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117TH CONGRESS
2D SESSION

H. R. 4609

[Report No. 117-247]

To reauthorize the National Institute of Standards and Technology, and
for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JULY 21, 2021

Ms. STEVENS (for herself, Mr. WALTZ, Ms. JOHNSON of Texas, and Mr. LUCAS) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

FEBRUARY 18, 2022

Additional sponsors: Ms. BONAMICI, Mr. BOWMAN, Mrs. KIM of California, Mr. GARAMENDI, Mr. FITZPATRICK, Ms. MOORE of Wisconsin, Mr. FOSTER, Mr. TRONE, Ms. ROSS, Mr. AUCHINCLOSS, Mr. POSEY, Mr. COHEN, and Mr. MOULTON

FEBRUARY 18, 2022

Reported with an amendment, committed to the Committee of the Whole
House on the State of the Union, and ordered to be printed

[Strike out all after the enacting clause and insert the part printed in italic]

[For text of introduced bill, see copy of bill as introduced on July 21, 2021]

A BILL

To reauthorize the National Institute of Standards and
Technology, 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.**

4 (a) *SHORT TITLE.*—*This Act may be cited as the “Na-*
 5 *tional Institute of Standards and Technology for the Future*
 6 *Act of 2021”.*

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

Sec. 1. Short title.
Sec. 2. Definitions.

TITLE I—APPROPRIATIONS

Sec. 101. Authorization of appropriations.

TITLE II—MEASUREMENT RESEARCH

Sec. 201. Engineering biology and biometrology.
Sec. 202. Greenhouse gas measurement research.
Sec. 203. NIST Authority for cybersecurity and privacy activities.
Sec. 204. Software security and authentication.
Sec. 205. Digital identity management research.
Sec. 206. Biometrics research and testing.
Sec. 207. Federal biometric performance standards.
Sec. 208. Protecting research from cyber theft.
Sec. 209. Dissemination of resources for research institutions.
Sec. 210. Advanced communications research.
Sec. 211. Neutron scattering.
Sec. 212. Quantum information science.
Sec. 213. Artificial intelligence.
Sec. 214. Facilitating development and distribution of forensic science standards.
Sec. 215. Sustainable Chemistry Research and Education.

TITLE III—GENERAL ACTIVITIES

Sec. 301. NIST facilities and construction.
Sec. 302. Educational outreach and support for underrepresented communities.
Sec. 303. Other transactions authority.
Sec. 304. Collaborations with government agencies.
Sec. 305. Hiring critical technical experts.
Sec. 306. International standards development.
Sec. 307. Standard technical update.
Sec. 308. GAO study of NIST research security policies and protocols.
Sec. 309. Premise plumbing research.

TITLE IV—HOLLINGS MANUFACTURING EXTENSION PARTNERSHIP

Sec. 401. Establishment of expansion awards pilot program as a part of the Hollings Manufacturing Extension Partnership.

Sec. 402. Update to manufacturing extension partnership.

Sec. 403. National supply chain database.

1 SEC. 2. DEFINITIONS.

2 In this Act:

3 (1) DIRECTOR.—The term “Director” means the
4 Director of the National Institute of Standards and
5 Technology.

6 (2) FRAMEWORK.—The term “Framework”
7 means the Framework for Improving Critical Infra-
8 structure Cybersecurity developed by the National In-
9 stitute of Standards and Technology and referred to
10 in Executive Order 13800 issued on May 11, 2017
11 (82 Fed. Reg. 22391 et seq.).

12 (3) HISTORICALLY BLACK COLLEGES AND UNI-
13 VERSITIES.—The term “historically Black colleges
14 and universities” has the same meaning given to the
15 term “part B institutions” in section 322 of the
16 Higher Education Act of 1965 (20 U.S.C. 1061).

17 (4) INSTITUTE.—The term “Institute” means the
18 National Institute of Standards and Technology.

19 (5) INSTITUTION OF HIGHER EDUCATION.—The
20 term “institution of higher education” has the mean-
21 ing given such term in section 101 of the Higher Edu-
22 cation Act of 1965 (20 U.S.C. 1001).

1 (6) *INTERNATIONAL STANDARDS ORGANIZA-*
 2 *TION.—The term “International Standards Organiza-*
 3 *tion” has the meaning given such term in section 451*
 4 *of the Trade Agreements Act of 1979 (19 U.S.C.*
 5 *2571).*

6 (7) *MINORITY SERVING INSTITUTION.—The term*
 7 *“minority-serving institution” means a Hispanic-*
 8 *serving institution, an Alaska Native-serving institu-*
 9 *tion, a Native Hawaiian-serving institutions, a Pre-*
 10 *dominantly Black Institution, an Asian American*
 11 *and Native American Pacific Islander-serving institu-*
 12 *tion, or a Native American-serving nontribal institu-*
 13 *tion as described in section 371 of the Higher Edu-*
 14 *cation Act of 1965 (20 U.S.C. 1067q(a)).*

15 (8) *SECRETARY.—The term “Secretary” means*
 16 *the Secretary of Commerce.*

17 (9) *TECHNICAL STANDARDS.—The term “tech-*
 18 *nical standard” has the meaning given such term in*
 19 *section 12(d)(5) of the National Technology Transfer*
 20 *and Advancement Act of 1995.*

21 ***TITLE I—APPROPRIATIONS***

22 ***SEC. 101. AUTHORIZATION OF APPROPRIATIONS.***

23 (a) *FISCAL YEAR 2022.—*

24 (1) *IN GENERAL.—There are authorized to be ap-*
 25 *propriated to the Secretary of Commerce*

1 \$1,409,070,000 for the National Institute of Stand-
2 ards and Technology for fiscal year 2022.

3 (2) *SPECIFIC ALLOCATIONS.*—Of the amount au-
4 thorized by paragraph (1)—

5 (A) \$915,570,000 shall be for scientific and
6 technical research and services laboratory activi-
7 ties, of which \$9,000,000 may be transferred to
8 the Working Capital Fund;

9 (B) \$140,000,000 shall be for the construc-
10 tion and maintenance of facilities, of which
11 \$80,000,000 shall be for Safety, Capacity, Main-
12 tenance, and Major Repairs;

13 (C) \$331,500,000 shall be for industrial
14 technology services activities, of which
15 \$275,000,000 shall be for the Manufacturing Ex-
16 tension Partnership program under sections 25
17 and 26 of the National Institute of Standards
18 and Technology Act (15 U.S.C. 278k and 278l)
19 and \$56,500,000 shall be for the Network for
20 Manufacturing Innovation Program under sec-
21 tion 34 of the National Institute of Standards
22 and Technology Act (15 U.S.C. 278s); and

23 (D) \$22,000,000 shall be for the Director for
24 the purpose of investigating the building collapse
25 that occurred in Surfside, Florida on June 24,

1 2021, to understand the source of failure, to pro-
2 vide recommendations for how to rectify any
3 shortcomings in existing building standards in
4 order to prevent future similar disasters, and to
5 inform future building codes for similar struc-
6 tures, in coordination with state and local offices
7 and other federal agencies as appropriate, con-
8 sistent with the Institute’s responsibilities under
9 the National Construction Safety Team Act of
10 2002 (Public Law 107–231).

11 (b) *FISCAL YEAR 2023.*—

12 (1) *IN GENERAL.*—There are authorized to be ap-
13 propriated to the Secretary of Commerce
14 \$1,518,800,000 for the National Institute of Stand-
15 ards and Technology for fiscal year 2023.

16 (2) *SPECIFIC ALLOCATIONS.*—Of the amount au-
17 thorized by paragraph (1)—

18 (A) \$979,100,000 shall be for scientific and
19 technical research and services laboratory activi-
20 ties, of which \$10,000,000 may be transferred to
21 the Working Capital Fund;

22 (B) \$200,000,000 shall be for the construc-
23 tion and maintenance of facilities, of which
24 \$80,000,000 shall be for Safety, Capacity, Main-

tenance, and Major Repairs, including
\$20,000,000 for IT infrastructure; and

(C) \$339,800,000 shall be for industrial
technology services activities, of which
\$283,300,000 shall be for the Manufacturing Ex-
tension Partnership program under sections 25
and 26 of the National Institute of Standards
and Technology Act (15 U.S.C. 278k and 278l)
and \$56,500,000 shall be for the Network for
Manufacturing Innovation Program under sec-
tion 34 of the National Institute of Standards
and Technology Act (15 U.S.C. 278s).

(c) FISCAL YEAR 2024.—

(1) IN GENERAL.—There are authorized to be ap-
propriated to the Secretary of Commerce
\$1,595,800,000 for the National Institute of Stand-
ards and Technology for fiscal year 2024.

(2) SPECIFIC ALLOCATIONS.—Of the amount au-
thorized by paragraph (1)—

(A) \$1,047,600,000 shall be for scientific
and technical research and services laboratory
activities, of which \$12,000,000 may be trans-
ferred to the Working Capital Fund;

(B) \$200,000,000 shall be for the construc-
tion and maintenance of facilities, of which

1 \$80,000,000 shall be for Safety, Capacity, Main-
2 tenance, and Major Repairs, including
3 \$20,000,000 for IT infrastructure; and

4 (C) \$348,200,000 shall be for industrial
5 technology services activities, of which
6 \$291,700,000 shall be for the Manufacturing Ex-
7 tension Partnership program under sections 25
8 and 26 of the National Institute of Standards
9 and Technology Act (15 U.S.C. 278k and 278l)
10 and \$56,500,000 shall be for the Network for
11 Manufacturing Innovation Program under sec-
12 tion 34 of the National Institute of Standards
13 and Technology Act (15 U.S.C. 278s).

14 (d) FISCAL YEAR 2025.—

15 (1) IN GENERAL.—There are authorized to be ap-
16 propriated to the Secretary of Commerce
17 \$1,677,900,000 for the National Institute of Stand-
18 ards and Technology for fiscal year 2025.

19 (2) SPECIFIC ALLOCATIONS.—Of the amount au-
20 thorized by paragraph (1)—

21 (A) \$1,120,900,000 shall be for scientific
22 and technical research and services laboratory
23 activities, of which \$15,000,000 may be trans-
24 ferred to the Working Capital Fund;

1 (B) \$200,000,000 shall be for the construc-
2 tion and maintenance of facilities, of which
3 \$80,000,000 shall be for Safety, Capacity, Main-
4 tenance, and Major Repairs, including
5 \$20,000,000 for IT infrastructure; and

6 (C) \$357,000,000 shall be for industrial
7 technology services activities, of which
8 \$300,500,000 shall be for the Manufacturing Ex-
9 tension Partnership program under sections 25
10 and 26 of the National Institute of Standards
11 and Technology Act (15 U.S.C. 278k and 278l)
12 and \$56,500,000 shall be for the Network for
13 Manufacturing Innovation Program under sec-
14 tion 34 of the National Institute of Standards
15 and Technology Act (15 U.S.C. 278s).

16 (e) FISCAL YEAR 2026.—

17 (1) IN GENERAL.—There are authorized to be ap-
18 propriated to the Secretary of Commerce
19 \$1,765,400,000 for the National Institute of Stand-
20 ards and Technology for fiscal year 2026.

21 (2) SPECIFIC ALLOCATIONS.—Of the amount au-
22 thorized by paragraph (1)—

23 (A) \$1,199,400,000 shall be for scientific
24 and technical research and services laboratory

1 *activities, of which \$18,000,000 may be trans-*
 2 *ferred to the Working Capital Fund;*

3 *(B) \$200,000,000 shall be for the construc-*
 4 *tion and maintenance of facilities, of which*
 5 *\$80,000,000 shall be for Safety, Capacity, Main-*
 6 *tenance, and Major Repairs, including*
 7 *\$20,000,000 for IT infrastructure; and*

8 *(C) \$366,000,000 shall be for industrial*
 9 *technology services activities, of which*
 10 *\$309,500,000 shall be for the Manufacturing Ex-*
 11 *tension Partnership program under sections 25*
 12 *and 26 of the National Institute of Standards*
 13 *and Technology Act (15 U.S.C. 278k and 23*
 14 *278l) and \$56,500,000 shall be for the Network*
 15 *for Manufacturing Innovation Program under*
 16 *section 34 of the National Institute of Standards*
 17 *and Technology Act (15 U.S.C. 278s).*

18 ***TITLE II—MEASUREMENT*** 19 ***RESEARCH***

20 ***SEC. 201. ENGINEERING BIOLOGY AND BIOMETROLOGY.***

21 *(a) IN GENERAL.—The Director shall—*

22 *(1) support basic measurement science, tech-*
 23 *nology research for engineering biology, biomanufac-*
 24 *turing, and biometrology to advance—*

1 (A) measurement technologies to support
2 foundational understanding of the mechanisms of
3 conversion of DNA information into cellular
4 function, including both the natural and engi-
5 neered production of biomolecules;

6 (B) technologies for measurement of such
7 biomolecular components and for complex engi-
8 neered biological systems;

9 (C) new data tools, techniques, and proc-
10 esses to improve engineering biology, biomanu-
11 facturing, and biometrology research; and

12 (D) all other areas deemed by the Director
13 to be critical to the development and deployment
14 of engineering biology, biomanufacturing and
15 biometrology;

16 (2) support activities to inform and expand the
17 development of measurements infrastructure needed to
18 develop technical standards to establish interoper-
19 ability and facilitate commercial development of bio-
20 molecular measurement technology and engineering
21 biology applications;

22 (3) convene industry, institutions of higher edu-
23 cation, nonprofit organizations, Federal laboratories,
24 and other Federal agencies engaged in engineering bi-
25 ology research and development to develop coordinated

1 *technical roadmaps for authoritative measurement of*
2 *the molecular components of the cell;*

3 (4) *provide access to user facilities with ad-*
4 *vanced or unique equipment, services, materials, and*
5 *other resources to industry, institutions of higher edu-*
6 *cation, nonprofit organizations, and government*
7 *agencies to perform research and testing;*

8 (5) *establish or expand collaborative partner-*
9 *ships or consortia with other Federal agencies en-*
10 *gaged in engineering biology research and develop-*
11 *ment, institutions of higher education, Federal lab-*
12 *oratories, and industry to advance engineering biol-*
13 *ogy applications; and*

14 (6) *support graduate and post graduate research*
15 *and training in biometrology, biomanufacturing, and*
16 *engineering biology.*

17 (b) *DEFINITIONS.—For purposes of this section, the*
18 *term “Engineering Biology” means the application of engi-*
19 *neering design principles and practices to biological sys-*
20 *tems, including molecular and cellular systems, to advance*
21 *fundamental understanding of complex natural systems*
22 *and to enable novel or optimize functions and capabilities.*

23 (c) *RULE OF CONSTRUCTION.—Nothing in this section*
24 *shall be construed to alter the policies, processes, or prac-*
25 *tices of individual Federal agencies in effect on the day be-*

1 *fore the date of the enactment of this Act relating to the*
 2 *conduct of biomedical research and advanced development,*
 3 *including the solicitation and review of extramural research*
 4 *proposals.*

5 (d) *CONTROLS.—In carrying out activities authorized*
 6 *by this section, the Secretary shall ensure proper security*
 7 *controls are in place to protect sensitive information, as ap-*
 8 *propriate.*

9 **SEC. 202. GREENHOUSE GAS MEASUREMENT RESEARCH.**

10 (a) *GREENHOUSE GAS MEASUREMENT PROGRAM.—*

11 (1) *IN GENERAL.—The Director, in consultation*
 12 *with the Administrator of the National Oceanic and*
 13 *Atmospheric Administration and the Administrator*
 14 *of the Environmental Protection Agency, shall carry*
 15 *out a measurement research program to inform the*
 16 *development of best practices, benchmarks, methodolo-*
 17 *gies, procedures, and technical standards for the*
 18 *measurement of greenhouse gas emissions and to as-*
 19 *sess and improve the performance of greenhouse gas*
 20 *emissions measurement systems.*

21 (2) *ACTIVITIES.—In carrying out such a pro-*
 22 *gram, the Director may—*

23 (A) *conduct research and testing to improve*
 24 *the accuracy, efficacy, and reliability of the*
 25 *measurement of greenhouse gas emissions at a*

1 *range of scales that covers direct measurement at*
2 *the component or process level through atmos-*
3 *spheric observations;*

4 *(B) conduct research to create novel meas-*
5 *urement technologies and techniques for the*
6 *measurement of greenhouse gas emissions;*

7 *(C) convene and engage with relevant Fed-*
8 *eral agencies and stakeholders to establish com-*
9 *mon definitions and characterizations for the*
10 *measurement of greenhouse gas emissions, taking*
11 *into account any existing United States and*
12 *international standards and guidance;*

13 *(D) conduct outreach and coordination to*
14 *share technical expertise with relevant industry*
15 *and non-industry stakeholders and standards de-*
16 *velopment organizations to assist such entities in*
17 *the development of best practices and technical*
18 *standards for greenhouse gas emissions measure-*
19 *ments; and*

20 *(E) in coordination with the Administrator*
21 *of the National Oceanic and Atmospheric Ad-*
22 *ministration and the Administrator of the Envi-*
23 *ronmental Protection Agency, develop such*
24 *standard reference materials as the Director de-*
25 *termines is necessary to further the development*

1 *of such technical standards, taking into account*
2 *any existing United States or international*
3 *standards.*

4 (3) *TEST BEDS.*—*In coordination with the pri-*
5 *vate sector, institutions of higher education, state and*
6 *local governments, the National Oceanic and Atmos-*
7 *pheric Administration, the Environmental Protection*
8 *Agency, and other Federal agencies as appropriate,*
9 *the Director may continue to develop and manage*
10 *testbeds to advance research and standards develop-*
11 *ment for greenhouse gas emissions measurements.*

12 (4) *GREENHOUSE GAS MEASUREMENT CENTER*
13 *OF EXCELLENCE.*—

14 (A) *IN GENERAL.*—*The Director, in collabo-*
15 *ration with the Administrator of the National*
16 *Oceanic and Atmospheric Administration, the*
17 *Administrator of the Environmental Protection*
18 *Agency, and the heads of other Federal agencies,*
19 *as appropriate, shall award to an institution of*
20 *higher education or an eligible nonprofit organi-*
21 *zation (or a consortium thereof), on a merit-re-*
22 *viewed, competitive basis, funds to establish a*
23 *Center of Excellence in Greenhouse Gas Measure-*
24 *ment.*

1 (B) *COLLABORATIONS.*—*The Director shall*
2 *require, as a condition of receipt of the award*
3 *under this paragraph, that the activities of the*
4 *Center of Excellence include collaboration among*
5 *public and private organizations, including in-*
6 *stitutions of higher education, nonprofit organi-*
7 *zations, private sector entities, and State, tribal,*
8 *territorial, and local officials.*

9 (C) *PURPOSE.*—*The purpose of the Center*
10 *of Excellence shall be to—*

11 (i) *advance measurement science, data*
12 *analytics, and modeling at a range of scales*
13 *that covers direct measurement at the com-*
14 *ponent or process level through atmospheric*
15 *observations to improve the accuracy of*
16 *greenhouse gas emissions measurement, val-*
17 *idation, and attribution to specific under-*
18 *lying activities and processes;*

19 (ii) *test and evaluate the performance*
20 *of existing capabilities, and inform and im-*
21 *prove best practices, benchmarks, methodolo-*
22 *gies, procedures, and technical standards,*
23 *for the measurement and validation of*
24 *greenhouse gas emissions at scales noted in*
25 *clause (i);*

1 (iii) educate and train students in
2 measurement science, computational science,
3 and systems engineering research relevant to
4 greenhouse gas emissions measurements;

5 (iv) foster collaboration among aca-
6 demic researchers, private sector stake-
7 holders, and State, tribal, territorial, and
8 local officials;

9 (v) support Institute test beds as de-
10 scribed in subsection (a)(3); and

11 (vi) collaborate with other Federal
12 agencies to conduct outreach and coordina-
13 tion to share technical expertise with rel-
14 evant public and private sector stakeholders,
15 including State, tribal, territorial, and local
16 officials, to assist such entities in measuring
17 greenhouse gas emissions.

18 (D) REQUIREMENTS.—

19 (i) IN GENERAL.—An institution of
20 higher education or an eligible nonprofit or-
21 ganization (or a consortium thereof) seeking
22 funding under this subsection shall submit
23 an application to the Director at such time,
24 in such manner, and containing such infor-
25 mation as the Director may require.

1 (ii) *APPLICATIONS.*—*Each application*
2 *made under clause (i) shall include a de-*
3 *scription of—*

4 (I) *how the Center will work with*
5 *other research institutions, industry*
6 *partners, and State and local officials*
7 *to identify research, testing, and tech-*
8 *nical standards needs relevant to*
9 *greenhouse gas emissions;*

10 (II) *how the Center will promote*
11 *active collaboration among researchers*
12 *in multiple disciplines involved in the*
13 *measurement of greenhouse gas emis-*
14 *sions; and*

15 (III) *how the Center will share*
16 *technical expertise with relevant public*
17 *and private sector stakeholders, includ-*
18 *ing state and local officials, to assist*
19 *such entities in measuring greenhouse*
20 *gas emissions.*

21 (iii) *SELECTION AND DURATION.*—
22 *Each Center established under this section*
23 *is authorized to carry out activities for a*
24 *period of 5 years, renewable for an addi-*
25 *tional 5 years at the discretion of the Direc-*

1 *tor, in consultation with other Federal*
 2 *agencies as appropriate.*

3 **SEC. 203. NIST AUTHORITY FOR CYBERSECURITY AND PRI-**
 4 **VACY ACTIVITIES.**

5 *Section 2 of the National Institute of Standards and*
 6 *Technology Act (15 U.S.C. 272 et seq.) is amended—*

7 *(1) in subsection (c)—*

8 *(A) in paragraph (16), by striking the pe-*
 9 *riod at the end and inserting a semicolon;*

10 *(B) by redesignating paragraphs (16)*
 11 *through (27) as paragraphs (21) through (32),*
 12 *respectively; and*

13 *(C) by inserting after paragraph (15) the*
 14 *following:*

15 *“(16) support information security measures for*
 16 *the development and lifecycle of software and the soft-*
 17 *ware supply chain, including development of vol-*
 18 *untary, consensus-based technical standards, best*
 19 *practices, frameworks, methodologies, procedures,*
 20 *processes, and software engineering toolkits and con-*
 21 *figurations;*

22 *“(17) support information security measures, in-*
 23 *cluding voluntary, consensus-based technical stand-*
 24 *ards, best practices, and guidelines, for the design,*
 25 *adoption and deployment of cloud computing services;*

1 “(18) support research, development, and prac-
 2 tical application to improve the usability of cyberse-
 3 curity processes and technologies;

4 “(19) facilitate and support the development of
 5 a voluntary, consensus-based set of technical stand-
 6 ards, guidelines, best practices, methodologies, proce-
 7 dures, and processes to cost-effectively ensure appro-
 8 priate privacy protections for personally identifiable
 9 information in systems, technologies, and processes
 10 used by both the public and private sector;

11 “(20) support privacy measures, including vol-
 12 untary, consensus-based technical standards, best
 13 practices, guidelines, metrology, and testbeds for the
 14 design, adoption and deployment of privacy enhanc-
 15 ing technologies;”; and

16 (2) in subsection (e)(1)(A)—

17 (A) in clause (viii), by striking “and” at
 18 the end;

19 (B) by redesignating clause (ix) as clause
 20 (x); and

21 (C) by inserting after clause (viii) the fol-
 22 lowing:

23 “(ix) conduct reviews of and create im-
 24 pact metrics for cybersecurity solutions and

1 capabilities developed by the Institute for
2 purposes of improvement; and”.

3 **SEC. 204. SOFTWARE SECURITY AND AUTHENTICATION.**

4 (a) *VULNERABILITIES IN OPEN SOURCE SOFTWARE.*—
5 The Director shall assess and assign severity metrics to
6 identified vulnerabilities with open source software and
7 produce voluntary guidance to assist the entities that main-
8 tain open source software repositories to discover and miti-
9 gate vulnerabilities.

10 (b) *ARTIFICIAL INTELLIGENCE-ENABLED DE-*
11 *FENSES.*—The Director shall carry out research and testing
12 to improve the effectiveness of artificial intelligence-enabled
13 cybersecurity, including by generating optimized data sets
14 to train artificial intelligence defense systems and evalu-
15 ating the performance of varying network architectures at
16 strengthening network security.

17 (c) *AUTHENTICATION OF INSTITUTE SOFTWARE.*—The
18 Director shall ensure all software released by the Institute
19 is digitally signed and maintained to enable stakeholders
20 to verify its authenticity and integrity upon installation
21 and execution.

22 (d) *ASSISTANCE TO INSPECTORS GENERAL.*—The Di-
23 rector shall provide technical assistance to improve the edu-
24 cation and training of individual Federal agency Inspec-
25 tors General and staff who are responsible for the annual

1 *independent evaluation they are required to perform of the*
 2 *information security program and practices of Federal*
 3 *Agencies under section 3555 of title 44, United States Code.*

4 *(e) SOFTWARE SUPPLY CHAIN SECURITY PRAC-*
 5 *TICES.—*

6 *(1) IN GENERAL.—The Director shall, in coordi-*
 7 *nation with industry, academia, and other Federal*
 8 *agencies, as appropriate, develop a set of security out-*
 9 *comes and practices, including security controls, con-*
 10 *trol enhancements, supplemental guidance, or other*
 11 *supporting information to enable software developers*
 12 *and operators to identify, assess, and manage cyber*
 13 *risks over the full lifecycle of software products.*

14 *(2) OUTREACH.—The Director shall conduct out-*
 15 *reach and coordination activities to share technical*
 16 *expertise with Federal agencies, relevant industry*
 17 *stakeholders, and standards development organiza-*
 18 *tions, as appropriate, to encourage the voluntary*
 19 *adoption of the software lifecycle security practices by*
 20 *Federal agencies and industry stakeholders.*

21 **SEC. 205. DIGITAL IDENTITY MANAGEMENT RESEARCH.**

22 *Section 504 of the Cybersecurity Enhancement Act of*
 23 *2014 (15 U.S.C. 7464) is amended to read as follows:*

1 **“SEC. 504. IDENTITY MANAGEMENT RESEARCH AND DEVEL-**
2 **OPMENT.**

3 “(a) *IN GENERAL.*—*The Director shall carry out a*
4 *program of research to support the development of vol-*
5 *untary, consensus-based technical standards, best practices,*
6 *benchmarks, methodologies, metrology, testbeds, and con-*
7 *formance criteria for identity management, taking into ac-*
8 *count appropriate user concerns—*

9 “(1) *to improve interoperability and portability*
10 *among identity management technologies;*

11 “(2) *to strengthen identity proofing and*
12 *verification methods used in identity management*
13 *systems;*

14 “(3) *to improve privacy protection in identity*
15 *management systems through authentication and se-*
16 *curity protocols; and*

17 “(4) *to monitor and improve the accuracy,*
18 *usability, and inclusivity of identity management*
19 *systems.*

20 “(b) *DIGITAL IDENTITY TECHNICAL ROADMAP.*—*The*
21 *Director, in consultation with other relevant Federal agen-*
22 *cies and stakeholders from the private sector, shall develop*
23 *and maintain a technical roadmap for digital identity*
24 *management research and development focused on enabling*
25 *the voluntary use and adoption of modern digital identity*
26 *solutions that align with the four criteria in subsection (a).*

1 “(c) *DIGITAL IDENTITY MANAGEMENT GUIDANCE.*—

2 “(1) *IN GENERAL.*—*The Director shall develop,*
3 *and periodically update, in collaboration with other*
4 *public and private sector organizations, common defi-*
5 *nitions and voluntary guidance for digital identity*
6 *management systems.*

7 “(2) *GUIDANCE.*—*The Guidance shall—*

8 “(A) *align with the four criteria in sub-*
9 *section (a), as practicable;*

10 “(B) *provide case studies of implementation*
11 *of guidance;*

12 “(C) *incorporate voluntary technical stand-*
13 *ards and industry best practices; and*

14 “(D) *not prescribe or otherwise require the*
15 *use of specific technology products or services.*

16 “(3) *CONSULTATION.*—*In carrying out this sub-*
17 *section, the Director shall consult with—*

18 “(A) *Federal and State agencies;*

19 “(B) *industry;*

20 “(C) *potential end-users and individuals*
21 *that will use services related to digital identity*
22 *verification; and*

23 “(D) *experts with relevant experience in the*
24 *systems that enable digital identity verification,*
25 *as determined by the Director.”.*

1 **SEC. 206. BIOMETRICS RESEARCH AND TESTING.**

2 (a) *IN GENERAL.*—The Secretary, acting through the
3 Director, shall establish a program to support measurement
4 research to inform the development of best practices, bench-
5 marks, methodologies, procedures, and voluntary, con-
6 sensus-based technical standards for biometric identifica-
7 tion systems, including facial recognition systems, to assess
8 and improve the performance of such systems. In carrying
9 out such program, the Director may—

10 (1) *conduct research to support efforts to improve*
11 *the performance of biometric identification systems,*
12 *including in areas related to conformity assessment,*
13 *image quality and interoperability, contactless bio-*
14 *metric capture technologies, and human-in-the-loop*
15 *biometric identification systems and processes;*

16 (2) *convene and engage with relevant stake-*
17 *holders to establish common definitions and charac-*
18 *terizations for biometric identification systems, in-*
19 *cluding accuracy, fairness, bias, privacy, consent, and*
20 *other properties, taking into account definitions in*
21 *relevant international technical standards and other*
22 *publications;*

23 (3) *carry out research and testing on a range of*
24 *biometric modalities, such as fingerprints, voice, iris,*
25 *face, vein, behavioral biometrics, genetics, multimodal*

1 *biometrics, and emerging applications of biometric*
2 *identification technology;*

3 (4) *study the use of privacy-enhancing tech-*
4 *nologies and other technical protective controls to fa-*
5 *cilitate access to public data sets for biometric re-*
6 *search;*

7 (5) *conduct outreach and coordination to share*
8 *technical expertise with relevant industry and non-in-*
9 *dustry stakeholders and standards development orga-*
10 *nizations to assist such entities in the development of*
11 *best practices and voluntary technical standards; and*

12 (6) *develop such standard reference artifacts as*
13 *the Director determines is necessary to further the de-*
14 *velopment of such voluntary technical standards.*

15 (b) *BIOMETRICS VENDOR TEST PROGRAM.—*

16 (1) *IN GENERAL.—The Secretary, acting through*
17 *the Director, shall carry out a test program to pro-*
18 *vide biometrics vendors the opportunity to test bio-*
19 *metric identification technologies across a range of*
20 *modalities.*

21 (2) *ACTIVITIES.—In carrying out the program*
22 *under subsection (a), the Director shall—*

23 (A) *conduct research and regular testing to*
24 *improve and benchmark the accuracy, efficacy,*
25 *and bias of biometric identification systems, in-*

cluding research and testing on demographic variations, capture devices, presentation attack detection, partially occluded or computer generated images, privacy and security designs and controls, template protection, de-identification, and comparison of algorithm, human, and combined algorithm-human recognition capability;

(B) develop an approach for testing software and cloud-based biometrics applications, including remote systems, in Institute test facilities;

(C) establish reference use cases for biometric applications and performance criteria for assessing each use case, including accuracy and bias metrics;

(D) produce public-facing reports of the findings from such testing for a general audience; and

(E) conduct such other activities as deemed necessary by the Director.

(3) *PARTNERSHIPS WITH OTHER FEDERAL AGENCIES.*—In addition to such sums as may be authorized to be appropriated or otherwise made available to carry out this section, the Director may accept funds from other Federal departments and agencies

1 *and States and local governments to carry out activi-*
 2 *ties under this subsection.*

3 **SEC. 207. FEDERAL BIOMETRIC PERFORMANCE STAND-**
 4 **ARDS.**

5 *Section 20 of the National Institute of Standards and*
 6 *Technology Act (15 U.S.C. 278g–3) is amended in sub-*
 7 *section (b)—*

8 *(1) in paragraph (2), by striking “and” after the*
 9 *semicolon;*

10 *(2) in paragraph (3), by striking the period and*
 11 *inserting “; and”; and*

12 *(3) by adding at the end the following:*

13 *“(4) performance standards and guidelines for*
 14 *high risk biometric identification systems, including*
 15 *facial recognition systems, accounting for various use*
 16 *cases, types of biometric identification systems, and*
 17 *relevant operational conditions.”.*

18 **SEC. 208. PROTECTING RESEARCH FROM CYBER THEFT.**

19 *Section 2(e)(1)(A) of the National Institute of Stand-*
 20 *ards and Technology Act (15 U.S.C. 272(e)(1)(A)), as*
 21 *amended by section 203(2), is further amended—*

22 *(1) in clause (ix), as added by section 203(2)(C),*
 23 *by striking “and” after the semicolon;*

24 *(2) by redesignating clause (x), as redesignated*
 25 *by section 203(2)(B), as clause (xi); and*

(3) *by inserting after clause (ix), as added by section 203(2)(C), the following:*

“(x) consider institutions of higher education (as defined in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001)); and”.

SEC. 209. DISSEMINATION OF RESOURCES FOR RESEARCH INSTITUTIONS.

(a) DISSEMINATION OF RESOURCES FOR RESEARCH INSTITUTIONS.—

(1) IN GENERAL.—Not later than one year after the date of the enactment of this Act, the Director shall, using the authorities of the Director under subsections (c)(15) and (e)(1)(A)(ix) of section 2 of the National Institute of Standards and Technology Act (15 U.S.C. 272), as amended by section 208, disseminate and make publicly available resources to help qualifying institutions identify, assess, manage, and reduce their cybersecurity risk related to conducting research.

(2) REQUIREMENTS.—The Director shall ensure that the resources disseminated pursuant to paragraph (1)—

(A) are generally applicable and usable by a wide range of qualifying institutions;

1 (B) vary with the nature and size of the
2 qualifying institutions, and the nature and sen-
3 sitivity of the data collected or stored on the in-
4 formation systems or devices of the qualifying
5 institutions;

6 (C) include elements that promote aware-
7 ness of simple, basic controls, a workplace cyber-
8 security culture, and third-party stakeholder re-
9 lationships, to assist qualifying institutions in
10 mitigating common cybersecurity risks;

11 (D) include case studies, examples, and sce-
12 narios studies of practical application;

13 (E) are technology-neutral and can be im-
14 plemented using technologies that are commercial
15 and off-the-shelf; and

16 (F) to the extent practicable, are based on
17 international technical standards.

18 (3) NATIONAL CYBERSECURITY AWARENESS AND
19 EDUCATION PROGRAM.—The Director shall ensure
20 that the resources disseminated under paragraph (1)
21 are consistent with the efforts of the Director under
22 section 303 of the Cybersecurity Enhancement Act of
23 2014 (15 U.S.C. 7451).

1 (4) *UPDATES.*—*The Director shall review peri-*
 2 *odically and update the resources under paragraph*
 3 *(1) as the Director determines appropriate.*

4 (5) *VOLUNTARY RESOURCES.*—*The use of the re-*
 5 *sources disseminated under paragraph (1) shall be*
 6 *considered voluntary.*

7 (b) *OTHER FEDERAL CYBERSECURITY REQUIRE-*
 8 *MENTS.*—*Nothing in this section may be construed to super-*
 9 *sede, alter, or otherwise affect any cybersecurity require-*
 10 *ments applicable to Federal agencies.*

11 (c) *DEFINITIONS.*—*In this section:*

12 (1) *QUALIFYING INSTITUTIONS.*—*The term*
 13 *“qualifying institutions” means institutions of higher*
 14 *education that are classified as either very-high re-*
 15 *search intensive (R1) or high research intensive (R2)*
 16 *status universities by the Carnegie Classification of*
 17 *Academic Institutions.*

18 (2) *RESOURCES.*—*The term “resources” means*
 19 *guidelines, tools, best practices, technical standards,*
 20 *methodologies, and other ways of providing informa-*
 21 *tion.*

22 **SEC. 210. ADVANCED COMMUNICATIONS RESEARCH.**

23 *The National Institute of Standards and Technology*
 24 *Act (15 U.S.C. 271 et seq.) is amended—*

1 (1) *by redesignating section 35 as section 36;*

2 *and*

3 (2) *by inserting after section 34 the following:*

4 **“SEC. 35. ADVANCED COMMUNICATIONS RESEARCH ACTIVI-**
 5 **TIES.**

6 “(a) *ADVANCED COMMUNICATIONS RESEARCH.—*

7 “(1) *IN GENERAL.—The Director, in consultation*
 8 *with the Administrator of the National Telecommuni-*
 9 *cations and Information Administration, the Director*
 10 *of the National Science Foundation, and heads of*
 11 *other Federal agencies, as appropriate, shall carry out*
 12 *a program of measurement research to inform the de-*
 13 *velopment of common definitions, benchmarks, best*
 14 *practices, methodologies, and voluntary, consensus-*
 15 *based technical standards for advanced communica-*
 16 *tions technologies.*

17 “(2) *RESEARCH AREAS.—Research areas may*
 18 *include—*

19 “(A) *radio frequency emissions and inter-*
 20 *ference, including technologies and techniques to*
 21 *mitigate such emissions;*

22 “(B) *advanced antenna arrays and artifi-*
 23 *cial intelligence systems capable of operating ad-*
 24 *vanced antenna arrays;*

1 “(C) artificial intelligence systems to enable
2 internet of things networks, immersive tech-
3 nology, and other advanced communications
4 technologies;

5 “(D) network sensing and monitoring tech-
6 nologies;

7 “(E) technologies to enable spectrum flexi-
8 bility and agility;

9 “(F) optical and quantum communications
10 technologies;

11 “(G) security of advanced communications
12 systems and their supply chains;

13 “(H) public safety communications;

14 “(I) resilient internet of things applications
15 for advanced manufacturing; and

16 “(J) other research areas deemed necessary
17 by the Director.

18 “(3) TEST BEDS.—In coordination with the pri-
19 vate sector and other Federal agencies as appropriate,
20 the Director may develop and manage testbeds for re-
21 search and development of advanced communications
22 technologies, avoiding duplication of existing testbeds
23 run by other agencies or the private sector.

24 “(4) OUTREACH.—In carrying out the activities
25 under this subsection, the Director shall seek input

1 *from other Federal agencies and from private sector*
2 *stakeholders, on an ongoing basis, to help inform re-*
3 *search and development priorities, including through*
4 *workshops and other multi-stakeholder activities.*

5 “(5) *TECHNICAL ROADMAPS.*—*In carrying out*
6 *the activities under this subsection, the Director shall*
7 *convene industry, institutions of higher education,*
8 *nonprofit organizations, Federal laboratories, and*
9 *other Federal agencies engaged in advanced commu-*
10 *nications research and development to develop, and*
11 *periodically update, coordinated technical roadmaps*
12 *for advanced communications research in priority*
13 *areas, such as those described in paragraph (2).*

14 “(b) *NATIONAL ADVANCED SPECTRUM AND COMMU-*
15 *NICATIONS TEST NETWORK.*—

16 “(1) *IN GENERAL.*—*The Director, in coordina-*
17 *tion with the Administrator of the National Tele-*
18 *communications and Information Administration*
19 *and heads of other Federal agencies, as appropriate,*
20 *shall operate a national network of government, aca-*
21 *demic, and commercial test capabilities and facilities*
22 *to be known as the National Advanced Spectrum and*
23 *Commutations Test Network (referred to in this sec-*
24 *tion as ‘NASCTN’).*

1 “(2) *PURPOSES.*—*NASCTN shall be for the pur-*
2 *poses of facilitating and coordinating the use of intel-*
3 *lectual capacity, modeling and simulation, laboratory*
4 *facilities, and test facilities to meet national spectrum*
5 *interests and challenges, including—*

6 “(A) *measurements and analyses of electro-*
7 *magnetic propagation, radio systems characteris-*
8 *tics, and operating techniques affecting the utili-*
9 *zation of the electromagnetic spectrum in coordi-*
10 *nation with specialized, related research and*
11 *analysis performed by other Federal agencies in*
12 *their areas of responsibility;*

13 “(B) *Conducting research and analysis in*
14 *the general field of telecommunications sciences*
15 *in support of the Institute’s mission and in sup-*
16 *port of other Government agencies;*

17 “(C) *developing methodologies for testing,*
18 *measuring, and setting guidelines for inter-*
19 *ference;*

20 “(D) *conducting interference tests to better*
21 *understand the impact of Federal and commer-*
22 *cial spectrum activities;*

23 “(E) *conducting research and testing to im-*
24 *prove spectrum interference tolerance, flexibility,*
25 *and agility; and*

1 “(F) other activities as deemed necessary by
2 the Director.

3 “(3) *PARTNERSHIPS WITH OTHER FEDERAL*
4 *AGENCIES.—In addition to such sums as may be au-*
5 *thorized to be appropriated or otherwise made avail-*
6 *able to carry out this section, the Director may accept*
7 *funds from other departments and agencies of the*
8 *Federal Government, and from the State and local*
9 *governments, to operate NASCTN under this sec-*
10 *tion.”.*

11 **SEC. 211. NEUTRON SCATTERING.**

12 (a) *STRATEGIC PLAN FOR THE INSTITUTE NEUTRON*
13 *REACTOR.—The Director shall develop a strategic plan for*
14 *the future of the Institute Center for Neutron Research after*
15 *the current neutron reactor is decommissioned, including—*

16 (1) *a succession plan for the reactor, including*
17 *a roadmap with timeline and milestones;*

18 (2) *conceptual design of a new reactor and ac-*
19 *companying facilities, as appropriate; and*

20 (3) *a plan to minimize disruptions to the user*
21 *community during the transition.*

22 (b) *COORDINATION WITH THE DEPARTMENT OF EN-*
23 *ERGY.—The Secretary, acting through the Director, shall*
24 *coordinate with the Secretary of Energy on issues related*
25 *to Federal support for neutron science, including estimation*

1 *of long-term needs for research using neutron sources, and*
 2 *planning efforts for future facilities to meet such needs.*

3 *(c) REPORT TO CONGRESS.—Not later than 18 months*
 4 *after the enactment of this Act, the Director shall submit*
 5 *to Congress the plan required under subsection (a), and*
 6 *shall notify Congress of any substantial updates to such*
 7 *plan in subsequent years.*

8 **SEC. 212. QUANTUM INFORMATION SCIENCE.**

9 *(a) IN GENERAL.—The Director shall continue to*
 10 *prioritize and carry out activities authorized in the Na-*
 11 *tional Quantum Initiative Act (15 U.S.C. 8801).*

12 *(b) QUANTUM RESEARCH.—Section 201(a) of the Na-*
 13 *tional Quantum Initiative Act (15 U.S.C. 8831) is amend-*
 14 *ed—*

15 *(1) by redesignating paragraphs (3) through (4)*
 16 *as paragraphs (6) through (7); and*

17 *(2) by inserting after paragraph (2) the fol-*
 18 *lowing:*

19 *“(3) shall carry out research to facilitate the de-*
 20 *velopment and standardization of quantum cryptog-*
 21 *raphy and post-quantum classical cryptography;*

22 *“(4) shall carry out research to facilitate the de-*
 23 *velopment and standardization of quantum net-*
 24 *working and communications technologies and appli-*
 25 *cations, including—*

1 “(A) quantum repeater technology;
 2 “(B) quantum network traffic management;
 3 “(C) quantum transduction;
 4 “(D) long baseline entanglement and
 5 teleportation; and
 6 “(E) such other technologies, processes, or
 7 applications as the Director considers appro-
 8 priate;
 9 “(5) shall, for quantum technologies deemed by
 10 the Director to be at a readiness level sufficient for
 11 standardization, the Director shall provide technical
 12 review and assistance to such other Federal agencies
 13 as the Director considers appropriate for the develop-
 14 ment of quantum network infrastructure standards;”.

15 **SEC. 213. ARTIFICIAL INTELLIGENCE.**

16 (a) *IN GENERAL.*—The Director shall continue to sup-
 17 port the development of artificial intelligence and data
 18 science, and carry out the activities of the National Artifi-
 19 cial Intelligence Initiative Act of 2020 authorized in divi-
 20 sion E of the National Defense Authorization Act for Fiscal
 21 Year 2021 (Public Law 116–283), including through—

22 (1) *expanding the Institute’s capabilities, includ-*
 23 *ing scientific staff and research infrastructure;*

1 (2) *supporting measurement research and devel-*
 2 *opment for advanced computer chips and hardware*
 3 *designed for artificial intelligence systems;*

4 (3) *supporting the development of technical*
 5 *standards and guidelines that promote safe and trust-*
 6 *worthy artificial intelligence systems;*

7 (4) *creating a framework for managing risks as-*
 8 *sociated with artificial intelligence systems; and*

9 (5) *developing and publishing cybersecurity*
 10 *tools, encryption methods, and best practices for arti-*
 11 *ficial intelligence and data science.*

12 (b) *TESTBEDS.*—*In coordination with other Federal*
 13 *agencies as appropriate, the private sector, and institutions*
 14 *of higher education, the Director may establish testbeds to*
 15 *examine artificial intelligence and machine learning sys-*
 16 *tems in virtual environments for vulnerabilities that may*
 17 *lead to failure, malfunction, or attacks under a wide range*
 18 *of conditions.*

19 **SEC. 214. FACILITATING DEVELOPMENT AND DISTRIBUTION OF FORENSIC SCIENCE STANDARDS.**
 20

21 (a) *ORGANIZATION OF SCIENTIFIC AREA COMMITTEES*
 22 *FOR FORENSIC SCIENCE.*—

23 (1) *ESTABLISHMENT.*—*The Director shall estab-*
 24 *lish in the Institute an organization to facilitate the*
 25 *development of forensic science standards.*

1 (2) *DESIGNATION.*—*The organization established*
2 *under paragraph (1) shall be known as the “Organi-*
3 *zation of Scientific Area Committees for Forensic*
4 *Science”.*

5 (3) *COMPOSITION.*—*The Organization shall be*
6 *composed of the following:*

7 (A) *The Forensic Science and Standards*
8 *Board established under subsection (b).*

9 (B) *Each scientific area committee estab-*
10 *lished under subsection (c).*

11 (4) *DUTIES OF THE ORGANIZATION.*—*The duties*
12 *of the Organization are as follows:*

13 (A) *Facilitating the development and dis-*
14 *tribution of scientifically sound, consensus-based*
15 *documentary standards and guidelines for foren-*
16 *sic science, including through formal collabora-*
17 *tion with nongovernmental standards develop-*
18 *ment organizations.*

19 (B) *Establishing a registry of scientifically*
20 *sound forensic science standards and guidelines*
21 *approved and endorsed by the Organization.*

22 (C) *Establish a process for regularly re-*
23 *evaluating existing standards and guidelines*
24 *published for placement on the registry estab-*
25 *lished under subparagraph (B).*

1 (D) *Promoting the adoption by the forensic*
2 *science community of the standards and guide-*
3 *lines described in subparagraph (A) and as in-*
4 *cluded in the registry established under subpara-*
5 *graph (B).*

6 (b) *FORENSIC SCIENCE STANDARDS BOARD.—*

7 (1) *ESTABLISHMENT.—The Director shall estab-*
8 *lish in the Organization a board to oversee the oper-*
9 *ations of the Organization and its committees.*

10 (2) *DESIGNATION.—The board established under*
11 *paragraph (1) shall be known as the “Forensic*
12 *Science Standards Board”.*

13 (3) *COMPOSITION.—The Board shall be composed*
14 *of the following:*

15 (A) *Members selected by the Director to*
16 *serve on the Board from among each of—*

17 (i) *members of the forensic science com-*
18 *munity;*

19 (ii) *scientists and engineers with rel-*
20 *evant expertise at institutions of higher edu-*
21 *cation and other nonprofit research organi-*
22 *zations;*

23 (iii) *statisticians;*

1 (iv) a representative of each of the task
2 groups established under subsection (d), as
3 the Director considers appropriate; and

4 (v) such other communities or sectors
5 as the Director considers appropriate.

6 (B) The chairpersons of the scientific area
7 committees established under subsection (c).

8 (4) DUTIES.—The duties of the Board are as fol-
9 lows:

10 (A) Overseeing all operations of the Organi-
11 zation, including the committees of the Organi-
12 zation.

13 (B) Establishing governance rules and poli-
14 cies for the Organization.

15 (C) Facilitating communication within the
16 Organization and between the Organization, the
17 criminal justice community, and the forensic
18 science community.

19 (D) Overseeing the reviewing and approving
20 process of standards to be added to the registry
21 established under subsection (a)(4)(B).

22 (5) AUTHORITY TO APPROVE STANDARDS FOR
23 LISTING IN REGISTRY OF FORENSIC SCIENCE STAND-
24 ARDS AND GUIDELINES.—The Board may approve

1 standards for listing on the registry established under
2 subsection (a)(4)(B).

3 (c) *SCIENTIFIC AREA COMMITTEES.*—

4 (1) *ESTABLISHMENT.*—*The Director shall estab-*
5 *lish one or more scientific area committees to carry*
6 *out the work of the Organization.*

7 (2) *MEMBERSHIP.*—

8 (A) *COMPOSITION.*—*Each scientific area*
9 *committee established under paragraph (1) shall*
10 *be composed of the following:*

11 (i) *The chairperson of the scientific*
12 *area committee.*

13 (ii) *The vice chairperson of the sci-*
14 *entific area committee.*

15 (iii) *The chairperson of each sub-*
16 *committee established under paragraph (3)*
17 *for each scientific area committee under*
18 *paragraph (1).*

19 (B) *CHAIRPERSON AND VICE CHAIR-*
20 *PERSON.*—

21 (i) *IN GENERAL.*—*For each scientific*
22 *area committee established under paragraph*
23 *(1), the Director shall appoint a chair-*
24 *person and a vice chairperson for the sci-*
25 *entific area committee from among individ-*

1 uals with expertise in the subject area of the
2 scientific area committee.

3 (ii) *SERVICE.*—Each chairperson and
4 vice chairperson appointed under clause (i)
5 shall serve as a chairperson or vice chair-
6 person at the pleasure of the Director.

7 (3) *SUBCOMMITTEES.*—

8 (A) *ESTABLISHMENT.*—The Director may
9 establish such subcommittees in a scientific area
10 committee established under paragraph (1) as
11 the Director considers appropriate to assist in
12 the work of the scientific area committee.

13 (B) *MEMBERSHIP.*—Each subcommittee es-
14 tablished under subparagraph (A) shall be com-
15 posed of such members selected by the Director
16 from among the following:

17 (i) *Forensic science practitioners.*

18 (ii) *Scientists and engineers at institu-*
19 *tions of higher education and other non-*
20 *profit research organizations.*

21 (iii) *Statisticians.*

22 (iv) *Representatives of the legal com-*
23 *munity.*

1 (v) *Such others as the Director con-*
2 *siders appropriate for purposes of this sec-*
3 *tion.*

4 (4) *DUTIES.—The duties of a scientific area*
5 *committee established under paragraph (1) shall be as*
6 *follows:*

7 (A) *Coordinating the operation and activi-*
8 *ties of specific forensic science discipline sub-*
9 *committees in order to encourage communication*
10 *across all subject and discipline specific sub-*
11 *committees.*

12 (B) *Providing opportunity to the public to*
13 *engage the forensic science community in matters*
14 *relating to priorities, standards, and guidelines.*

15 (C) *Address topics of high importance to the*
16 *forensic community, such as matters relating to*
17 *the following:*

18 (i) *Biology.*

19 (ii) *Chemistry, including—*

20 (I) *matters relating to seized*
21 *drugs and toxicology; and*

22 (II) *matters relating to trace evi-*
23 *dence.*

24 (iii) *Scene examination.*

25 (iv) *Medicine.*

1 (v) *Digital and multimedia.*

2 (vi) *Physics and pattern interpreta-*
3 *tion.*

4 (vii) *Computational forensic algo-*
5 *rithms.*

6 (D) *Furthering the development of stand-*
7 *ards under subsection (e)(1) and other guide-*
8 *lines.*

9 (d) *RESOURCE TASK GROUPS.—*

10 (1) *ESTABLISHMENT.—The Director, acting*
11 *through the Board, shall establish legal, human fac-*
12 *tors, quality, and statistics task groups to support*
13 *and assist the Organization with matters relating to*
14 *questions of law, human factors, ethical and social*
15 *implications of technology, workflow processes, quality*
16 *assurance, and statistics.*

17 (2) *MEMBERSHIP.—The Director, acting through*
18 *the Board, shall ensure that each task group estab-*
19 *lished under paragraph (1) is composed of voting*
20 *members of the subcommittees established under sub-*
21 *section (c)(3) who have relevant expertise.*

22 (3) *CHAIRPERSONS.—The Director, acting*
23 *through the Board, shall appoint a chairperson of*
24 *each task group established under paragraph (1).*

1 (e) *FORENSIC SCIENCE STANDARDS DEVELOPMENT*
2 *PROCESS.*—

3 (1) *STANDARDS DEVELOPMENT PROCESS.*—*The*
4 *Director, acting through the Organization, shall im-*
5 *plement a process to facilitate the development of sci-*
6 *entifically sound, consensus- based forensic standards*
7 *and guidelines, consistent with the duties described*
8 *for each entity established under this section.*

9 (2) *TECHNICAL REVIEW.*—

10 (A) *PROCESS REQUIRED.*—*The Director*
11 *shall establish a process for technical peer review*
12 *to provide feedback on a draft of a standard or*
13 *guideline to a relevant subcommittee of a sci-*
14 *entific area committee before such standard or*
15 *guideline is submitted to a nongovernmental*
16 *standards development organization or submitted*
17 *for inclusion in a registry of forensic standards*
18 *or guidelines.*

19 (B) *PARTICIPANTS.*—*The process established*
20 *under subparagraph (A)—*

21 (i) *may include members of the Orga-*
22 *nization; and*

23 (ii) *shall include additional volunteer*
24 *experts from the forensic science community*
25 *and the academic research community.*

1 (3) *PUBLIC COMMENT.*—

2 (A) *IN GENERAL.*—*The Director shall pro-*
3 *vide for public comment on draft standards*
4 *prior to inclusion in the registry of forensic*
5 *science standards and guidelines established*
6 *under subsection (a)(4)(B).*

7 (B) *COMMENTS FROM RESEARCH TASK*
8 *GROUPS.*—*The Director shall ensure that—*

9 (i) *each resource task group established*
10 *under subsection (d) may submit, as a*
11 *group, comments on draft standards de-*
12 *scribed in subparagraph (A); and*

13 (ii) *any comments submitted under*
14 *clause (i), and any adjudication of such*
15 *comments by the Organization, are made*
16 *available to the public.*

17 (4) *SUBMISSION TO STANDARDS DEVELOPING OR-*
18 *GANIZATION.*—*The Director shall ensure that stand-*
19 *ards proposed by the Organization and approved for*
20 *the registry of forensic science standards and guide-*
21 *lines established under subsection (a)(4)(B) are sub-*
22 *mitted to a nongovernmental standards development*
23 *organization for review and formal adoption as*
24 *standard.*

1 (5) *GRANTS.*—*The Director shall award grants*
2 *through a competitive process—*

3 (A) *to support activities under paragraph*
4 (3); *and*

5 (B) *to ensure that the standards approved*
6 *for inclusion in the registry of forensic science*
7 *standards and guidelines required by subsection*
8 (a)(4)(B) *are submitted to a nongovernmental*
9 *standards development organization.*

10 (f) *FORENSIC STANDARDS FOR AUTHENTICATING DIG-*
11 *ITAL EVIDENCE.*—

12 (1) *FURTHERING DEVELOPMENT OF STAND-*
13 *ARDS.*—

14 (A) *IN GENERAL.*—*The subcommittee ad-*
15 *dressng digital and multimedia, or any suc-*
16 *cessor thereto, shall develop standards for vali-*
17 *dating or assessing the authenticity of digital*
18 *content, including content created by technologies*
19 *that synthesize or manipulate digital content*
20 *such as deepfakes.*

21 (B) *COLLABORATION.*—*In carrying out sub-*
22 *paragraph (A), the subcommittee described in*
23 *such subparagraph shall collaborate with the fo-*
24 *rensic science community and experts who study*
25 *advanced techniques for digital content manipu-*

1 *lation, including those in academia and govern-*
2 *ment entities such as the Defense Advanced Re-*
3 *search Projects Agency (DARPA).*

4 *(2) RESOURCE DEVELOPMENT.—The Organiza-*
5 *tion shall develop and compile resources and mate-*
6 *rials for use by the forensic science community in de-*
7 *veloping standards to authenticate digital materials.*

8 *(3) CONGRESSIONAL BRIEFING.—Not later than*
9 *1 year after the date of the enactment of this Act, the*
10 *Director shall provide the appropriate committees of*
11 *Congress a briefing on the status of efforts undertaken*
12 *pursuant to this subsection.*

13 **SEC. 215. SUSTAINABLE CHEMISTRY RESEARCH AND EDU-**
14 **CATION.**

15 *In accordance with section 263 of the National Defense*
16 *Authorization Act for Fiscal Year 2021, the Director shall*
17 *carry out activities in support of green and sustainable*
18 *chemistry, including coordinating and partnering with*
19 *academia, industry, non-profits, and other entities in ac-*
20 *tivities to support clean, safe, and economic alternatives,*
21 *technologies, and methodologies to traditional chemical*
22 *products and processes.*

1 ***TITLE III—GENERAL ACTIVITIES***

2 ***SEC. 301. NIST FACILITIES AND CONSTRUCTION.***

3 (a) *OWNERSHIP, OPERATION, AND LEASING OF FA-*
 4 *CILITIES.*—Section 14 of the National Institute of Stand-
 5 *ards and Technology Act (15 U.S.C. 278d) is amended by*
 6 *adding at the end the following:*

7 “(c) *OWNERSHIP, OPERATION, AND LEASING OF FA-*
 8 *CILITIES.*—Within the limits of funds which are appro-
 9 *priated for the Institute, the Secretary is authorized to own,*
 10 *operate, or lease research facilities in locations throughout*
 11 *the United States and its territories in furtherance of its*
 12 *mission, provided that no agreement is entered into to own,*
 13 *operate, or lease without first notifying the appropriate*
 14 *Congressional committees of jurisdiction.”.*

15 (b) *FACILITIES MODERNIZATION FUND.*—Section 14 of
 16 *such Act (15 U.S.C. 278d), as amended by subsection (a),*
 17 *is further amended by adding at the end the following:*

18 “(d) *FACILITIES MODERNIZATION FUND.*—

19 “(1) *ESTABLISHMENT.*—There is established in
 20 *the Treasury of the United States a fund to be known*
 21 *as the ‘NIST Facilities Modernization Fund’ (here-*
 22 *after in this section referred to as the ‘Fund’).*

23 “(2) *USE OF FUNDS.*—Amounts in the Fund
 24 *shall be available to Secretary, acting through the Di-*
 25 *rector, for Capital Projects on the Institute’s cam-*

1 *puses, and as needed on the Institute’s joint institute*
2 *campuses, for the modernization, renovation, and con-*
3 *struction of research facilities needed to conduct lead-*
4 *ing edge scientific and technical research.*

5 *“(3) CONTENTS OF FUND.—The Funds shall con-*
6 *sist of the following amounts:*

7 *“(A) Such amounts as may be appropriated*
8 *by law.*

9 *“(B) Interest earned on the balance of the*
10 *Fund.*

11 *“(4) AUTHORIZATION OF FUNDS.—Of the funds*
12 *authorized to be appropriated in section 302 of the*
13 *National Institute of Standards and Technology for*
14 *the Future Act of 2021 for the construction and ren-*
15 *ovation of facilities, \$80,000,000 for each of the fiscal*
16 *years 2022 through 2026 shall be provided for the*
17 *Fund established in subsection (a).*

18 *“(5) CONTINUING AVAILABILITY OF FUNDS.—*
19 *Amounts in the Fund are available without regard to*
20 *fiscal year limitation.*

21 *“(6) NOTIFICATION TO COMMITTEES.—Upon*
22 *making any obligation or expenditure of any amount*
23 *in the Fund, the Secretary, through the Director, shall*
24 *notify the Committee on Science, Space, and Tech-*
25 *nology of the House of Representatives, the Committee*

1 *on Commerce, Science, and Transportation of the*
 2 *Senate, the Committee on Appropriations of the*
 3 *House of Representatives and the Committee on Ap-*
 4 *propriations of the Senate of the amount and purpose*
 5 *of the obligation or expenditure.*

6 “(7) *NIST FACILITIES MODERNIZATION AND*
 7 *MAINTENANCE PLAN.—*

8 “(A) *IN GENERAL.—To carry out the pro-*
 9 *gram authorized in subsection (d), the Secretary,*
 10 *acting through the Director, shall develop and*
 11 *submit to Congress a 5-year modernization and*
 12 *maintenance plan for the Institute’s campuses.*

13 “(B) *TIMING.—The modernization and*
 14 *maintenance plan required in subparagraph (A)*
 15 *shall be submitted to Congress not later than 30*
 16 *days after the date of enactment of the National*
 17 *Institute of Standards and Technology for the*
 18 *Future Act of 2021, and an update shall be sub-*
 19 *mitted to Congress annually thereafter.*

20 “(C) *COMPONENTS.—The plan required in*
 21 *subparagraph (A) shall include, with respect to*
 22 *the 5-year period beginning on the date of the*
 23 *submission or update, the following:*

24 “(i) *A list of Capital Construction*
 25 *Projects expected to be undertaken during*

1 *such period, the core capabilities these fa-*
2 *cilities will provide, climate-resilience plan-*
3 *ning efforts, anticipated schedule of con-*
4 *struction, and anticipated funding require-*
5 *ments.*

6 “(ii) *A list of planned utility infra-*
7 *structure projects expected to be undertaken*
8 *during such periods, anticipated schedule of*
9 *construction, and anticipated funding re-*
10 *quirements.*

11 “(iii) *A list of planned IT infrastruc-*
12 *ture projects expected to be undertaken dur-*
13 *ing such period, anticipated schedule of con-*
14 *struction, and anticipated funding require-*
15 *ments.*

16 “(iv) *A list of the deferred maintenance*
17 *projects expected to be undertaken during*
18 *such period, anticipated schedule of con-*
19 *struction, anticipated funding requirements,*
20 *and an evaluation of progress made in re-*
21 *ducing the deferred maintenance backlog.”.*

22 **SEC. 302. EDUCATIONAL OUTREACH AND SUPPORT FOR**
23 **UNDERREPRESENTED COMMUNITIES.**

24 *Section 18 of the National Institute of Standards and*
25 *Technology Act (15 U.S.C. 278g-1) is amended—*

1 (1) *in subsection (a), in the second sentence—*

2 (A) *by striking “may” and inserting*
3 *“shall”; and*

4 (B) *by striking “academia” and inserting*
5 *“diverse types of institutions of higher education,*
6 *including minority-serving institutions and com-*
7 *munity colleges”; and*

8 (2) *in subsection (e)—*

9 (A) *in paragraph (4), by striking “and” at*
10 *the end;*

11 (B) *in paragraph (5), by striking the period*
12 *at the end and inserting “; and”; and*

13 (C) *by inserting after paragraph (5) the fol-*
14 *lowing:*

15 “(6) *conduct outreach to and develop research*
16 *collaborations with historically black colleges and uni-*
17 *versities and minority-serving institutions, including*
18 *through the recruitment of students and faculty at*
19 *such institutions to participate in programs developed*
20 *under paragraph (3);*

21 “(7) *conduct outreach to and develop research*
22 *collaborations with community colleges, including*
23 *through the recruitment of students and faculty at*
24 *such institutions to participate in programs developed*
25 *under paragraph (3);*

1 “(8) carry out other activities to increase the
2 participation of persons historically underrepresented
3 in STEM in the Institute’s programs; and

4 “(9) conduct outreach to and develop collabora-
5 tions with nontraditional educational organizations,
6 including those that offer training through non-profit
7 associations and professional associations or profes-
8 sional societies, to engage persons historically under-
9 represented in STEM through programs developed
10 under this subsection.”.

11 **SEC. 303. OTHER TRANSACTIONS AUTHORITY.**

12 Section 2(b)(4) of the National Institute of Standards
13 and Technology Act (15 U.S.C. 272(b)(4)) is amended to
14 read as follows:

15 “(4) to enter into and perform such contracts,
16 including cooperative research and development ar-
17 rangements and grants and cooperative agreements or
18 other transactions, as may be necessary in the con-
19 duct of its work and on such terms as it may deem
20 appropriate, in furtherance of the purposes of this
21 Act;”.

1 **SEC. 304. COLLABORATIONS WITH GOVERNMENT AGEN-**
 2 **CIES.**

3 *Section 8 of the National Bureau of Standards Author-*
 4 *ization of Act for Fiscal Year 1983 (15 U.S.C. 275b) is*
 5 *amended—*

6 *(1) in the heading, by adding “AND WITH”*
 7 *after “PERFORMED FOR”;*

8 *(2) by striking “The Secretary of Commerce”*
 9 *and inserting “(a) IN GENERAL.—The Secretary of*
 10 *Commerce”;*

11 *(3) by inserting after “(15 U.S.C. 278b(e)).” the*
 12 *following: “The Secretary may accept, apply for, use,*
 13 *and spend Federal, State, and non-governmental*
 14 *funds to further the mission of the Institute without*
 15 *regard to the source or the period of availability of*
 16 *these funds as well as share personnel, associates, fa-*
 17 *cilities, and property with these partner organiza-*
 18 *tions, with or without reimbursement, upon mutual*
 19 *agreement.”; and*

20 *(4) by adding at the end the following:*

21 *“(b) REPORT.—For each fiscal year beginning with*
 22 *fiscal year 2022, not later than 90 days after submission*
 23 *of the President’s annual budget request for such fiscal year,*
 24 *the Director shall submit to the Committee on Science,*
 25 *Space, and Technology and the Committee on Appropria-*
 26 *tions of the House of Representatives and the Committee*

1 *on Commerce, Science, and Transportation and the Com-*
 2 *mittee of Appropriations of the Senate a de- scription of*
 3 *any appropriated funds, under this authority, carried over*
 4 *from the year in which such funds were ap- propriated.”.*

5 **SEC. 305. HIRING CRITICAL TECHNICAL EXPERTS.**

6 *Section 6 of the National Institute of Standards and*
 7 *Technology Act is amended to read as follows:*

8 **“SEC. 6. HIRING CRITICAL TECHNICAL EXPERTS.**

9 *“(a) IN GENERAL.—The officers and employees of the*
 10 *Institute, except the director, shall be appointed by the Sec-*
 11 *retary of Commerce at such time as their respective services*
 12 *may become necessary.*

13 *“(b) HIRING CRITICAL TECHNICAL EXPERTS.—Not-*
 14 *withstanding section 3104 of title 5 or the provisions of any*
 15 *other law relating to the appointment, number, classifica-*
 16 *tion, or compensation of employees, the Secretary of Com-*
 17 *merce shall have the authority to make appointments of sci-*
 18 *entific, engineering, and professional personnel, and to fix*
 19 *the basic pay of such personnel at a rate to be determined*
 20 *by the Secretary at rates not in excess of the highest total*
 21 *annual compensation payable at the rate determined under*
 22 *section 104 of title 3. The Director shall appoint not more*
 23 *than 15 personnel under this section.*

1 “(c) *SUNSET.*—*The authority under section (b) shall*
2 *expire on the date that is 5 years after the date of enactment*
3 *of this section.*”.

4 ***SEC. 306. INTERNATIONAL STANDARDS DEVELOPMENT.***

5 (a) *INTERNATIONAL STANDARDS ENGAGEMENT.*—

6 (1) *IN GENERAL.*—*The Director shall lead infor-*
7 *mation exchange and coordination among Federal*
8 *agencies and communication from Federal agencies to*
9 *the private sector of the United States to ensure effec-*
10 *tive Federal engagement in the development and use*
11 *of international technical standards.*

12 (2) *REQUIREMENTS.*—*To support private sector-*
13 *led engagement and ensure effective Federal engage-*
14 *ment in the development and use of international*
15 *technical standards, the Director shall consider—*

16 (A) *the role and needs of the Federal Gov-*
17 *ernment with respect to international technical*
18 *standards;*

19 (B) *organizations developing international*
20 *technical standards of interest to the United*
21 *States, United States representation and influ-*
22 *ence in these organizations, and key contributors*
23 *for technical and leadership expertise in these or-*
24 *ganizations;*

1 (C) support for persons with domain subject
2 matter expertise, especially from small businesses
3 located in the United States, to influence and en-
4 gage in technical standards leadership positions,
5 working groups and meetings;

6 (D) opportunities for partnerships for sup-
7 porting international technical standards from
8 across the Federal Government, federally funded
9 research and development centers, university-af-
10 filiated research centers, institutions of higher
11 education, industry, industry associations, non-
12 profit organizations, and other key contributors;

13 (E) support for activities to encourage the
14 adoption of technical standards developed in the
15 United States to be adopted by international
16 standards organizations; and

17 (F) other activities determined by the Direc-
18 tor to be necessary to support United States par-
19 ticipation in international standards develop-
20 ment, economic competitiveness, and national se-
21 curity in the development and use of inter-
22 national technical standards.

23 (b) *CAPACITY BUILDING GUIDANCE.*—The Director
24 shall support education and workforce development efforts

1 *to promote United States participation in international*
2 *standards organizations. The Director shall—*

3 *(1) identify and create, as appropriate, technical*
4 *standards education and training resources for inter-*
5 *ested businesses, industry associations, academia,*
6 *nonprofits, Federal agencies, and other relevant*
7 *standards contributors, including activities targeted*
8 *at integrating standards content into undergraduate*
9 *and graduate curricula in science, engineering, busi-*
10 *ness, public policy, and law;*

11 *(2) conduct outreach, including to private sector*
12 *leaders, to support engagement by more United States*
13 *stakeholders in international technical standards de-*
14 *velopment; and*

15 *(3) other activities deemed necessary by the Di-*
16 *rector to support increased engagement, influence,*
17 *and leadership of United States organizations in the*
18 *development of international technical standards.*

19 *(c) CAPACITY BUILDING PILOT PROGRAM.—*

20 *(1) IN GENERAL.—The Director, in coordination*
21 *with the Director of the National Science Foundation,*
22 *the Administrator of the Small Business Administra-*
23 *tion and the heads of other relevant Federal agencies,*
24 *as appropriate, shall establish a 5-year pilot program*
25 *to award grants, on a merit-reviewed, competitive*

1 *basis, to private sector entities or nonprofit institu-*
2 *tions based in the United States to support increased*
3 *participation by small business and academic inter-*
4 *ests in international standards organizations.*

5 (2) *ACTIVITIES.—In carrying out the pilot pro-*
6 *grams established in subsection (c), the Director shall*
7 *award competitive, merit-reviewed grants to covered*
8 *entities to cover the reasonable costs, up to a specified*
9 *ceiling set by the Director, of activities supporting in-*
10 *creased engagement and leadership of employees of*
11 *small businesses and faculty of institutions of higher*
12 *education or other nonprofit research institutions*
13 *with subject matter and technical expertise necessary*
14 *to be contributors in international standards organiza-*
15 *tions.*

16 (3) *AWARD CRITERIA.—The Director may only*
17 *provide a grant under this section to an eligible re-*
18 *cipient that—*

19 (A) *demonstrates deep technical standards*
20 *expertise;*

21 (B) *demonstrates knowledge with the proc-*
22 *esses of the standards development organization*
23 *in which the recipient intends to engage using*
24 *grant funds;*

1 (C) proposes a feasible set of standard
2 deliverables to be completed over the period of the
3 grant;

4 (D) explains how the recipient will fund the
5 standards work supported by the grant if the
6 grant funds are insufficient to cover all costs of
7 the work; and

8 (E) commits personnel with appropriate ex-
9 pertise to engage in relevant international orga-
10 nizations responsible for developing technical
11 standards over the period of the grant.

12 (4) *ELIGIBILITY.*—A small business concern (as
13 defined in section 3 of the Small Business Act (15
14 U.S.C. 632) based in the United States, an institu-
15 tion of higher education (as defined by section 102 of
16 the Higher Education Act of 1965 (20 U.S. C. 1002)),
17 or a nonprofit institution as defined in section 4(5)
18 of the Stevenson-Wydler Act (15 U.S.C. 3703) shall be
19 eligible to receive grants under this program.

20 (5) *PRIORITIZATION.*—The Director may
21 prioritize grants awarded under this section to eligi-
22 ble recipients proposals for standards development
23 that address clearly defined current or anticipated
24 market needs or gaps that would not be met without
25 the grant.

1 (6) *APPLICATION.*—*An eligible recipient seeking*
2 *funding under subsection (c) shall submit an applica-*
3 *tion to the Director at such time, in such manner,*
4 *and containing such information as the Director may*
5 *require.*

6 (7) *MERIT REVIEW PROCESS.*—*Not later than 90*
7 *days after the enactment of this Act, the Director*
8 *shall establish a merit review process, including the*
9 *creation of merit review panels made of experts from*
10 *government and the private sector, to evaluate the ap-*
11 *plication under paragraph (6) to ensure applications*
12 *submitted are reviewed in a fair, competitive, trans-*
13 *parent, and in-depth manner.*

14 (8) *CONSULTATION.*—*In carrying out the pilot*
15 *program established under subsection (c), the Director*
16 *shall consult with other Federal agencies, private sec-*
17 *tor organizations, institutions of higher education,*
18 *and nonprofit organizations to help inform the pilot*
19 *program, including selection criteria, applicant dis-*
20 *closure requirements, grant amount and duration,*
21 *and the merit review process.*

22 (9) *REPORT TO CONGRESS.*—*The Director shall*
23 *brief Congress after the second year of the pilot pro-*
24 *gram and each year following that includes the fol-*
25 *lowing:*

(A) *An assessment of the effectiveness of the pilot program for improving the participation of United States small businesses, United States institutions of higher education, or other nonprofit research institutions in international standards organizations, including—*

(i) the type of activities supported, including leadership roles;

(ii) the international standards organizations participated in; and

(iii) the technical areas covered by the activities.

(B) *If deemed effective, a plan for permanent implementation of the pilot program.*

(d) *REAFFIRMING THE IMPORTANCE OF VOLUNTARY CONSENSUS-BASED INTERNATIONAL STANDARDS BODIES.—To the extent applicable, the Institute, when preparing standards, participating in voluntary consensus standard bodies, and engaging in a standards development process that is open to participation from Chinese firms and state-owned enterprises of the People’s Republic of China, the process should include the following attributes that are easily accessible, clear, and unambiguous:*

(1) Transparency.

(2) Openness.

1 (3) *Impartiality and Consensus.*

2 (4) *Effectiveness and Relevance.*

3 (5) *Coherence.*

4 (6) *Development Dimension.*

5 **SEC. 307. STANDARD TECHNICAL UPDATE.**

6 (a) *NATIONAL INSTITUTE OF STANDARDS AND TECH-*
7 *NOLOGY ACT UPDATES.*—*The National Institute of Stand-*
8 *ards and Technology Act (15 U.S.C. 271) is amended—*

9 (1) *in section 15—*

10 (A) *in subsection (b), by striking the period*
11 *at the end and inserting a semicolon;*

12 (B) *in subsection (g), by striking “and”*
13 *after the semicolon; and*

14 (C) *by striking the period at the end and*
15 *inserting “; and (i) the protection of Institute*
16 *buildings and other plant facilities, equipment,*
17 *and property, and of employees, associates, or*
18 *visitors, located therein or associated therewith,*
19 *notwithstanding any other provision of law, the*
20 *direction of such of the officers and employees of*
21 *the Institute as the Secretary deems necessary in*
22 *the public interest hereafter to carry firearms*
23 *while in the conduct of their official duties, and*
24 *the authorization of employees of contractors and*
25 *subcontractors of the Institute who are engaged*

1 *in the protection of property owned by the*
2 *United States, and located at facilities owned by,*
3 *leased, used or under the control of the United*
4 *States, to carry firearms while in the conduct of*
5 *their official duties, and, under regulations pre-*
6 *scribed by the Secretary and approved by the At-*
7 *torney General, the authorization of officers and*
8 *employees of the Institute and of its contractors*
9 *and subcontractors authorized to carry firearms*
10 *hereafter to arrest without warrant for any of-*
11 *fense against the United States committed in*
12 *their presence, or for any felony cognizable under*
13 *the laws of the United States if they have reason-*
14 *able grounds to believe that the person to be ar-*
15 *rested has committed or is committing such fel-*
16 *ony, provided that such authority to make ar-*
17 *rests may be exercised only while guarding and*
18 *protecting buildings and other plant facilities,*
19 *equipment, and property owned or leased by,*
20 *used or under the control of, the United States*
21 *under the administration and control of the Sec-*
22 *retary.”; and*
23 *(2) by amending section 17(a) to read as follows:*
24 *“(a) The Secretary is authorized, notwithstanding any*
25 *other provision of law, to expend such sums, within the*

1 *limit of appropriated funds, as the Secretary may deem de-*
 2 *sirable through direct support for activities of international*
 3 *organizations and foreign national metrology institutes*
 4 *with which the Institute cooperates to advance measurement*
 5 *methods, technical standards, and related basic technologies,*
 6 *for official representation, to host official receptions, din-*
 7 *ners, and similar events, and to otherwise extend official*
 8 *courtesies, including transportation of foreign dignitaries*
 9 *and representatives of foreign national metrology institutes*
 10 *to and from the Institute, for the purpose of maintaining*
 11 *the standing and prestige of the Department of Commerce*
 12 *and the Institute, through the grant of fellowships or other*
 13 *appropriate form of financial or logistical assistance or*
 14 *support to foreign nationals not in service to the Govern-*
 15 *ment of the United States while they are performing sci-*
 16 *entific or engineering work at the Institute or participating*
 17 *in the exchange of scientific or technical information at the*
 18 *Institute.”.*

19 (b) STEVENSON-WYDLER UPDATES.—*The Stevenson-*
 20 *Wydlar Technology Innovation Act of 1980 (15 U.S.C.*
 21 *3701) is amended—*

22 (1) *in section 17(c)(1)—*

23 (A) *by moving each of subparagraphs (D)*

24 *and (E) two ems to the left; and*

25 (B) *by adding at the end the following:*

1 “(G) Community.”; and

2 (2) in section 23(a)—

3 (A) by redesignating paragraphs (1) and

4 (2) as paragraphs (2) and (3), respectively; and

5 (B) by inserting before paragraph (2), as so
6 redesignated, the following:

7 “(1) accept, apply for, use, and spend Federal,
8 State, and nongovernmental acquisition and assist-
9 ance funds to further the purposes of this Act as well
10 as share personnel, associates, facilities, and property
11 with these partner organizations, with or without re-
12 imbursement, upon mutual agreement: Provided, That
13 the approving official may waive statutory and regu-
14 latory administrative provisions so that a single
15 agency may administer a joint program, upon mu-
16 tual agreement;”.

17 (c) *AMERICAN INNOVATION AND COMPETITIVENESS*
18 *ACT UPDATE*.—Section 113 of the American Innovation
19 and Competitiveness Act (15 U.S.C. 278e note) is repealed.

20 (d) *CLERICAL AMENDMENT*.—The item relating to sec-
21 tion 113 in the table of contents in section 1(b) of the Amer-
22 ican Innovation and Competitiveness Act is repealed.

23 (e) *FEDERAL ENERGY MANAGEMENT IMPROVEMENT*
24 *ACT UPDATE*.—Section 4 of the Federal Energy Manage-

1 *ment Improvement Act of 1988 (15 U.S.C. 5001) is amend-*
 2 *ed—*

3 *(1) by striking “Secretary of Commerce” and*
 4 *“Secretary” each place either such term appears and*
 5 *inserting “Consumer Product Safety Commission”;*

6 *(2) by redesignating the second subsection (c) as*
 7 *subsection (e); and*

8 *(3) in subsection (g), by redesignating clauses (i)*
 9 *and (ii) as paragraphs (1) and (2), respectively.*

10 **SEC. 308. GAO STUDY OF NIST RESEARCH SECURITY POLI-**
 11 **CIES AND PROTOCOLS.**

12 *(a) EVALUATION.—Not later than 1 year after the date*
 13 *of enactment of this Act, the Comptroller General of the*
 14 *United States shall conduct a study of the Institute’s poli-*
 15 *cies and protocols to protect its research and combat undue*
 16 *foreign influence,*

17 *(b) MATTERS TO BE INCLUDED.—The study conducted*
 18 *under subsection (a) shall include, to the extent practicable,*
 19 *the following:*

20 *(1) An analysis of steps taken by the Institute to*
 21 *address foreign threats to Institute-funded research*
 22 *over the previous 5 years.*

23 *(2) An analysis of the coordination and engage-*
 24 *ment between the Department of Commerce’s Office of*
 25 *Inspector General, the Department of Commerce’s Of-*

1 *fice of Intelligence and the Institute in identifying*
2 *and addressing concerning findings.*

3 *(3) An assessment of the Institute's review proc-*
4 *ess for Foreign National associates.*

5 *(4) An assessment of the Institute's policies as it*
6 *relates to employees and associates participating in*
7 *foreign talent recruitment programs.*

8 *(5) An assessment of the Institute's implementa-*
9 *tion of conflict-of-interest and disclosure policies and*
10 *requirements, including the disclosure requirements*
11 *authorized in Section 223 of the National Defense Au-*
12 *thorization Act for Fiscal Year 2021 (public Law*
13 *116-283).*

14 *(6) An assessment of the Institute's, the Depart-*
15 *ment of Commerce's Office of Security, the Depart-*
16 *ment of Commerce's Office of Intelligence, and the De-*
17 *partment of Commerce's Office of Inspector General's*
18 *ability to monitor and enforce conflict-of-interest and*
19 *disclosure policies and requirements, including the*
20 *disclosure requirements authorized in Section 223 of*
21 *the National Defense Authorization Act for Fiscal*
22 *Year 2021 (public Law 116-283).*

23 *(7) An assessment of the Institute's, the Depart-*
24 *ment of Commerce's, and the Department of Com-*
25 *merce's Office of Inspector General's ability to con-*

1 *duct risk assessments of research and development*
2 *award applications and disclosures to the Institute.*

3 (8) *An assessment of the Institute’s research secu-*
4 *rity training programs for both internal and exter-*
5 *nally-supported researchers and associates, including*
6 *training focused on international collaboration, and*
7 *international travel, foreign interference, and rules*
8 *for proper use of funds, disclosure, conflict of commit-*
9 *ment, and conflict of interest.*

10 (9) *An analysis and summary of incidents of*
11 *undue foreign influence at Institute-supported re-*
12 *search facilities and programs over the past 10 years.*

13 (10) *Recommendations for the Institute to bolster*
14 *its research security policies and protocols.*

15 (11) *Other matters the Comptroller General de-*
16 *termines appropriate.*

17 (c) *CONGRESSIONAL BRIEFING.*—*Not later than 180*
18 *days after the date of enactment of this Act, the Comptroller*
19 *General shall brief the Committee on Science, Space, and*
20 *Technology of the House of Representatives and the Com-*
21 *mittee of Commerce, Science, and Transportation of the*
22 *Senate on the findings available from the evaluation con-*
23 *ducted under subsection (a).*

24 (d) *REPORT.*—*Not later than 18 months after the date*
25 *of enactment of this Act, the Comptroller General shall sub-*

1 *mit to the congressional committees specified in subsection*
2 *(c) a report on the findings and recommendations of the*
3 *evaluation conducted under subsection (a).*

4 **SEC. 309. PREMISE PLUMBING RESEARCH.**

5 *(a) IN GENERAL.—The Secretary, acting through the*
6 *Director, shall create a program for premise plumbing re-*
7 *search, including to—*

8 *(1) conduct metrology research on premise*
9 *plumbing in relation to water safety, security, effi-*
10 *ciency, sustainability, and resilience; and*

11 *(2) coordinate research activities with academia,*
12 *the private sector, nonprofits, and other Federal agen-*
13 *cies.*

14 *(b) DEFINITIONS.—For purposes of this section, the*
15 *term “premise plumbing” means the water distribution sys-*
16 *tem located within the property lines of a property, includ-*
17 *ing all buildings and permanent structures on such prop-*
18 *erty. Such term includes building supply and distribution*
19 *pipes, fixtures, fittings, water heaters, water-treating and*
20 *water-using equipment, and all respective joints, connec-*
21 *tions, devices, and appurtenances.*

1 **TITLE IV—HOLLINGS MANUFAC-**
 2 **TURING EXTENSION PART-**
 3 **nership**

4 **SECTION 401. ESTABLISHMENT OF EXPANSION AWARDS**
 5 **PILOT PROGRAM AS A PART OF THE HOL-**
 6 **LINGS MANUFACTURING EXTENSION PART-**
 7 **nership.**

8 *The National Institute of Standards and Technology*
 9 *Act (15 U.S.C. 271 et seq.) is amended by inserting after*
 10 *section 25A (15 U.S.C. 278k–1) the following:*

11 **“SEC. 25B. EXPANSION AWARDS PILOT PROGRAM.**

12 *“(a) DEFINITIONS.—The terms used in this section*
 13 *have the meanings given the terms in section 25.*

14 *“(b) ESTABLISHMENT.—The Director shall establish as*
 15 *a part of the Hollings Manufacturing Extension Partner-*
 16 *ship a pilot program of expansion awards among partici-*
 17 *pants described in subsection (c) of this section for the pur-*
 18 *poses described in subsection (e) of this section.*

19 *“(c) PARTICIPANTS.—Participants receiving awards*
 20 *under this section shall be Centers, or a consortium of Cen-*
 21 *ters.*

22 *“(d) AWARD AMOUNTS.—Subject to the availability of*
 23 *appropriations, an award for a recipient under this section*
 24 *shall be in an amount equal to the sum of the following:*

1 “(1) *Such amount as the Director considers ap-*
2 *propriate as a minimum base funding level for each*
3 *award under this section.*

4 “(2) *Such additional amount as the Director*
5 *considers in proportion to the manufacturing density*
6 *of the region of the recipient.*

7 “(3) *Such supplemental amounts as the Director*
8 *considers appropriate.*

9 “(e) *PURPOSE OF AWARDS.—An award under this sec-*
10 *tion shall be made for one or more of the following purposes:*

11 “(1) *To provide coordinating services on em-*
12 *ployee engagement, including employee ownership*
13 *and workforce training, including connecting manu-*
14 *facturers with career and technical education entities,*
15 *institutions of higher education (including commu-*
16 *nity colleges), workforce development boards, labor or-*
17 *ganizations, and nonprofit job training providers to*
18 *develop and support training and job placement serv-*
19 *ices, including apprenticeship and online learning*
20 *platforms, for new and incumbent workers, program-*
21 *ming to prevent job losses when adopting new tech-*
22 *nologies and processes, and development of employee*
23 *ownership practices.*

24 “(2) *To provide services to improve the resiliency*
25 *of domestic supply chains and to mitigate*

1 *vulnerabilities to cyberattacks, including helping to*
2 *offset the cost of cybersecurity projects for small man-*
3 *ufacturers.*

4 *“(3) To expand advanced technology services to*
5 *United States-based small- and medium-sized manu-*
6 *facturers, which may include—*

7 *“(A) developing advanced technology dem-*
8 *onstration laboratories for training and dem-*
9 *onstration in areas of supply chain and critical*
10 *technology needs, including a focus on the dem-*
11 *onstration of technologies developed by compa-*
12 *nies based in the United States;*

13 *“(B) services for the adoption of advanced*
14 *technologies, including smart manufacturing*
15 *technologies and practices; and*

16 *“(C) establishing partnerships, for the devel-*
17 *opment, demonstration, and deployment of ad-*
18 *vanced technologies, between United States-based*
19 *small- and medium-sized manufacturers and—*

20 *“(i) national laboratories (as defined*
21 *in section 2 of the Energy Policy Act of*
22 *2005 (42 U.S.C. 15801));*

23 *“(ii) Federal laboratories;*

24 *“(iii) Manufacturing USA institutes*
25 *(as described in section 34(d)); and*

1 “(iv) institutions of higher education.

2 “(4) To build capabilities across the Hollings
3 *Manufacturing Extension Partnership* for domestic
4 supply chain resiliency and optimization, includ-
5 ing—

6 “(A) assessment of domestic manufacturing
7 capabilities, expanded capacity for researching
8 and deploying information on supply chain risk,
9 hidden costs of reliance on offshore suppliers, re-
10 designing products and processes to encourage
11 reshoring, and other relevant topics; and

12 “(B) expanded services to provide industry-
13 wide support that assists United States manu-
14 facturers with reshoring manufacturing to
15 strengthen the resiliency of domestic supply
16 chains, including in critical technology areas
17 and foundational manufacturing capabilities
18 that are key to domestic manufacturing competi-
19 tiveness and resiliency, including forming, cast-
20 ing, machining, joining, surface treatment, and
21 tooling.

22 “(f) REIMBURSEMENT.—The Director may reimburse
23 Centers for costs incurred by the Centers under this section.

24 “(g) APPLICATIONS.—Applications for awards under
25 this section shall be submitted in such manner, at such

1 *time, and containing such information as the Director shall*
2 *require in consultation with the Manufacturing Extension*
3 *Partnership Advisory Board.*

4 “(h) *SELECTION.*—

5 “(1) *REVIEWED AND MERIT-BASED.*—*The Direc-*
6 *tor shall ensure that awards under this section are re-*
7 *viewed and merit-based.*

8 “(2) *GEOGRAPHIC DIVERSITY.*—*The Director*
9 *shall endeavor to have broad geographic diversity*
10 *among selected proposals.*

11 “(3) *CRITERIA.*—*The Director shall select appli-*
12 *cations consistent with the purposes identified pursu-*
13 *ant to subsection (e) to receive awards that the Direc-*
14 *tor determines will achieve one or more of the fol-*
15 *lowing:*

16 “(A) *Improvement of the competitiveness of*
17 *industries in the region in which the Center or*
18 *Centers are located.*

19 “(B) *Creation of jobs or training of newly*
20 *hired employees.*

21 “(C) *Promotion of the transfer and commer-*
22 *cialization of research and technology from insti-*
23 *tutions of higher education, national labora-*
24 *tories, or other federally funded research pro-*
25 *grams, and nonprofit research institutes.*

1 “(D) *Recruitment of a diverse manufac-*
2 *turing workforce, including through outreach to*
3 *underrepresented populations, including individ-*
4 *uals identified in section 33 or section 34 of the*
5 *Science and Engineering Equal Opportunities*
6 *Act (42 U.S.C. 1885a, 1885b).*

7 “(E) *Any other result the Director deter-*
8 *mines will advance the objective set forth in sec-*
9 *tions 25(c) or 26.*

10 “(i) *PROGRAM CONTRIBUTION.—Recipients of awards*
11 *under this section shall not be required to provide a match-*
12 *ing contribution.*

13 “(j) *GLOBAL MARKETPLACE PROJECTS.—In making*
14 *an award under this section, the Director, in consultation*
15 *with the Manufacturing Extension Partnership Advisory*
16 *Board and the Secretary, may take into consideration*
17 *whether an application has significant potential for en-*
18 *hancing the competitiveness of small and medium-sized*
19 *United States manufacturers in the global marketplace.*

20 “(k) *DURATION.—The Director shall ensure that the*
21 *duration of an award under this section is aligned and con-*
22 *sistent with a Center’s cooperative agreement established in*
23 *section 25(e).*

24 “(l) *REPORT.—After the completion of the pilot pro-*
25 *gram under subsection (b) and not later than October 1,*

1 *2024, the Director shall submit to Congress a report that*
 2 *includes—*

3 “(1) *a summary description of what activities*
 4 *were funded and the measurable outcomes of such ac-*
 5 *tivities;*

6 “(2) *a description of which types of activities*
 7 *under paragraph (1) could be integrated into, and*
 8 *supported under, the program under section 25;*

9 “(3) *a description of which types of activities*
 10 *under paragraph (1) could be integrated into, and*
 11 *supported under, the competitive awards program*
 12 *under section 25A; and*

13 “(4) *a recommendation, supported by a clear ex-*
 14 *planation, as to whether the pilot program should be*
 15 *continued.”.*

16 ***SEC. 402. UPDATE TO MANUFACTURING EXTENSION PART-***
 17 ***nership.***

18 *(a) ACCEPTANCE OF FUNDS.—Section 25(l) of the Na-*
 19 *tional Institute of Standards and Technology Act (15*
 20 *U.S.C. 278k(l)) is amended to read as follows:*

21 “(l) *ACCEPTANCE OF FUNDS.—*

22 “(1) *IN GENERAL.—In addition to such sums as*
 23 *may be appropriated to the Secretary and Director to*
 24 *operate the Program, the Secretary and Director may*
 25 *also accept funds from other Federal departments and*

1 *agencies, as well as funds provided by the private sec-*
 2 *tor pursuant to section 2(c)(7) of this Act (15 U.S.C.*
 3 *272(c)(7)), to be available to the extent provided by*
 4 *appropriations Acts, for the purpose of strengthening*
 5 *United States manufacturing.*

6 *“(2) COMPETITIVE AWARDS.—Funds accepted*
 7 *from other Federal departments and agencies and*
 8 *from the private sector under paragraph (1) shall be*
 9 *awarded competitively by the Secretary and by the*
 10 *Director to Manufacturing Extension Partnership*
 11 *Centers, provided that the Secretary and Director*
 12 *may make non-competitive awards, pursuant to this*
 13 *section or section 25A, or as a non-competitive con-*
 14 *tract, as appropriate, if the Secretary and the Direc-*
 15 *tor determine that—*

16 *“(A) the manufacturing market or sector*
 17 *targeted is limited geographically or in scope;*

18 *“(B) the number of States (or territory, in*
 19 *the case of Puerto Rico) with Manufacturing Ex-*
 20 *tension Partnership Centers serving manufactur-*
 21 *ers of such market or sector is five or fewer; and*

22 *“(C) such Manufacturing Extension Part-*
 23 *nership Center or Centers has received a positive*
 24 *evaluation in the most recent evaluation con-*
 25 *ducted pursuant to subsection (g).”.*

1 (b) *INCLUSION OF CERTAIN SCHOOLS*.—Section 25 of
2 the National Institute of Standards and Technology Act (15
3 U.S.C. 278k) is amended—

4 (1) in subsection (c)—

5 (A) in paragraph (6), by striking “commu-
6 nity colleges and area career and technical edu-
7 cation schools” and inserting “secondary schools
8 (as defined in section 8101 of the Elementary
9 and Secondary Education Act of 1965 (20
10 U.S.C. 7801)), community colleges, and area ca-
11 reer and technical education schools, including
12 those in underserved and rural communities,”;
13 and

14 (B) in paragraph (7)—

15 (i) by striking “and local colleges” and
16 inserting “local high schools and local col-
17 leges, including those in underserved and
18 rural communities,”; and

19 (ii) by inserting “or other applied
20 learning opportunities” after “apprentice-
21 ships”; and

22 (2) in subsection (d)(3), by striking “, commu-
23 nity colleges, and area career and technical education
24 schools,” and inserting “and local high schools, com-
25 munity colleges, and area career and technical edu-

1 *cation schools, including those in underserved and*
 2 *rural communities,”.*

3 *(c) SUPPORTING AMERICAN MANUFACTURING.—Sec-*
 4 *tion 25 of the National Institute of Standards and Tech-*
 5 *nology Act (15 U.S.C. 278k) is amended—*

6 *(1) in subsection (a)(5)—*

7 *(A) by striking “or consortium thereof,”;*
 8 *and*

9 *(B) by inserting “or a consortium thereof”*
 10 *before the period at the end of the sentence;*

11 *(2) in subsection (c)(4), by inserting “United*
 12 *States-based” before “industrial”;*

13 *(3) in subsection (d)—*

14 *(A) in paragraph (1), by inserting “at*
 15 *United States-based industrial facilities, includ-*
 16 *ing small and medium manufacturing compa-*
 17 *nies” before “based”;*

18 *(B) in paragraph (2), by inserting “United*
 19 *States-based” before “companies”; and*

20 *(C) in paragraph (3), by inserting “United*
 21 *States-based” before “small”;*

22 *(4) in subsection (f)(5)(B)(i), by inserting “in*
 23 *the United States” before the semicolon at the end of*
 24 *the clause; and*

1 (5) in subsection (n)(1)(A), by inserting “United
2 *States-based*” before “small”.

3 (d) *AMENDING THE MEP COMPETITIVE AWARDS PRO-*
4 *GRAM.*—Section 25A(c)(2) of the National Institute of
5 *Standards and Technology Act (15 U.S.C. 278k-1(c)(2))* is
6 *amended by inserting “United States” before “manufactur-*
7 *ers”.*

8 **SEC. 403. NATIONAL SUPPLY CHAIN DATABASE.**

9 (a) *ESTABLISHMENT OF NATIONAL SUPPLY CHAIN*
10 *DATABASE.*—The Director of the National Institute of
11 *Standards and Technology (referred to in this section as*
12 *“NIST”)* shall establish and maintain a National Supply
13 *Chain Database.*

14 (b) *PURPOSE.*—The purpose of the National Supply
15 *Chain Database shall be to assist the Federal government*
16 *and industry sectors in minimizing disruptions to the*
17 *United States supply chain by having an assessment of*
18 *United States manufacturers’ capabilities.*

19 (c) *STUDY ON NATIONAL SUPPLY CHAIN DATABASE.*—
20 *In establishing the National Supply Chain Database, the*
21 *Director of NIST shall consider the findings and rec-*
22 *ommendations from the study authorized in section 9413*
23 *of the National Defense Authorization Act for Fiscal Year*
24 *2021 (Public Law 116–283), including measures to secure*

1 *and protect the National Supply Chain Database from ad-*
 2 *versarial attacks and vulnerabilities.*

3 (d) *DATABASE AND MANUFACTURING EXTENSION*
 4 *PARTNERSHIP.—*

5 (1) *IN GENERAL.—The National Supply Chain*
 6 *Database shall be carried out and managed through*
 7 *the Hollings Manufacturing Extension Partnership*
 8 *program and the Director of NIST shall ensure that*
 9 *the Hollings Manufacturing Extension Partnership*
 10 *Centers are connected to the National Supply Chain*
 11 *Database.*

12 (2) *CAPABILITIES.—The National Supply Chain*
 13 *Database shall be capable of providing a national*
 14 *view of the supply chain and enable authorized data-*
 15 *base users to determine in near real-time the United*
 16 *States manufacturing capabilities for critical prod-*
 17 *ucts, including defense supplies, food, and medical de-*
 18 *vices, including personal protective equipment.*

19 (3) *INDIVIDUAL STATE DATABASES.—Each*
 20 *State’s supply chain database maintained by the*
 21 *NIST-recognized Manufacturing Extension Partner-*
 22 *ship Center within the State shall be complementary*
 23 *in design to the National Supply Chain Database.*

24 (e) *MAINTENANCE OF NATIONAL SUPPLY CHAIN DATA-*
 25 *BASE.—The Director of NIST, acting through the Hollings*

1 *Manufacturing Extension Partnership program, shall*
2 *maintain the National Supply Chain Database as an inte-*
3 *gration of the State level databases from each State's Manu-*
4 *facturing Extension Partnership Center and may be popu-*
5 *lated with information from past, current, or potential Cen-*
6 *ter clients.*

7 (f) *EXEMPT FROM PUBLIC DISCLOSURE.—The Na-*
8 *tional Supply Chain Database and any information related*
9 *to it not publicly released by NIST shall be exempt from*
10 *public disclosure under section 552 of title 5, United States*
11 *Code, and access to non-public content shall be limited to*
12 *the contributing company and Manufacturing Extension*
13 *Partnership Center staff who sign an appropriate non-dis-*
14 *closure agreement.*

15 (g) *AUTHORIZATION OF APPROPRIATIONS.—Of the*
16 *funds authorized to the Hollings Manufacturing Extension*
17 *Partnership Program, \$10,000,000 for each of the fiscal*
18 *years 2022 through 2026 are authorized to carry out this*
19 *Act.*

Union Calendar No. 177

117TH CONGRESS
2D Session

H. R. 4609

[Report No. 117-247]

A BILL

To reauthorize the National Institute of Standards
and Technology, and for other purposes.

FEBRUARY 18, 2022

Reported with an amendment, committed to the Com-
mittee of the Whole House on the State of the Union,
and ordered to be printed