

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**



9-78

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           (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 finan-  
2 cial 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 infeasible,  
6 the Secretary shall send to Congress, as part of the  
7 budget request for the following year, a plan for implementing  
8 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 facility,  
18 and the physical construction, purchase, or manufacture  
19 of equipment or components that are specifically designed  
20 for the ITER facility, but does not mean the design of the  
21 facility, equipment, or components.  
22

23 (2) FIRE.—The term “FIRE” means the Fusion  
24 Ignition Research Experiment, the fusion research  
25 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         icity described in subsection (a). The plan shall ensure  
2         that—

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

5                    (B) fusion science, technology, theory, ad-  
6                    vanced computation, modeling, and simulation  
7                    are strengthened;

8                    (C) new magnetic and inertial fusion re-  
9                    search facilities are selected based on scientific  
10                    innovation, cost effectiveness, and their poten-  
11                    tial to advance the goal of practical fusion en-  
12                    ergy at the earliest date possible, and those that  
13                    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;

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

22                    (F) attractive alternative inertial and mag-  
23                    netic fusion energy approaches are more fully  
24                    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;