

**CHAPTER 78—SUPERCONDUCTIVITY AND
COMPETITIVENESS**

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§ 5201. Findings and purposes

(a) Findings

The Congress finds that—

(1) recent discoveries of high-temperature superconducting materials could result in significant new applications of these materials in such areas as microelectronics, computers, power systems, transportation, medical imaging, and nuclear fusion, yet most potential applications may well lie beyond our ability to predict them;

(2) full application of the new superconductors is expected to require 10 to 20 years, thus calling for long-term commitments by the public and private sector to appropriate research and development programs;

(3) the Nation's economic competitiveness and strategic well-being depend greatly on the development and application of critical advanced technologies such as those anticipated to evolve from the new superconducting materials;

(4) the United States manufacturing industries confront strong competition in both domestic and world markets as other countries are increasingly taking advantage of modern technology and production techniques and innovative management focused on quality;

(5) whereas we have as a Nation been highly successful in the conduct of basic research in a variety of scientific areas, including superconductivity, other nations have been highly successful in the commercial and military application of the results of such fundamental research;

(6) if the United States is to begin its competitive advantage, it must commit sufficient long-term resources to solving processing and manufacturing problems in parallel with basic research and development;

(7) Federal agencies have responded aggressively to this exciting challenge by reprogramming funds to basic superconductivity research while informally coordinating their efforts to avoid unnecessary duplication; and further commitment of Federal funding and efforts directed to developing manufacturing, materials processing, and fabrication technologies is essential so that these activities may be conducted in parallel;

(8) successful development and application of the new superconducting materials will require close collaboration between the Federal Government and the industrial and academic components of the private sector, as well as

coordinating among the Federal departments and agencies involved in research and development on superconductors;

(9) a committed Federal program effort with appropriate long-term goals, priorities, and adequate resources is necessary for the rapid development and application of the new superconducting materials; and

(10) a national program should serve as a test of new agency authorities directed at technological competitiveness such as those provided to the Department of Energy.

(b) Purposes

The purposes of this chapter are—

(1) to establish a 5-year national action plan to research and develop new high-temperature superconducting materials with appropriate goals and priorities;¹

(2) to designate the appropriate roles, mechanisms, and responsibilities of various Federal departments and agencies in implementing such a national research and development action plan.

(Pub. L. 100-697, § 2, Nov. 19, 1988, 102 Stat. 4613.)

SHORT TITLE

Pub. L. 100-697, § 1, Nov. 19, 1988, 102 Stat. 4613, provided that: "This Act [enacting this chapter] may be cited as the 'National Superconductivity and Competitiveness Act of 1988'."

§ 5202. National Action Plan on Advanced Superconductivity Research and Development

(a) Establishment

(1) The Director of the Office of Science and Technology Policy shall establish a 5-year National Action Plan on Advanced Superconductivity Research and Development (hereinafter in this chapter referred to as the "Superconductivity Action Plan").

(2) The Office of Science and Technology Policy shall coordinate the development of the Superconductivity Action Plan and any recommendations required by this chapter with the National Critical Materials Council and the National Commission on Superconductivity.

(b) Content and scope

The Superconductivity Action Plan shall include—

(1) goals and priorities for advanced superconductivity research and development to be carried out by individual departments and agencies and organizational elements therein;

(2) the assignment of responsibility for the conduct of advanced superconductivity research and development among the departments, agencies, and organization elements therein;

(3) recommendation of proposed funding levels for activities relating to superconductivity of the 5 years following November 19, 1988, for each of the participating departments, agencies, and organizational elements therein; and

(4) proposals for the participation by industry and academia in the planning and implementation of the Superconductivity Action Plan.

¹ So in original. Probably should be followed by "and".