

H.R.4

Energy Policy Act of 2002 (Public Print)

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SEC. 1254. FUSION ENERGY SCIENCES PROGRAM AND PLANNING.

(a) OVERALL PLAN FOR FUSION ENERGY SCIENCES PROGRAM-

(1) IN GENERAL- Not later than 6 months after the date of enactment of this subtitle, the Secretary, after consultation with the Fusion Energy Sciences Advisory Committee, shall develop and transmit to the Congress a plan to ensure a strong scientific base for the Fusion Energy Sciences Program within the Office of Science and to enable the experiments described in subsections (b) and (c).

(2) OBJECTIVES OF PLAN- The plan under this subsection shall include as its objectives--

(A) to ensure that existing fusion research facilities and equipment are more fully utilized with appropriate measurements and control tools;

(B) to ensure a strengthened fusion science theory and computational base;

(C) to encourage and ensure that the selection of and funding for new magnetic and inertial fusion research facilities is based on scientific innovation and cost effectiveness;

(D) to improve the communication of scientific results and methods between the fusion science community and the wider scientific community;

(E) to ensure that adequate support is provided to optimize the design of the magnetic fusion burning plasma experiments referred to in subsections (b) and (c); and

(F) to ensure that inertial confinement fusion facilities are utilized to the extent practicable for the purpose of inertial fusion energy research and development.

(b) PLAN FOR UNITED STATES FUSION EXPERIMENT-

(1) **IN GENERAL-** The Secretary, after consultation with the Fusion Energy Sciences Advisory Committee, shall develop a plan for construction in the United States of a magnetic fusion burning plasma experiment for the purpose of accelerating scientific understanding of fusion plasmas. The Secretary shall request a review of the plan by the National Academy of Sciences and shall transmit the plan and the review to the Congress by July 1, 2004.

(2) **REQUIREMENTS OF PLAN-** The plan described in paragraph (1) shall--

(A) address key burning plasma physics issues; and

(B) include specific information on the scientific capabilities of the proposed experiment, the relevance of these capabilities to the goal of practical fusion energy, and the overall design of the experiment including its estimated cost and potential construction sites.

(c) PLAN FOR PARTICIPATION IN AN INTERNATIONAL EXPERIMENT- In addition to the plan described in subsection (b), the Secretary, after consultation with the Fusion Energy Sciences Advisory Committee, may also develop a plan for United States participation in an international burning plasma experiment for the same purpose, whose construction is found by the Secretary to be highly likely and where United States participation is cost-effective relative to the cost and scientific benefits of a domestic experiment described in subsection (b). If the Secretary elects to develop a plan under this subsection, he shall include the information described in subsection (b)(2), and an estimate of the cost of United States participation in such an international experiment. The Secretary shall request a review by the National Academy of Sciences of a plan developed under this subsection, and shall transmit the plan and the review to the Congress no later than July 1, 2004.

(d) AUTHORIZATION FOR RESEARCH AND DEVELOPMENT- The Secretary, through the Office of Science, may conduct any research and development necessary to fully develop the plans described in this section.

(e) AUTHORIZATION OF APPROPRIATIONS- From amounts authorized under section 1251, the following amounts are authorized for activities under this section and for activities of the Fusion Energy Science Program--

(1) for fiscal year 2003, \$335,000,000;

(2) for fiscal year 2004, \$349,000,000;

(3) for fiscal year 2005, \$362,000,000; and

(4) for fiscal year 2006, \$377,000,000.