

- (C) \$219,000,000 for fiscal year 2025;
- (D) \$297,000,000 for fiscal year 2026; and
- (E) \$301,000,000 for fiscal year 2027.

(c) Authorization of appropriations

Out of funds authorized to be appropriated for the Office of Science in a fiscal year, there are authorized to be appropriated to the Secretary to carry out the activities described in this section—

- (1) \$840,480,000 for fiscal year 2023;
- (2) \$976,508,800 for fiscal year 2024;
- (3) \$1,062,239,328 for fiscal year 2025;
- (4) \$1,190,833,688 for fiscal year 2026; and
- (5) \$1,248,463,709 for fiscal year 2027.

(Pub. L. 115–246, title III, § 308, Sept. 28, 2018, 132 Stat. 3150; Pub. L. 117–167, div. B, title I, § 10107, Aug. 9, 2022, 136 Stat. 1449.)

Editorial Notes

AMENDMENTS

2022—Pub. L. 117–167 amended section generally. Prior to amendment, text was comprised of subsec. (a) of section 308 of Pub. L. 115–246 which read as follows: “The Director—

“(1) may carry out a program for the production of isotopes, including the development of techniques to produce isotopes, that the Secretary determines are needed for research, medical, industrial, or related purposes; and

“(2) shall ensure that isotope production activities carried out under the program under this paragraph do not compete with private industry unless the Director determines that critical national interests require the involvement of the Federal Government.”

Prior to amendment, section 308 of Pub. L. 115–246 also contained subsec. (b) which amended section 16321 of this title.

§ 18647. Science laboratories infrastructure program

(a) In general

The Director shall carry out a program to improve the safety, efficiency, and mission readiness of infrastructure at laboratories of the Office of Science.

(b) Inclusions

The program under subsection (a) shall include projects—

- (1) to renovate or replace space that does not meet research needs;
- (2) to replace facilities that are no longer cost effective to renovate or operate;
- (3) to modernize utility systems to prevent failures and ensure efficiency;
- (4) to remove excess facilities to allow safe and efficient operations; and
- (5) to construct modern facilities to conduct advanced research in controlled environmental conditions.

(c) Approach

In carrying out the program under subsection (a), the Director shall use all available approaches and mechanisms, as the Secretary determines to be appropriate, including—

- (1) capital line items;
- (2) minor construction projects;
- (3) energy savings performance contracts;
- (4) utility energy service contracts;
- (5) alternative financing; and

(6) expense funding.

(d) Submission to Congress

For each fiscal year through fiscal year 2027, at the same time as the annual budget submission of the President, the Secretary shall submit to the Committee on Appropriations and the Committee on Energy and Natural Resources of the Senate and the Committee on Appropriations and the Committee on Science, Space, and Technology of the House of Representatives a list of projects for which the Secretary will provide funding under this section, including a description of each project and the funding profile for the project.

(e) Authorization of appropriations

Out of funds authorized to be appropriated for the Office of Science in a fiscal year, there is authorized to be appropriated to the Secretary to carry out the activities described in this section \$550,000,000 for each of fiscal years 2023 through 2027.

(Pub. L. 115–246, title III, § 309, Sept. 28, 2018, 132 Stat. 3150; Pub. L. 117–167, div. B, title I, § 10108, Aug. 9, 2022, 136 Stat. 1450.)

Editorial Notes

AMENDMENTS

2022—Subsecs. (c) to (e). Pub. L. 117–167 added subsecs. (c) to (e).

§ 18648. Accelerator research and development

(a) Program

As part of the activities authorized under section 7139 of this title, the Director shall carry out a research program—

- (1) to advance accelerator science and technology relevant to the Department, other Federal agencies, and United States industry;
- (2) to foster partnerships to develop, demonstrate, and enable the commercial application of accelerator technologies;
- (3) to support the development of a skilled, diverse, and inclusive accelerator workforce; and
- (4) to provide access to accelerator design and engineering resources.

(b) Accelerator research

In carrying out the program authorized under subsection (a), the Director shall support—

- (1) research activities in cross-cutting accelerator technologies including superconducting magnets and accelerators, beam physics, data analytics-based accelerator controls, simulation software, new particle sources, advanced laser technology, and transformative research; and
- (2) optimal operation of the Accelerator Test Facility.

(c) Accelerator development

In carrying out the program authorized under subsection (a), the Director shall support partnerships to foster the development, demonstration, and commercial application of accelerator technologies, including advanced superconducting wire and cable, superconducting RF cavities, and high efficiency radiofrequency power sources for accelerators.

(d) Research collaborations

In developing accelerator technologies under the program authorized under subsection (a), the Director shall—

(1) consider the requirements necessary to support translational research and development for medical, industrial, security, and defense applications; and

(2) leverage investments in accelerator technologies and fundamental research in particle physics by partnering with institutions of higher education, industry, and other Federal agencies to enable the commercial application of advanced accelerator technologies.

(e) Authorization of appropriations

Out of funds authorized to be appropriated for the Office of Science in a fiscal year, there are authorized to be appropriated to the Secretary to carry out the activities described in this section—

- (1) \$19,080,000 for fiscal year 2023;
- (2) \$20,224,800 for fiscal year 2024;
- (3) \$21,438,288 for fiscal year 2025;
- (4) \$22,724,585 for fiscal year 2026; and
- (5) \$24,088,060 for fiscal year 2027.

(Pub. L. 115-246, title III, §310, as added Pub. L. 117-167, div. B, title I, §10109, Aug. 9, 2022, 136 Stat. 1451.)

§ 18649. Isotope research, development, and production**(a) Definition of critical radioactive and stable isotope****(1) In general**

In this section, the term “critical radioactive and stable isotope” means a radioactive and stable isotope—

(A) the domestic commercial production of which is unavailable or inadequate to satisfy the demand of research, medical, industrial, or related industries in the United States; and

(B) the supply of which is augmented through—

- (i) Department production; or
- (ii) foreign suppliers.

(2) Exclusion

In this section, the term “critical radioactive and stable isotope” does not include the medical isotope molybdenum-99, the production and supply of which is addressed in the American Medical Isotopes Production Act of 2012 (Public Law 112-239; 126 Stat. 2211) (including the amendments made by that Act).

(b) Program

The Director shall—

(1) carry out, in coordination with other relevant programs across the Department, a program—

(A) for the production of critical radioactive and stable isotopes, including the development of techniques to produce isotopes, that the Secretary determines are needed and of sufficient quality and quantity for research, medical, industrial, or related purposes;

(B) for the production of critical radioactive and stable isotopes that are in short

supply or projected to be in short supply in the future, including byproducts, surplus materials, and related isotope services;

(C) to maintain and enhance the infrastructure required to produce and supply critical radioactive and stable isotope products and related services;

(D) to conduct research and development on new and improved isotope production and processing techniques that can make critical radioactive and stable isotopes available for research and application as soon as possible while assisting in workforce development;

(E) to reduce domestic dependency on the foreign supply of critical radioactive and stable isotopes to ensure national preparedness; and

(F) to the maximum extent practicable, in accordance with—

(i) evidence-based reports, such as the 2015 report of the Nuclear Science Advisory Committee entitled “Meeting Isotope Needs and Capturing Opportunities for the Future”; and

(ii) assessments of isotope supply chains, including the assessment described in paragraph (3), any reports submitted pursuant to subsection (d), and other current and future assessments;

(2) ensure that isotope production activities carried out under this subsection are consistent with the statement of policy entitled “Policies and Procedures for Transfer of Commercial Radioisotope Production and Distribution to Private Industry” (30 Fed. Reg. 3247 (March 9, 1965));

(3) assess the domestic requirements of current and emerging critical radioactive and stable isotopes and associated applications, including by consulting end-users, to identify areas that may require Federal investment for expedited development of domestic production capacity for those isotopes, including through public-private partnerships, as appropriate;

(4) ensure that actions taken by the Department do not interfere with, delay, compete with, or otherwise adversely affect efforts by the private sector to make available or otherwise facilitate the supply of critical radioactive and stable isotopes, including efforts under existing agreements between the Department or contractors of the Department and the private sector; and

(5) in coordination with the Assistant Secretary for Nuclear Energy, assess options for demonstrating the production of critical radioactive and stable isotopes in research, test, or commercial nuclear reactors and accelerators, including reactors and accelerators operated at universities.

(c) Advisory committee**(1) In general**

Not later than 90 days after August 9, 2022, the Secretary shall establish an advisory committee (referred to in this subsection as the “committee”) in alignment with the program established under subsection (b)—

(A) to carry out the activities previously executed as part of the Isotope Subcommittee of the Nuclear Science Advisory Committee; and