Act of 2008”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

8 (1) the United States and foreign countries will
9 require massive and increasing quantities of energy

1 during the 20-year period beginning on the date of
2 enactment of this Act to support economic growth;

3 (2) nuclear power provides energy without gen-
4 erating unacceptable quantities of greenhouse gas-
5 ses;

6 (3) the generation of nuclear power in the
7 United States and many foreign countries has been
8 discouraged by concerns regarding—

9 (A) the proliferation of weapons-useable
10 material; and

11 (B) the proper disposal of spent nuclear
12 fuel;

13 (4) nuclear power plants operating on an ad-
14 vanced thorium fuel cycle to generate nuclear en-
15 ergy—

16 (A) could potentially produce fewer weap-
17 ons-useable materials than uranium-fueled
18 plants; and

19 (B) would produce less long-term waste as
20 compared to other nuclear power plants;

21 (5)(A) thorium is more abundant than ura-
22 nium; and

23 (B) the United States possesses significant do-
24 mestic quantities of thorium to ensure energy inde-
25 pendence;

1 (6)(A) thorium fuel cycle technology was origi-
2 nally developed in the United States; and

3 (B) cutting-edge research relating to thorium
4 fuel cycle technology continues to be carried out by
5 entities in the United States; and

6 (7) it is in the national security and foreign pol-
7 icy interest of the United States that foreign coun-
8 tries seeking to establish or expand generation and
9 use of nuclear power should be provided—

10 (A) access to advanced thorium fuel cycle
11 technology; and

12 (B) incentives to reduce the risk of nuclear
13 proliferation.

14 **SEC. 3. THORIUM FUEL CYCLE NUCLEAR POWER GENERA-**
15 **TION.**

16 Chapter 19 of title I of the Atomic Energy Act of
17 1954 (42 U.S.C. 2015 et seq.) is amended by inserting
18 after section 244 the following:

19 **“SEC. 251. THORIUM FUEL CYCLE NUCLEAR POWER GEN-**
20 **ERATION.**

21 “(a) DEFINITIONS.—In this section:

22 “(1) CHAIRMAN.—The term ‘Chairman’ means
23 the Chairman of the Nuclear Regulatory Commis-
24 sion.

1 “(2) OFFICE.—The term ‘Office’ means an of-
2 fice established under subsection (b)(1).

3 “(3) SECRETARY.—The term ‘Secretary’ means
4 the Secretary of Energy.

5 “(b) OFFICES FOR REGULATION OF THORIUM FUEL
6 CYCLE NUCLEAR POWER GENERATION.—

7 “(1) ESTABLISHMENT.—The Secretary, in con-
8 sultation with the Chairman, shall establish, and
9 provide funds to, an office for the regulation of tho-
10 rium fuel cycle nuclear power generation in each
11 of—

12 “(A) the Office of Nuclear Energy, Science
13 and Technology of the Department of Energy;
14 and

15 “(B) the Nuclear Regulatory Commission.

16 “(2) REGULATIONS.—Not later than December
17 31, 2012, the Chairman, in cooperation with the
18 heads of the Offices, shall promulgate regulations
19 for facilities and materials used in thorium fuel cycle
20 nuclear power generation.

21 “(3) DEMONSTRATION PROJECTS.—The heads
22 of the Offices, in cooperation with the head of the
23 Idaho National Engineering Laboratory, shall carry
24 out demonstration projects for thorium fuel cycle

1 nuclear power generation at the Idaho National En-
2 gineering Laboratory.

3 “(4) INTERNATIONAL PARTNERSHIPS AND IN-
4 CENTIVES.—The heads of the Offices shall provide
5 recommendations to the Secretary with respect to
6 methods of—

7 “(A) strengthening international partner-
8 ships to advance nuclear nonproliferation
9 through the design and deployment of thorium
10 fuel cycle nuclear power generation; and

11 “(B) providing incentives to nuclear reac-
12 tor operators in the United States and foreign
13 countries to use proliferation-resistant, low-
14 waste thorium fuels in lieu of other fuels.

15 “(c) REPORT.—Not later than 1 year after the date
16 of enactment of the Thorium Energy Independence and
17 Security Act of 2008, and annually thereafter, the Sec-
18 retary shall submit to Congress a report describing, with
19 respect to the preceding calendar year—

20 “(1) progress made in implementing this sec-
21 tion; and

22 “(2) activities carried out by the Offices pursu-
23 ant to this section.

24 “(d) AUTHORIZATION OF APPROPRIATIONS.—There
25 are authorized to be appropriated to the Secretary to carry

- 1 out this section \$250,000,000 for the period of fiscal years
- 2 2009 through 2013.”.

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