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.)

§ 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 Repealed.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 Repealed.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.)

§ 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 Repealed.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,

118 Stat. 2400, which is classified principally to this subchapter. For complete classification of this Act to the Code, see Short Title note set out under section 5501 of this title and Tables.

§ 5542. Department of Energy high-end computing research and development program

(a) In general

The Secretary shall—

(1) carry out a coordinated program across the Department of research and development (including development of software and hardware) to advance high-end computing systems; and

(2) develop and deploy high-end computing systems for advanced scientific and engineering applications.

(b) Program

The program shall—

(1) support both individual investigators and multidisciplinary teams of investigators;

(2) conduct research in multiple architectures;

(3) conduct research on software for high-end computing systems, including research on algorithms, programming environments, tools, languages, and operating systems for high-end computing systems, in collaboration with architecture development efforts;

(4) provide for sustained access by the research community in the United States to high-end computing systems and to Leadership Systems, including provision of technical support for users of such systems;

(5) support technology transfer to the private sector and others in accordance with applicable law; and

(6) ensure that the high-end computing activities of the Department of Energy are coordinated with relevant activities in industry and with other Federal agencies, including the National Science Foundation, the Defense Advanced Research Projects Agency, the National Nuclear Security Administration, the National Security Agency, the National Institutes of Health, the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, the National Institutes of Standards and Technology, and the Environmental Protection Agency.

(c) Leadership Systems facilities

(1) In general

As part of the program carried out under this subchapter, the Secretary shall establish and operate 1 or more Leadership Systems facilities to—

(A) conduct advanced scientific and engineering research and development using Leadership Systems; and

(B) develop potential advancements in high-end computing system hardware and software.

(2) Administration

In carrying out this subsection, the Secretary shall provide to Leadership Systems, on a competitive, merit-reviewed basis, access to researchers in United States industry, institutions of higher education, national laboratories, and other Federal agencies.

(d) Exascale Computing Program

(1) In general

The Secretary shall conduct a research program (referred to in this subsection as the ''Program'') for exascale computing, including the development of two or more exascale computing machine architectures, to promote the missions of the Department.

(2) Execution

(A) In general

In carrying out the Program, the Secretary shall—

(i) establish two or more National Laboratory partnerships with industry partners and institutions of higher education for the research and development of two or more exascale computing architectures across all applicable organizations of the Department;

(ii) conduct mission-related codesign activities in developing the exascale computing architectures under clause (i);

(iii) develop such advancements in hardware and software technology as are required to fully realize the potential of an exascale production system in addressing Department target applications and solving scientific problems involving predictive modeling and simulation and large scale data analytics and management;

(iv) explore the use of exascale computing technologies to advance a broad range of science and engineering; and

(v) provide, as appropriate, on a competitive, merit-reviewed basis, access for researchers in industries in the United States, institutions of higher education, National Laboratories, and other Federal agencies to the exascale computing systems developed pursuant to clause (i).

(B) Selection of partners

The Secretary shall select the partnerships with the computing facilities of the Department under subparagraph (A) through a competitive, peer-review process.

(3) Codesign and application development

(A) In general

The Secretary shall—