

119TH CONGRESS
2D SESSION

S. 3597

To reauthorize the National Quantum Initiative Act, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JANUARY 8 (legislative day, JANUARY 7), 2026

Mr. YOUNG (for himself, Ms. CANTWELL, Mr. DAINES, Mr. DURBIN, Mrs. BLACKBURN, Mr. LUJÁN, Mr. BUDD, Ms. BALDWIN, Mr. ROUNDS, and Mr. SCHUMER) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To reauthorize the National Quantum Initiative Act, and
for other purposes.

1 *Be it enacted by the Senate and House of Representa-
2 tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the
5 “National Quantum Initiative Reauthorization Act of
6 2026”.

7 (b) TABLE OF CONTENTS.—The table of contents for
8 this Act is as follows:

- Sec. 1. Short title; table of contents.
- Sec. 2. Definitions.
- Sec. 3. Purposes.
- Sec. 4. National Quantum Initiative Program.

Sec. 5. National Quantum Coordination Office.
 Sec. 6. Subcommittee on Quantum Information Science.
 Sec. 7. National Quantum Initiative Advisory Committee.
 Sec. 8. Subcommittee on the Economic and Security Implications of Quantum Information Science.
 Sec. 9. International Quantum Cooperation Strategy.
 Sec. 10. Prize challenges.
 Sec. 11. Sunset of National Quantum Initiative.
 Sec. 12. National Institute of Standards and Technology activities and quantum consortium.
 Sec. 13. National Institute of Standards and Technology Quantum Centers.
 Sec. 14. National Science Foundation quantum information science research and education activities.
 Sec. 15. Multidisciplinary centers for quantum research and education.
 Sec. 16. Quantum Reskilling, Education, and Workforce (QREW) Coordination Hub, quantum testbeds, and research security.
 Sec. 17. National Science Foundation cryptography research.
 Sec. 18. National Aeronautics and Space Administration quantum activities.
 Sec. 19. Comptroller General review and report.
 Sec. 20. Review of regulatory barriers to quantum information science and technology development.
 Sec. 21. Sunset of National Nanotechnology Program.
 Sec. 22. Clerical amendments.

1 SEC. 2. DEFINITIONS.

2 Section 2 of the National Quantum Initiative Act (15
 3 U.S.C. 8801) is amended—

4 (1) by redesignating paragraphs (4), (5), (6),
 5 (7), the first paragraph (8) (relating to the definition
 6 of the “Subcommittee on Economic and Security
 7 Implications”), and the second paragraph (8)
 8 (relating to the definition of the “Subcommittee on
 9 Quantum Information Science”) as paragraphs (7),
 10 (9), (12), (13), (17), and (18), respectively;

11 (2) by inserting after paragraph (3) the following:

13 “(4) FEDERAL LABORATORY.—The term ‘Federal
 14 laboratory’ has the meaning given such term in

1 section 4 of the Stevenson-Wydler Technology Innovation
2 Act of 1980 (15 U.S.C. 3703).

3 “(5) FOREIGN COUNTRY OF CONCERN.—The
4 term ‘foreign country of concern’ means—

5 “(A) a country that is a covered nation (as
6 such term is defined in section 4872(d) of title
7 10, United States Code); and

8 “(B) any country that the Secretary of
9 Commerce, in consultation with the Secretary of
10 Defense, the Secretary of State, and the Director
11 of National Intelligence, determines to be
12 engaged in conduct that is detrimental to the
13 national security or foreign policy of the United
14 States.

15 “(6) FOREIGN ENTITY OF CONCERN.—The
16 term ‘foreign entity of concern’ means a foreign entity that is—

18 “(A) designated as a foreign terrorist organization by the Secretary of State under section
19 219(a) of the Immigration and Nationality Act
20 (8 U.S.C. 1189(a));

22 “(B) included on the list of specially designated nationals and blocked persons maintained by the Office of Foreign Assets Control

1 of the Department of the Treasury (commonly
2 known as the ‘SDN list’);

3 “(C) owned by, controlled by, or subject to
4 the jurisdiction or direction of a government of
5 a foreign country that is a covered nation (as
6 such term is defined in section 4872 of title 10,
7 United States Code);

8 “(D) alleged by the Attorney General to
9 have been involved in activities for which a con-
10 viction was obtained under—

11 “(i) chapter 37 of title 18, United
12 States Code (commonly known as the ‘Es-
13 pionage Act’);

14 “(ii) section 951 or 1030 of title 18,
15 United States Code;

16 “(iii) chapter 90 of title 18, United
17 States Code (commonly known as the ‘Eco-
18 nomic Espionage Act of 1996’);

19 “(iv) the Arms Export Control Act
20 (22 U.S.C. 2751 et seq.);

21 “(v) section 224, 225, 226, 227, or
22 236 of the Atomic Energy Act of 1954 (42
23 U.S.C. 2274, 2275, 2276, 2277, and
24 2284);

1 “(vi) the Export Control Reform Act
2 of 2018 (50 U.S.C. 4801 et seq.); or

3 “(vii) the International Emergency
4 Economic Powers Act (50 U.S.C. 1701 et
5 seq.); or

6 “(E) determined by the Secretary of Com-
7 merce, in consultation with the Secretary of De-
8 fense and the Director of National Intelligence,
9 to be engaged in unauthorized conduct that is
10 detrimental to the national security or foreign
11 policy of the United States.”;

12 (3) in paragraph (7), as so redesignated, by
13 striking “(a)” each place it appears;

14 (4) by inserting after paragraph (7), as so re-
15 designated, the following new paragraph:

16 “(8) NATIONAL LABORATORY.—The term ‘Na-
17 tional Laboratory’ has the meaning given such term
18 in section 2 of the Energy Policy Act of 2005 (42
19 U.S.C. 15801).”;

20 (5) by inserting after paragraph (9), as so re-
21 designated, the following:

22 “(10) QUANTUM APPLICATIONS.—The term
23 ‘quantum applications’ means uses of quantum in-
24 formation science, engineering, and technology, in-
25 cluding quantum algorithms and software, quantum

1 computing and quantum-classical hybrids, quantum
2 sensing, quantum networking, quantum encryption,
3 quantum simulation, or quantum communications
4 applications.

5 “(11) QUANTUM COMPUTING.—The term ‘quantum
6 computing’ means any of a variety of quantum
7 computing technologies, including quantum annealing
8 and quantum gate-model systems that utilize a
9 variety of architectures, such as superconductors,
10 ion traps, photonics, neutral atoms, atomic spin,
11 electron spin, or topological qubits.”;

12 (6) by amending paragraph (12), as so redesignated, to read as follows:

14 “(12) QUANTUM INFORMATION SCIENCE, ENGINEERING, AND TECHNOLOGY.—The term ‘quantum
15 information science, engineering, and technology’
16 means the understanding, translation, use, or application
17 of the laws of quantum physics for the storage,
18 transmission, manipulation, computing, simulation,
19 or measurement of information.”; and

21 (7) by inserting after paragraph (13), as so redesignated, the following:

23 “(14) QUANTUM NETWORKING.—The term
24 ‘quantum networking’ means the transmission of
25 quantum information and the distribution and use of

1 entanglement across nodes to enable new information
2 technology applications and fundamental
3 science.

4 “(15) QUANTUM SENSING.—The term ‘quantum
5 sensing’—

6 “(A) means the use of quantum mechanics
7 to enhance or enable new sensors; and

8 “(B) can include uses of superposition and
9 entanglement, nonclassical states, and advances
10 in accuracy and precision enabled by quantum
11 control.

12 “(16) STEM.—The term ‘STEM’ means the
13 academic and professional disciplines of science,
14 technology, engineering, and mathematics, including
15 computer science.

16 “(17) SUPPLY CHAIN SHOCK.—The term ‘supply
17 chain shock’—

18 “(A) means an event causing severe or serious
19 disruption to normal operations or capacity in a supply chain; and

20 “(B) includes—

21 “(i) a natural disaster;

22 “(ii) a pandemic;

23 “(iii) a biological threat;

24 “(iv) a cyber attack;

1 “(v) a geopolitical conflict;

2 “(vi) a terrorist or geopolitical attack;

3 “(vii) a trade disruption caused by—

4 “(I) a foreign country of concern;

5 or

6 “(II) an entity or an individual

7 subject to the jurisdiction of such a

8 country; and

9 “(viii) an event for which the Presi-

10 dent declares a major disaster or an emer-

11 gency under section 401 or 501, respec-

12 tively, of the Robert T. Stafford Disaster

13 Relief and Emergency Assistance Act (42

14 U.S.C. 5170; 42 U.S.C. 5191).”.

15 **SEC. 3. PURPOSES.**

16 Section 3 of the National Quantum Initiative Act (15

17 U.S.C. 8802) is amended—

18 (1) in paragraph (1)—

19 (A) by amending subparagraph (A) to read

20 as follows:

21 “(A) to expand the number of researchers,

22 educators, and students with training in quan-

23 tum information science, engineering, and tech-

24 nology to develop a domestic workforce pipeline

25 and retain international talent to the extent

1 consistent with national security and inter-
2 national competitiveness;”;
3 (B) in subparagraph (B), by striking
4 “science at the” and inserting “science, engi-
5 neering, and technology at the primary, sec-
6 ondary;”;
7 (C) in subparagraph (D)—
8 (i) by striking “science and tech-
9 nology” and inserting “science, engineer-
10 ing, and technology”; and
11 (ii) by striking “and” after the semi-
12 colon; and
13 (D) by adding at the end the following:
14 “(F) to facilitate development of quantum
15 applications, including quantum-hybrid applica-
16 tions, to promote innovation; and
17 “(G) to support advancements in emerging
18 technologies that could benefit from or benefit
19 the development of quantum technology and
20 promote research, development, demonstration,
21 and application of such emerging technologies
22 in quantum information science, engineering,
23 and technology and scientific discovery.”;

4 (3) in paragraph (3), by striking “science and
5 technology” and inserting “science, engineering, and
6 technology”;

7 (4) in paragraph (4)—

10 (B) by striking “and” after the semicolon;

11 (5) in paragraph (5)—

12 (A) in the matter preceding subparagraph

13 (A)—

14 (i) by inserting “partnerships, re-
15 search collaborations, and” after “inter-
16 national”; and

17 (ii) by striking “science and tech-
18 nology security” and inserting “science,
19 engineering, and technology”;

20 (B) in subparagraph (A), by striking
21 “and” after the semicolon;

22 (C) in subparagraph (B), by striking the
23 period at the end and inserting a semicolon;
24 and

25 (D) by adding at the end the following:

1 “(C) to facilitate cooperation in the ad-
2 vancement of quantum capabilities among the
3 United States and its strategic allies and part-
4 ners to strengthen and secure the quantum-rel-
5 evant supply chain and related ecosystem; and

6 “(D) to coordinate on potential export or
7 strategic trade controls where appropriate;
8 and”; and

9 (6) by adding at the end the following:

10 “(6) improving the maturity and scale of the
11 quantum industry.”.

12 **SEC. 4. NATIONAL QUANTUM INITIATIVE PROGRAM.**

13 Subsection (b) of section 101 of the National Quan-
14 tum Initiative Act (15 U.S.C. 8811) is amended—

15 (1) in paragraph (1)—

16 (A) by striking “development” and insert-
17 ing “research development, and near-, medium-
18 , and long-term demonstration”; and

19 (B) by striking “information science and
20 technology”;

21 (2) in paragraph (2)—

22 (A) by striking “science and technology”
23 and inserting “science, engineering, and tech-
24 nology”; and

1 (B) by inserting “infrastructure,” after
2 “demonstration,”;

3 (3) in paragraph (3)—

4 (A) by inserting “and retain” after “to de-
5 velop”; and

(B) by striking “science and technology” and inserting “science, engineering, and technology”;

9 (4) by amending paragraph (4) to read as fol-

10 lows:

11 “(4) provide for interagency planning and co-
12 ordination of Federal quantum information science,
13 engineering, and technology research, development,
14 demonstration, standards engagement, and other ac-
15 tivities under the Program, including activities au-
16 thorized pursuant to section 234 of the John S.
17 McCain National Defense Authorization Act for Fis-
18 cal Year 2019 (Public Law 115–232; 10 U.S.C.
19 4001 note), quantum educational activities and pro-
20 grams authorized pursuant to section 10661 of the
21 Research and Development, Competition, and Inno-
22 vation Act (42 U.S.C. 19261), and activities con-
23 ducted at any Federal laboratory or National Lab-
24 oratory;”; and

25 (5) in paragraph (5)—

7 SEC. 5. NATIONAL QUANTUM COORDINATION OFFICE.

8 Section 102 of the National Quantum Initiative Act
9 (15 U.S.C. 8812) is amended—

10 (1) in subsection (a)(2)—

13 (B) by amending subparagraph (B) to read
14 as follows:

18 (2) in subsection (b)—

19 (A) in paragraph (3), by striking “science
20 and technology” and inserting “science, engi-
21 neering, and technology research, development,
22 workforce, and international”;

23 (B) by amending paragraph (4) to read as
24 follows:

1 “(4) ensure coordination among the collaborative ventures or consortia established under this
2 Act, including under section 201(a), the Multidisciplinary Centers for Quantum Research and Education established under section 302(a), and the National Quantum Information Science Research Centers established under section 402(a), and the Quantum Economic Development Consortium;”;

9 (C) in paragraph (6), by striking “; and”
10 and inserting a semicolon;

11 (D) in paragraph (7)—
12 (i) by inserting “nonprofit research
13 organizations,” after “universities,”; and
14 (ii) by striking the period at the end
15 and inserting a semicolon; and

16 (E) by adding after paragraph (7), the following:

18 “(8) promote understanding and adoption of
19 viable quantum capabilities that strengthen the
20 United States economy, as may be appropriate;

21 “(9) track, monitor, and promote policies that
22 will ensure the stability of the United States quantum
23 workforce, quantum supply chain, domestic
24 quantum industry, and international trade; and

1 “(10) ensure coordination and avoid unnecessary duplication of existing quantum-related activities, other activities carried out under this Act, and other related programs, as appropriate.”.

5 **SEC. 6. SUBCOMMITTEE ON QUANTUM INFORMATION**
6 **SCIENCE.**

7 Section 103 of the National Quantum Initiative Act
8 (15 U.S.C. 8813) is amended—

9 (1) in subsection (b)—

10 (A) in paragraph (8), by striking “and”
11 after the semicolon;

12 (B) by redesignating paragraph (9) as
13 paragraph (12); and

14 (C) by inserting after paragraph (8) the
15 following new paragraphs:

16 “(9) the Department of Health and Human
17 Services;

18 “(10) the Department of State;

19 “(11) the Department of Homeland Security;
20 and”;

21 (2) in subsection (d)—

22 (A) in paragraph (1), by striking “the
23 quantum information science and technology re-
24 search” and inserting “quantum information
25 science, engineering, and technology research

1 and quantum application development, and
2 demonstration”;

3 (B) in paragraph (4)—
4 (i) by inserting “, engineering, and
5 technology” after “science”; and

6 (ii) by inserting “skillset” before “di-
7 versity”;

8 (C) in paragraph (5)—
9 (i) by inserting “, engineering, and
10 technology” after “science”; and

11 (ii) by inserting “and conduct com-
12 parative benchmarking of Federal invest-
13 ments and research strategies relative to
14 those of strategic allies and partners of the
15 United States and other countries,” after
16 “development efforts”;

17 (D) in paragraph (6)—
18 (i) by striking “science and tech-
19 nology” and inserting “science, engineer-
20 ing, and technology”; and

21 (ii) by striking “and” after the semi-
22 colon;

23 (E) in paragraph (7)—
24 (i) by inserting “, engineering and
25 technology” after “science”; and

1 (ii) by striking the period and insert-
2 ing “; and”; and

(F) by adding at the end the following new paragraph:

5 “(8) facilitate interagency partnership opportu-
6 nities to advance quantum applications related to
7 advanced manufacturing, biotechnology, chemistry,
8 space, and other sectors.”;

9 (3) in subsection (g)(2)—

10 (A) in paragraph (A), by inserting “num-
11 bers” after “budget”;

12 (B) in paragraph (B), by inserting “num-
13 bers” after “budget”; and

14 (C) by adding at the end the following new
15 paragraphs:

16 “(D) Metrics for measuring the impact of
17 the Program for the current fiscal year, for
18 each Federal department and agency described
19 in subsection (b).

22 (4) in subsection (h)(2)(A), by inserting “, in-
23 cluding a description of agency roles and responsibil-
24 ities” before the period; and

(5) by adding at the end the following new sub-section:

3 (i) QUANTUM USE CASES.—

4 “(1) IN GENERAL.—The Subcommittee shall
5 identify potential use cases for quantum technologies
6 that could advance the missions of Federal depart-
7 ments and agencies participating in the Program.

8 “(2) QUANTUM ON-RAMP.—For each potential
9 use case identified pursuant to paragraph (1) for a
10 Federal department or agency, the head of the Fed-
11 eral department or agency may, in consultation with
12 the Subcommittee, develop a plan to enable such de-
13 partment or agency to address the potential use
14 case.

15 “(3) COMPARISON TO ARTIFICIAL INTEL-
16 LIGENCE TECHNOLOGIES.—For any potential use
17 case identified under paragraph (1) for a Federal
18 department or agency, the head of the department
19 or agency may, in consultation with the Sub-
20 committee, consider the quantum use case’s inter-
21 play with artificial intelligence and compare its an-
22 ticipated costs, functionality, and benefits.

23 “(4) REPORTING.—The Subcommittee, as part
24 of the annual report on the budget for the Program
25 under subsection (g), shall report progress in car-

1 rying out the activities under this subsection, includ-
2 ing information relating to the following:

3 “(A) The potential use cases identified
4 pursuant to paragraph (1).

5 “(B) The status of plans developed pursu-
6 ant to paragraph (2).

7 “(C) Any obstacles to addressing such po-
8 tential use cases, including lack of funding.”.

9 **SEC. 7. NATIONAL QUANTUM INITIATIVE ADVISORY COM-**

10 **MITTEE.**

11 Section 104 of the National Quantum Initiative Act
12 (15 U.S.C. 8814) is amended—

13 (1) by amending subsection (b) to read as fol-
14 lows:

15 “(b) **QUALIFICATIONS.**—The Advisory Committee
16 shall consist of members, appointed by the President,
17 who—

18 “(1) are—

19 “(A) representative of industry;

20 “(B) small- and medium-sized businesses;

21 and

22 “(C) universities and Federal laboratories
23 that are qualified to provide advice and infor-
24 mation on quantum information science, engi-
25 neering, and technology research, development,

1 demonstrations, standards, STEM education
2 and workforce, technology transfer, economic
3 and national security, or research security.

4 “(2) may hold doctoral degrees in physical
5 sciences, mathematics, computer science, or engi-
6 neering, or related fields.”;

7 (2) in subsection (d)(2)—

8 (A) in subparagraph (A), by striking
9 “science and technology” and inserting
10 “science, engineering, and technology”;

11 (B) by redesignating subparagraphs (D),
12 (E), (F), and (G) as subparagraphs (F), (G),
13 (H), and (I), respectively;

14 (C) by inserting after subparagraph (C)
15 the following new subparagraphs:

16 “(D) other countries’ quantum programs
17 and the progress of such countries and their
18 programs, based on publicly available data, in-
19 cluding metrics such as published government
20 funding commitments, research publications,
21 patent filings, academic and industry partner-
22 ships, and announced strategic initiatives and
23 milestones, in comparison to the progress of the
24 Program;

1 “(E) the competitiveness and capabilities
2 of the United States in quantum technologies,
3 with respect to quantum computing, sensing,
4 and networking;”;

5 (D) in subparagraph (F), as so redesign-
6 ated—

7 (i) by striking “to” and inserting
8 “promote innovation, foster a robust
9 United States quantum industry, and”;
10 and

11 (ii) by striking “science and tech-
12 nology” and inserting “science, engineer-
13 ing, and technology”;

14 (E) in subparagraph (G), as so redesign-
15 ated, by inserting “, including to address any
16 gaps that may exist in basic research, capabili-
17 ties, workforce, supply chain, or coordination
18 among participating Federal agencies” before
19 the semicolon;

20 (F) in subparagraph (H), as so redesign-
21 ated, by striking “open standards for, quan-
22 tum information science and technology; and”
23 and inserting “international standards in open
24 and transparent standardization systems for

1 quantum information science, engineering, and
2 technology;”;

3 (G) in subparagraph (I), as so redesignated, by striking “societal”; and

5 (H) by adding at the end the following new
6 subparagraphs:

7 “(J) the domestic and international co-operation needs and goals of the Program, including those related to infrastructure and the supply chain of quantum information science, engineering, and technology; and

12 “(K) the degree to which quantum information science, engineering, and technology—

14 “(i) is enhancing or can enhance—

15 “(I) the capabilities of the United States advanced industrial economy; and

18 “(II) Federal, State, and local government capabilities and services; and

21 “(ii) can protect or optimize critical infrastructure (as such term is defined in section 1016(e) of Public Law 107–56 (42 U.S.C. 5195c(e))).”;

25 (3) in subsection (e)—

3 (B) by adding at the end the following new
4 sentence: “In the first such report required
5 after the date of the enactment of the National
6 Quantum Initiative Reauthorization Act of
7 2026, the Advisory Committee shall assess the
8 benefits and opportunities to strengthen quantum
9 communications corridors in which Federal
10 laboratories, institutions of higher education,
11 and other entities conducting quantum informa-
12 tion science, engineering, and technology re-
13 search are connected via quantum communica-
14 tion networks capable of securely transmitting
15 information.”;

16 (4) by redesignating subsections (e) through (g)
17 as subsections (f) through (h), respectively; and

18 (5) by inserting after subsection (d) the fol-
19 lowing:

20 “(e) PERFORMANCE AND USEFULNESS ASSESSMENT
21 OF NATIONAL QUANTUM INITIATIVE PROGRAM.—

22 “(1) ANNUAL EVALUATION REQUIRED—Not

23 less frequently than once each year, the Advisory
24 Committee shall, in coordination with the Sub-
25 committee on Quantum Information Science, con-

1 duct an evaluation of the effectiveness, progress, and
2 usefulness of activities carried out under the Pro-
3 gram.

4 “(2) ELEMENTS.—Each evaluation under para-
5 graph (1) shall assess—

6 “(A) which Federal programs or activities
7 within the Program have made measurable
8 progress toward program goals;

9 “(B) which Federal programs within the
10 Program have produced tangible scientific,
11 workforce, or commercial outcomes;

12 “(C) which programs or activities within
13 the Program have overlapping missions or du-
14 plicative structures;

15 “(D) resource utilization and return on in-
16 vestment of each major component of the Pro-
17 gram; and

18 “(E) barriers to performance or implemen-
19 tation of the Program, including structural or
20 administrative challenges.

21 “(3) REPORT TO CONGRESS.—Not later than
22 March 1 of each year, the Advisory Committee shall
23 submit to the Committee on Commerce, Science, and
24 Transportation of the Senate and the Committee on
25 Science, Space, and Technology of the House of

1 Representatives a report summarizing the findings
2 of the Advisory Committee with respect to the eval-
3 uation most recently conducted under paragraph (1),
4 including specific recommendations for—

5 “(A) improvements to the Program;
6 “(B) consolidation or termination of pro-
7 grams or activities within the Program; and
8 “(C) realignment of funding to high-imp-
9 act areas within the Program.

10 “(4) PUBLIC SUMMARY.—The Advisory Com-
11 mittee shall make a public-facing summary of each
12 report submitted under paragraph (3) available on
13 the website of the Advisory Committee to promote
14 transparency and accountability.”.

15 **SEC. 8. SUBCOMMITTEE ON THE ECONOMIC AND SECURITY**
16 **IMPLICATIONS OF QUANTUM INFORMATION**
17 **SCIENCE.**

18 Section 105 of the National Quantum Initiative Act

19 (15 U.S.C. 8814a) is amended—

20 (1) in subsection (b)—

21 (A) in paragraph (10), by striking “and”
22 after the semicolon;

23 (B) by redesignating paragraph (11) as
24 paragraph (15); and

(C) by inserting after paragraph (10) the following new paragraphs:

3 “(11) the Department of State;

4 “(12) the National Aeronautics and Space Ad-
5 ministration; and”; and

6 (2) in subsection (c)—

7 (A) in paragraph (1), by striking “infor-
8 mation science” and inserting “information
9 science, engineering, and technology”;

10 (B) in paragraph (2), by inserting “or to
11 supply chains” before the semicolon;

12 (C) in paragraph (3), by inserting “or sup-
13 ply chains” before the semicolon;

14 (D) in paragraph (5)—

15 (i) by inserting “and engineering”
16 after “quantum information science”; and
17 (ii) by inserting “any” before “export
18 controls”;

19 (E) in paragraph (6), by striking “infor-
20 mation science” and inserting “information
21 science, engineering, and technology”;

22 (F) in paragraph (7), by striking "and"
23 after the semicolon:

24 (G) in paragraph (8)—

1 (i) by striking “information science”
2 and inserting “information science, engi-
3 neering, and technology”; and

4 (ii) by striking the period and insert-
5 ing a semicolon; and

6 (H) by adding at the end the following:

7 “(9) in coordination with the Subcommittee on
8 Quantum Information Science, identify opportunities
9 to increase coordination between civilian, military,
10 and intelligence quantum research entities, reduce
11 unnecessary duplicative quantum research activities,
12 and facilitate collaboration between quantum re-
13 search agencies with specialized capabilities or ex-
14 pertise in one or more aspects of quantum informa-
15 tion science, engineering, and technology; and

16 “(10) recommend strategies for attracting and
17 retaining students and scholars with expertise in
18 quantum related fields to Federal departments and
19 agencies.”.

20 SEC. 9. INTERNATIONAL QUANTUM COOPERATION STRAT- 21 EGY.

22 The National Quantum Initiative Act (15 U.S.C.
23 8801 et seq.) is amended by inserting after section 105
24 the following new section:

1 **“SEC. 105A. INTERNATIONAL QUANTUM COOPERATION**2 **STRATEGY.**

3 “(a) STRATEGY REQUIRED.—Not later than one year
4 after the date of the enactment of this section, the Direc-
5 tor of the Office of Science and Technology Policy shall,
6 in consultation with the Secretary of Commerce, the Sec-
7 retary of State, the Secretary of Energy, the Director of
8 the National Science Foundation, the Director of the Na-
9 tional Institute of Standards and Technology, and the Ad-
10 ministrator of the National Aeronautics and Space Admin-
11 istration, and the heads of other Federal agencies, as ap-
12 propriate, develop and submit to the Committee on Com-
13 merce, Science, and Transportation, the Committee on
14 Energy and Natural Resources, and the Committee on
15 Foreign Relations of the Senate, and the Committee on
16 Science, Space, and Technology and the Committee on
17 Foreign Affairs of the House of Representatives a strat-
18 egy—

19 “(1) to establish collaborative international
20 partnerships to advance research and development,
21 testing and evaluation, and interoperability in quan-
22 tum information science, engineering, and tech-
23 nology with allies and partners of the United States,
24 and other countries, when in the security, strategic,
25 technological, and scientific interests of the United
26 States;

1 “(2) to establish collaborative international
2 partnerships, including co-funded international pro-
3 grams, to advance research and development, testing
4 and evaluation, and interoperability in quantum in-
5 formation science, engineering, and technology with
6 allies and partners of the United States, and other
7 countries, when in the security, strategic, technolo-
8 gical, and scientific interests of the United States;

9 “(3) to ensure continued United States partici-
10 pation in bilateral and multilateral efforts to ad-
11 vance quantum information science, engineering, and
12 technology on the international stage;

13 “(4) to promote the integrity and impartiality
14 of international standards organizations and proc-
15 esses related to quantum information science, engi-
16 neering, and technology; and

17 “(5) to ensure ethical application of quantum
18 information science, engineering, and technology to
19 protect civil liberties and basic human rights.

20 “(b) DESIGNATION.—The strategy under this sub-
21 section shall be known as the ‘International Quantum Co-
22 operation Strategy’ (in this section referred to as the
23 ‘Strategy’).

24 “(c) ELEMENTS.—In the development of the Strat-
25 egy, the Director of the Office of Science and Technology

1 Policy, the National Quantum Coordination Office, the
2 Subcommittee on Quantum Information Science, the Sub-
3 committee on Economic and Security Implications, and
4 the relevant agencies shall consider including the fol-
5 lowing:

6 “(1) The establishment of international part-
7 nerships to advance research and development in
8 quantum information science, engineering, and tech-
9 nology.

10 “(2) Key strategic allies and partners of the
11 United States that have demonstrated unique capa-
12 bilities in one or more areas of quantum information
13 science, engineering, and technology.

14 “(3) Efforts and plans to address risks to the
15 national security and economic interests of the
16 United States during development and deployment
17 of quantum technologies worldwide, including plans
18 for diplomatic engagement with allies and partners,
19 and other countries.

20 “(4) Efforts and plans to promote global devel-
21 opment and deployment of quantum technologies, in-
22 cluding through international engagement and lead-
23 ership in the development of international standards
24 that are aligned with United States national inter-
25 ests.

1 “(5) Efforts and plans to develop, attract, and
2 retain international talent.

3 “(6) The ability and risks of domestic manufac-
4 turers and suppliers and those of allies and partners
5 of the United States to meet the needs of the global
6 quantum supply chain, including raw materials such
7 as Helium-3, plans for engagement with allies and
8 partners, manufacturers, and suppliers, and options
9 to mitigate gaps and vulnerabilities in the global
10 quantum supply chain.

11 “(7) A plan to safeguard research and tech-
12 nology supported through international cooperation,
13 as appropriate, in whole or in part, including in
14 quantum technologies critical to national security,
15 from malign influence, theft, or exfiltration by for-
16 eign entities of concern.

17 “(8) As necessary, a description of such legisla-
18 tive or administrative action needed to carry out the
19 Strategy.

20 “(d) BRIEFING.—Not later than 30 days after the
21 date on which the Strategy is completed, the Director shall
22 brief the committees specified in subsection (a) on the
23 Strategy.”.

1 **SEC. 10. PRIZE CHALLENGES.**

2 The National Quantum Initiative Act (15 U.S.C. 3
3 8801 et seq.) is amended—

4 (1) by redesignating section 106 as section 107;

5 and

6 (2) by inserting after section 105A, as added by
7 section 9, the following:

8 **“SEC. 106. NATIONAL QUANTUM PRIZE CHALLENGES.**

9 “(a) IN GENERAL.—Subject to the availability of ap-
10 propriations, any head of a Federal agency with a rep-
11 resentative serving on the Subcommittee on Quantum In-
12 formation Science established under section 103, may, in-
13 dividually or in cooperation with one or more heads of
14 Federal agencies—

15 (1) conduct a prize competition under section
16 24 of the Stevenson-Wydler Technology Innovation
17 Act of 1980 (15 U.S.C. 3719), or such other prize
18 competition authority as may be available to the
19 head of an agency, to dramatically accelerate the de-
20 velopment of applications and algorithms in quan-
21 tum information science, engineering, and tech-
22 nology; and

23 (2) define a measurable set of performance
24 goals for participants in the prize competitions to
25 demonstrate their solutions on a level playing field

1 while making a significant advancement over the
2 current state of the art.

3 “(b) PURPOSE.—Any prize competition carried out
4 under subsection (a) shall be for the purpose of stimu-
5 lating innovation to advance the ability of the United
6 States to achieve high-priority breakthroughs for applica-
7 tions in quantum information science, engineering, and
8 technology, such as in quantum computing, quantum sens-
9 ing, quantum communications, quantum networking,
10 quantum algorithms, and quantum cryptography.

11 “(c) COORDINATION WITH SUBCOMMITTEES.—Each
12 prize competition conducted under subsection (a) may be
13 conducted in coordination with members of the Sub-
14 committee on Quantum Information Science and the Sub-
15 committee on the Economic and Security Implications of
16 Quantum Information Science.

17 “(d) RECOMMENDATIONS.—To assist in the adminis-
18 tration of this section, the Subcommittee on Quantum In-
19 formation Science may provide recommendations on key
20 challenges in quantum information science, engineering,
21 and technology that would be well-suited for a prize com-
22 petition under subsection (a). The recommendations shall
23 include a scope for efforts carried out under such sub-
24 section.”.

1 **SEC. 11. SUNSET OF NATIONAL QUANTUM INITIATIVE.**

2 Subsection (a) of section 107 of the National Quan-
3 tum Initiative Act (15 U.S.C. 8815), as redesignated by
4 section 10, is amended to read as follows:

5 “(a) **IN GENERAL.**—Except as provided in subsection
6 (b), the authority to carry out sections 101, 102, 103, 104,
7 and 105 shall terminate on December 30, 2034.”.

8 **SEC. 12. NATIONAL INSTITUTE OF STANDARDS AND TECH-**
9 **NOLOGY ACTIVITIES AND QUANTUM CONSOR-**
10 **TIUM.**

11 Section 201 of the National Quantum Initiative Act
12 (15 U.S.C. 8831) is amended—

13 (1) in subsection (a)—

14 (A) in paragraph (1), by striking “science
15 and technology” and inserting “science, engi-
16 neering, and technology”;

17 (B) in paragraph (2)—

18 (i) by inserting “attract, educate,
19 and” before “train”; and

20 (ii) by striking “science and tech-
21 nology” and inserting “science, engineer-
22 ing, and technology”;

23 (C) by amending paragraph (3) to read as
24 follows:

25 “(3) shall carry out research to facilitate the
26 development and standardization, as appropriate, of

1 quantum cryptography, post-quantum cryptography
2 (as such term is defined in section 3 of the Quantum
3 Computing Cybersecurity Preparedness Act (6
4 U.S.C. 1526 note; Public Law 117–260)), and prac-
5 tices to replace cryptographic keys or algorithms
6 with minimal disruption to current applications and
7 systems;”;

8 (D) by amending paragraph (4) to read as
9 follows:

10 “(4) shall carry out research, development, and
11 demonstration projects, as appropriate, to facilitate
12 the development of quantum applications, including
13 research on quantum supply chain enabling tech-
14 nologies, such as lasers, cryogenics, and other sup-
15 porting technologies;”;

16 (E) by redesignating paragraphs (5), (6),
17 and (7) as paragraphs (8), (9), and (11), re-
18 spectively;

19 (F) by inserting the following after para-
20 graph (4) the following:

21 “(5) shall carry out, in coordination with the
22 Director of the Defense Advanced Research Projects
23 Agency, research to support the measurement of
24 comparative performance and progress of quantum
25 technologies;

1 “(6) shall promote United States participation
2 in international standards organizations related to
3 quantum information science, engineering, and tech-
4 nology;

5 “(7) shall establish or expand partnerships with
6 the public sector and private sector—

7 “(A) to accelerate the development of do-
8 mestic quantum supply chain and supply chain-
9 supporting technologies;

10 “(B) to reduce quantum supply chain
11 vulnerabilities; and

12 “(C) to avoid offshoring to, or dependence
13 on, countries of concern for critical components
14 of capabilities in the quantum supply chain;”;

15 (G) in paragraph (8), as so redesignated,
16 by striking “infrastructure” and inserting “,
17 communications, sensing, and computing”;

18 (H) in paragraph (9), as so redesignated—

19 (i) by inserting “nonprofit research
20 organizations,” after “universities,”; and

21 (ii) by striking “and engineering;
22 and” and inserting “, engineering, and
23 technology and expanding the domestic
24 STEM workforce;”; and

(I) by inserting after paragraph (9), as so redesignated, the following:

3 “(10) shall establish such infrastructure as is
4 necessary to carry out title II; and”;

5 (2) in subsection (b)—

6 (A) in paragraph (1)—

7 (i) by striking “future” and inserting
8 “research”; and

9 (ii) by striking “science and tech-
10 nology” and inserting “science, engineer-
11 ing, and technology”;

12 (B) in paragraph (2)—

13 (i) by amending subparagraph (A) to
14 read as follows:

18 (ii) by striking subparagraphs (B) and
19 (C) and inserting the following new sub-
20 paragraphs:

21 “(B) to provide recommendations regard-
22 ing how the National Institute of Standards
23 and Technology, the Program, and other Fed-
24 eral agencies, as appropriate, can address the
25 gaps in the research necessary to meet the

1 needs identified in paragraph (1) and accelerate
2 real-world uses of quantum information science,
3 engineering, and technology;

4 “(C) to identify enabling technologies and
5 the relevant supply chain essential to foster re-
6 search and industrial competitiveness in quan-
7 tum information science, engineering, and tech-
8 nology, and communicate findings to Federal
9 agencies and other domestic and international
10 stakeholders; and

11 “(D) to assess and identify key areas for
12 establishing, expanding, or developing inter-
13 national partnerships that will meet the needs
14 identified in paragraph (1).”;

15 (C) in paragraph (3)—

16 (i) by striking “Not later than 2 years
17 after the date of enactment of this Act,
18 the” and inserting “The”; and

19 (ii) by inserting “periodically, but not
20 less frequently than once every five years,”
21 after “shall”; and

22 (D) by adding at the end the following new
23 paragraph:

24 “(4) SENSE OF CONGRESS ON COORDINA-
25 TION.—It is the sense of Congress that, as may be

1 appropriate, Federal agencies that are involved in
2 the transition or translation of research results to
3 practical quantum applications or that have a mis-
4 sion that could benefit from the development of
5 quantum technologies, should engage with the con-
6 sortium to inform and accelerate progress in such
7 areas.”; and

8 (3) by striking subsection (c) and inserting the
9 following new subsections:

10 “(c) QUANTUM SUPPLY CHAINS.—

11 “(1) MAPPING AND PLANNING.—The Secretary
12 of Commerce shall carry out the following activities:

13 “(A) Assess, map, and model supply chains
14 for quantum networking, quantum computing,
15 quantum communications, quantum simulation,
16 and quantum sensing technologies and applica-
17 tions.

18 “(B) Identify current and future high-pri-
19 ority gaps and vulnerabilities in quantum sup-
20 ply chains, such as—

21 “(i) single points of failure, sole
22 source, consolidated manufacturing, or
23 where there are limited United States and
24 partner national suppliers; and

1 “(ii) critical components, elements,
2 materials, equipment, and infrastructure.

3 “(C) Identify potential supply chain shocks
4 to the quantum supply chain that may disrupt,
5 strain, or eliminate the supply chain.

6 “(2) STUDY ON CRITICAL QUANTUM SUPPLY
7 CHAINS.—Not later than 2 years after the date of
8 the enactment of the National Quantum Initiative
9 Reauthorization Act of 2026, the Secretary of Com-
10 merce and the Secretary of Energy shall jointly—

11 “(A) complete a study documenting the
12 critical quantum supply chains and identified
13 high-priority gaps and vulnerabilities; and

14 “(B) submit to the appropriate committees
15 of Congress a report on the findings with re-
16 spect to the study completed pursuant to sub-
17 paragraph (A).

18 “(3) RECOMMENDATIONS FOR AVOIDING
19 SHOCKS TO QUANTUM SUPPLY CHAINS.—Not later
20 than 2 years after the date of the enactment of the
21 National Quantum Initiative Reauthorization Act of
22 2026, the Secretary of Commerce shall, in coordina-
23 tion with the Secretary of Energy, the Director of
24 the National Science Foundation, the Secretary of
25 Defense, the Administrator of the National Aero-

1 nautics and Space Administration, the Adminis-
2 trator of the Small Business Administration, and the
3 heads of such other Federal agencies as the Sec-
4 retary of Commerce considers relevant, develop and
5 submit to the appropriate committees of Congress
6 specific recommendations for legislative or adminis-
7 trative action to mitigate harm to quantum supply
8 chains.

17 "(d) INTERNATIONAL QUANTUM RESEARCH AND
18 METROLOGY.—

19 “(1) IN GENERAL.—The Director of the Na-
20 tional Institute of Standards and Technology shall,
21 in coordination with the Secretary of State and the
22 Director of the National Science Foundation, pro-
23 mote, establish, and support international quantum
24 information science, engineering, and technology re-
25 search, metrology research, and standardization, as

1 appropriate, to enhance international cooperation,
2 meet United States commitments, and support
3 United States engagement in international voluntary
4 standards for quantum information science, engi-
5 neering, and technology.

6 “(2) ALIGNMENT.—In carrying out this section,
7 the Director of the National Institute of Standards
8 and Technology shall ensure alignment with the Na-
9 tional Quantum Information Science Strategy and
10 the U.S. Government National Standards Strategy
11 for Critical and Emerging Technology, or successor
12 strategies.

13 “(3) PROHIBITIONS.—

14 “(A) CONFUCIUS INSTITUTE.—None of the
15 funds made available under this subsection may
16 be obligated or expended to an institution of
17 higher education that maintains a contract or
18 agreement between such institution and a Con-
19 fucius Institute (as defined in section 10339A
20 of the Research and Development, Competition,
21 and Innovation Act (42 U.S.C. 19039)) or any
22 successor of a Confucius Institute.

23 “(B) FOREIGN COUNTRIES OR ENTITIES
24 OF CONCERN.—None of the funds made avail-
25 able under this subsection may be obligated or

1 expended to promote, establish, or finance
2 quantum research activities between a United
3 States entity and a foreign country of concern
4 or foreign entity of concern, including the enti-
5 ty's subsidiaries, except such restriction shall
6 not apply to participation by award recipients
7 in consensus-based international standardiza-
8 tion activities.

9 “(e) POST-QUANTUM CRYPTOGRAPHY DEPLOY-
10 MENT.—

11 “(1) DEFINITION OF POST-QUANTUM CRYPTO-
12 GRAPHY.—In this subsection, the term ‘post-quantum
13 cryptography’ has the meaning given such term in
14 section 3 of the Quantum Computing Cybersecurity
15 Preparedness Act (Public Law 117-260; 6 U.S.C.
16 1526 note).

17 “(2) IN GENERAL.—The Director of the Na-
18 tional Institute of Standards and Technology shall,
19 in consultation with the Secretary of Homeland Se-
20 curity, the heads of Sector Risk Management Agen-
21 cies (as such term is defined in section 2200 of the
22 Homeland Security Act of 2002 (6 U.S.C. 650)),
23 and private sector entities, as the Director considers
24 appropriate, promote the voluntary development,

1 adoption, and deployment of voluntary standards re-
2 lating to post-quantum cryptography, including by—

3 “(A) disseminating and making publicly
4 available guidelines and resources to help orga-
5 nizations adopt and deploy standards relating
6 to post-quantum cryptography and minimize
7 disruptions to current applications and systems
8 caused by cryptographic updates;

9 “(B) providing technical assistance, as
10 practicable, to entities that are at high risk of
11 quantum cryptoanalytic attacks, such as enti-
12 ties determined to be critical infrastructure (as
13 such term is defined in section 1016(e) of Pub-
14 lic Law 107–56 (42 U.S.C. 5195c(e))) or dig-
15 ital infrastructure providers; and

16 “(C) conducting such other activities as
17 determined necessary by the Director to pro-
18 mote the development, adoption, and deploy-
19 ment across the United States of standards re-
20 lating to post-quantum cryptography.

21 “(3) GRANT PROGRAM.—

22 “(A) IN GENERAL.—Subject to the avail-
23 ability of appropriations and after the date on
24 which the Director of the National Institute of
25 Standards and Technology has issued voluntary

1 standards relating to post-quantum cryptog-
2 raphy, the Director may establish a program to
3 identify and provide technical assistance
4 through the award of grants to entities that are
5 at high risk of quantum cryptoanalytic attacks,
6 including by granting funds for the adoption of
7 such standards and the remediation of quan-
8 tum-related vulnerabilities.

9 “(B) USE OF FUNDS.—Grants awarded to
10 entities under this paragraph may be used to
11 cover reasonable costs, up to a specified amount
12 established by the Director of the National In-
13 stitute of Standards and Technology, for activi-
14 ties to adopt standards relating to post-quan-
15 tum cryptography and remediate quantum-re-
16 lated vulnerabilities.

17 “(C) GUIDANCE.—The Director of the Na-
18 tional Institute of Standards and Technology
19 may develop, and periodically update, guidance,
20 including relating to eligibility, application dis-
21 closure requirements, grant amount and dura-
22 tion, and any additional requirements regarding
23 the award of grants under this paragraph.

24 “(D) CONSULTATION.—If the program de-
25 scribed in this paragraph is established, the Di-

1 rector of the National Institute of Standards
2 and Technology shall consult with the Director
3 of the Cybersecurity and Infrastructure Secu-
4 rity Agency of the Department of Homeland
5 Security, the heads of other Sector Risk Man-
6 agement Agencies, and appropriate representa-
7 tives of private sector entities, including non-
8 profit organizations, to share information re-
9 garding the grant program under this para-
10 graph and guidance developed and updated
11 under subparagraph (C).

12 “(f) FUNDING.—

13 “(1) AUTHORIZATION OF APPROPRIATIONS.—
14 There is authorized to be appropriated to the Direc-
15 tor of the National Institute of Standards and Tech-
16 nology to carry out this section \$85,000,000 for
17 each of fiscal years 2026 through 2030.

18 “(2) DERIVATION OF FUNDS.—Amounts made
19 available pursuant to paragraph (1) for each of fis-
20 cal years 2026 and 2027 shall be derived from
21 amounts authorized to be appropriated for the Na-
22 tional Institute of Standards and Technology pursu-
23 ant to section 10211 of the Research and Develop-
24 ment, Competition, and Innovation Act (Public Law

1 117–167) for scientific and technical research and
2 services laboratory activities.”.

3 SEC. 13. NATIONAL INSTITUTE OF STANDARDS AND TECH-
4 NOLOGY QUANTUM CENTERS.

5 Title II of the National Quantum Initiative Act is
6 amended by adding at the end the following new sections:

7 "SEC. 202. NATIONAL INSTITUTE OF STANDARDS AND
8 TECHNOLOGY QUANTUM CENTERS.

9 "(a) ESTABLISHMENT.—

10 “(1) IN GENERAL.—Subject to the availability
11 of appropriations, the Director of the National Insti-
12 tute of Standards and Technology shall, in consulta-
13 tion with such heads of other Federal departments
14 and agencies as the Director considers appropriate,
15 carry out a program to establish and operate at least
16 1, but not more than 3, centers to accelerate re-
17 search, development, deployment, and standardiza-
18 tion of quantum information science, engineering,
19 and technology.

20 “(2) PROGRAM DETAILS.—

21 “(A) COMPETITIVE, MERIT-REVIEWED
22 PROCESS.—The centers established and oper-
23 ated under paragraph (1) shall be established
24 through a competitive, merit-reviewed process.

1 “(B) APPLICATIONS.—An eligible applicant
2 described in subparagraph (C) seeking to estab-
3 lish and operate a center described in para-
4 graph (1) shall submit to the Director of the
5 National Institute of Standards and Technology
6 an application therefor at such time, in such
7 manner, and containing such information as the
8 Director determines to be appropriate.

9 “(C) ELIGIBLE APPLICANTS.—Eligible ap-
10 plicants described in this subparagraph are the
11 following:

12 “(i) Institutions of higher education.
13 “(ii) Nonprofit organizations.
14 “(iii) Multi-institution collaborations,
15 including multiple types of research insti-
16 tutions, private sector entities, Federal lab-
17 oratories, and nonprofit organizations, or
18 consortia thereof.

19 “(iv) Any other entity the Director de-
20 termines appropriate.

21 “(3) SELECTION OF APPLICATIONS AND
22 PRIORITIZED TOPICS.—The Director of the National
23 Institute of Standards and Technology shall solicit
24 proposals and prioritize the following topics in the

1 initial selection of applications submitted under
2 paragraph (2)(B), subject to merit-review:

3 “(A) Quantum sensing and measurement
4 technologies.

5 “(B) Advancing the manufacturing and
6 scale-up of quantum systems and quantum-ena-
7 bling technologies.

8 “(C) Address technology barriers to quan-
9 tum networking and communications.

10 “(4) GRANTS.—

11 “(A) IN GENERAL.—The Director shall
12 carry out the program required by paragraph
13 (1) through the award of grants to eligible ap-
14 plicants seeking to establish and operate centers
15 under the program.

16 “(B) DURATION OF GRANT AWARDS.—
17 Subject to the availability of appropriations, the
18 duration of a grant awarded under subpara-
19 graph (A) shall be a period of 5 years.

20 “(C) RENEWAL.—Subject to the avail-
21 ability of appropriations, each grant awarded
22 under subparagraph (A) may be renewed for
23 successive periods of 5 years following a suc-
24 cessful merit-based review by the Director.

1 “(D) TERMINATION.—Consistent with the
2 authorities of the Institute, the Director may
3 terminate a grant awarded under subparagraph
4 (A) for an underperforming center for cause
5 during the performance period of the grant.

6 “(b) REQUIREMENTS.—To the maximum extent
7 practicable, centers established and operated under this
8 section shall serve the mission of the National Institute
9 of Standards and Technology, for the benefit of the broad-
10 er United States quantum information science community,
11 to develop processes for the following purposes:

12 “(1) Advancing research and standardization in
13 quantum information science, engineering, and tech-
14 nology.

15 “(2) Advancing technology development.

16 “(3) Improving the competitiveness of the
17 United States.

18 “(c) COORDINATION.—The Director of the National
19 Institute of Standards and Technology shall ensure coordi-
20 nation, and avoid unnecessary duplication of, the activities
21 carried out under this section with existing activities of
22 the Institute, other activities carried out under this Act,
23 and other related programs, as appropriate.

24 “(d) OPERATION OF CENTERS.—

1 “(1) COMMERCIAL TECHNOLOGY.—Each center
2 established under this section may leverage commer-
3 cially available hardware and software to carry out
4 the activities described in subsection (a), provided
5 that such hardware and software is not manufac-
6 tured in a country of concern or by a foreign coun-
7 try of concern.

8 “(2) RENEWAL.—Each center established under
9 this section may be renewed for successive periods of
10 5 years following a successful merit-based review by
11 the Director.

12 “(3) TERMINATION.—Consistent with the au-
13 thorities of the National Institute of Standards and
14 Technology, the Director of the National Institute of
15 Standards and Technology may terminate an under-
16 performing center for cause during the performance
17 period.

18 “(e) FUNDING.—The Director of the National Insti-
19 tute of Standards and Technology shall allocate up to
20 \$18,000,000 for each center established under this section
21 for each of fiscal years 2026 through 2030, subject to the
22 availability of appropriations. Such amounts shall be de-
23 rived from amounts appropriated pursuant to section
24 10211 of the Research and Development Competition and
25 Innovation Act (Public Law 117–167).

1 “(f) BRIEFING REQUIREMENTS.—Not later than 1
2 year after the date of the enactment of the National Quan-
3 tum Initiative Reauthorization Act of 2026, and not less
4 frequently than once each year thereafter, the Director of
5 the National Institute of Standards and Technology shall
6 provide the Committee on Commerce, Science, and Trans-
7 portation of the Senate and the Committee on Space,
8 Science, and Technology of the House of Representatives
9 a briefing on current and planned activities under this sec-
10 tion.

11 **“SEC. 203. RESEARCH SECURITY.**

12 “The activities authorized under this title shall be
13 carried out in a manner consistent with subtitle D of title
14 VI of the Research and Development, Competition, and
15 Innovation Act (42 U.S.C. 19231 et seq.) and section
16 6432 of the Servicemember Quality of Life Improvement
17 and National Defense Authorization Act for Fiscal Year
18 2025 (Public Law 118–159; 42 U.S.C. 7144b note).”.

19 **SEC. 14. NATIONAL SCIENCE FOUNDATION QUANTUM IN-**
20 **FORMATION SCIENCE RESEARCH AND EDU-**
21 **CATION ACTIVITIES.**

22 Section 301 of the National Quantum Initiative Act
23 (15 U.S.C. 8841) is amended—

4 (2) in subsection (a), by striking “science and
5 engineering” and inserting “science, engineering,
6 and technology”;

7 (3) in subsection (b)—

8 (A) in paragraph (1)—

9 (i) in subparagraph (A), by striking
10 “science and engineering” and inserting
11 “science, engineering, and technology”;
12 and

13 (ii) in subparagraph (B)—

14 (I) by striking “human re-
15 sources” and inserting “education and
16 workforce”; and

17 (II) by striking “science and en-
18 gineering” and inserting “science, en-
19 gineering, and technology”; and

20 (B) in paragraph (2)—

21 (i) in subparagraph (A)—

22 (I) in clause (i)—

23 (aa) by striking “science and
24 engineering” and inserting

1 “science, engineering, and tech-
2 nology”; and
3 (bb) by striking “and” after
4 the semicolon;
5 (II) in clause (ii), by inserting
6 “and” after the semicolon; and
7 (III) by adding at the end the
8 following:
9 “(iii) to pursue research at the fron-
0 tiers of quantum information science, engi-
1 neering, and technology, and explore solu-
2 tions to important challenges for the devel-
3 opment and application of quantum tech-
4 nologies;”;
5 (ii) in subparagraph (B), by striking
6 “science and engineering” and inserting
7 “science, engineering, and technology”;
8 (iii) in subparagraph (C), by striking
9 “science and engineering” and inserting
20 “science, engineering, and technology”;
21 (iv) in subparagraph (D), by striking
22 “and” after the semicolon;
23 (v) in subparagraph (E), by striking
24 the period and inserting “; and”; and

1 (vi) by adding at the end the fol-
2 lowing:

3 “(F) providing infrastructure to support
4 academic quantum information science, engi-
5 neering, and technology, including through ex-
6 isting infrastructure programs and new activi-
7 ties.”;

8 (4) by striking subsection (c) and inserting the
9 following:

10 "(c) STUDENT TRAINEESHIPS, FELLOWSHIPS, AND
11 OTHER MODELS.—

12 “(1) QUANTUM TRAINEESHIPS.—The Director
13 of the National Science Foundation, in consultation
14 with heads of Federal agencies as the Director con-
15 siders appropriate, may use existing programs to
16 make awards to institutions of higher education or
17 nonprofit organizations (or consortia thereof)—

18 “(A) to provide traineeships to graduate
19 students at institutions of higher education
20 within the United States who are citizens of the
21 United States and who choose or plan to pursue
22 master or doctoral degrees in quantum informa-
23 tion science, engineering, and technology, or re-
24 lated fields; and

1 “(B) to provide students with opportunities
2 for research experiences in government or in-
3 dustry related to such students' quantum stud-
4 ies.

5 “(2) QUANTUM FELLOWSHIPS AND SCHOLAR-
6 SHIPS.—

7 “(A) IN GENERAL.—The Director of the
8 National Science Foundation, in consultation
9 with heads of Federal agencies as the Director
10 considers appropriate, may use existing pro-
11 grams to support fellowships and scholarships
12 for students at institutions of higher education
13 for the purpose of—

14 “(i) increasing quantum information
15 science, engineering, and technology expo-
16 sure for undergraduate and graduate
17 STEM students; and

18 “(ii) increasing postgraduation em-
19 ployment opportunities for STEM students
20 who demonstrate potential to pursue ca-
21 reers in quantum information science, en-
22 gineering, and technology.

23 “(B) REQUIREMENTS.—An eligible partici-
24 pant in the fellowship and scholarship program
25 under this paragraph shall—

1 “(i) be enrolled in or have graduated
2 from a STEM degree program at an institu-
3 tion of higher education within the
4 United States; and

5 “(ii) have demonstrated interest in
6 quantum information science, engineering,
7 and technology, such as by taking not less
8 than 1 quantum science or quantum-re-
9 levant course as part of the participant’s
10 degree program or by participating in a
11 summer school program that focuses on
12 quantum information science, engineering,
13 and technology.

14 “(C) CONSIDERATIONS.—Eligible fellow-
15 ships and scholarship programs under this
16 paragraph may include temporary quantum-re-
17 lated positions at Federal or State agencies,
18 National Laboratories, private sector entities,
19 institutions of higher education, the quantum
20 centers established under section 202, the Mul-
21 tidisciplinary Centers for Quantum Research
22 and Education established under section 302,
23 the Quantum Reskilling, Education, and Work-
24 force Coordination Hub under section 303, the
25 National Quantum Information Science Re-

1 search Centers established under section 402,
2 and the initiatives established under section
3 503, or other quantum-relevant entities, as de-
4 termined appropriate by the Director.

5 “(D) COMPETITIVE AWARDS.—Fellowships
6 and scholarships awarded under this paragraph
7 shall be competitively awarded through a merit-
8 review process. The Director of the National
9 Science Foundation may prioritize fellowships
10 that include an industry partner that provides
11 financial assistance to awardees for direct or in-
12 direct costs.

13 “(3) QUANTUM RESEARCH EXPERIENCES FOR
14 UNDERGRADUATES.—The Director of the National
15 Science Foundation shall seek to increase opportuni-
16 ties for quantum research for undergraduate stu-
17 dents by encouraging proposals in quantum informa-
18 tion science, engineering, and technology, through
19 the research experiences for undergraduates pro-
20 vided under section 514 of the America COM-
21 PETES Reauthorization Act of 2010 (42 U.S.C.
22 1862p-6).

23 “(4) COOPERATIVE EDUCATION PROGRAMS.—
24 The Director of the National Science Foundation, in
25 consultation with heads of Federal agencies the Di-

1 rector considers appropriate, may establish, or use
2 existing, programs to support cooperative education
3 programs between institutions of higher education
4 and employers that increase opportunities for under-
5 graduate students to acquire experiential learning
6 and professional experiences in quantum information
7 science, engineering, and technology.

8 “(5) PARTNERSHIPS.—In carrying out the ac-
9 tivities under this subsection, the Director of the
10 National Science Foundation shall encourage recipi-
11 ents of awards under this subsection to partner with
12 relevant Federal agencies, Federal laboratories, in-
13 dustry and other private sector organizations, and
14 nonprofit organizations to facilitate the expansion of
15 workforce pathways and hands-on learning experi-
16 ences.”;

17 (5) in subsection (d)—

18 (A) in the subsection heading, by striking
19 “QISE” and inserting “QISET”;

20 (B) in paragraph (1)—

21 (i) by striking “information science
22 and engineering (referred to in this sub-
23 section as ‘QISE’)” and inserting “infor-
24 mation science, engineering, and tech-

1 nology (referred to in this subsection as
2 ‘QISET’); and

3 (ii) by inserting “and career and tech-
4 nical education entities” after “colleges”;

5 (C) in paragraph (2)—

6 (i) in subparagraph (A), by striking
7 “QISE” and inserting “quantum informa-
8 tion science, engineering, and technology”;

9 (ii) in subparagraph (D)—

10 (I) by inserting “, engineering,
11 and technology” after “science”; and

12 (II) by inserting “, including
13 those principles relevant to emerging
14 technologies, such as artificial intel-
15 ligence, microelectronics, and nano-
16 technology” after “fields”;

17 (iii) by redesignating subparagraph
18 (F) as subparagraph (G); and

19 (iv) by inserting after subparagraph
20 (E) the following:

21 “(F) Methods to introduce security dimen-
22 sions associated with quantum information
23 science, engineering, and technology into STEM
24 curricula.”;

1 (D) in paragraph (3), by striking “QISE”
2 and inserting “quantum information science,
3 engineering, and technology”; and

4 (E) by striking paragraph (4); and

5 (6) by adding at the end the following:

6 “(e) QUANTUM RESEARCH EXPERIENCES FOR
7 TEACHERS.—The Director of the National Science Foun-
8 dation shall seek to increase opportunities to engage edu-
9 cators, principals, or other school leaders of kindergarten
0 through grade 12 students in professional learning oppor-
1 tunities to enhance quantum information science, engi-
2 neering, and technology knowledge, including by—

13 “(1) providing hands-on training and research
14 opportunities for such educators at Federal labora-
15 tories or institutions of higher education, or in in-
16 dustry; and

17 “(2) developing best practices.

18 "(f) EXPANDING CAPACITY IN QUANTUM INFORMA-
19 TION SCIENCE, ENGINEERING, AND TECHNOLOGY.—

20 “(1) DEFINITIONS.—In this subsection:

21 “(A) ELIGIBLE CONSORTIUM.—The term
22 ‘eligible consortium’ means a consortium that—
23 “(i) includes not less than 1 institu-
24 tion of higher education or eligible non-
25 profit organization; and

1 “(ii) may include—
2 “(I) a private sector entity;
3 “(II) a Federal laboratory; or
4 “(III) a Federal, Tribal, State,
5 local, or territorial government entity.

6 “(B) ELIGIBLE INSTITUTION OF HIGHER
7 EDUCATION.—The term ‘eligible institution of
8 higher education’ means an institution of higher
9 education that, during the 3-year period prior
10 to the year of an award under this section and
11 according to the data published by the National
12 Center for Science and Engineering Statistics
13 was not, on average, among the top 70 institu-
14 tions in Federal research and development ex-
15 penditures.

16 “(2) AWARDS AUTHORIZED.—The Director of
17 the National Science Foundation, in consultation
18 with the heads of Federal agencies the Director con-
19 siders appropriate, shall make awards on a competi-
20 tive, merit-reviewed basis to eligible institutions of
21 higher education, eligible nonprofit organizations, or
22 eligible consortia to increase research capacity, in-
23 crease education and infrastructure capacity, and
24 broaden participation in quantum information

1 science, engineering, and technology and related dis-
2 ciplines, including by—

3 “(A) supporting curriculum development in
4 quantum information science, engineering, and
5 technology as described in subsection (d);

6 “(B) building upon the activities carried
7 out under the Next Generation Quantum Lead-
8 ers Pilot Program authorized under section
9 10661(f) of the Research and Development,
10 Competition, and Innovation Act (42 U.S.C.
11 19261(f)); and

12 “(C) leveraging the readiness for the in-
13 volvement of local research and education com-
14 munities to secure a talent pipeline in quantum
15 information science, engineering, and tech-
16 nology to meet the workforce needs of industry,
17 government, and academia.

18 “(3) REQUIREMENTS.—To receive an award
19 under this subsection, an eligible institution of high-
20 er education, eligible nonprofit organization, or eligi-
21 ble consortium shall submit to the Director of the
22 National Science Foundation an application that in-
23 cludes the following:

24 “(A) A plan to sustain proposed activities
25 beyond the duration of the award.

1 “(B) Proposed quantum information
2 science, engineering, and technology disciplines
3 and focus areas the eligible institution of higher
4 education or consortium is prepared to engage
5 in to significantly build up its quantum infor-
6 mation science, engineering, and technology re-
7 search and education capacity.

8 “(C) A plan for education and workforce
9 development, which may include—

10 “(i) kindergarten through grade 12
11 and postsecondary education programs and
12 activities;

13 “(ii) workforce training and career
14 and technical education programs and ac-
15 tivities;

16 “(iii) undergraduate, graduate, and
17 postdoctoral education programs and ac-
18 tivities; and

19 “(iv) informal education programs
20 and activities.

21 “(4) ACTIVITIES.—Awards under this sub-
22 section to support research and related activities
23 may include activities relating to the following:

1 “(A) Development or expansion of research
2 programs in disciplines and focus areas speci-
3 fied in paragraph (3)(B).

4 “(B) Faculty recruitment and professional
5 development in disciplines and focus areas spec-
6 fied in paragraph (3)(B).

7 “(C) Bridge programs focused on pre-
8 paring postbaccalaureate students for graduate
9 programs in quantum information science, engi-
10 neering, and technology.

11 “(D) Building research capacity and infra-
12 structure at an eligible institution of higher
13 education in disciplines and focus areas speci-
14 fied in paragraph (3)(B).

15 “(E) An assessment of capacity-building
16 and research infrastructure needs identified in
17 paragraph (3)(B).

18 “(F) Administrative research development
19 support.

20 “(G) Other activities necessary to build re-
21 search capacity in quantum information science,
22 engineering, and technology.

23 “(5) ADDITIONAL CONSIDERATIONS.—In mak-
24 ing awards under this subsection, the Director of the

1 National Science Foundation may also consider the
2 following:

3 “(A) The extent to which the eligible appli-
4 cant will support students from diverse back-
5 grounds, including first-generation under-
6 graduate students.

7 “(B) The geographic and institutional di-
8 versity of eligible applicants.

9 “(C) How the eligible applicant can lever-
10 age public-private partnerships and existing re-
11 search partnerships with Federal agencies.

12 “(D) How the eligible applicant prioritizes
13 research security, including through educational
14 efforts and furtherance of best practices for
15 handling research that is supported by an
16 award under this subsection.

17 “(6) DUPLICATION.—The Director of the Na-
18 tional Science Foundation shall ensure awards made
19 under this subsection are complementary to, and not
20 duplicative of, existing programs.

21 “(g) INTERNATIONAL RESEARCH ON QUANTUM IN-
22 FORMATION SCIENCE, ENGINEERING, AND TECH-
23 NOLOGY.—

24 “(1) IN GENERAL.—The Director of the Na-
25 tional Science Foundation, in coordination with the

1 Secretary of State and the heads of other Federal
2 agencies, as appropriate, shall support international
3 quantum information science, engineering, and tech-
4 nology research, as appropriate, to enhance inter-
5 national cooperation and meet United States com-
6 mitments, including as part of the terms and condi-
7 tions of bilateral or multilateral quantum informa-
8 tion science, engineering, and technology research
9 agreements.

10 “(2) ALIGNMENT.—In carrying out this sub-
11 section, the Director of the National Science Foun-
12 dation shall ensure alignment with the national
13 strategy for quantum information science in accord-
14 ance with Executive Order 14073 (87 Fed. Reg.
15 27909; relating to enhancing the National Quantum
16 Advisory Committee) or successor strategies.

17 “(3) PRIORITY.—The Director shall prioritize
18 research programs with countries that have signed a
19 quantum cooperation statement with the United
20 States.

21 “(4) RESTRICTIONS.—

22 “(A) CONFUCIUS INSTITUTE.—None of the
23 funds made available under this subsection may
24 be obligated or expended to an institution of
25 higher education that maintains a contract or

1 agreement between such institution and a Con-
2 fucius Institute, as defined in section 10339A
3 of the Research and Development, Competition,
4 and Innovation Act (42 U.S.C. 19039) or any
5 successor of a Confucius Institute.

6 “(B) FOREIGN COUNTRY OF CONCERN AND
7 FOREIGN ENTITY OF CONCERN.—None of the
8 funds made available under this subsection may
9 be obligated or expended to promote, establish,
10 or finance quantum research activities between
11 a United States entity and a foreign country of
12 concern or foreign entity of concern, including
13 the entity’s subsidiaries.

14 “(h) UPGRADE AND IMPROVING ACCESS TO QUAN-
15 TUM RESEARCH RESOURCES.—

16 “(1) IN GENERAL.—In carrying out the activi-
17 ties described in this section, the Director of the Na-
18 tional Science Foundation, in consultation with the
19 heads of other Federal departments and agencies, as
20 appropriate, shall award grants to institutions of
21 higher education or eligible nonprofit organizations
22 (or consortia thereof) to upgrade research facilities
23 and improve access to research resources, such as
24 equipment and instrumentation, that is needed for

1 research and development in quantum information
2 science, engineering, and technology.

3 “(2) PURPOSE.—Grants under paragraph (1)
4 shall be used to facilitate quantum information
5 science, engineering, and technology research and
6 development, including by carrying out the following:

7 “(A) Upgrading or adding research re-
8 sources to—

9 “(i) accelerate the development of
10 quantum technologies, including capabili-
11 ties focused on addressing the roadblocks
12 to implementation; and

13 “(ii) meet the materials, advanced
14 materials development, high performance
15 computing, heterogeneous computing, net-
16 working, software, data, clean room, and
17 device needs of the scientific community
18 and the quantum supply chain.

19 “(B) Enhancing access to equipment and
20 instrumentation, including at partnering insti-
21 tutions, by facilitating information sharing, co-
22 ordination, education, and training, including
23 activities that provide meaningful hands-on
24 learning experiences for students, including at
25 community and technical colleges.

1 “(C) Enabling professional staff to support
2 the operation, scheduling, and improvement of
3 research resources used for quantum informa-
4 tion science, engineering, and technology.

5 “(3) REQUIREMENTS.—An institution of higher
6 education or an eligible nonprofit organization (or a
7 consortium thereof) seeking funding under this sub-
8 section shall submit to the Director of the National
9 Science Foundation an application at such time, in
10 such manner, and containing such information as
11 the Director may require.”.

12 **SEC. 15. MULTIDISCIPLINARY CENTERS FOR QUANTUM RE-**
13 **SEARCH AND EDUCATION.**

14 Section 302 of the National Quantum Initiative Act
15 (15 U.S.C. 8842) is amended—

16 (1) in subsection (a), by striking “5” and in-
17 serting “10”;

18 (2) in subsection (c)—

19 (A) in paragraph (1), by striking “science
20 and engineering” and inserting “science, engi-
21 neering, and technology”;

22 (B) in paragraph (2), by striking “and en-
23 gineering” and inserting “, engineering, and
24 technology, including leveraging or expanding

1 activities established pursuant to section
2 301(d)”; and

3 (C) in paragraph (3), by inserting “, such
4 as commercially-available hardware and soft-
5 ware” after “resources”;

6 (3) in subsection (d)(2)—

7 (A) in subparagraph (A), by striking
8 “quantum science,” and inserting “quantum in-
9 formation science, engineering, and tech-
10 nology,”;

11 (B) in subparagraph (B), by inserting
12 “health,” after “chemistry,”;

13 (C) in subparagraph (D), by striking
14 “and” after the semicolon;

15 (D) in subparagraph (E), by striking the
16 period and inserting a semicolon; and

17 (E) by adding at the end the following:

18 “(F) how the Center will participate in
19 international collaborations, as appropriate, to
20 build a trusted global research network with al-
21 lies and partners of the United States and
22 other countries that share values with the
23 United States;

24 “(G) how the Center will protect research
25 from foreign countries of concern and foreign

1 entities of concern, and the subsidiaries of such
2 foreign entities, to ensure the competitiveness of
3 the United States; and

4 “(H) how the Center will assess and report
5 on progress toward achieving self-sustainability,
6 including metrics, milestones, and a timeline for
7 meeting the long-term goal described in sub-
8 paragraph (E).”; and

9 (4) in subsection (e), by striking paragraph (2)
10 and inserting the following:

11 “(2) REAPPLICATION.—An awardee may re-
12 apply for an additional, subsequent period of 5 years
13 following a successful, merit-based review.”;

14 (5) in subsection (f), by striking “2019 through
15 2023” and inserting “2026 through 2030”; and

16 (6) by adding at the end the following:

17 “(g) BRIEFING REQUIREMENTS.—Not later than 1
18 year after the date of the enactment of the National Quan-
19 tum Initiative Reauthorization Act of 2026, and not less
20 frequently than annually thereafter, the Director of the
21 National Science Foundation shall brief the appropriate
22 committees of Congress on current and planned activities
23 under this section. Each briefing shall include—

1 “(1) an assessment of how each Center is pro-
2 gressing toward the goal of self-sustainability de-
3 scribed in subsection (d)(2)(E); and

4 “(2) a summary of the most recent reports sub-
5 mitted by the Centers regarding such progress in ac-
6 cordance with subsection (d)(2)(H).”.

7 **SEC. 16. QUANTUM RESKILLING, EDUCATION, AND WORK-**
8 **FORCE (QREW) COORDINATION HUB, QUAN-**
9 **TUM TESTBEDS, AND RESEARCH SECURITY.**

10 Title III of the National Quantum Initiative Act (15
11 U.S.C. 8841 et seq.) is amended by adding at the end
12 the following:

13 **“SEC. 303. QUANTUM RESKILLING, EDUCATION, AND WORK-**
14 **FORCE (QREW) COORDINATION HUB.**

15 “(a) IN GENERAL.—The Director of the National
16 Science Foundation, in consultation with the Director of
17 the National Institute of Standards and Technology, the
18 Secretary of Energy, and the heads of other relevant Fed-
19 eral agencies, shall make an award to a consortium led
20 by an institution of higher education or an eligible non-
21 profit organization to establish a Quantum Reskilling,
22 Education, and Workforce Coordination Hub (in this sec-
23 tion referred to as the ‘Hub’).

24 “(b) CONSORTIUM.—The consortium established pur-
25 suant to subsection (a) shall include not fewer than 4 in-

1 stitutions of higher education, including not fewer than
2 2 community colleges, and may include career and tech-
3 nical schools, nonprofit organizations, and private sector
4 entities.

5 “(c) PURPOSE.—The purpose of the Hub shall be
6 to—

7 “(1) identify and address cross-cutting work-
8 force development challenges in quantum informa-
9 tion science, engineering, and technology, the quan-
10 tum industry, and other critical and emerging tech-
11 nology areas that share similar workforce challenges
12 by serving as a national and regional clearinghouse;
13 and

14 “(2) facilitate the establishment of programs to
15 disseminate, to institutions of higher education (in-
16 cluding community colleges) and career and tech-
17 nical education entities, model curricula, best prac-
18 tices, and instructional materials related to the ac-
19 tivities described in subsection (d).

20 “(d) ACTIVITIES.—The activities of the Hub may in-
21 clude the following:

22 “(1) Testing, implementing, scaling, dissemi-
23 nating, and standardizing materials, methods, best
24 practices, and other outputs developed through ac-
25 tivities under this Act.

1 “(2) Promoting core competencies, such as
2 computer science, data science, and mathematics,
3 that are shared with other critical and emerging
4 technologies, such as artificial intelligence.

5 “(3) Increasing the integration of quantum in-
6 formation science, engineering, and technology con-
7 tent into STEM curricula at all education levels, in-
8 cluding career and technical education programs.

9 “(4) Providing opportunities for STEM degree
10 students to provide feedback on quantum informa-
11 tion science, engineering, and technology curricula.

12 “(5) Facilitating post-education employment
13 opportunities and workforce pathways for STEM de-
14 gree recipients in quantum-related industries, includ-
15 ing by facilitating opportunities for internships,
16 externships, fellowships, and other such activities as
17 determined by the Director, including through the
18 establishment of a publicly accessible online portal.

19 “(6) Coordinating with quantum industry and
20 nonprofit entities and small- and medium-sized busi-
21 nesses and startups to inform and enhance the qual-
22 ity and availability of quantum education in STEM
23 degree programs, including through the promotion of
24 postgraduation opportunities for STEM students

1 outside the classroom to increase exposure to quantum
2 industries.

3 “(7) Supporting activities and programs to enhance the recruitment of students from groups historically underrepresented in STEM to pursue undergraduate and graduate studies in quantum information science, engineering, and technology.

8 “(8) Developing, testing, implementing, and coordinating career development programs and strategies to increase the number of quantum-informed
9 educators at all levels of education, including by carrying out the following:

13 “(A) Hosting career development workshops.

15 “(B) Developing in-house and distance learning career development tools for public
16 use.

18 “(C) Facilitating access to related quantum technology, tools, and resources.

20 “(D) Developing training, research, and professional development programs, including innovative pre-service and in-service programs.

23 “(E) Facilitating relationships with State
24 and local entities, such as a State board or local
25 board (as such terms are defined in section 3

1 of the Workforce Innovation and Opportunity
2 Act (29 U.S.C. 3102)), to increase awareness of
3 and promote quantum-related career develop-
4 ment activities at the Hub.

5 “(9) Establishing a framework for performing
6 ongoing regular data collection and analysis for the
7 quantum workforce to report on trends, and perform
8 other activities that expand the understanding of the
9 current and future needs of the quantum industry,
10 and the education capacity or readiness of the quan-
11 tum workforce. Such activities shall complement or
12 align with, as relevant, authorized quantum and
13 STEM workforce studies under section 10661(d) of
14 the Research and Development, Competition, and
15 Innovation Act (42 U.S.C. 19261(d)).

16 “(10) Facilitating public education and out-
17 reach activities to enhance the understanding and
18 awareness of quantum information science, engineer-
19 ing, and technology to a broader community to sat-
20 isfy broader impact requirements of award applica-
21 tions.

22 “(11) Encouraging coordination on quantum
23 education in the broader STEM community.

24 “(e) QREW QUANTUM FELLOWSHIP PROGRAM.—
25 Subject to the restrictions described in section 301(c), the

1 Hub may support education or policy fellowships for stu-
2 dents at entities participating in the consortium under
3 subsection (a) or at other research centers established pur-
4 suant to this Act at the National Science Foundation, the
5 National Institute of Standards and Technology, the De-
6 partment of Energy, or the National Aeronautics and
7 Space Administration, for the purpose of supporting the
8 activities described in subsection (d).

9 “(f) INDUSTRY COORDINATION.—The Hub shall col-
10 laborate with the Quantum Consortium established under
11 section 201(b) or other industry consortia to identify, pub-
12 lish, facilitate, or enable quantum-related education and
13 workforce development opportunities as described in sub-
14 sections (c) and (d).

15 “(g) APPLICATION.—A consortium seeking funding
16 under this section shall submit to the Director of the Na-
17 tional Science Foundation an application at such time, in
18 such manner, and containing such information as the Di-
19 rector may require. Each application shall include a de-
20 scription of how the consortium shall carry out the fol-
21 lowing:

22 “(1) Contribute to the success of the Hub and
23 fulfill the purposes of the Hub.

24 “(2) Include industry participation in fulfilling
25 the purposes of the Hub.

1 “(3) Collaborate with other members of the
2 consortium to share expertise in integrating quan-
3 tum information science, engineering, and tech-
4 nology into STEM programs and other relevant
5 fields and disciplines.

6 “(4) Support long-term and short-term work-
7 force development in the quantum field.

8 “(5) Develop and implement outreach activities
9 to increase the participation of women and other
10 students from groups historically underrepresented
11 in STEM.

12 “(h) SELECTION AND DURATION.—

13 “(1) IN GENERAL.—The Hub established under
14 this section is authorized to carry out activities for
15 a period of 5 years.

16 “(2) REAPPLICATION.—A consortium receiving
17 an award under this section may reapply for an ad-
18 dditional, subsequent period of 5 years following a
19 successful, merit-based review.

20 “(3) TERMINATION.—Consistent with and in
21 addition to the authorities of the National Science
22 Foundation, the Director of the National Science
23 Foundation may also terminate the Hub if it is
24 underperforming during the performance period.

1 “(i) COORDINATION.—The Hub shall coordinate with
2 other research centers established under this Act at the
3 National Science Foundation, the National Institute of
4 Standards and Technology, the Department of Energy,
5 the National Aeronautics and Space Administration, and
6 other relevant Federal agencies, as appropriate, on activi-
7 ties and resources.

8 “(j) REPORTING REQUIREMENTS.—Not later than 3
9 years after the date of enactment of the National Quan-
10 tum Initiative Reauthorization Act of 2026, the Director
11 shall prepare and submit to the appropriate committees
12 of Congress a progress report that includes current (as
13 of the date of the report) and planned activities of the
14 Hub.

15 **“SEC. 304. QUANTUM TESTBEDS.**

16 “(a) IN GENERAL.—Not later than 1 year after the
17 date of the enactment of the National Quantum Initiative
18 Reauthorization Act of 2026, the Director of the National
19 Science Foundation, in coordination with the Director of
20 the National Institute of Standards and Technology, the
21 Secretary of Energy, the Administrator of the National
22 Aeronautics and Space Administration, and the heads of
23 other Federal agencies, as determined appropriate by the
24 Director of the National Science Foundation, shall make
25 awards on a competitive, merit-reviewed basis to institu-

1 tions of higher education, nonprofit organizations, feder-
2 ally funded research and development centers, or consortia
3 thereof, to establish testbeds for accelerating the develop-
4 ment of viable quantum applications.

5 “(b) PURPOSES.—The quantum testbeds established
6 under subsection (a) shall focus on advancing the develop-
7 ment of quantum application use cases, as determined by
8 the Director, through proof-of-concept testing, demonstra-
9 tions, pilot projects, benchmarking, and prototyping, by—

10 “(1) supporting translational quantum research
11 and development activities for quantum application
12 use cases, including, for testbeds featuring quantum
13 software and quantum algorithms driving toward
14 utility, leveraging approaches such as algorithm in-
15 novation and tools such as resource estimators;

16 “(2) providing accessible research resources for
17 developing, testing, and benchmarking the applica-
18 tion of quantum technologies to likely use cases, in-
19 cluding enabling quantum cloud access;

20 “(3) investing in quantum computing tech-
21 nologies that show promise for viability, including di-
22 recting funding to advance each layer of the stack
23 and related systems engineering and integration; and

24 “(4) establishing cost and benefit.

1 “(c) APPLICATION PROPOSALS.—An applicant for an
2 award under this section shall submit to the Director a
3 proposal at such time, in such manner, and containing
4 such information as the Director may reasonably require.

5 The proposal shall, at a minimum, describe the following:

6 “(1) How the applicant will assemble a work-
7 force, including from populations that are histori-
8 cally underrepresented in STEM, with the skills
9 needed to operate a quantum testbed.

10 “(2) How the applicant will ensure broad access
11 to a quantum testbed, including for start-ups and
12 small businesses.

13 “(3) How a quantum testbed will operate after
14 Federal funding has ended.

15 “(4) How the applicant will contribute to the
16 quantum testbed, such as through funding or other
17 resources required to develop quantum applications.

18 “(5) How the applicant will protect any re-
19 search or advancements made as a result of using
20 the quantum testbed.

21 “(d) PRIORITIZATION.—In awarding grants under
22 this section, the Director of the National Science Founda-
23 tion shall prioritize the following:

24 “(1) Applicants that ensure not less than 25
25 percent of the cost for a testbed awarded under this

1 section is provided by private or non-Federal enti-
2 ties, including in-kind contributions.

3 “(2) Awards for consortia that include quantum
4 industry participation.

5 “(e) ROLES AND RESPONSIBILITIES.—The Director
6 of the National Science Foundation shall be responsible
7 for the following:

8 “(1) Maintaining a record of notable outcomes
9 from each quantum testbed established under this
10 section.

11 “(2) Partnering with other Federal agencies to
12 enable opportunities for quantum testbed outcomes
13 to be appropriately taken up by such agencies in
14 alignment with the missions of such agencies.

15 “(3) Not later than 1 year after the date of the
16 enactment of this section and every 2 years there-
17 after until December 31, 2030, briefing the appro-
18 priate committees of Congress on the status of such
19 quantum testbeds and providing recommendations
20 for improving such quantum testbeds.

21 “(f) COORDINATION.—In establishing quantum
22 testbeds under this section, the Director of the National
23 Science Foundation shall ensure coordination with other
24 testbeds and other quantum facilities hosting Federal
25 quantum technology and infrastructure supported by the

1 National Science Foundation, including those testbeds and
2 facilities authorized pursuant to section 10390 of the Re-
3 search and Development, Competition, and Innovation Act
4 (42 U.S.C. 19110), or by other Federal agencies as deter-
5 mined appropriate by the Director, to avoid duplication
6 and maximize use of Federal resources.

7 “(g) STAKEHOLDER COLLABORATION.—In carrying
8 out this section, the Director of the National Science
9 Foundation shall collaborate with the Quantum Consor-
10 tium established pursuant to section 201(b) to accomplish
11 the purposes of the quantum testbeds program described
12 in subsection (b) and ensure there is strong collaboration
13 with industry stakeholders. The Director may also engage
14 with National Laboratories, federally funded research and
15 development centers, industry, and other members of the
16 United States quantum ecosystem.

17 “(h) GEOGRAPHIC DIVERSITY.—The Director shall
18 ensure regional and geographic diversity in issuing awards
19 under this section.

20 **“SEC. 305. RESEARCH SECURITY.**

21 “(a) RESEARCH SECURITY.—The activities author-
22 ized under this title shall be carried out in a manner con-
23 sistent with subtitle D of title VI of the Research and De-
24 velopment, Competition, and Innovation Act (42 U.S.C.
25 19231 et seq.).

1 “(b) REVIEW OF VISITORS AND ASSIGNEES FROM
2 COUNTRIES OF RISK.—The Director of the National
3 Science Foundation shall establish policies and procedures
4 to assess and screen visitors and assignees to National
5 Science Foundation-supported facilities that are similar,
6 to the extent practicable, to the policies and procedures
7 regarding visitors and assignees to the National Labora-
8 tories that were established in accordance with section
9 6432 of the Servicemember Quality of Life Improvement
10 and National Defense Authorization Act for Fiscal Year
11 2025 (42 U.S.C. 7144b note).”.

12 **SEC. 17. NATIONAL SCIENCE FOUNDATION CRYPTOGRAPHY**

13 **RESEARCH.**

14 Section 4(a)(1)(A) of the Cyber Security Research
15 and Development Act (15 U.S.C. 7403) is amended by in-
16 serting “, including post-quantum cryptography (as such
17 term is defined in section 3 of the Quantum Computing
18 Cybersecurity Preparedness Act (6 U.S.C. 1526 note;
19 Public Law 117–260))” before the semicolon.

20 **SEC. 18. NATIONAL AERONAUTICS AND SPACE ADMINIS-**

21 **TRATION QUANTUM ACTIVITIES.**

22 (a) IN GENERAL.—The National Quantum Initiative
23 Act (15 U.S.C. 8801 et seq.) is amended by adding at
24 the end the following new title:

1 **“TITLE V—NATIONAL AERO-**
2 **NAUTICS AND SPACE ADMIN-**
3 **ISTRATION QUANTUM ACTIVI-**
4 **TIES**

5 **“SEC. 501. DEFINITION OF ADMINISTRATOR.**

6 “In this title, the term ‘Administrator’ means the Ad-
7 ministrator of the National Aeronautics and Space Admin-
8 istration.

9 **“SEC. 502. QUANTUM INFORMATION SCIENCE, ENGINEER-**
10 **ING, AND TECHNOLOGY RESEARCH FOR**
11 **SPACE AND AERONAUTICS.**

12 “(a) IN GENERAL.—The Administrator is authorized
13 to carry out research on quantum information science, en-
14 gineering, and technology.

15 “(b) COOPERATION.—In carrying out subsection (a),
16 the Administrator—

17 “(1) shall consider cooperative arrangements
18 with the Department of Energy and other Federal
19 Government agencies, as practicable, on areas of
20 shared benefit; and

21 “(2) may enter into memoranda of under-
22 standing or memoranda of agreement to establish
23 such cooperative arrangements.

24 “(c) STRATEGY.—Not later than 180 days after the
25 date of the enactment of this title, the Administrator shall

1 submit to the appropriate committees of Congress a strat-
2 egy for National Aeronautics and Space Administration
3 research on quantum information science, engineering,
4 and technology. The strategy shall identify resources re-
5 quired to support implementation of the strategy, includ-
6 ing budgets, workforce, and infrastructure, describe coop-
7 erative efforts with other Federal Government agencies,
8 and address areas of research and applications, including
9 the following:

10 “(1) Quantum sensing.

11 “(2) Quantum networking.

12 “(3) Quantum communications, including quan-
13 tum satellite communications.

14 “(4) Quantum computing.

15 “(5) Science, aeronautics, and exploration-re-
16 lated applications.

17 “(6) Any other area of quantum information,
18 science, engineering, and technology that furthers
19 the mission of the National Aeronautics and Space
20 Administration and is consistent with the purposes
21 of this Act, as the Administrator considers appro-
22 priate.

23 “(d) CONSULTATION.—In developing the strategy de-
24 scribed in subsection (c), the Administrator may seek
25 input from relevant external stakeholders, including insti-

1 tutions of higher education, industry, and nonprofit re-
2 search organizations.

3 **SEC. 503. NATIONAL AERONAUTICS AND SPACE ADMINIS-**
4 **TRATION QUANTUM INITIATIVES.**

5 “(a) IN GENERAL.—Subject to the availability of ap-
6 propriations, the Administrator, in consultation with the
7 heads of other Federal departments and agencies, as ap-
8 proprie, may establish one or more initiatives focused
9 on space and aeronautics applications of quantum infor-
10 mation science, engineering, and technology.

11 “(b) INITIATIVE DETAILS.—

12 “(1) MERIT-BASED REVIEW PROCESS.—

13 “(A) IN GENERAL.—The Administrator
14 shall develop and implement a formal, merit-
15 based review process for evaluating proposals,
16 applications, and initiatives submitted to the
17 National Aeronautics and Space Administration
18 with respect to the research, development, or
19 deployment of quantum technologies with po-
20 tential relevance to the civil space and aero-
21 nautics missions of the National Aeronautics
22 and Space Administration.

23 “(B) CRITERIA.—The process established
24 under subparagraph (A) shall be designed—

1 “(i) to ensure taxpayer dollars are di-
2 rected to the most technically sound and
3 strategically aligned quantum technology
4 proposals;

5 “(ii) to prioritize proposals that dem-
6 onstrate strong potential to enhance
7 United States leadership in space-based
8 quantum applications, including sensing,
9 navigation, communications, simulation,
10 and computing;

11 “(iii) to support initiatives that align
12 with the strategic goals of the National
13 Aeronautics and Space Administration and
14 avoid unnecessary duplication of efforts led
15 by other Federal agencies;

16 “(iv) to facilitate a competitive, trans-
17 parent, and objective selection process
18 using qualified subject-matter experts; and

19 “(v) to include appropriate consider-
20 ation of project feasibility, cost-effective-
21 ness, technological maturity, and risk miti-
22 gation.

23 “(2) APPLICATION REQUIREMENTS.—An appli-
24 cant under this section shall submit to the Adminis-
25 trator a proposal at such time, in such manner, and

1 containing such technical, programmatic, and budg-
2 etary information as the Administrator determines
3 necessary to evaluate the proposal through the re-
4 view process developed under paragraph (1).

5 “(3) ELIGIBLE APPLICANTS.—In carrying out
6 the process under paragraph (1), the Administrator
7 shall consider applications from institutions of high-
8 er education, research centers, multi-institutional
9 collaborations, and any other entity the Adminis-
10 trator considers appropriate.

11 “(4) COLLABORATIONS.—A collaboration that
12 receives an award under this section may include
13 multiple types of research institutions, including in-
14 stitutions of higher education, private sector entities,
15 and nonprofit organizations.

16 “(5) COORDINATION AND ACCOUNTABILITY.—
17 The Administrator shall ensure that an awardee
18 under this section—

19 “(A) coordinates with the National Aero-
20 nautics and Space Administration, including by
21 identifying personnel designated to serve as
22 program liaisons for technical and pro-
23 grammatic oversight; and

24 “(B) avoids unnecessary duplication of ex-
25 isting activities of the National Aeronautics and

1 Space Administration, other activities carried
2 out under the National Quantum Initiative Re-
3 authorization Act of 2026 or the amendments
4 made by that Act, and other related programs,
5 as appropriate.

6 “(6) COMMERCIAL TECHNOLOGY.—An initiative
7 established under this section may leverage commer-
8 cially-available hardware and software to carry out
9 the activities described in subsection (c).

10 “(c) INITIATIVE ACTIVITIES.—An initiative estab-
11 lished under this section may carry out activities that—

12 “(1) support research focused on developing
13 and demonstrating space, aeronautics, and explo-
14 ration applications for quantum information science,
15 engineering, exploration, and technology, including
16 research relating to the strategy developed under
17 section 502(c); and

18 “(2) support quantum information science, en-
19 gineering, and technology education and public out-
20 reach.

21 “(d) INITIATIVE REQUIREMENTS.—To the maximum
22 extent practicable, an initiative established under this sec-
23 tion shall serve the needs of the National Aeronautics and
24 Space Administration for the benefit of the broader
25 United States quantum information science community, to

1 create and develop processes for the purpose of advancing
2 space and aeronautics applications in quantum informa-
3 tion science, engineering, and technology, and improving
4 the competitiveness of the United States.

5 “(e) INITIATIVE SELECTION AND DURATION.—

6 “(1) IN GENERAL.—Subject to the availability
7 of appropriations, an initiative established under this
8 section may carry out activities for a period of 5
9 years.

10 “(2) REAPPLICATION.—Subject to the avail-
11 ability of appropriations, an awardee may reapply
12 for an additional, subsequent period of 5 years fol-
13 lowing a successful, merit-based review.

14 “(3) TERMINATION.—Consistent with the au-
15 thorities of the National Aeronautics and Space Ad-
16 ministration, the Administrator may terminate the
17 initiative for cause during the performance period.

18 **“SEC. 504. RESEARCH SECURITY.**

19 “The activities authorized under this title shall be
20 carried out in a manner consistent with—

21 “(1) subtitle D of title VI of the Research and
22 Development, Competition, and Innovation Act (42
23 U.S.C. 19231 et seq.); and

24 “(2) section 6432 of the Servicemember Quality
25 of Life Improvement and National Defense Author-

1 ization Act for Fiscal Year 2025 (42 U.S.C. 7144b
2 note; Public Law 118–159).

3 **“SEC. 505. AUTHORIZATION OF APPROPRIATIONS.**

4 “The Administrator shall allocate up to \$25,000,000
5 for each of fiscal years 2026 through 2030 to carry out
6 this title, subject to the availability of appropriations.
7 Amounts made available to carry out this title shall be
8 derived from amounts appropriated or otherwise made
9 available to the National Aeronautics and Space Adminis-
10 tration.”.

11 **SEC. 19. COMPTROLLER GENERAL REVIEW AND REPORT.**

12 (a) REVIEW.—Not later than 1 year after the date
13 of the enactment of this Act, the Comptroller General of
14 the United States shall conduct a review of existing proc-
15 esses and reporting requirements associated with research
16 and development programs established within the National
17 Institute of Standards and Technology, the National
18 Science Foundation, and the Department of Energy pur-
19 suant to the National Quantum Initiative Act (15 U.S.C.
20 8801 et seq.) to identify potential opportunities—

21 (1) to reduce duplicative and unnecessary pa-
22 perwork and reporting requirements without com-
23 promising security, transparency, and accountability;
24 and

4 (b) RESEARCH AND DEVELOPMENT PROGRAMS COV-
5 ERED.—The review required under subsection (a) shall
6 cover all research and development programs established
7 pursuant to sections 201, 302, 402, 403, and 404 of the
8 National Quantum Initiative Act (15 U.S.C. 8831, 8842,
9 8852, 8853, and 8854).

10 (c) REPORT.—Not later than 180 days after com-
11 pleting the review under subsection (a), the Comptroller
12 General shall submit to the Committee on Commerce,
13 Science, and Transportation and the Committee on En-
14 ergy and Natural Resources of the Senate and the Com-
15 mittee on Energy and Commerce of the House of Rep-
16 resentatives a report on the findings of the review, which
17 shall include recommendations relating to paragraphs (1)
18 and (2) of such subsection.

19 SEC. 20. REVIEW OF REGULATORY BARRIERS TO QUANTUM
20 INFORMATION SCIENCE AND TECHNOLOGY
21 DEVELOPMENT.

22 (a) DEFINITIONS.—In this section:

1 Science, and Transportation of the Senate and the
2 Committee on Science, Space, and Technology of the
3 House of Representatives.

4 (2) QUANTUM INFORMATION SCIENCE AND
5 TECHNOLOGY.—The term “quantum information
6 science and technology” has the meaning given such
7 term in section 2 of the National Quantum Initiative
8 Act (15 U.S.C. 8801), as amended by section 2 of
9 this Act.

10 (b) REVIEW AND ASSESSMENT REQUIRED.—Not
11 later than 540 days after the date of the enactment of
12 this Act, the Director of the Office of Science and Tech-
13 nology Policy shall, in coordination with the National
14 Quantum Coordination Office, conduct a review to identify
15 and assess any existing or potential regulatory barriers
16 that inhibit research, development, deployment, or scaling
17 of quantum information science and technology.

18 (c) ELEMENTS.—The review and assessment con-
19 ducted pursuant to subsection (b) shall include the fol-
20 lowing:

21 (1) An inventory of existing Federal regula-
22 tions, policies, and guidance documents that are ap-
23 plicable to quantum information science and tech-
24 nology.

6 (3) Recommendations to modernize, streamline,
7 or eliminate duplicative or outdated regulatory bar-
8 riers identified pursuant to subsection (b).

9 (4) Input from stakeholders across industry,
10 academia, and the National Laboratories with re-
11 spect to such regulatory barriers.

16 (d) REPORT.—Not later than 180 days after the date
17 on which the Director completes the review and assess-
18 ment required by subsection (b), the Director shall submit
19 to the appropriate congressional committees a report de-
20 tailing the findings and recommendations described in
21 subsection (c).

22 (e) QUINQUENNIAL UPDATES.—Not later than 5
23 years after the date on which the Director completes the
24 review and assessment required by subsection (b), and
25 every 5 years thereafter, the Director shall update the re-

1 view and assessment required by subsection (b) and sub-
2 mit to the appropriate congressional committees an up-
3 dated report detailing the findings and recommendations
4 of the Director.

5 **SEC. 21. SUNSET OF NATIONAL NANOTECHNOLOGY PRO-**
6 **GRAM.**

7 (a) **SUNSET OF NATIONAL NANOTECHNOLOGY PRO-**
8 **GRAM.**—The National Nanotechnology Program (in this
9 section referred to as the “Program”) and the authorities
10 and requirements of the 21st Century Nanotechnology Re-
11 search and Development Act (15 U.S.C. 7501 et seq.) are
12 terminated on the date that is 180 days after the date
13 of the enactment of this Act.

14 (b) **WIND-DOWN.**—The Director of the Office of
15 Science and Technology Policy shall take such actions as
16 may be necessary to terminate and wind down the Pro-
17 gram before the date specified in subsection (a).

18 (c) **PLAN AND BRIEFING.**—

19 (1) **IN GENERAL.**—Not later than 90 days after
20 the date of the enactment of this Act, the Director
21 of the Office of Science and Technology Policy shall
22 provide to the Committee on Commerce, Science,
23 and Transportation of the Senate and the Com-
24 mittee on Science, Space, and Technology of the
25 House of Representatives a briefing in which the Di-

1 rector shall present a plan on how the Director will
2 carry out subsection (b).

3 (2) ELEMENTS.—The plan presented under
4 paragraph (1) shall—

5 (A) ensure minimal disruption to ongoing
6 federally funded research and development ac-
7 tivities;

8 (B) ensure transfer or reassignment of
9 nanotechnology research infrastructure pro-
10 grams and facilities to minimize disruption of
11 researcher access to critical tools that support
12 other national priorities;

13 (C) provide for the orderly disposition or
14 transfer of active grants, contracts, and per-
15 sonnel associated with the National Nanotech-
16 nology Coordination Office established under
17 section 3(a) of the 21st Century Nanotechnol-
18 ogy Research and Development Act (15 U.S.C.
19 7502(a));

20 (D) identify any relevant responsibilities
21 that should be reassigned to existing programs
22 at the Office of Science and Technology Policy;
23 and

24 (E) minimize duplication and ensure fiscal
25 efficiency in the conclusion of the Program.

1 **SEC. 22. CLERICAL AMENDMENTS.**

2 The table of contents in section 1(b) of the National
 3 Quantum Initiative Act is amended as follows:

4 (1) By inserting after the item relating to sec-
 5 tion 105 the following new items:

“Sec. 105A. International Quantum Cooperation Strategy.

“Sec. 106. National quantum prize challenges.”.

6 (2) By inserting after the item relating to sec-
 7 tion 201 the following new items:

“Sec. 202. National Institute of Standards and Technology Quantum Centers.

“Sec. 203. Research security.”.

8 (3) By striking the item relating to section 301
 9 and inserting the following new item:

“Sec. 301. Quantum information science, engineering, and technology research
 and education program.”.

10 (4) By inserting after the item relating to sec-
 11 tion 302 the following new items:

“Sec. 303. Quantum Reskilling, Education, and Workforce (QREW) Coordina-
 tion Hub.

“Sec. 304. Quantum testbeds.

“Sec. 305. Research security.”.

12 (5) By adding at the end the following new
 13 items:

**“TITLE V—NATIONAL AERONAUTICS AND SPACE
 ADMINISTRATION QUANTUM ACTIVITIES**

“Sec. 501. Definition of Administrator.

“Sec. 502. Quantum information science, engineering, and technology research
 for space and aeronautics.

“Sec. 503. National Aeronautics and Space Administration quantum initiatives.

“Sec. 504. Research security.

“Sec. 505. Authorization of appropriations.”.

