

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.)

#### Editorial Notes

##### 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.

##### CODIFICATION

This section was enacted as part of the American Super Computing Leadership Act of 2017 which comprises this subchapter, and not as part of the High-Performance Computing Act of 1991 which comprises this chapter.

##### AMENDMENTS

2018—Pars. (1) to (5). Pub. L. 115-246, § 304(a)(2)(A), (B), added pars. (1) and (2), redesignated former pars. (2) to (4) as (3) to (5), respectively, and struck out former par. (1) which defined “Center”. Former par. (5) redesignated (6).

Par. (6). Pub. L. 115-246, § 304(a)(2)(A), (C), redesignated par. (5) as (6) and struck out “, acting through the Director of the Office of Science of the Department of Energy” before period at end.

#### Statutory Notes and Related Subsidiaries

##### SHORT TITLE

This subchapter known as the “American Super Computing Leadership Act of 2017”, see Short Title note set out under section 5501 of this title.

#### § 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