which the lack of knowledge limits magnetic fusion energy systems in order to ensure the achievement of the purposes of this chapter.

(b) Research programs on plasma confinement, alternate confinement concepts, advanced fuels, and properties of materials likely to be used in construction of fusion engineering devices

(1) The Secretary shall maintain an aggressive plasma confinement research program on the current lead concept to provide a full measure of support for the design, construction, and operation of the fusion engineering devices.

(2) The Secretary shall maintain a broadly based research program on alternate confinement concepts and on advanced fuels at a sufficient level of funding to achieve optimal design of each successive magnetic fusion facility using the then best available confinement and fuel concept.

(3) The Secretary shall ensure that research on properties of materials likely to be required for the construction of fusion engineering devices is adequate to provide timely information for the design of such devices.

(c) Fusion engineering device designs

(1) The Secretary shall initiate design activities on a fusion engineering device using the best available confinement concept to ensure operation of such a device at the earliest practicable time, but not later than the year 1990.

(2) The Secretary shall develop and test the adequacy of the engineering design of components to be utilized in the fusion engineering device.

(d) Operation of demonstration plant at turn of twenty-first century

The Secretary shall initiate at the earliest practical time each activity which he deems necessary to achieve the national goal for operation of a demonstration plant at the turn of the twenty-first century.

(e) Assessment of factors in determining commercial introduction of magnetic fusion energy systems

The Secretary shall continue efforts to assess factors which will determine the commercial introduction of magnetic fusion energy systems including, but not limited to—

(1) projected costs relative to other alternative energy sources;

(2) projected growth rates in energy demand;

(3) safety-related design limitations;

(4) environmental impacts; and

(5) limitations on the availability of strategic elements, such as helium, lithium, and special metals.

(Pub. L. 96–386, § 4, Oct. 7, 1980, 94 Stat. 1540.)

§ 9304. Comprehensive program management plan; submittal to Congressional committees

(a) The Secretary shall prepare a comprehensive program management plan for the conduct of the research, development, and demonstration activities under this chapter. Such plan shall include at a minimum—

(1) a presentation of the program strategy which will be used to achieve the purposes of this chapter;

(2) a five-year program implementation schedule, including identification of detailed milestone goals, with associated budget and program resources requirements;

(3) risk assessments;

(4) supporting research and development needed to solve problems which may inhibit or limit development of magnetic fusion energy systems; and

(5) an analysis of institutional, environmental, and economic considerations which are limiting the national magnetic fusion program.

(b) The Secretary shall transmit the comprehensive program management plan to the Committee on Science and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate not later than January 1, 1982.

(Pub. L. 96–386, § 5, Oct. 7, 1980, 94 Stat. 1541.)

Statutory Notes and Related Subsidiaries

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

§ 9305. Magnetic fusion engineering center

(a) Development plan

The Secretary shall develop a plan for the creation of a national magnetic fusion engineering center for the purpose of accelerating fusion technology development via the concentration and coordination of major magnetic fusion engineering devices and associated activities at such a national center.

(b) Factors considered in formulation of development plan

In developing the plan, the Secretary shall include relevant factors including, but not limited to—

(1) means of saving cost and time through the establishment of the national center relative to the cost and schedule currently projected for the program;

(2) means of providing common facilities to be shared by many magnetic fusion concepts;

(3) assessment of the environmental and safety-related aspects of the national center;

(4) provisions for international cooperation in magnetic fusion activities at the national center;

(5) provision of access to facilities for the broader technical involvement of domestic industry and universities in the magnetic fusion energy program;

(6) siting criteria for the national center including a list of potential sites;

(7) the advisability of establishing such a center considering all factors, including the alternative means and associated costs of pursuing such technology; and

(8) changes in the management structure of the magnetic fusion program to allow more effective direction of activities related to the national center.