111TH CONGRESS
2D SESSION

S. 3060

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

IN THE SENATE OF THE UNITED STATES

MARCH 3, 2010

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

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A BILL

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

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Thorium Energy Security Act of 2010''.

SEC. 2. FINDINGS.

Congress finds that—

(1) the United States and foreign countries will continue to demand increasing quantities of energy

into the foreseeable future in order to support economic growth;

(2) nuclear power provides energy without generating significant quantities of greenhouse gases;

(3) the growth of nuclear power in the United States and many foreign countries has faced barriers from concerns related to—

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

(B) the proper disposal of spent nuclear fuel;

(4) nuclear power plants operating on an advanced thorium fuel cycle to generate nuclear energy—

(A) would not produce weapons-useable material in spent fuel; and

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

(5) thorium fuel cycle technology was originally developed and proven in the United States;

(6) the United States possesses significant domestic quantities of thorium in accessible high-grade deposits;

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

(8) it is in the national security and foreign policy interest of the United States that foreign countries seeking to establish or expand generation and use of nuclear power should be provided—

(A) access to advanced thorium fuel cycle technology;

(B) incentives to explore the thorium-based fuel cycle as a means to reduce the risk of nuclear proliferation; and

(C) access to a secure domestic supply of thorium.

SEC. 3. THORIUM FUEL CYCLE NUCLEAR POWER GENERATION.

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

"SEC. 251. THORIUM FUEL CYCLE NUCLEAR POWER GENERATION.

''(a) DEFINITIONS.—In this section:

''(1) CHAIRMAN.—The term 'Chairman' means the Chairman of the Commission.

''(2) DEPARTMENT.—The term 'Department' means the Department of Energy.

''(3) OFFICE.—The term 'Office' means an office established under subsection (b)(1).

''(4) SECRETARY.—The term 'Secretary' means the Secretary of Energy.

''(b) OFFICES FOR RESEARCH AND REGULATION OF THORIUM FUEL CYCLE NUCLEAR POWER GENERATION.—The Secretary, in consultation with the Chairman, shall establish and provide funds to—

''(1) an office for the regulation of thorium fuel cycle nuclear power generation within the Commission; and

''(2) an office of thorium-based fuel cycle research within the Department.

''(c) REGULATIONS.—

''(1) FUEL.—Not later than December 31, 2011, the Chairman, in consultation with industry and nonindustry experts, shall establish standards for the manufacture, testing, use, and management of spent thorium-based nuclear fuel.

''(2) POWER GENERATION.—Not later than December 31, 2012, the Chairman, in cooperation with the Secretary, shall promulgate regulations for facili-

ties and materials used in thorium-based fuel cycle power generation.

''(d) DEMONSTRATION PROJECTS.—

''(1) IN GENERAL.—The Secretary, in consultation with industry experts, nonindustry experts, and National Laboratories, shall carry out demonstration projects for thorium-based nuclear power generation.

''(2) ADMINISTRATION.—In preparing for and selecting demonstration projects, the Secretary shall consult with reactor designers, utilities, engineering, and manufacturing firms to—

''(A) determine the optimum use of thorium in different reactor types;

''(B) prioritize thorium-based fuel cycle options that take advantage of existing nuclear power infrastructure and could be deployed in support of light water reactors like reactors used in the United States in the near term;

''(C) license the manufacture of thorium-based fuels;

''(D) qualify and license thorium-based fuel for use in commercial reactors; and

''(E) develop and maintain databases necessary for United States industry and regulators to safely license and use advanced fuels.

''(e) INTERNATIONAL PARTNERSHIPS AND INCENTIVES.—Not later than December 31, 2011, the Secretary shall submit to Congress a report providing recommendations with respect to methods of—

''(1) strengthening international partnerships to advance nuclear nonproliferation through the design and deployment of thorium fuel cycle nuclear power generation; and

''(2) providing incentives to nuclear reactor operators to use proliferation-resistant, low-waste thorium fuels in lieu of other fuels.

''(f) REPORT.—Not later than 1 year after the date of enactment of this section and annually thereafter, the Secretary, in consultation with the Chairman, shall submit to Congress a report describing, with respect to the preceding calendar year—

''(1) progress made in implementing this section; and

''(2) activities carried out by the Department and Commission pursuant to this section.

''(g) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out this section $250,000,000 for the period of fiscal years 2011 through 2016.''.

(b) TECHNICAL AMENDMENT.—Section 11 f. of the Atomic Energy Act of 1954 (42 U.S.C. 2014(f)) is amended by striking ''Atomic Energy Commission'' and inserting ''Nuclear Regulatory Commission''.

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