

construction of the facility under this section—

- (A) \$295,000,000 for fiscal year 2021;
- (B) \$348,000,000 for fiscal year 2022;
- (C) \$525,000,000 for fiscal year 2023;
- (D) \$534,000,000 for fiscal year 2024; and
- (E) \$584,000,000 for fiscal year 2025.

(d) Gateway for Accelerated Innovation in Nuclear

(1) In general

In carrying out the programs under this part, the Secretary is authorized to establish a new initiative to be known as the Gateway for Accelerated Innovation in Nuclear (GAIN). The initiative shall, to the maximum extent practicable and consistent with national security, provide the nuclear energy industry with access to cutting edge research and development along with the technical, regulatory, and financial support necessary to move innovative nuclear energy technologies toward commercialization in an accelerated and cost-effective fashion. The Secretary shall make available, as a minimum—

- (A) experimental capabilities and testing facilities;
- (B) computational capabilities, modeling, and simulation tools;
- (C) access to existing datasets and data validation tools; and
- (D) technical assistance with guidance or processes as needed.

(2) Selection

(A) In general

The Secretary shall select industry partners for awards on a competitive merit-reviewed basis.

(B) Considerations

In selecting industry partners under subparagraph (A), the Secretary shall consider—

- (i) the information disclosed by the Department as described in paragraph (1); and
- (ii) any existing facilities the Department will provide for public private partnership activities.

(Pub. L. 109–58, title IX, §955, Aug. 8, 2005, 119 Stat. 887; Pub. L. 115–248, §2(e), Sept. 28, 2018, 132 Stat. 3156; Pub. L. 116–260, div. Z, title II, §2003(f), Dec. 27, 2020, 134 Stat. 2466.)

Editorial Notes

AMENDMENTS

2020—Subsec. (c)(1). Pub. L. 116–260, §2003(f)(1)(A), substituted “Authorization” for “Mission need” in heading.

Subsec. (c)(1)(A). Pub. L. 116–260, §2003(f)(1)(B), substituted “provide” for “determine the mission need”.

Subsec. (c)(4). Pub. L. 116–260, §2003(f)(3), substituted “2026” for “2025”.

Subsec. (c)(7). Pub. L. 116–260, §2003(f)(2), added par. (7).

Subsec. (d). Pub. L. 116–260, §2003(f)(4), added subsec. (d).

2018—Subsecs. (c), (d). Pub. L. 115–248 added subsec. (c) and struck out former subsecs. (c) and (d) which required development of a comprehensive plan for the fa-

cilities at the Idaho National Laboratory and transmittal of the plan to Congress.

§ 16276. Security of nuclear facilities

The Secretary shall conduct a research and development program on cost-effective technologies for increasing—

- (1) the safety of nuclear facilities from natural phenomena; and
- (2) the security of nuclear facilities from deliberate attacks.

(Pub. L. 109–58, title IX, §956, Aug. 8, 2005, 119 Stat. 888; Pub. L. 115–248, §2(f), Sept. 28, 2018, 132 Stat. 3157.)

Editorial Notes

AMENDMENTS

2018—Pub. L. 115–248 struck out “, acting through the Director of the Office of Nuclear Energy, Science and Technology,” after “The Secretary” in introductory provisions.

§ 16277. High-performance computation and supportive research

(a) Modeling and simulation

The Secretary shall carry out a program to enhance the capabilities of the United States to develop new reactor technologies through high-performance computation modeling and simulation techniques.

(b) Coordination

In carrying out the program under subsection (a), the Secretary shall coordinate with relevant Federal agencies as described by the National Strategic Computing Initiative established by Executive Order 13702 (80 Fed. Reg. 46177 (July 29, 2015)), while taking into account the following objectives:

- (1) Using expertise from the private sector, institutions of higher education, and the National Laboratories to develop computational software and capabilities that prospective users may access to accelerate research and development of advanced nuclear reactor systems and reactor systems for space exploration.
- (2) Developing computational tools to simulate and predict nuclear phenomena that may be validated through physical experimentation.
- (3) Increasing the utility of the research infrastructure of the Department by coordinating with the Advanced Scientific Computing Research program within the Office of Science.
- (4) Leveraging experience from the Energy Innovation Hub for Modeling and Simulation.
- (5) Ensuring that new experimental and computational tools are accessible to relevant research communities, including private sector entities engaged in nuclear energy technology development.

(3) Increasing the utility of the research infrastructure of the Department by coordinating with the Advanced Scientific Computing Research program within the Office of Science.

(4) Leveraging experience from the Energy Innovation Hub for Modeling and Simulation.

(5) Ensuring that new experimental and computational tools are accessible to relevant research communities, including private sector entities engaged in nuclear energy technology development.

(c) Supportive research activities

The Secretary shall consider support for additional research activities to maximize the utility of the research facilities of the Department, including physical processes—

- (1) to simulate degradation of materials and behavior of fuel forms; and