

108TH CONGRESS
2D SESSION

S. 2095

"Lean" Energy Bill Introduced February 11, 2004

IN THE SENATE OF THE UNITED STATES

_____ introduced 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.

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; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the
5 “Energy Policy Act of 2003”.

6 (b) TABLE OF CONTENTS.—The table of contents for
7 this Act is as follows:

TITLE I—ENERGY EFFICIENCY

 Subtitle A—Federal Programs

Sec. 101. Energy and water saving measures in congressional buildings.
Sec. 102. Energy management requirements.

Only Fusion section included out of 1200 page bill

1 (4) 5 percent shall be for research under section
2 941(d).

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

7 **Subtitle F—Science**

8 **SEC. 951. SCIENCE.**

9 (a) IN GENERAL.—The following sums are author-
10 ized to be appropriated to the Secretary for research, de-
11 velopment, demonstration, and commercial application ac-
12 tivities of the Office of Science, including activities author-
13 ized under this subtitle, including the amounts authorized
14 under the amendment made by section 958(c)(2)(C), and
15 including basic energy sciences, advanced scientific com-
16 puting research, biological and environmental research, fu-
17 sion energy sciences, high energy physics, nuclear physics,
18 and research analysis and infrastructure support:

- 19 (1) For fiscal year 2004, \$3,785,000,000.
20 (2) For fiscal year 2005, \$4,153,000,000.
21 (3) For fiscal year 2006, \$4,618,000,000.
22 (4) For fiscal year 2007, \$5,310,000,000.
23 (5) For fiscal year 2008, \$5,800,000,000.

24 (b) ALLOCATIONS.—From amounts authorized under
25 subsection (a), the following sums are authorized:

1 (1) For activities of the Fusion Energy Sciences
2 Program, including activities under sections 952 and
3 953—

- 4 (A) for fiscal year 2004, \$335,000,000;
5 (B) for fiscal year 2005, \$349,000,000;
6 (C) for fiscal year 2006, \$362,000,000;
7 (D) for fiscal year 2007, \$377,000,000;

8 and

- 9 (E) for fiscal year 2008, \$393,000,000.

10 (2) For the Spallation Neutron Source—

11 (A) for construction in fiscal year 2004,
12 \$124,600,000;

13 (B) for construction in fiscal year 2005,
14 \$79,800,000;

15 (C) for completion of construction in fiscal
16 year 2006, \$41,100,000; and

17 (D) for other project costs (including re-
18 search and development necessary to complete
19 the project, preoperations costs, and capital
20 equipment related to construction),
21 \$103,279,000 for the period encompassing fis-
22 cal years 2003 through 2006, to remain avail-
23 able until expended through September 30,
24 2006.

1 (3) For Catalysis Research activities under sec-
2 tion 956—

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

8 (4) For Nanoscale Science and Engineering Re-
9 search activities under section 957—

- 10 (A) for fiscal year 2004, \$270,000,000;
11 (B) for fiscal year 2005, \$292,000,000;
12 (C) for fiscal year 2006, \$322,000,000;
13 (D) for fiscal year 2007, \$355,000,000;
14 and
15 (E) for fiscal year 2008, \$390,000,000.

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

- 19 (A) for fiscal year 2004, \$135,000,000;
20 (B) for fiscal year 2005, \$150,000,000;
21 (C) for fiscal year 2006, \$120,000,000;
22 (D) for fiscal year 2007, \$100,000,000;
23 and
24 (E) for fiscal year 2008, \$125,000,000.

1 (6) For activities in the Genomes to Life Pro-
2 gram under section 959—

3 (A) for fiscal year 2004, \$100,000,000;
4 and

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

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

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

14 **SEC. 952. UNITED STATES PARTICIPATION IN ITER.**

15 (a) IN GENERAL.—The United States may partici-
16 pate in ITER in accordance with the provisions of this
17 section.

18 (b) AGREEMENT.—

19 (1) IN GENERAL.—The Secretary is authorized
20 to negotiate an agreement for United States partici-
21 pation in ITER.

22 (2) CONTENTS.—Any agreement for United
23 States participation in ITER shall, at a minimum—

1 (A) clearly define the United States financial
2 contribution to construction and operating
3 costs;

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

8 (C) ensure that the United States will not
9 be financially responsible for cost overruns in
10 components manufactured in other ITER par-
11 ticipating countries;

12 (D) guarantee the United States full ac-
13 cess to all data generated by ITER;

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

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

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

23 (c) PLAN.—The Secretary, in consultation with the
24 Fusion Energy Sciences Advisory Committee, shall de-
25 velop a plan for the participation of United States sci-

1 entists in ITER that shall include the United States re-
2 search agenda for ITER, methods to evaluate whether
3 ITER is promoting progress toward making fusion a reli-
4 able and affordable source of power, and a description of
5 how work at ITER will relate to other elements of the
6 United States fusion program. The Secretary shall request
7 a review of the plan by the National Academy of Sciences.

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

11 (1) the agreement negotiated pursuant to sub-
12 section (b) and 120 days have elapsed since that
13 transmission;

14 (2) a report describing the management struc-
15 ture of ITER and providing a fixed dollar estimate
16 of the cost of United States participation in the con-
17 struction of ITER, and 120 days have elapsed since
18 that transmission;

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

24 (4) the plan required by subsection (c) (but not
25 the National Academy of Sciences review of that

1 plan), and 60 days have elapsed since that trans-
2 mission.

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

14 (f) DEFINITIONS.—In this section and sections
15 951(b)(1) and (c):

16 (1) CONSTRUCTION.—The term “construction”
17 means the physical construction of the ITER facil-
18 ity, and the physical construction, purchase, or man-
19 ufacture of equipment or components that are spe-
20 cifically designed for the ITER facility, but does not
21 mean the design of the facility, equipment, or com-
22 ponents.

23 (2) FIRE.—The term “FIRE” means the Fu-
24 sion Ignition Research Experiment, the fusion re-
25 search experiment for which design work has been

1 supported by the Department as a possible alter-
2 native burning plasma experiment in the event that
3 ITER fails to move forward.

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

8 **SEC. 953. PLAN FOR FUSION ENERGY SCIENCES PROGRAM.**

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

19 (b) PLANNING.—

20 (1) IN GENERAL.—Not later than 180 days
21 after the date of enactment of this Act, the Sec-
22 retary shall present to Congress a plan, with pro-
23 posed cost estimates, budgets, and potential inter-
24 national partners, for the implementation of the pol-

1 icy described in subsection (a). The plan shall ensure
2 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;

14 (D) communication of scientific results and
15 methods between the fusion energy science com-
16 munity and the broader scientific and tech-
17 nology communities is improved;

(F) attractive alternative inertial and magnetic fusion energy approaches are more fully explored.

1 (2) COSTS AND SCHEDULES.—Such plan shall
2 also address the status of and, to the degree pos-
3 sible, costs and schedules for—

4 (A) in coordination with the program
5 under section 960, the design and implementa-
6 tion of international or national facilities for the
7 testing of fusion materials; and

8 (B) the design and implementation of
9 international or national facilities for the test-
10 ing and development of key fusion technologies.

11 **SEC. 954. SPALLATION NEUTRON SOURCE.**

12 (a) DEFINITION.—For the purposes of this section,
13 the term “Spallation Neutron Source” means Department
14 Project 99-E-334, Oak Ridge National Laboratory, Oak
15 Ridge, Tennessee.

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

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

25 (1) \$1,192,700,000 for costs of construction;