

§ 18643. High-energy physics**(a) Sense of Congress**

It is the sense of Congress that—

(1) the Director should incorporate the findings and recommendations of the report of the Particle Physics Project Prioritization Panel entitled “Building for Discovery: Strategic Plan for U.S. Particle Physics in the Global Context” into the planning process of the Department; and

(2) the nations that lead in particle physics by hosting international teams dedicated to a common scientific goal attract the world’s best talent and inspire future generations of physicists and technologists.

(b) International collaboration

The Director, as practicable and in coordination with other appropriate Federal agencies as necessary, shall ensure the access of United States researchers to the most advanced accelerator facilities and research capabilities in the world, including the Large Hadron Collider.

(c) Neutrino research

The Director shall carry out research activities on rare decay processes and the nature of the neutrino, which may include collaborations with the National Science Foundation or international collaborations.

(d) Dark energy and dark matter research

The Director shall carry out research activities on the nature of dark energy and dark matter, which may include collaborations with the National Aeronautics and Space Administration or the National Science Foundation; or international collaborations.

(Pub. L. 115–246, title III, § 305, Sept. 28, 2018, 132 Stat. 3147.)

§ 18644. Biological and environmental research**(a) Biological systems**

The Director shall carry out research and development activities in fundamental, structural, computational, and systems biology to increase systems-level understanding of the complex biological systems, which may include activities—

(1) to accelerate breakthroughs and new knowledge that would enable the cost-effective, sustainable production of—

(A) biomass-based liquid transportation fuels;

(B) bioenergy; and

(C) biobased materials;

(2) to improve understanding of the global carbon cycle, including processes for removing carbon dioxide from the atmosphere, through photosynthesis and other biological processes, for sequestration and storage; and

(3) to understand the biological mechanisms used to transform, immobilize, or remove contaminants from subsurface environments.

(b) Limitation for research funds

The Director shall not approve new climate science-related initiatives without making a determination that such work is well-coordinated with any relevant work carried out by other Federal agencies.

(c) Low-dose radiation research program**(1) In general**

The Secretary shall carry out a research program on low-dose and low dose-rate radiation to—

(A) enhance the scientific understanding of, and reduce uncertainties associated with, the effects of exposure to low-dose and low dose-rate radiation; and

(B) inform improved risk-assessment and risk-management methods with respect to such radiation.

(2) Program components

In carrying out the program required under paragraph (1), the Secretary shall—

(A) support and carry out the directives under section 106(b) of the American Innovation and Competitiveness Act (42 U.S.C. 6601 note), except that such section shall be treated for purposes of this subsection as applying to low dose and low-dose rate radiation research, in coordination with the Physical Science Subcommittee of the National Science and Technology Council;

(B) identify and, to the extent possible, quantify, potential monetary and health-related impacts to Federal agencies, the general public, industry, research communities, and other users of information produced by such research program;

(C) leverage the collective body of knowledge from existing low-dose and low dose-rate radiation research;

(D) engage with other Federal agencies, research communities, and potential users of information produced under this section, including institutions performing or utilizing radiation research, medical physics, radiology, health physics, and emergency response measures; and

(E) support education and outreach activities to disseminate information and promote public understanding of low-dose radiation, with a focus on non-emergency situations such as medical physics, space exploration, and naturally occurring radiation.

(3) Research plan

(A) Not later than 90 days after December 27, 2020, the Secretary shall enter into an agreement with the National Academy of Sciences to develop a long-term strategic and prioritized research agenda for the program described in paragraph (2);

(B) Not later than one year after December 27, 2020, the Secretary shall transmit this research plan developed in subparagraph (A) to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate.

(4) GAO study

Not later than 3 years after December 27, 2020, the Comptroller General shall transmit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate, a report on:

(A) an evaluation of the program activities carried out under this section;