

SUBCHAPTER IV—DEPARTMENT OF  
ENERGY QUANTUM ACTIVITIES

**§ 8851. Quantum information science research program**

**(a) In general**

The Secretary of Energy shall carry out a basic research program on quantum information science.

**(b) Program components**

In carrying out the program under subsection (a), the Secretary of Energy shall—

(1) formulate goals for quantum information science research to be supported by the Department of Energy;

(2) leverage the collective body of knowledge from existing quantum information science research;

(3) provide research experiences and training for additional undergraduate and graduate students in quantum information science, including in the fields of—

- (A) quantum information theory;
- (B) quantum physics;
- (C) quantum computational science;
- (D) applied mathematics and algorithm development;
- (E) quantum networking;
- (F) quantum sensing and detection; and
- (G) materials science and engineering;

(4) coordinate research efforts funded through existing programs across the Department of Energy, including—

- (A) the Nanoscale Science Research Centers;
- (B) the Energy Frontier Research Centers;
- (C) the Energy Innovation Hubs;
- (D) the National Laboratories;
- (E) the Advanced Research Projects Agency; and
- (F) the National Quantum Information Science Research Centers; and

(5) coordinate with other Federal departments and agencies, research communities, and potential users of information produced under this section.

(Pub. L. 115-368, title IV, § 401, Dec. 21, 2018, 132 Stat. 5101.)

**§ 8852. National Quantum Information Science Research Centers**

**(a) Establishment**

**(1) In general**

The Secretary of Energy, acting through the Director of the Office of Science (referred to in this section as the “Director”), shall ensure that the Office of Science carries out a program, in consultation with other Federal departments and agencies, as appropriate, to establish and operate at least 2, but not more than 5, National Quantum Information Science Research Centers (referred to in this section as “Centers”) to conduct basic research to accelerate scientific breakthroughs in quantum information science and technology and to support research conducted under section 8851 of this title.

**(2) Requirements**

**(A) Competitive, merit-reviewed process**

The Centers shall be established through a competitive, merit-reviewed process.

**(B) Applications**

An eligible applicant under this subsection shall submit to the Director an application at such time, in such manner, and containing such information as the Director determines to be appropriate.

**(C) Eligible applicants**

The Director shall consider applications from National Laboratories, institutions of higher education, research centers, multi-institutional collaborations, and any other entity that the Secretary of Energy determines to be appropriate.

**(b) Collaborations**

A collaboration that receives an award under this section may include multiple types of research institutions and private sector entities.

**(c) Requirements**

To the maximum extent practicable, the Centers developed, constructed, operated, or maintained under this section shall serve the needs of the Department of Energy, industry, the academic community, and other relevant entities to create and develop processes for the purpose of advancing basic research in quantum information science and improving the competitiveness of the United States.

**(d) Coordination**

The Secretary of Energy shall ensure the coordination, and avoid unnecessary duplication, of the activities of each Center with the activities of—

(1) other research entities of the Department of Energy, including—

- (A) the Nanoscale Science Research Centers;
- (B) the Energy Frontier Research Centers;
- (C) the Energy Innovation Hubs; and
- (D) the National Laboratories;

- (2) institutions of higher education; and
- (3) industry.

**(e) Duration**

**(1) In general**

Each Center established under this section is authorized to carry out activities for a period of 5 years.

**(2) Reapplication**

An awardee may reapply for additional, subsequent periods of 5 years. The Director shall approve or disapprove of each reapplication on a competitive, merit-reviewed basis.

**(3) Termination**

Consistent with the authorities of the Department of Energy, the Secretary of Energy may terminate an underperforming Center for cause during the performance period.

**(f) Funding**

The Secretary of Energy shall allocate up to \$25,000,000 for each Center established under this section for each of fiscal years 2019 through 2023,