

108TH CONGRESS
1ST SESSION

H. R. 1282

To authorize the Secretary of Energy to cooperate in the international magnetic fusion burning plasma experiment, or alternatively to develop a plan for a domestic burning plasma experiment, for the purpose of accelerating the scientific understanding and development of fusion as a long term energy source.

IN THE HOUSE OF REPRESENTATIVES

MARCH 13, 2003

Ms. LOFGREN (for herself, Mr. NETHERCUTT, Mr. HOLT, Mr. CUNNINGHAM, Mr. ISSA, Ms. LEE, Mrs. TAUSCHER, Mr. HALL, Mr. McGOVERN, Mr. MATSUI, Mr. BERMAN, Mrs. CAPPES, Mr. SCHIFF, Mr. PASCRELL, Mr. EHLERS, Mr. CAPUANO, Mr. LAMPSON, Mr. OLVER, Mr. HONDA, Mrs. DAVIS of California, Mr. CALVERT, Mr. FRANK of Massachusetts, Mr. FILNER, Mr. STARK, Mr. EDWARDS, Mr. GREEN of Texas, Mrs. BONO, Mr. MARKEY, and Mr. LYNCH) introduced the following bill; which was referred to the Committee on Science

A BILL

To authorize the Secretary of Energy to cooperate in the international magnetic fusion burning plasma experiment, or alternatively to develop a plan for a domestic burning plasma experiment, for the purpose of accelerating the scientific understanding and development of fusion as a long term energy source.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

1 SECTION 1. SHORT TITLE.

2 This Act may be cited as the “Fueling the U.S.A.
3 Through Unlimited Reliable Energy (FUTURE) Act of
4 2003”.

5 SEC. 2. FINDINGS.

6 Congress finds the following:

7 (1) Economic prosperity is closely linked to an
8 affordable and ample energy supply.

9 (2) Environmental quality is closely linked to
10 energy production and use.

11 (3) Population, worldwide economic development,
12 energy consumption, and stress on the environment
13 are all expected to increase substantially in
14 the coming decades.

15 (4) The few energy options with the potential to
16 meet economic and environmental needs for the
17 long-term future should be pursued aggressively
18 now, as part of a balanced national energy plan.

19 (5) Fusion energy is an attractive long-term energy
20 source due to a virtually inexhaustible supply of
21 fuel available to all nations, its potential as a large
22 base-load electric and hydrogen energy source re-
23 quiring relatively little land mass, and its inherent
24 safety and promise of minimal environmental im-
25 pact.

1 (9) The United States scientific community has
2 also developed a corresponding consensus that the
3 eventual success of fusion power will require, concur-
4 rent with a burning plasma experiment, strength-
5 ened effort in fundamental fusion science, develop-
6 ment of advanced technology, and innovation and
7 optimization of configurations for an eventual fusion
8 demonstration facility.

15 SEC. 3. PLAN FOR FUSION EXPERIMENT.

16 (a) IN GENERAL.—

1 ation of the ITER project is unlikely or infeasible,
2 the Secretary shall send to Congress, as part of the
3 budget request for the following year, a plan for im-
4 plementing the domestic burning plasma experiment
5 known as FIRE, including costs and schedules for
6 such a plan. The Secretary shall refine such plan in
7 full consultation with the Fusion Energy Sciences
8 Advisory Committee and shall also transmit such
9 plan to the National Research Council for review.

10 (b) UNITED STATES POLICY WITH RESPECT TO FU-
11 SION ENERGY SCIENCE.—

12 (1) DECLARATION OF POLICY.—It shall be the
13 policy of the United States to develop the scientific,
14 engineering, and commercial infrastructure nec-
15 essary to ensure that the United States is competi-
16 tive with other nations in providing fusion energy for
17 its own needs and the needs of other nations, includ-
18 ing, by demonstrating electric power or hydrogen
19 production for the United States energy grid uti-
20 lizing fusion energy at the earliest date possible.

21 (2) FUSION ENERGY PLAN.—Within 6 months
22 of the date of enactment of this act, the Secretary
23 shall transmit to Congress a plan for carrying out
24 the policy set forth in paragraph (1), including cost
25 estimates, proposed budgets, potential international

1 partners, and specific programs for implementing
2 such policy.

5 (i) existing fusion research facilities
6 are more fully utilized;

7 (ii) fusion science, technology, theory,
8 advanced computation, modeling, and sim-
9 ulation are strengthened;

10 (iii) new magnetic and inertial fusion
11 research facilities are selected based on sci-
12 entific innovation, cost effectiveness, and
13 their potential to advance the goal of prac-
14 tical fusion energy at the earliest date pos-
15 sible;

16 (iv) such facilities that are selected
17 are funded at a cost-effective rate;

18 (v) communication of scientific results
19 and methods between the fusion energy
20 science community and the broader sci-
21 entific and technology communities is im-
22 proved;

23 (vi) inertial confinement fusion facil-
24 ties are utilized to the extent practicable

1 for the purpose of inertial fusion energy re-
2 search and development; and

3 (vii) attractive alternative inertial and
4 magnetic fusion energy approaches are
5 more fully explored.

6 (B) REPORT ON FUSION MATERIALS AND
7 TECHNOLOGY PROJECT.—In addition, the plan
8 required by this section shall also address the
9 status of, and to the degree possible, the costs
10 and schedules for—

11 (i) the design and implementation of
12 international or national facilities for the
13 testing of fusion materials; and

14 (ii) the design and implementation of
15 international or national facilities for the
16 testing and development of key fusion tech-
17 nologies.

18 **SEC. 4. DEFINITIONS.**

19 As used in this Act, the following definitions apply:

20 (1) The term “ITER” refers to the inter-
21 national fusion research project whose design is
22 complete and whose location and financing is cur-
23 rently being negotiated between Japan, Europe, the
24 Russian Federation, Canada, China, and the United
25 States.

1 (2) The term “FIRE”, refers to the Fusion Ig-
2 nition Research Experiment, the fusion research ex-
3 periment for which design work has been supported
4 by the Department of Energy in the as a possible al-
5 ternative burning plasma experiment in the event
6 that the ITER project fails to move forward.

7 SEC. 5. AUTHORIZATION OF APPROPRIATIONS.

8 There are authorized to be appropriated—

- 12 (A) \$12,000,000 for fiscal year 2004;
- 13 (B) \$20,000,000 for fiscal year 2005;
- 14 (C) \$50,000,000 for fiscal year 2006;
- 15 (D) \$75,000,000 for fiscal year 2007; and
- 16 (E) \$115,000,000 for fiscal year 2008; and

17 (2) for the Fusion Energy Sciences Program in
18 addition to the sums under paragraph (1) of this
19 section—

20 (A) \$335,000,000 for fiscal year 2004;
21 (B) \$349,000,000 for fiscal year 2005;
22 (C) \$362,000,000 for fiscal year 2006;
23 (D) \$377,000,000 for fiscal year 2007;
24 and

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

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