"Lean" Energy Bill Introduced February 11, 2004

IN THE SENATE OF THE UNITED STATES

 introducered the following bill; which was read twice and referred to the Committee on

A BILL

To enhance energy conservation and research and development and to provide for security and diversity in the energy supply for the American people.

Be it enacted by the Senate and House of Representa-

tives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) Short Title.—This Act may be cited as the “Energy Policy Act of 2003”.

(b) Table of Contents.—The table of contents for this Act is as follows:

TITLE I—ENERGY EFFICIENCY

Subtitle A—Federal Programs

Sec. 102. Energy management requirements.
(4) 5 percent shall be for research under section 941(d).

(d) FUND.—There is hereby established in the Treasury of the United States a separate fund to be known as the “Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Research Fund”.

Subtitle F—Science

SEC. 951. SCIENCE.

(a) IN GENERAL.—The following sums are authorized to be appropriated to the Secretary for research, development, demonstration, and commercial application activities of the Office of Science, including activities authorized under this subtitle, including the amounts authorized under the amendment made by section 958(c)(2)(C), and including basic energy sciences, advanced scientific computing research, biological and environmental research, fusion energy sciences, high energy physics, nuclear physics, and research analysis and infrastructure support:

(1) For fiscal year 2004, $3,785,000,000.
(2) For fiscal year 2005, $4,153,000,000.
(3) For fiscal year 2006, $4,618,000,000.
(4) For fiscal year 2007, $5,310,000,000.
(5) For fiscal year 2008, $5,800,000,000.

(b) ALLOCATIONS.—From amounts authorized under subsection (a), the following sums are authorized:
(1) For activities of the Fusion Energy Sciences Program, including activities under sections 952 and 953—

(A) for fiscal year 2004, $335,000,000;
(B) for fiscal year 2005, $349,000,000;
(C) for fiscal year 2006, $362,000,000;
(D) for fiscal year 2007, $377,000,000;
and
(E) for fiscal year 2008, $393,000,000.

(2) For the Spallation Neutron Source—

(A) for construction in fiscal year 2004, $124,600,000;
(B) for construction in fiscal year 2005, $79,800,000;
(C) for completion of construction in fiscal year 2006, $41,100,000; and
(D) for other project costs (including research and development necessary to complete the project, preoperations costs, and capital equipment related to construction), $103,279,000 for the period encompassing fiscal years 2003 through 2006, to remain available until expended through September 30, 2006.
(3) For Catalysis Research activities under section 956—

(A) for fiscal year 2004, $33,000,000;
(B) for fiscal year 2005, $35,000,000;
(C) for fiscal year 2006, $36,500,000;
(D) for fiscal year 2007, $38,200,000; and
(E) for fiscal year 2008, $40,100,000.

(4) For Nanoscale Science and Engineering Research activities under section 957—

(A) for fiscal year 2004, $270,000,000;
(B) for fiscal year 2005, $292,000,000;
(C) for fiscal year 2006, $322,000,000;
(D) for fiscal year 2007, $355,000,000;
and
(E) for fiscal year 2008, $390,000,000.

(5) For activities under section 957(c), from the amounts authorized under paragraph (4) of this subsection—

(A) for fiscal year 2004, $135,000,000;
(B) for fiscal year 2005, $150,000,000;
(C) for fiscal year 2006, $120,000,000;
(D) for fiscal year 2007, $100,000,000;
and
(E) for fiscal year 2008, $125,000,000.
(6) For activities in the Genomes to Life Program under section 959—

(A) for fiscal year 2004, $100,000,000;

and

(B) for fiscal years 2005 through 2008, such sums as may be necessary.

(7) For activities in the Energy-Water Supply Program under section 961, $30,000,000 for each of fiscal years 2004 through 2008.

(c) ITER Construction.—In addition to the funds authorized under subsection (b)(1), such sums as may be necessary for costs associated with ITER construction, consistent with limitations under section 952.

SEC. 952. UNITED STATES PARTICIPATION IN ITER.

(a) In General.—The United States may participate in ITER in accordance with the provisions of this section.

(b) Agreement.—

(1) In General.—The Secretary is authorized to negotiate an agreement for United States participation in ITER.

(2) Contents.—Any agreement for United States participation in ITER shall, at a minimum—
(A) clearly define the United States financial contribution to construction and operating costs;

(B) ensure that the share of ITER’s high-technology components manufactured in the United States is at least proportionate to the United States financial contribution to ITER;

(C) ensure that the United States will not be financially responsible for cost overruns in components manufactured in other ITER participating countries;

(D) guarantee the United States full access to all data generated by ITER;

(E) enable United States researchers to propose and carry out an equitable share of the experiments at ITER;

(F) provide the United States with a role in all collective decisionmaking related to ITER; and

(G) describe the process for discontinuing or decommissioning ITER and any United States role in those processes.

(e) PLAN.—The Secretary, in consultation with the Fusion Energy Sciences Advisory Committee, shall develop a plan for the participation of United States sci-
entists in ITER that shall include the United States research agenda for ITER, methods to evaluate whether ITER is promoting progress toward making fusion a reliable and affordable source of power, and a description of how work at ITER will relate to other elements of the United States fusion program. The Secretary shall request a review of the plan by the National Academy of Sciences.

(d) LIMITATION.—No funds shall be expended for the construction of ITER until the Secretary has transmitted to Congress—

(1) the agreement negotiated pursuant to subsection (b) and 120 days have elapsed since that transmission;

(2) a report describing the management structure of ITER and providing a fixed dollar estimate of the cost of United States participation in the construction of ITER, and 120 days have elapsed since that transmission;

(3) a report describing how United States participation in ITER will be funded without reducing funding for other programs in the Office of Science, including other fusion programs, and 60 days have elapsed since that transmission; and

(4) the plan required by subsection (c) (but not the National Academy of Sciences review of that
plan), and 60 days have elapsed since that trans-
mission.

e) ALTERNATIVE TO ITER.—If at any time during
the negotiations on ITER, the Secretary determines that
construction and operation of ITER is unlikely or infeasi-
ble, the Secretary shall send to Congress, as part of the
budget request for the following year, a plan for imple-
menting the domestic burning plasma experiment known
as FIRE, including costs and schedules for such a plan.
The Secretary shall refine such plan in full consultation
with the Fusion Energy Sciences Advisory Committee and
shall also transmit such plan to the National Academy of
Sciences for review.

(f) DEFINITIONS.—In this section and sections
951(b)(1) and (e):

(1) CONSTRUCTION.—The term “construction”
means the physical construction of the ITER facil-
ity, and the physical construction, purchase, or manu-
facture of equipment or components that are spe-
cifically designed for the ITER facility, but does not
mean the design of the facility, equipment, or com-
ponents.

(2) FIRE.—The term “FIRE” means the Fu-
sion Ignition Research Experiment, the fusion re-
search experiment for which design work has been
supported by the Department as a possible alternative burning plasma experiment in the event that ITER fails to move forward.

(3) ITER.—The term “ITER” means the international burning plasma fusion research project in which the President announced United States participation on January 30, 2003.

SEC. 953. PLAN FOR FUSION ENERGY SCIENCES PROGRAM.

(a) DECLARATION OF POLICY.—It shall be the policy of the United States to conduct research, development, demonstration, and commercial application to provide for the scientific, engineering, and commercial infrastructure necessary to ensure that the United States is competitive with other nations in providing fusion energy for its own needs and the needs of other nations, including by demonstrating electric power or hydrogen production for the United States energy grid utilizing fusion energy at the earliest date possible.

(b) PLANNING.—

(1) IN GENERAL.—Not later than 180 days after the date of enactment of this Act, the Secretary shall present to Congress a plan, with proposed cost estimates, budgets, and potential international partners, for the implementation of the pol-
icy described in subsection (a). The plan shall ensure that—

(A) existing fusion research facilities are more fully utilized;

(B) fusion science, technology, theory, advanced computation, modeling, and simulation are strengthened;

(C) new magnetic and inertial fusion research facilities are selected based on scientific innovation, cost effectiveness, and their potential to advance the goal of practical fusion energy at the earliest date possible, and those that are selected are funded at a cost-effective rate;

(D) communication of scientific results and methods between the fusion energy science community and the broader scientific and technology communities is improved;

(E) inertial confinement fusion facilities are utilized to the extent practicable for the purpose of inertial fusion energy research and development; and

(F) attractive alternative inertial and magnetic fusion energy approaches are more fully explored.
(2) Costs and Schedules.—Such plan shall also address the status of and, to the degree possible, costs and schedules for—

(A) in coordination with the program under section 960, the design and implementation of international or national facilities for the testing of fusion materials; and

(B) the design and implementation of international or national facilities for the testing and development of key fusion technologies.

SEC. 954. SPALLATION NEUTRON SOURCE.

(a) Definition.—For the purposes of this section, the term “Spallation Neutron Source” means Department Project 99–E–334, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

(b) Report.—The Secretary shall report on the Spallation Neutron Source as part of the Department’s annual budget submission, including a description of the achievement of milestones, a comparison of actual costs to estimated costs, and any changes in estimated project costs or schedule.

(c) Limitations.—The total amount obligated by the Department, including prior year appropriations, for the Spallation Neutron Source shall not exceed—

(1) $1,192,700,000 for costs of construction;