

(1) the National Science Foundation shall provide high-end computing and networking infrastructure support for all science and engineering disciplines, and support basic research and human resource development in all aspects of networking and information technology; and

(2) the National Science Foundation shall use its existing programs, in collaboration with other agencies, as appropriate, to improve the teaching and learning of networking and information technology at all levels of education and to increase participation in networking and information technology fields, including by individuals identified in sections 1885a and 1885b of title 42.

(Pub. L. 102-194, title II, §201, Dec. 9, 1991, 105 Stat. 1599; Pub. L. 114-329, title I, §105(j), Jan. 6, 2017, 130 Stat. 2983.)

AMENDMENTS

2017—Pub. L. 114-329, §105(j)(1)(A), (2), struck out subsec. (a) designation and heading “General responsibilities” and struck out subsec. (b) which authorized appropriations for fiscal years 1992 to 1996.

Par. (1). Pub. L. 114-329, §105(j)(1)(B), inserted “high-end” after “National Science Foundation shall provide” and substituted “networking and information technology; and” for “high-performance computing and advanced high-speed computer networking;”.

Par. (2). Pub. L. 114-329, §105(j)(1)(C), (D), added par. (2) and struck out former par. (2) which read as follows: “to the extent that colleges, universities, and libraries cannot connect to the Network with the assistance of the private sector, the National Science Foundation shall have primary responsibility for assisting colleges, universities, and libraries to connect to the Network;”.

Pars. (3), (4). Pub. L. 114-329, §105(j)(1)(C), struck out pars. (3) and (4) which read as follows:

“(3) the National Science Foundation shall serve as the primary source of information on access to and use of the Network; and

“(4) the National Science Foundation shall upgrade the National Science Foundation funded network, assist regional networks to upgrade their capabilities, and provide other Federal departments and agencies the opportunity to connect to the National Science Foundation funded network.”

§ 5522. National Aeronautics and Space Administration activities

As part of the Program described in subchapter I, the National Aeronautics and Space Administration shall conduct basic and applied research in networking and information technology, particularly in the field of computational science, with emphasis on aerospace sciences, earth and space sciences, and remote exploration and experimentation.

(Pub. L. 102-194, title II, §202, Dec. 9, 1991, 105 Stat. 1600; Pub. L. 114-329, title I, §105(k), Jan. 6, 2017, 130 Stat. 2983.)

AMENDMENTS

2017—Pub. L. 114-329 struck out subsec. (a) designation and heading “General responsibilities”, substituted “networking and information technology” for “high-performance computing”, and struck out subsec. (b) which authorized appropriations for fiscal years 1992 to 1996.

§ 5523. Department of Energy activities

As part of the Program described in subchapter I, the Secretary of Energy shall—

(1) conduct and support basic and applied research in networking and information technology to support fundamental research in science and engineering disciplines related to energy applications; and

(2) provide computing and networking infrastructure support, including—

(A) the provision of high-end computing systems that are among the most advanced in the world in terms of performance in solving scientific and engineering problems; and

(B) support for advanced software and applications development for science and engineering disciplines related to energy applications.

(Pub. L. 102-194, title II, §203, Dec. 9, 1991, 105 Stat. 1600; Pub. L. 104-66, title I, §1052(j), Dec. 21, 1995, 109 Stat. 719; Pub. L. 109-58, title IX, §976(b), Aug. 8, 2005, 119 Stat. 903; Pub. L. 114-329, title I, §105(l), Jan. 6, 2017, 130 Stat. 2984.)

AMENDMENTS

2017—Pub. L. 114-329, §105(l)(1), (4), struck out subsec. (a) designation and heading “General responsibilities” and struck out subsec. (b) which authorized to be appropriated to the Secretary of Energy such sums as necessary to carry out this section.

Par. (1). Pub. L. 114-329, §105(l)(2), substituted “networking and information technology” for “high-performance computing and networking”.

Par. (2)(A). Pub. L. 114-329, §105(l)(3), substituted “high-end” for “high-performance”.

2005—Pub. L. 109-58 reenacted section catchline without change and amended text generally, substituting provisions relating to general responsibilities and authorization of appropriations for provisions relating to general responsibilities, establishment of High-Performance Computing Research and Development Collaborative Consortia, transfer of technology to private sector and others, reports on activities, and authorization of appropriations.

1995—Subsec. (d). Pub. L. 104-66 amended heading and text of subsec. (d) generally. Prior to amendment, text read as follows: “Within one year after December 9, 1991, and every year thereafter, the Secretary of Energy shall transmit to the Congress a report on activities taken to carry out this chapter.”

§ 5524. Department of Commerce activities

(a) General responsibilities

As part of the Program described in subchapter I—

(1) the National Institute of Standards and Technology shall—

(A) conduct basic and applied measurement research needed to support various networking and information technology systems and capabilities;

(B) develop and propose standards and guidelines, and develop measurement techniques and test methods, for the interoperability and usability of networking and information technology systems; and

(C) be responsible for developing benchmark tests and standards for networking and information technology systems and software; and

(2) the National Oceanic and Atmospheric Administration shall conduct basic and applied research in weather prediction and ocean sciences, particularly in development of new forecast models, in computational fluid dy-

namics, and in the incorporation of evolving computer architectures and networks into the systems that carry out agency missions.

(b) Networking and information technology security

The National Institute of Standards and Technology shall be responsible for developing and proposing standards and guidelines needed to assure the cost-effective security and privacy of Federal agency information and information systems.

(Pub. L. 102-194, title II, §204, Dec. 9, 1991, 105 Stat. 1601; Pub. L. 114-329, title I, §105(m), Jan. 6, 2017, 130 Stat. 2984.)

AMENDMENTS

2017—Subsec. (a)(1)(A). Pub. L. 114-329, §105(m)(1)(A), substituted “networking and information technology systems and capabilities” for “high-performance computing systems and networks”.

Subsec. (a)(1)(B). Pub. L. 114-329, §105(m)(1)(B), substituted “interoperability and usability of networking and information technology systems” for “interoperability of high-performance computing systems in networks and for common user interfaces to systems”.

Subsec. (a)(1)(C). Pub. L. 114-329, §105(m)(1)(C), substituted “networking and information technology” for “high-performance computing”.

Subsec. (b). Pub. L. 114-329, §105(m)(2), in heading, substituted “Networking and information technology” for “High-performance computing and network” and, in text, substituted “The National Institute” for “Pursuant to the Computer Security Act of 1987 (Public Law 100-235; 101 Stat. 1724), the National Institute” and “Federal agency information and information systems” for “sensitive information in Federal computer systems”.

Subsecs. (c), (d). Pub. L. 114-329, §105(m)(3), struck out subsecs. (c) and (d) which required a study of the impact of Federal procurement regulations and authorized appropriations for fiscal years 1992 to 1996.

§ 5525. Repealed. Pub. L. 114-329, title I, § 105(n), Jan. 6, 2017, 130 Stat. 2984

Section, Pub. L. 102-194, title II, §205, Dec. 9, 1991, 105 Stat. 1602, described Environmental Protection Agency activities and authorized appropriations for fiscal years 1992 to 1996.

§ 5526. Repealed. Pub. L. 114-329, title I, § 105(o), Jan. 6, 2017, 130 Stat. 2984

Section, Pub. L. 102-194, title II, §206, Dec. 9, 1991, 105 Stat. 1602, described the role of the Department of Education and authorized appropriations for fiscal years 1992 to 1996.

§ 5527. Miscellaneous provisions

(a) Nonapplicability

Except to the extent the appropriate Federal agency or department head determines, the provisions of this chapter shall not apply to—

(1) programs or activities regarding computer systems that process classified information; or

(2) computer systems the function, operation, or use of which are those delineated in section 3552(b)(6)(A)(i) of title 44.

(b) Acquisition of prototype and early production models

In accordance with Federal contracting law, Federal agencies and departments participating

in the Program may acquire prototype or early production models of new networking and information technology systems and subsystems to stimulate hardware and software development. Items of computing equipment acquired under this subsection shall be considered research computers for purposes of applicable acquisition regulations.

(Pub. L. 102-194, title II, §207, Dec. 9, 1991, 105 Stat. 1602; Pub. L. 114-329, title I, §105(p), Jan. 6, 2017, 130 Stat. 2984.)

AMENDMENTS

2017—Subsec. (a)(2). Pub. L. 114-329, §105(p)(1), substituted “section 3552(b)(6)(A)(i) of title 44” for “paragraphs (1) through (5) of section 2315(a) of title 10”.

Subsec. (b). Pub. L. 114-329, §105(p)(2), substituted “networking and information technology” for “high-performance computing”.

§ 5528. Repealed. Pub. L. 114-329, title I, § 105(q), Jan. 6, 2017, 130 Stat. 2984

Section, Pub. L. 102-194, title II, §208, Dec. 9, 1991, 105 Stat. 1603; Pub. L. 110-69, title III, §3002(c)(6), Aug. 9, 2007, 121 Stat. 587, related to findings and annual reports for fostering United States competitiveness in high-performance computing and related activities.

SUBCHAPTER III—DEPARTMENT OF ENERGY HIGH-END COMPUTING REVITALIZATION

§ 5541. Definitions

In this subchapter:

(1) Department

The term “Department” means the Department of Energy.

(2) Exascale computing

The term “exascale computing” means computing through the use of a computing machine that performs near or above 10 to the 18th power operations per second.

(3) High-end computing system

The term “high-end computing system” means a computing system with performance that substantially exceeds that of systems that are commonly available for advanced scientific and engineering applications.

(4) Leadership System

The term “Leadership System” means a high-end computing system that is among the most advanced in the world in terms of performance in solving scientific and engineering problems.

(5) Institution of higher education

The term “institution of higher education” has the meaning given the term in section 1001(a) of title 20.

(6) Secretary

The term “Secretary” means the Secretary of Energy.

(Pub. L. 108-423, §2, Nov. 30, 2004, 118 Stat. 2400; Pub. L. 115-246, title III, §304(a)(2), Sept. 28, 2018, 132 Stat. 3145.)

REFERENCES IN TEXT

This subchapter, referred to in text, was in the original “this Act”, meaning Pub. L. 108-423, Nov. 30, 2004,