

103D CONGRESS
1ST SESSION

S. 646

AN ACT

To establish within the Department of Energy an international fusion energy program, and for other purposes.

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To establish within the Department of Energy an international fusion energy program, and for other purposes.

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.**

4 This Act may be cited as the “International Fusion
5 Energy Act of 1993”.

1 **SEC. 2. FINDINGS, PURPOSES AND DEFINITIONS.**

2 (a) FINDINGS.—Congress finds that—

3 (1) fusion energy has the potential to be a safe,
4 environmentally attractive, secure and economically
5 affordable source of energy;

6 (2) the United States Department of Energy's
7 magnetic fusion energy program has made signifi-
8 cant progress toward realizing fusion as a viable
9 source of energy;

10 (3) other industrial nations have also invested
11 in significant magnetic fusion energy programs;

12 (4) an integrated program of international col-
13 laboration will be necessary for continued progress
14 to demonstrate the scientific and technological fea-
15 sibility of magnetic fusion energy;

16 (5) there is international agreement to proceed
17 with the engineering and design of the International
18 Thermonuclear Experimental Reactor to prove the
19 scientific and technical feasibility of fusion energy
20 and to lead to a demonstration reactor;

21 (6) the United States should focus the Depart-
22 ment of Energy's magnetic fusion energy program
23 on elements furthering the design, construction and
24 operation of the International Thermonuclear Exper-
25 imental Reactor and a fusion demonstration reactor,

1 including the operation of the Tokamak Physics
2 Experiment;

3 (7) the continuation of an aggressive fusion en-
4 ergy program requires the Department of Energy,
5 industry, utilities, and the international fusion com-
6 munity to commit to the International Thermo-
7 nuclear Experimental Reactor as soon as practicable;
8 and

9 (8) an effective United States fusion energy
10 program requires substantial involvement by indus-
11 try and utilities in the design, construction, and op-
12 eration of fusion facilities.

13 (b) PURPOSES.—The purposes of this Act are to—

14 (1) redirect and refocus the Department’s mag-
15 netic fusion energy program in a way that will lead
16 to the design, construction and operation of the
17 International Thermonuclear Experimental Reactor
18 by 2005, in cooperation with other countries, and
19 operation of a fusion demonstration reactor by 2025;

20 (2) develop a plan identifying the budget, criti-
21 cal path, milestones and schedules for the Inter-
22 national Thermonuclear Experimental Reactor;

23 (3) limit the Department of Energy’s magnetic
24 fusion energy program to elements that support the
25 development of the International Thermonuclear Ex-

1 perimental Reactor or a fusion demonstration reac-
2 tor, including the Tokamak Physics Experiment to
3 be built at the Princeton Plasma Physics Labora-
4 tory; and

5 (4) select a candidate host site within the Unit-
6 ed States for the International Thermonuclear Ex-
7 perimental Reactor and to identify the steps nec-
8 essary to lead to the selection of the final host site
9 by the international community.

10 (c) DEFINITIONS.—

11 (1) “Department” means the United States De-
12 partment of Energy;

13 (2) “ITER” means the International Thermo-
14 nuclear Experimental Reactor; and

15 (3) “Secretary” means the Secretary of the
16 United States Department of Energy.

17 **SEC. 3. INTERNATIONAL FUSION ENERGY PROGRAM.**

18 (a)(1) OFFICE OF THE FUSION NEGOTIATOR.—(A)
19 There is established the Office of the International Fusion
20 Negotiator that shall be an independent establishment in
21 the executive branch.

22 (B) The Office shall be headed by an International
23 Fusion Negotiator who shall be appointed by the Presi-
24 dent, by and with the advice and consent of the Senate.
25 The Negotiator shall hold office at the pleasure of the

1 President, and shall be compensated at the rate provided
2 for level III of the Executive Schedule in section 5314 of
3 title 5, United States Code.

4 (C) The Negotiator, in consultation with the Sec-
5 retary and the Secretary of State, shall represent the
6 United States in negotiations with other countries relating
7 to the design, construction or operation of the Inter-
8 national Thermonuclear Experimental Reactor.

9 (2) PROGRAM.—The Secretary shall redirect and
10 refocus the Department’s magnetic fusion program in a
11 way that will lead to the design, construction and oper-
12 ation of ITER by 2005 and operation of a fusion dem-
13 onstration reactor by 2025. The Department’s magnetic
14 fusion program shall be referred to as the program and
15 shall be carried out in cooperation with the international
16 community.

17 (b) REQUIREMENTS.—In developing the program, the
18 Secretary shall—

19 (1) establish as the main focus of the Depart-
20 ment’s magnetic fusion energy program the develop-
21 ment of ITER;

22 (2) provide for the development of fusion mate-
23 rials and other reactor components to the extent
24 necessary for the development of a fusion dem-
25 onstration reactor;

1 (3) eliminate those components of the magnetic
2 fusion energy program not contributing directly to
3 development of ITER or to the development of a fu-
4 sion demonstration reactor;

5 (4) select a candidate host site within the Unit-
6 ed States for the International Thermonuclear Ex-
7 perimental Reactor;

8 (5) provide support, as requested, to the Inter-
9 national Fusion Negotiator in negotiating with other
10 countries involved in ITER to select a final host site
11 for ITER and to agree to construct ITER as soon
12 as practicable;

13 (6) provide for substantial United States indus-
14 try and utility involvement in the design, construc-
15 tion and operation of ITER to ensure United States
16 industry and utility expertise in the technologies de-
17 veloped; and

18 (7) provide for reducing the level of effort in
19 the program to the levels prescribed in section
20 4(b)(2) in the event the program is terminated in
21 accordance with subsection (g).

22 (c) MANAGEMENT PLAN.—(1) Within one hundred
23 eighty days of the date of enactment of this Act, the Sec-
24 retary shall prepare, in consultation with the International
25 Fusion Negotiator, and implement a management plan for

1 the program. The plan shall be revised and updated bian-
2 nually.

3 (2) The plan shall—

4 (A) establish the goals of the program;

5 (B) describe how each component of the De-
6 partment's program contributes directly to the devel-
7 opment of ITER or development of a fusion dem-
8 onstration reactor;

9 (C) set priorities for the elements of the De-
10 partment's program, identifying those elements that
11 contribute directly to the development of ITER or to
12 the development of a fusion demonstration reactor;

13 (D) provide for the elimination of those ele-
14 ments of the magnetic fusion energy program not
15 contributing directly to the development of ITER, or
16 to the development of fusion materials or other reac-
17 tor components that are necessary for the develop-
18 ment of a fusion demonstration reactor;

19 (E) describe the selection process for a pro-
20 posed host site within the United States for ITER;

21 (F) establish the necessary steps that will lead
22 to the final selection of the host site for ITER by
23 the countries involved in the program by the end of
24 1996.

1 (G) establish the necessary steps that will lead
2 to the design, construction and operation of ITER
3 by 2005 and operation of a fusion demonstration re-
4 actor by 2025;

5 (H) establish a schedule and critical path, in-
6 cluding milestones, and a budget that will allow for
7 the design, construction and operation of ITER by
8 2005 and operation of a demonstration fusion reac-
9 tor by 2025;

10 (I) provide mechanisms for ensuring substantial
11 industry and utility involvement in the design, con-
12 struction and operation of ITER;

13 (J) set forth any recommendations of the Sec-
14 retary on—

15 (i) the need for additional legislation re-
16 garding the program; or

17 (ii) the possibility and desirability of ac-
18 celerating the design and construction of ITER
19 or the development of a fusion demonstration
20 reactor; and

21 (K) provide for reducing the level of effort in
22 magnetic fusion to the levels prescribed in section
23 4(b)(2) in the event the program is terminated in
24 accordance with subsection (g).

1 (d) INTERNATIONAL AGREEMENTS.—(1) The Inter-
2 national Fusion Negotiator may negotiate or enter into
3 agreements with any country governing the design, con-
4 struction and operation of ITER or facilities related to
5 ITER.

6 (2) The International Fusion Negotiator shall seek
7 to enter into agreements with other countries to share in
8 the cost of the facilities and components of the program
9 that contribute to the design, construction or operation of
10 ITER or to the development of a fusion demonstration re-
11 actor.

12 (e) REPORT ON ITER NEGOTIATIONS.—The Inter-
13 national Fusion Negotiator shall submit an annual report
14 to the Congress on the status of negotiations with other
15 countries regarding ITER. The report shall—

16 (1) identify the issues to be negotiated with
17 other countries involved in the program;

18 (2) identify impediments to reaching agreement
19 on a host site for ITER, or on issues related to the
20 construction or operation of ITER;

21 (3) identify the steps needed to reach agree-
22 ment on a host site for ITER or on issues related
23 to the construction or operation of ITER;

1 (4) establish the timetable for agreement relat-
2 ed to the siting, operation and construction of
3 ITER; and

4 (5) assess the likelihood of reaching agreement
5 on a host site for ITER and on issues related to the
6 construction or operation of ITER.

7 (f) CERTIFICATION.—Prior to seeking funds for con-
8 struction of ITER, the Secretary, after consultation with
9 the International Fusion Negotiator, shall certify to the
10 Congress that there is agreement in place or there is a
11 substantial likelihood agreement will be reached with the
12 countries involved in ITER on the siting, construction and
13 operation of ITER.

14 (g) TERMINATION.—(1) The Secretary shall report to
15 Congress if the Secretary determines that—

16 (A) ITER is no longer essential to the develop-
17 ment of a fusion demonstration reactor;

18 (B) no agreement can be reached on the final
19 host site for ITER;

20 (C) no agreement can be reached on the final
21 design of ITER or on issues related to construction
22 of ITER; or

23 (D) there is an insufficient commitment to the
24 final ITER design by United States industry and
25 utilities.

1 (2) Within thirty days of submission of the report
2 under paragraph (1), the Secretary shall initiate the ter-
3 mination of the program.

4 (3) In the event the Secretary terminates the pro-
5 gram, the Secretary may continue to carry out research
6 in magnetic fusion, but only at the levels authorized in
7 section 4(b)(2).

8 **SEC. 4. AUTHORIZATION OF APPROPRIATIONS.**

9 (a) LIMITATION ON APPROPRIATIONS.—No more
10 funds may be appropriated to carry out the purposes of
11 this Act than the amounts set forth in subsection (b). This
12 Act shall be the exclusive source of authorization of appro-
13 priations to support any activities of the Secretary relating
14 to magnetic fusion energy.

15 (b) APPROPRIATIONS.—(1) There is authorized to be
16 appropriated to the Secretary for carrying out the pur-
17 poses of this Act \$380,000,000 for fiscal year 1994,
18 \$425,000,000 for fiscal year 1995, \$475,000,000 for fis-
19 cal year 1996, and such sums as may be necessary there-
20 after.

21 (2) In the event the Secretary terminates the pro-
22 gram, there is authorized to be appropriated to the Sec-
23 retary \$50,000,000 for 1994, \$50,000,000 for 1995 and

- 1 \$50,000,000 for 1996 for activities relating to magnetic
- 2 fusion energy.

Passed the Senate June 29 (legislative day, June 22), 1993.

Attest:

Secretary.

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