be available for payment in connection with any grant, contract, or other agreement, unless the recipient of such grant, contractor, or party to such agreement, as the case may be, has in place and will continue to administer in good faith a written policy, adopted by the board of directors or other government authority of such recipient, contractor, or party, satisfactory to the Administrator of the [National Aeronautics and Space] Administration, designed to ensure that all of the workplaces of such recipient, contractor, or party are free from the illegal use, possession, or distribution of controlled substances (as defined in the Controlled Substances Act) by the officers and employees of such recipient, contractor, or party.

''(c) The provisions of this section, and the provisions of the Steel and Aluminum Energy Conservation and Technology Competitiveness Act of 1988 [15 U.S.C. 5101 et seq.], the National Institute of Standards and Technology Authorization Act for Fiscal Year 1989 [Pub. L. 100–519, title I, Oct. 24, 1988, 102 Stat. 2589], the National Science Foundation Authorization Act for Fiscal Years 1989 and 1990 [probably means Pub. L. 100–570, Oct. 31, 1988, 102 Stat. 2865], and the National Nutrition Monitoring and Related Research Act of 1988 [probably means S. 1081, One Hundredth Congress, which was pocket vetoed], relating to a drug-free workplace, shall not be effective until January 16, 1989.''

CHAPTER 78—SUPERCONDUCTIVITY AND COMPETITIVENESS

§ 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.)

Statutory Notes and Related Subsidiaries

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

[1] So in original. Probably should be followed by ''and''.

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.

(c) Action Plan report

The Office of Science and Technology Policy, in conjunction with the National Critical Materials Council, shall submit a report detailing the Superconductivity Action Plan to the Committee on Science, Space, and Technology of the House of Representatives, and to the Committees on Energy and Natural Resources, and Commerce, Science, and Transportation of the Senate, within 9 months after November 19, 1988.

(d) Update reports

The Office of Science and Technology Policy shall prepare an annual report setting forth and evaluating the progress of the Superconductivity Action Plan. This report shall include a description of the amount of funds expended in the previous year by all Federal departments and agencies involved with superconductivity. This report shall be submitted with the President's annual budget request to the Committee on Science, Space, and Technology of the House of Representatives, and to the Committees on Energy and Natural Resources, and Commerce, Science, and Transportation of the Senate.

(Pub. L. 100–697, § 3, Nov. 19, 1988, 102 Stat. 4614; Pub. L. 116–260, div. Z, title VII, § 7002(n)(2), Dec. 27, 2020, 134 Stat. 2576.)

Editorial Notes

AMENDMENTS

2020—Subsec. (d). Pub. L. 116–260 struck out '', with the assistance of the National Critical Materials Council as specified in the National Critical Materials Act of 1984 (30 U.S.C. 1801 et seq.),'' after ''Policy''.

§ 5203. Department of Energy

The Secretary of Energy shall conduct a program in superconductivity research and development. Within 180 days after November 19, 1988, and for the two succeeding years thereafter, the Secretary shall submit annual reports on the implementation of technology transfer activities under the Stevenson-Wydler Technology Innovation Act of 1980 [15 U.S.C. 3701 et seq.] and related legislation with respect to superconductivity research and development to the Committee on Science, Space, and Technology of the House of Representatives and to the Committee on Energy and Natural Resources of the Senate. Such report shall include recommendations for improvements in the technology transfer between government and industry, and in the management of property developed or made at the National Laboratories.

(Pub. L. 100–697, § 4, Nov. 19, 1988, 102 Stat. 4615.)

Editorial Notes

REFERENCES IN TEXT

The Stevenson-Wydler Technology Innovation Act of 1980, referred to in text, is Pub. L. 96–480, Oct. 21, 1980, 94 Stat. 2311, which is classified generally to chapter 63 (§ 3701 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 3701 of this title and Tables.

§ 5204. National Institute of Standards and Technology

In pursuance of the goals of this chapter, the National Institute of Standards and Technology shall promote fundamental research and materials standards to accelerate the use and application of the new superconducting materials, and shall utilize the Superconductivity Center Focusing on Electronic Applications at the National Institute of Standards and Technology in Boulder, Colorado.

(Pub. L. 100–697, § 5, Nov. 19, 1988, 102 Stat. 4615.)

§ 5205. National Science Foundation

The National Science Foundation shall promote fundamental research in pursuance of the goals of this chapter.

(Pub. L. 100–697, § 6, Nov. 19, 1988, 102 Stat. 4615.)

§ 5206. National Aeronautics and Space Administration

The National Aeronautics and Space Administration shall utilize existing programs in technology transfer, aeronautics and space technology, and space commercialization to promote the commercial applications of high-temperature superconductors, including applications relating to thin film technology, communications technology, sensors, space power, and propulsion.

(Pub. L. 100–697, § 7, Nov. 19, 1988, 102 Stat. 4615.)

§ 5207. Department of Defense

(a) Focus of research

In conformance with the Superconductivity Action Plan, the Secretary of Defense, in the superconductivity research and development activities of the Department of Defense, shall give emphasis to fundamental research, materials processing, and applications of new superconducting materials.

(b) Additional activities

In conducting research under subsection (a), the Secretary of Defense shall—

(1) systematically define the engineering parameters for high-temperature superconducting materials; and

(2) conduct the necessary development, engineering, and operational prototype testing considered appropriate to the overall mission of the Department of Defense. Such operational prototype testing shall, where appropriate, utilize criteria developed by the Defense Advanced Research Projects Agency.

(c) Defense Advanced Research Projects Agency

The Director of the Defense Advanced Research Projects Agency shall, in conformance with the Superconductivity Action Plan, conduct activities to—

(1) augment, as appropriate, basic and applied superconductivity research conducted in other Federal agencies and industry; and

(2) develop criteria for operational prototype testing within the Department of Defense.

(Pub. L. 100–697, § 8, Nov. 19, 1988, 102 Stat. 4615.)

§ 5208. International cooperation

The President, as part of the Superconductivity Action Plan, shall establish a program of international cooperation in the conduct of fundamental and basic research on superconducting materials. Such program of international cooperation shall include the exchange of basic information and data, as well as the development of international standards for the use and application of superconducting materials.

(Pub. L. 100–697, § 9, Nov. 19, 1988, 102 Stat. 4616.)

§ 5209. Technology transfer

(a) Promotion

In pursuance of the goals of this chapter, all Federal departments and agencies shall conduct technology transfer activities as appropriate to the overall mission of each department or agency to—

(1) complement basic superconductivity research by promoting the rapid development of manufacturing and processing technologies necessary for the commercialization of high-temperature superconductors; and

(2) promote collaborative arrangements and consortia of industry (which shall include small business) in order to lower the barriers to deployment of advanced high-temperature superconductor technology; such consortia to also include, as appropriate, universities and independent research organizations.

(b) Impediments to commercialization

The Director of the Office of Science and Technology Policy, in collaboration with the Secretary of Commerce and the Secretary of Energy, shall identify those Federal policies and regulations which impede the ability of the private sector to undertake long-term investment programs to commercialize superconductivity applications.

(Pub. L. 100–697, § 10, Nov. 19, 1988, 102 Stat. 4616.)

CHAPTER 79—METAL CASTING COMPETITIVENESS RESEARCH PROGRAM

Sec.

§ 5301. Findings

The Congress finds that—

(1) metal casting is an important process for manufacturing many items imported into or exported from the United States;

(2) the encouragement and maintenance of a technically advanced United States metal casting industry is essential to the competitiveness of many American industries;

(3) maintaining a viable metal casting industry is vital to the national security and economic well being of the United States;

(4) the promotion of technology competitiveness and energy efficiency in the United States metal casting industry by the Federal Government is necessary to maintain a viable metal casting industry;

(5) many metal casting companies lack the resources to conduct metal casting research alone, placing them at a serious competitive disadvantage;

(6) the support of university-based research in metal casting is important in promoting technology development and providing industry with qualified engineers; and

(7) by combining the resources of the Federal Government, universities, industry, and private organizations, to conduct research and development activities, substantial technological benefits will result to the metal casting industry.

(Pub. L. 101–425, § 2, Oct. 15, 1990, 104 Stat. 915.)

Statutory Notes and Related Subsidiaries

SHORT TITLE

Pub. L. 101–425, § 1, Oct. 15, 1990, 104 Stat. 915, provided that: ''This Act [enacting this chapter] may be cited as the 'Department of Energy Metal Casting Competitiveness Research Act of 1990'.''

§ 5302. Definitions

As used in this chapter, the term—

(1) ''applicant'' means:

(A) an educational institution;

(B) a consortium of educational institutions;

(C) a consortium of an educational institution or educational institutions with one or more of the following: Government-owned laboratories, private research organizations, nonprofit institutions, or private firms;

that is located in a region where the metal casting industry is concentrated;

(2) ''census region'' means one of the four census regions (Northeast, South, Midwest, and West) that are designated as census regions by the Bureau of the Census as of October 15, 1990;

(3) ''Department'' means the Department of Energy;

(4) ''educational institution'' means a degree granting institution of at least a baccalaureate level;