

sion, providing research results key to the success of ITER, and training the next generation of fusion scientists are of critical importance to the United States and should in no way be diminished by participation of the United States in the ITER project.

**(m) International collaboration**

The Director shall—

(1) as practicable and in coordination with other appropriate Federal agencies as necessary, ensure the access of United States researchers to the most advanced fusion research facilities and research capabilities in the world, including ITER;

(2) to the maximum extent practicable, continue to leverage United States participation ITER,<sup>1</sup> and prioritize expanding international partnerships and investments in current and future fusion research facilities within the United States; and

(3) to the maximum extent practicable, prioritize engagement in collaborative efforts in support of future international facilities that would provide access to the most advanced fusion research facilities in the world to United States researchers.

**(n) Fission and fusion research coordination report**

**(1) In general**

Not later than 6 months after the date of enactment of this section, the Secretary shall transmit to Congress a report addressing opportunities for coordinating fusion energy research and development activities between the Office of Nuclear Energy, the Office of Science, and the Advanced Research Projects Agency—Energy.

**(2) Components**

The report shall assess opportunities for collaboration on research and development of—

(A) liquid metals to address issues associated with fusion plasma interactions with the inner wall of the encasing device and other components within the reactor;

(B) immersion blankets for heat management and fuel breeding;

(C) technologies and methods for instrumentation and control;

(D) computational methods and codes for system operation and maintenance;

(E) codes and standard development;

(F) radioactive waste handling;

(G) radiological safety;

(H) potential for non-electricity generation applications; and

(I) any other overlapping priority as identified by the Director of the Office of Science or the Assistant Secretary of Energy for Nuclear Energy.

**(o) Authorization of appropriations**

There are authorized to be appropriated to the Secretary to carry out the activities described in this section—

(1) \$996,000,000 for fiscal year 2021;

(2) \$921,000,000 for fiscal year 2022;

(3) \$961,000,000 for fiscal year 2023;

(4) \$921,000,000 for fiscal year 2024; and

(5) \$901,000,000 for fiscal year 2025.

(Pub. L. 115-246, title III, §307, Sept. 28, 2018, 132 Stat. 3148; Pub. L. 116-260, div. Z, title II, §2008(a), Dec. 27, 2020, 134 Stat. 2474.)

REFERENCES IN TEXT

The date of enactment of this section, referred to in subsecs. (i)(1) and (n)(1), probably means the date of enactment of Pub. L. 116-260, which enacted subsecs. (i) and (n) of this section and was approved Dec. 27, 2020.

The enactment of this section, referred to in subsecs. (i)(2) and (l), probably means the enactment of Pub. L. 116-260, which enacted subsecs. (i) and (l) of this section and made other amendments to this section.

CODIFICATION

Section is comprised of section 307 of Pub. L. 115-246. Subsec. (g) of section 307 of Pub. L. 115-246 amended section 2053 of this title.

AMENDMENTS

Subsec. (a). Pub. L. 116-260, §2008(a)(2), added subsec. (a). Former subsec. (a) redesignated (b).

Subsecs. (b), (c). Pub. L. 116-260, §2008(a)(1), redesignated subsecs. (a) and (b) as (b) and (c), respectively. Former subsec. (c) redesignated (d).

Subsec. (d). Pub. L. 116-260, §2008(a)(3), amended subsec. (d) generally. Prior to amendment, text read as follows: “The Director shall support research and development activities for inertial fusion for energy applications.”

Pub. L. 116-260, §2008(a)(1), redesignated subsec. (c) as (d). Former subsec. (d) redesignated (e).

Subsec. (e). Pub. L. 116-260, §2008(a)(4), amended subsec. (e) generally. Prior to amendment, text read as follows: “The Director shall support research and development activities and facility operations at institutions of higher education, National Laboratories, and private facilities in the United States for a portfolio of alternative and enabling fusion energy concepts that may provide solutions to significant challenges to the establishment of a commercial magnetic fusion power plant, prioritized based on the ability of the United States to play a leadership role in the international fusion research community.”

Pub. L. 116-260, §2008(a)(1), redesignated subsec. (d) as (e). Former subsec. (e) redesignated (f).

Subsecs. (f) to (h). Pub. L. 116-260, §2008(a)(1), redesignated subsecs. (f) and (g) as (g) and (h) respectively.

Subsecs. (i) to (o). Pub. L. 116-260, §2008(a)(5), added subsecs. (i) to (o).

**§ 18646. Isotope development and production for research applications**

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.

(Pub. L. 115-246, title III, §308(a), Sept. 28, 2018, 132 Stat. 3150.)

**§ 18647. Science laboratories infrastructure program**

**(a) In general**

The Director shall carry out a program to improve the safety, efficiency, and mission readi-

<sup>1</sup> So in original.

ness 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.

(Pub. L. 115-246, title III, § 309, Sept. 28, 2018, 132 Stat. 3150.)