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111TH CONGRESS
1ST SESSION

H. R. 1534

To direct the Secretary of Defense and the Chairman of the Joint Chiefs of Staff to jointly carry out a study on the use of thorium-liquid fueled nuclear reactors for naval power needs, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MARCH 16, 2009

Mr. SESTAK introduced the following bill; which was referred to the Committee on Armed Services

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A BILL

To direct the Secretary of Defense and the Chairman of the Joint Chiefs of Staff to jointly carry out a study on the use of thorium-liquid fueled nuclear reactors for naval power needs, and for other purposes.

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

SECTION 1. STUDY ON THORIUM-LIQUID FUELED REACTORS FOR NAVAL FORCES.

(a) STUDY REQUIRED.—The Secretary of Defense and the Chairman of the Joint Chiefs of Staff shall jointly carry out a study on the use of thorium-liquid fueled nuclear reactors for naval power needs pursuant to section

1012, of the National Defense Authorization Act for Fiscal Year 2008 (Public Law 110–181; 122 Stat. 303).

(b) CONTENTS OF STUDY.—In carrying out the study required under subsection (a), the Secretary of Defense and the Chairman of the Joint Chiefs of Staff shall, with respect to naval power requirements for the Navy strike and amphibious force—

(1) compare and contrast thorium-liquid fueled reactor concept to the 2005 Quick Look, 2006 Navy Alternative Propulsion Study, and the Navy CG(X) Analysis of Alternatives study;

(2) identify the benefits to naval operations which thorium-liquid fueled nuclear reactors or uranium reactors would provide to major surface combatants compared to conventionally fueled ships, including such benefits with respect to—

(A) fuel cycle, from mining to waste disposal;

(B) security of fuel supply;

(C) power needs for advanced weapons and sensors;

(D) safety of operation, waste handling and disposal, and proliferation issues compared to uranium reactors;

(E) no requirement to refuel and reduced logistics;

(F) ship upgrades and retrofitting;

(G) reduced manning;

(H) global range at flank speed, greater forward presence, and extended combat operations;

(I) power for advanced sensors and weapons, including electromagnetic guns and lasers;

(J) survivability due to increased performance and reduced signatures;

(K) high power density propulsion;

(L) operational tempo;

(M) operational effectiveness; and

(N) estimated cost-effectiveness; and

(3) conduct a ROM cost-effectiveness comparison of nuclear reactors in use by the Navy as of the date of the enactment of this Act, thorium-liquid fueled reactors, and conventional fueled major surface combatants, which shall include a comparison of—

(A) security, safety, and infrastructure costs of fuel supplies;

(B) nuclear proliferation issues;

(C) reactor safety;

(D) nuclear fuel safety, waste handling, and storage;

(E) power requirements and distribution for sensors, weapons, and propulsion; and

(F) capabilities to fully execute the Navy Maritime Strategic Concept.

(c) REPORT.—Not later than February 1, 2011, the Secretary of Defense and the Chairman of the Joint Chiefs of Staff shall jointly submit to the congressional defense committees a report on the results of the study required under subsection (a).

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