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(Original Signature of Member)

117TH CONGRESS
1ST SESSION

H. R. _____

To promote the use of smart technologies and systems in communities, and
for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Ms. DELBENE introduced the following bill; which was referred to the
Committee on _____

A BILL

To promote the use of smart technologies and systems in
communities, and for other purposes.

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

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

4 (a) SHORT TITLE.—This Act may be cited as the
5 “Smart Cities and Communities Act of 2021”.

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

- Sec. 1. Short title; table of contents.
- Sec. 2. Purpose.
- Sec. 3. Definitions.

TITLE I—ENHANCING FEDERAL COORDINATION AND
INVESTMENT IN SMART CITY OR COMMUNITY PROGRAMS

- Sec. 101. Coordination of activities among Federal agencies.
- Sec. 102. Smart city and community resource guide.

TITLE II—PROVIDING ASSISTANCE TO CITIES AND COMMUNITIES

- Sec. 201. Technology demonstration grant program.
- Sec. 202. Cybersecurity Working Group.
- Sec. 203. TechHire Workforce Training and Development Program.
- Sec. 204. GAO study on innovative financing.
- Sec. 205. Technical assistance, smart city voucher, and technologist in residence programs.

TITLE III—IMPROVING PERFORMANCE AND INTEROPERABILITY

- Sec. 301. Standards and interoperability framework.

TITLE IV—INTERNATIONAL COOPERATION AND BEST PRACTICES

- Sec. 401. Development of global smart city or community best practices.
- Sec. 402. Trade program.

1 SEC. 2. PURPOSE.

2 The purpose of this Act is to promote smart tech-
3 nologies and systems to improve community livability,
4 services, communication, safety, mobility, energy produc-
5 tivity, and resilience to natural and manmade disasters,
6 to reduce civic costs, traffic congestion, and air pollution,
7 and to promote equity, economic growth, and opportuni-
8 ties for communities of all sizes by—

9 (1) improving Federal Government coordination
10 and outreach with respect to smart city or commu-
11 nity technologies;

12 (2) promoting the quality and performance of
13 smart city or community technologies while pro-
14 tecting—

15 (A) the security of data and systems; and

- 1 (B) privacy;
- 2 (3) demonstrating the value and utility of
- 3 smart, local government-owned and -operated serv-
- 4 ices through the development and implementation of
- 5 performance standards;
- 6 (4) providing assistance to local governments
- 7 interested in implementing smart city or community
- 8 technologies;
- 9 (5) developing a workforce skilled in smart city
- 10 or community technologies; and
- 11 (6) expanding international cooperation and
- 12 trade in smart city or community technologies.

13 **SEC. 3. DEFINITIONS.**

14 In this Act:

15 (1) COUNCIL.—The term “Council” means the

16 Interagency Council on Smart Cities established

17 under section 101(a)(1)(A)(i).

18 (2) DATA.—The term “data” includes informa-

19 tion and images.

20 (3) EQUITY; EQUITABLE.—The terms “equity”

21 and “equitable” mean the consistent and systematic

22 fair, just, and impartial treatment of individuals

23 who—

24 (A) belong to underserved communities;

25 and

1 (B) have been denied systematic fair, just,
2 and impartial treatment based on race, eth-
3 nicity, religion, income, geography, gender iden-
4 tity, sexual orientation, or disability status.

5 (4) LOCAL WORKFORCE DEVELOPMENT BOARD;
6 STATE WORKFORCE DEVELOPMENT BOARD.—The
7 terms “local workforce development board” and
8 “State workforce development board” have the
9 meanings given the terms “local board” and “State
10 board”, respectively, in section 3 of the Workforce
11 Innovation and Opportunity Act (29 U.S.C. 3102).

12 (5) SECRETARIES.—The term “Secretaries”
13 means the Secretary, acting in coordination with—

14 (A) the Secretary of Energy;

15 (B) the Secretary of Housing and Urban
16 Development;

17 (C) the Secretary of Transportation;

18 (D) the Director of the National Science
19 Foundation; and

20 (E) as the Secretary determines to be ap-
21 propriate—

22 (i) the Secretary of Health and
23 Human Services;

24 (ii) the Secretary of Homeland Secu-
25 rity;

- 1 (iii) the Secretary of Labor; and
- 2 (iv) the Secretary of State.

3 (6) SECRETARY.—The term “Secretary”, unless
4 otherwise specified, means the Secretary of Com-
5 merce.

6 (7) SMART CITY OR COMMUNITY.—

7 (A) IN GENERAL.—The term “smart city
8 or community” means a community in which
9 innovative, advanced, and trustworthy informa-
10 tion, communications, and energy technologies
11 and related mechanisms are applied—

12 (i) to improve the health and quality
13 of life of residents;

14 (ii) to increase the efficiency and cost
15 effectiveness of civic operations and serv-
16 ices;

17 (iii) to promote economic growth; and

18 (iv) to create a community that is
19 safer and more secure, equitable, sustain-
20 able, resilient, livable, and workable.

21 (B) INCLUSIONS.—The term “smart city
22 or community” includes a local jurisdiction
23 that—

24 (i) gathers and incorporates data from
25 systems, devices, and sensors embedded in

1 civic systems and infrastructure to improve
2 the effectiveness and efficiency of civic op-
3 erations and services;

4 (ii) aggregates and analyzes gathered
5 data;

6 (iii) communicates the analysis per-
7 formed under clause (ii), and the data de-
8 scribed in that clause, in a variety of for-
9 mats;

10 (iv) makes corresponding improve-
11 ments to civic systems and services based
12 on gathered data;

13 (v) coordinates with relevant public
14 and private sector entities (including enti-
15 ties providing electric, water, telecommuni-
16 cations, energy, and transportation serv-
17 ices) to leverage the activities carried out
18 by those entities;

19 (vi) integrates measures—

20 (I) to ensure the resilience of
21 civic systems against cybersecurity
22 threats and physical vulnerabilities
23 and breaches;

24 (II) to protect the private data of
25 residents; and

1 (III) to measure the impact of
2 smart city or community technologies
3 on the effectiveness, equity, and effi-
4 ciency of civic operations and services;
5 and

6 (vii) promotes regional coordination of
7 the activities described in clauses (i)
8 through (vi).

9 (8) STATE.—The term “State” means—

10 (A) a State;

11 (B) the District of Columbia;

12 (C) the Commonwealth of Puerto Rico;

13 and

14 (D) any other territory or possession of the
15 United States.

16 (9) WORKING GROUP.—The term “Working
17 Group” means the Cybersecurity Working Group es-
18 tablished under section 202(b)(1).

19 **TITLE I—ENHANCING FEDERAL**
20 **COORDINATION AND INVEST-**
21 **MENT IN SMART CITY OR**
22 **COMMUNITY PROGRAMS**

23 **SEC. 101. COORDINATION OF ACTIVITIES AMONG FEDERAL**
24 **AGENCIES.**

25 (a) COORDINATION.—

1 (1) COORDINATION OF ACTIVITIES.—

2 (A) FEDERAL COUNCIL.—

3 (i) ESTABLISHMENT.—The Secre-
4 taries shall establish a council of Federal
5 agencies, to be known as the “Interagency
6 Council on Smart Cities”, to promote the
7 coordination of the activities and funding
8 from Federal agencies relating to smart
9 cities or communities.

10 (ii) MEMBERSHIP.—The Council
11 shall—

12 (I) be led by the Office of Science
13 and Technology Policy;

14 (II) be co-chaired by the Director
15 of the Office of Science and Tech-
16 nology Policy and the Secretary; and

17 (III) include—

18 (aa) the Secretary of En-
19 ergy;

20 (bb) the Secretary of Hous-
21 ing and Urban Development;

22 (cc) the Secretary of Trans-
23 portation;

24 (dd) the Director of the Na-
25 tional Science Foundation; and

1 (ee) the heads of such other
2 Federal agencies as the Secretary
3 determines to be appropriate, in-
4 cluding—

5 (AA) the Secretary of
6 Homeland Security;

7 (BB) the Secretary of
8 Labor; and

9 (CC) the Secretary of
10 State.

11 (B) PRIORITIZATION.—For purposes of co-
12 ordinating Federal activities under subpara-
13 graph (A), the Secretaries shall prioritize the
14 conduct of Federal activities that would—

15 (i) demonstrate smart city or commu-
16 nity technologies in repeatable ways that
17 can rapidly be scaled;

18 (ii) encourage public, private, re-
19 gional, national, and international sharing
20 of data and best practices;

21 (iii) encourage private sector innova-
22 tion by promoting industry-driven tech-
23 nology standards, open platforms, tech-
24 nology-neutral requirements, and inter-
25 operability;

- 1 (iv) promote—
- 2 (I) a skilled workforce;
- 3 (II) an open and competitive
- 4 global market for smart city or com-
- 5 munity technologies;
- 6 (III) inclusion of all citizens, in-
- 7 cluding minority or disadvantaged
- 8 groups;
- 9 (IV) protocols and standards that
- 10 allow for the measurement and valida-
- 11 tion of the cost savings and perform-
- 12 ance improvements associated with
- 13 the installation and use of smart city
- 14 or community technologies and prac-
- 15 tices; and
- 16 (V) equitable distribution of ben-
- 17 efits gained from the use of smart
- 18 technologies;
- 19 (v) foster the growth of the smart city
- 20 or community technology industry and
- 21 workforce in the United States;
- 22 (vi) encourage the adoption of smart
- 23 city or community technologies by commu-
- 24 nities;

1 (vii) safeguard cybersecurity, includ-
2 ing by promoting industry practices relat-
3 ing to cybersecurity; and

4 (viii) safeguard privacy and, in con-
5 sultation with cities, communities, and in-
6 dustry entities, establish parameters and
7 best practices for the full life cycle man-
8 agement of all types of smart city or com-
9 munity data, including—

10 (I) best practices for the collec-
11 tion, storage, disposal, ownership, and
12 sharing of data; and

13 (II) best practices for data trans-
14 parency and data use limitations.

15 (C) CONSIDERATIONS.—The Secretaries
16 shall—

17 (i) ensure that the Federal activities
18 described in subparagraph (B) relating to
19 safeguarding cybersecurity take into ac-
20 count existing Federal, State, and local
21 frameworks, guidelines, and best practices
22 when considering the application of those
23 frameworks, guidelines, and best practices
24 to smart city technologies;

1 (ii) ensure that the Federal activities
2 described in subparagraph (B) take into
3 consideration software quality, especially
4 as software quality impacts reproducibility,
5 maintainability, reliability, and security of
6 systems, especially high-confidence sys-
7 tems;

8 (iii) conduct privacy impact assess-
9 ments for Federal activities that could neg-
10 atively affect privacy; and

11 (iv) ensure the privacy of individuals
12 by providing guidelines for—

13 (I) the use of technologies with
14 inherent privacy and security consid-
15 erations;

16 (II) screening vendors and part-
17 ners to prevent the inclusion of orga-
18 nizations and individuals that have
19 been involved in, or affiliated with, il-
20 legal or unethical uses of data;

21 (III) contractually obligating ven-
22 dors and partners to maintain legal
23 and ethical data standards with re-
24 spect to privacy and data security;
25 and

1 (IV) monitoring for compliance
2 with the requirements of this clause.

3 (2) STRATEGY.—

4 (A) IN GENERAL.—The Secretaries, acting
5 through the Council, in consultation with indus-
6 try entities, cities, and communities, shall de-
7 velop a multiyear strategy for—

8 (i) the coordination of activities and
9 funding under paragraph (1)(A);

10 (ii) the development of partnerships
11 with the private sector relating to smart
12 cities or communities; and

13 (iii) the promotion of international co-
14 operation with respect to smart city or
15 community technologies and standards.

16 (B) REQUIREMENT.—The Secretaries shall
17 coordinate with the heads of any applicable
18 Federal agencies to leverage private sector and
19 non-Federal public investment in smart city or
20 community technologies consistent with the
21 strategy developed under subparagraph (A).

22 (3) ASSESSMENT.—

23 (A) IN GENERAL.—Not later than 180
24 days after the date of enactment of this Act,
25 the Secretary of Labor, in consultation with the

1 heads of other applicable Federal agencies, shall
2 coordinate with such private and public organi-
3 zations and units of local government as the
4 Secretary of Labor determines to be appro-
5 priate regarding the preparation of a smart city
6 or community technology workforce needs as-
7 sessment.

8 (B) SUBMISSION.—On completion of the
9 assessment prepared under subparagraph (A),
10 the Secretary of Labor shall submit to the ap-
11 propriate committees of Congress and the
12 Council the completed assessment.

13 (4) COORDINATION OF FUNDS.—In promoting
14 the coordination of Federal funding relating to
15 smart city or community activities under paragraph
16 (1)(A) and in accordance with the strategy developed
17 under paragraph (2)(A), each of the Secretaries
18 shall—

19 (A) track, with respect to the appropriate
20 Federal agency, the expenditures and planned
21 expenditures of Federal funds for smart city- or
22 community-related activities, together with le-
23 veraged non-Federal matching funds; and

1 (B) coordinate with the head of any other
2 applicable Federal agency that allocates funds
3 for smart city or community activities—

4 (i) to achieve greater benefits from ac-
5 tivities using Federal funds;

6 (ii) to produce integrated projects re-
7 lating to those activities; and

8 (iii) to leverage complementary invest-
9 ments of other Federal agencies in those
10 activities.

11 (b) SUBMISSION OF INFORMATION AND BIENNIAL
12 REPORT.—During the 6-year period beginning on the date
13 of enactment of this Act—

14 (1) the head of each applicable Federal agency
15 shall submit to the Secretary information for inclu-
16 sion in the report submitted under paragraph (2);
17 and

18 (2) not less frequently than once every 2 years,
19 the Secretary shall submit to the Committees on
20 Commerce, Science, and Transportation and Energy
21 and Natural Resources of the Senate and the Com-
22 mittees on Energy and Commerce and Transpor-
23 tation and Infrastructure of the House of Represent-
24 atives a report, based on the information described
25 in paragraph (1), that includes—

1 (A) an update of the status of relevant
2 smart city or community technology develop-
3 ments and applications, including broadband in-
4 frastructure;

5 (B) a description of any related program
6 or activity that is funded by the Federal agency
7 during the period covered by the report;

8 (C) the budget of the Federal agency for
9 supporting smart city or community activities,
10 as described in subsection (a)(4)(A);

11 (D) any non-Federal cost-share contrib-
12 uted for activities for which Federal assistance
13 is provided under this section;

14 (E) a description of the strategy developed
15 under subsection (a)(2)(A), including a descrip-
16 tion of how the relevant programs are pro-
17 gressing under that strategy;

18 (F) a description of outreach activities con-
19 ducted under section 102(d), including the
20 amount and type of assistance required by cities
21 and communities to overcome barriers to imple-
22 menting smart city or community technologies,
23 and any Federal actions necessary to meet
24 those needs;

- 1 (G) a description of projects funded under
2 section 201, including a description of—
- 3 (i) project outcomes and performance;
 - 4 (ii) the use of leveraged non-Federal
5 funds;
 - 6 (iii) the equitable distribution of Fed-
7 eral funds; and
 - 8 (iv) how each project fulfills the prior-
9 ities described in subsection (a)(1)(B); and
- 10 (H) such other information as the Sec-
11 retary determines to be necessary.

12 **SEC. 102. SMART CITY AND COMMUNITY RESOURCE GUIDE.**

13 (a) PUBLICATION.—

14 (1) IN GENERAL.—The Secretaries, in coordina-
15 tion with the heads of any other applicable Federal
16 agencies, shall create, publish, and maintain, for a
17 period of not less than 6 years beginning on the date
18 that is 1 year after the date of enactment of this
19 Act, a resource guide designed to assist States, com-
20 munities, and cities in the United States in devel-
21 oping and implementing smart city or community
22 programs.

23 (2) INFORMATION INCLUDED.—The Secretaries,
24 in coordination with cities, communities, and indus-

1 try entities, shall determine which information shall
2 be included in the guide under paragraph (1).

3 (b) REQUIREMENTS.—The guide published under
4 subsection (a)(1)—

5 (1) shall be maintained electronically on a
6 website;

7 (2) shall be provided as an electronic reference
8 guide available to the public free of charge; and

9 (3) may include—

10 (A) a compilation of existing related pro-
11 grams of the Federal Government available to
12 communities, including technical assistance,
13 education, training, research and development,
14 analysis, and funding;

15 (B) available examples of local govern-
16 ments engaging private sector entities in order
17 to implement smart city or community solu-
18 tions, including public-private partnership mod-
19 els, such as the use of energy savings perform-
20 ance contracts and utility energy service con-
21 tracts or other innovative models, that could be
22 used to leverage private sector funding to in-
23 crease energy productivity and reduce water,
24 transportation, and other costs to cities and

1 communities, including the results of the study
2 conducted under section 204;

3 (C) available examples of proven methods
4 for local governments and utilities to facilitate
5 the integration of smart technologies with new
6 and existing infrastructure and systems;

7 (D) best practices and lessons learned
8 from technology demonstrations, including re-
9 turn on investment, equitable distribution of
10 benefits, and performance information to help
11 cities and communities decide how to initiate in-
12 tegration of smart technologies;

13 (E) Federal, State, and local best practices
14 for safeguarding cybersecurity and ensuring ap-
15 propriate data management and data privacy;

16 (F) technical specifications for wireless or
17 wired broadband infrastructure to support
18 smart city or community technologies; and

19 (G) such other topics as are requested by
20 industry entities or local governments or deter-
21 mined to be necessary by the Secretaries.

22 (c) EXISTING GUIDES.—In creating, publishing, and
23 maintaining the guide under subsection (a)(1), the Secre-
24 taries shall consider Federal, State, and local guides pub-
25 lished before, on, or after the date of enactment of this

1 Act relating to smart city or community goals, activities,
2 and best practices—

3 (1) to prevent duplication of efforts by the Fed-
4 eral Government; and

5 (2) to leverage existing complementary efforts.

6 (d) OUTREACH.—The Secretaries, in coordination
7 with the heads of any applicable Federal agencies and in
8 consultation with applicable private sector entities, shall
9 conduct outreach to States, cities, and communities—

10 (1) to provide interested States, cities, and com-
11 munities with the guide published under subsection
12 (a)(1);

13 (2) to promote the consideration of smart city
14 or community technologies and encourage States
15 and local governments to contribute smart city or
16 community program and activity data to the guide
17 published under subsection (a)(1);

18 (3) to identify—

19 (A) barriers to smart city or community
20 technology adoption;

21 (B) opportunities to increase the equitable
22 distribution of benefits from the use of smart
23 city or community technology;

1 (C) any necessary research, development,
2 and assistance, including in Tribal, rural, and
3 underserved communities; and

4 (D) local government programs that could
5 be included in the guide under subsection
6 (a)(1);

7 (4) to respond to requests for assistance, ad-
8 vice, or consultation from cities and communities;
9 and

10 (5) for other purposes, as identified by the Sec-
11 retaries.

12 **TITLE II—PROVIDING ASSIST-** 13 **ANCE TO CITIES AND COMMU-** 14 **NITIES**

15 **SEC. 201. TECHNOLOGY DEMONSTRATION GRANT PRO-** 16 **GRAM.**

17 (a) IN GENERAL.—The Secretary shall establish a
18 smart city or community regional demonstration grant
19 program under which the Secretary shall conduct dem-
20 onstration projects focused on advanced smart city or
21 community technologies and systems in a variety of com-
22 munities, including small- and medium-sized cities and
23 rural and Tribal communities.

24 (b) GOALS.—The goals of the program established
25 under subsection (a) are—

1 (1) to demonstrate—

2 (A) potential benefits of concentrated in-
3 vestments in smart city or community tech-
4 nologies that are repeatable and scalable across
5 cities of different sizes; and

6 (B) the efficiency, equity, reliability, and
7 resilience of civic infrastructure and services;

8 (2) to facilitate the adoption of advanced smart
9 city or community technologies and collaboration be-
10 tween small- and medium- to large-sized cities; and

11 (3) to demonstrate protocols and standards that
12 allow for the measurement and validation of the cost
13 savings and performance improvements associated
14 with the installation and use of smart city or com-
15 munity technologies and practices.

16 (c) DEMONSTRATION PROJECTS.—

17 (1) ELIGIBILITY.—Subject to paragraph (2), a
18 unit of local government shall be eligible to receive
19 a grant for a demonstration project under this sec-
20 tion.

21 (2) APPLICATION; COOPERATION.—To qualify
22 for a demonstration project under this section, a
23 unit of local government shall—

24 (A) submit to the Secretary an application
25 for a grant for a demonstration project at such

1 time and containing such information as the
2 Secretary may require; and

3 (B) agree to follow applicable best prac-
4 tices identified by the Secretaries, in consulta-
5 tion with industry entities and institutions of
6 higher education, to evaluate the effectiveness
7 of the implemented smart city or community
8 technologies to ensure that—

9 (i) technologies and interoperability
10 can be assessed;

11 (ii) best practices can be shared; and

12 (iii) data can be shared in a public,
13 interoperable, and transparent format.

14 (3) FEDERAL SHARE OF COST OF TECHNOLOGY
15 INVESTMENTS.—The Secretary—

16 (A) subject to subparagraph (B), shall pro-
17 vide to a unit of local government selected
18 under this section for the conduct of a dem-
19 onstration project a grant in an amount equal
20 to not more than 50 percent of the total cost
21 of technology investments to incorporate and
22 assess qualifying smart city or community tech-
23 nologies in the applicable jurisdiction; and

1 (B) may waive the cost-share requirement
2 of subparagraph (A) as the Secretary deter-
3 mines to be appropriate.

4 (d) REQUIREMENT.—In conducting demonstration
5 projects under this section, the Secretary shall—

6 (1) develop competitive, technology-neutral re-
7 quirements;

8 (2) seek to award grants and distribute benefits
9 from smart city technologies in an equitable manner;

10 (3) seek to leverage ongoing or existing civic in-
11 frastructure investments; and

12 (4) take into consideration the non-Federal cost
13 share as a competitive criterion in applicant selec-
14 tion in order to leverage non-Federal investment.

15 (e) PUBLIC AVAILABILITY OF DATA AND RE-
16 PORTS.—The Secretary shall ensure that reports, public
17 data sets, schematics, diagrams, and other works created
18 using a grant provided under this section are—

19 (1) available on a royalty-free, non-exclusive
20 basis; and

21 (2) open to the public to reproduce, publish, or
22 otherwise use, without cost.

23 (f) AUTHORIZATION OF APPROPRIATIONS.—There is
24 authorized to be appropriated to the Secretary to carry

1 out subsection (c) \$100,000,000 for each of fiscal years
2 2022 through 2026.

3 **SEC. 202. CYBERSECURITY WORKING GROUP.**

4 (a) SENSE OF CONGRESS.—It is the sense of Con-
5 gress that—

6 (1) the work conducted by the Internet Policy
7 Task Force and the Digital Economy Leadership
8 Team of the Department of Commerce to foster an
9 enabling environment for Internet of Things tech-
10 nology to grow and thrive, allow the private sector
11 to lead, and promote technology-neutral standards
12 and consensus-based multi-stakeholder approaches
13 to policymaking at local, Tribal, State, Federal, and
14 international levels on issues ranging from the secu-
15 rity to the competitiveness of the United States is
16 valuable and should be continued; and

17 (2) the work conducted by the Department of
18 Commerce and the National Telecommunications
19 and Information Administration to create resources
20 for communities seeking to adopt smart cities or
21 communities technology is valuable and should be
22 continued.

23 (b) ESTABLISHMENT.—

24 (1) IN GENERAL.—The Secretary, in consulta-
25 tion with the Council, shall convene a multistake-

1 holder working group, to be known as the “Cyberse-
2 curity Working Group”, to develop tools for commu-
3 nities to use to evaluate the cybersecurity of smart
4 city or community technologies.

5 (2) MEMBERSHIP.—

6 (A) IN GENERAL.—In appointing members
7 to the Working Group, the Secretary shall con-
8 sider appointing—

9 (i) representatives of consumer groups
10 and civil liberties organizations;

11 (ii) representatives of small units of
12 local government, as determined by the
13 Secretary;

14 (iii) representatives of large units of
15 local government, as determined by the
16 Secretary;

17 (iv) manufacturers of smart city or
18 community devices, equipment, and soft-
19 ware;

20 (v) individuals with expertise in com-
21 munications networks;

22 (vi) Federal, State, and local law en-
23 forcement officials;

1 (vii) individuals with other expertise
2 necessary to carry out the duties of the
3 Working Group; and

4 (viii) such representatives of the
5 Council as the Secretary determines to be
6 appropriate.

7 (B) REPRESENTATION.—In appointing
8 members to the Working Group, the Secretary
9 shall ensure that the Working Group includes
10 an equitable multidisciplinary cross section of
11 smart city or community stakeholders.

12 (3) DUTIES.—The Working Group shall—

13 (A) leverage and build on previous activi-
14 ties carried out by the Department of Com-
15 merce relating to Internet of Things technology;

16 (B) develop tools for communities to evalu-
17 ate the cybersecurity of smart city or commu-
18 nity technology being considered by the commu-
19 nities for adoption in those communities;

20 (C) develop tools for communities to pro-
21 tect against cybersecurity threats relevant to
22 the technology the community has chosen to
23 adopt;

24 (D)(i) assess—

1 (I) whether Internet of Things cyber-
2 security standards should exist; and

3 (II) whether the standards described
4 in subclause (I) should be voluntary or
5 mandatory; and

6 (ii) identify which entity is appropriate to
7 devise the standards described in clause (i)(I);
8 and

9 (E) submit to the Council a report that de-
10 scribes the findings of the Working Group.

11 **SEC. 203. TECHHIRE WORKFORCE TRAINING AND DEVEL-**
12 **OPMENT PROGRAM.**

13 (a) IN GENERAL.—Not later than 18 months after
14 the date of enactment of this Act, based on findings from
15 the needs assessment conducted under section 101(a)(3),
16 the Secretary of Labor, in consultation with the Secretary,
17 shall establish a pilot program, to be known as the
18 “TechHire Workforce Training and Development Pilot
19 Program”, under which the Secretary of Labor, during the
20 5-year period beginning on the date of enactment of this
21 Act, shall provide to eligible entities, on a competitive
22 basis, grants for technology-based job training and edu-
23 cation programs that provide an industry-recognized cer-
24 tificate or certification.

1 (b) REQUIREMENTS.—A job training and education
2 program that is carried out with a grant under this section
3 shall—

4 (1) provide technology-based training across 2
5 or more sectors;

6 (2) focus on equitable smart city or community
7 technologies, systems, and infrastructure which may
8 span across all sectors of the economy;

9 (3) address privacy and cybersecurity consider-
10 ations; and

11 (4) address smart city or community workforce
12 needs identified by the Secretary of Labor, after
13 consultation with other applicable Federal agencies.

14 (c) ELIGIBLE ENTITIES.—To be eligible to receive a
15 grant under this section, an entity shall be a public organi-
16 zation or an organization described in section 501(c) of
17 the Internal Revenue Code of 1986 and exempt from tax-
18 ation under section 501(a) of that Code that—

19 (1) includes an advisory board, which may be—

20 (A)(i) a local workforce development board;

21 (ii) a State workforce development board;

22 or

23 (iii) an appropriate subgroup of a local
24 workforce development board or a State work-
25 force development board; or

1 (B) a board of proportional participation,
2 as determined by the Secretary of Labor, of rel-
3 evant organizations, including—

4 (i) relevant industry organizations, in-
5 cluding public and private employers;

6 (ii) labor organizations;

7 (iii) one or more units of local govern-
8 ment that are actively pursuing smart city
9 or community programs; or

10 (iv) postsecondary education organiza-
11 tions;

12 (2) demonstrates experience in implementing
13 and operating job training and education programs;

14 (3) demonstrates the ability to recruit and sup-
15 port individuals who plan to work in a relevant sec-
16 tor on the successful completion of relevant job
17 training and education programs;

18 (4)(A) provides students who complete the
19 training and education program with an industry-
20 recognized certificate or certification; or

21 (B) uses a curriculum that has received exten-
22 sive feedback from employers;

23 (5) demonstrates the quality of the proposed
24 program of job training and education, including the

1 training services that lead to an industry-recognized
2 certificate or certification; and

3 (6) demonstrates successful outcomes con-
4 necting graduates of job training and education pro-
5 grams to quality jobs relevant to the job training
6 and education programs.

7 (d) APPLICATIONS.—An eligible entity seeking a
8 grant under this section shall submit to the Secretary of
9 Labor an application at such time, in such manner, and
10 containing such information as the Secretary of Labor
11 may require.

12 (e) PRIORITY.—In selecting eligible entities to receive
13 grants under this section, the Secretary of Labor shall
14 prioritize applicants that—

15 (1)(A) are a local workforce development board
16 or State workforce development board; or

17 (B) demonstrate a strong partnership with a
18 local workforce development board or State work-
19 force development board;

20 (2) house the job training and education pro-
21 gram in—

22 (A) an institution of higher education (as
23 defined in section 101 of the Higher Education
24 Act of 1965 (20 U.S.C. 1001)), including a
25 community college, that includes basic science,

1 technology, and mathematics education in the
2 curriculum of the institution of higher edu-
3 cation; or

4 (B) an apprenticeship program registered
5 with the Department of Labor or a State;

6 (3) work with the Secretary of Defense or vet-
7 erans organizations to transition members of the
8 Armed Forces and veterans to careers in a relevant
9 sector;

10 (4) include in the application an entity that re-
11 ceives State funding or is operated by a State agen-
12 cy;

13 (5) include an apprenticeship program reg-
14 istered with the Department of Labor or a State as
15 part of the job training and education program;

16 (6) provide support services and career coach-
17 ing;

18 (7) provide entry-level technology workforce
19 training aimed at matching workers with well-paying
20 jobs; or

21 (8) propose to serve—

22 (A) young adults between the ages of 16
23 and 24; or

24 (B) individuals with barriers to employ-
25 ment (as defined in section 3 of the Workforce

1 Innovation and Opportunity Act (29 U.S.C.
2 3102)).

3 (f) ADDITIONAL CONSIDERATION.—In making grants
4 under this section, the Secretary of Labor shall consider
5 equity and regional diversity.

6 (g) LIMITATION ON APPLICATIONS.—An eligible enti-
7 ty may not submit, either individually or as part of a joint
8 application, more than 1 application for a grant under this
9 section during any 1 fiscal year.

10 (h) LIMITATIONS ON AMOUNT OF GRANT.—The
11 amount of a single grant provided under this section for
12 any 1 year shall not exceed \$5,000,000.

13 (i) NON-FEDERAL SHARE.—The non-Federal share
14 of the cost of a job training and education program carried
15 out using a grant under this section shall be not less than
16 25 percent of the total cost.

17 (j) REDUCTION OF DUPLICATION.—Before submit-
18 ting an application for a grant under this section, each
19 applicant shall—

20 (1) consult with the heads of appropriate Fed-
21 eral agencies; and

22 (2) coordinate the proposed activities of the ap-
23 plicant with existing State and local programs.

24 (k) TECHNICAL ASSISTANCE.—The Secretary of
25 Labor, in consultation with the Secretary, may provide

1 technical assistance to eligible entities under subsection
2 (c) to leverage the existing job training and education pro-
3 grams of the Department of Labor and other relevant pro-
4 grams at appropriate Federal agencies.

5 (l) REPORT.—Not less frequently than once every 2
6 years, the Secretary of Labor shall submit to Congress,
7 and make publicly available on the website of the Depart-
8 ment of Labor, a report on the program established under
9 this section, including a description of—

10 (1) any entity that receives a grant under this
11 section;

12 (2) activities carried out using the grants under
13 this section;

14 (3) best practices used to leverage the invest-
15 ment of the Federal Government under this section;

16 and

17 (4) an assessment of the results achieved by the
18 program established under this section, including the
19 equitable distribution of benefits and the rate of em-
20 ployment for participants after completing a job
21 training and education program carried out using a
22 grant under this section.

23 (m) AUTHORIZATION OF APPROPRIATIONS.—There is
24 authorized to be appropriated to carry out this section
25 \$100,000,000 for each of fiscal years 2022 through 2026.

1 **SEC. 204. GAO STUDY ON INNOVATIVE FINANCING.**

2 Not later than 1 year after the date of enactment
3 of this Act, the Comptroller General of the United States
4 shall conduct a study to identify—

5 (1) financial and procurement mechanisms cur-
6 rently available to public and private entities to fund
7 smart city or community activities and associated
8 demonstration projects, including “pay for perform-
9 ance” financing that could deliver measurable and
10 verifiable market and non-market values to smart
11 cities or communities;

12 (2) new and innovative financial and procure-
13 ment mechanisms under development or used experi-
14 mentally that may be available, in the near term, to
15 public and private entities to fund smart city or
16 community activities and associated demonstration
17 projects;

18 (3) barriers to creative financing solutions for
19 smart city or community activities and associated
20 demonstration projects, including procurement bar-
21 riers faced by State and local governments; and

22 (4) ways to leverage private sector investments
23 in smart cities and communities.

1 **SEC. 205. TECHNICAL ASSISTANCE, SMART CITY VOUCHER,**
2 **AND TECHNOLOGIST IN RESIDENCE PRO-**
3 **GRAMS.**

4 (a) TECHNICAL ASSISTANCE PROGRAM.—The Sec-
5 retary of Energy (referred to in this section as the “Sec-
6 retary”) shall establish a program to provide technical as-
7 sistance to cities and communities seeking to incorporate
8 smart city or community technologies.

9 (b) SMART CITY VOUCHER PILOT PROGRAM.—

10 (1) IN GENERAL.—The Secretary shall establish
11 a pilot program (referred to in this section as the
12 “pilot program”) under which the Secretary shall
13 provide assistance, including through vouchers, to
14 cities and communities (including cities or commu-
15 nities partnered with a small business concern (as
16 defined in section 3 of the Small Business Act (15
17 U.S.C. 632))) to improve, for the purposes of pro-
18 moting smart city or community technologies and
19 commercialization—

20 (A) the access of cities and communities to
21 the expertise, competencies, and infrastructure
22 of National Laboratories; and

23 (B) the products, services, and capabilities
24 of those cities and communities.

25 (2) VOUCHER.—A voucher provided under the
26 pilot program may be redeemed at any National

1 Laboratory or laboratory of the Department of En-
2 ergy.

3 (3) COLLABORATION.—The Secretary shall
4 carry out the pilot program in collaboration with the
5 Director of each National Laboratory.

6 (4) COST SHARING.—

7 (A) IN GENERAL.—Except as provided in
8 subparagraph (B), section 988 of the Energy
9 Policy Act of 2005 (42 U.S.C. 16352) shall
10 apply to financial assistance provided under this
11 section.

12 (B) EXCEPTION.—The Secretary may
13 waive section 988 of that Act (42 U.S.C.
14 16352) in providing financial assistance under
15 the pilot program to cities or communities that
16 partner with a small business concern that is
17 socially or economically disadvantaged, as deter-
18 mined by the Secretary.

19 (c) TECHNOLOGIST IN RESIDENCE PILOT PRO-
20 GRAM.—

21 (1) IN GENERAL.—The Secretary shall expand
22 the Technologist in Residence pilot program of the
23 Department of Energy to include partnerships be-
24 tween National Laboratories and cities or commu-

1 nities with respect to research and development re-
2 lating to smart cities or communities.

3 (2) REQUIREMENTS.—For purposes of the part-
4 nerships entered into under paragraph (1), tech-
5 nologists in residence shall work with an assigned
6 city or community to develop an assessment of smart
7 city or community technologies available and appro-
8 priate to meet the smart city or community objec-
9 tives of the city or community.

10 (d) GUIDANCE.—The Secretary, in consultation with
11 the Secretary of Commerce, shall issue guidance with re-
12 spect to—

13 (1) the scope of the programs established under
14 subsections (a) through (c); and

15 (2) requests for proposals from cities and com-
16 munities interested in participating in those pro-
17 grams.

18 (e) CONSIDERATIONS.—In establishing the programs
19 under subsections (a) through (c), the Secretary shall seek
20 to address the needs of small- and medium-sized cities,
21 counties, and Tribal governments.

22 (f) AUTHORIZATION OF APPROPRIATIONS.—There is
23 authorized to be appropriated to carry out this section
24 \$20,000,000 for each of fiscal years 2022 through 2026.

1 **TITLE III—IMPROVING PER-**
2 **FORMANCE AND INTEROPER-**
3 **ABILITY**

4 **SEC. 301. STANDARDS AND INTEROPERABILITY FRAME-**
5 **WORK.**

6 (a) PARTICIPATION.—To strengthen the public-pri-
7 vate partnership approach to smart city-related or commu-
8 nity-related standards development and interoperability,
9 the Secretary, acting through the Director of the National
10 Institute of Standards and Technology, shall strongly en-
11 courage and support participation by Federal Government
12 experts in private sector-led, standards-related activities
13 that convene smart city or community stakeholders, in-
14 cluding representatives of applicable Federal agencies.

15 (b) ACTIVITIES.—To promote innovation and eco-
16 nomic competitiveness and to achieve interoperability of
17 smart city or community devices and systems, while
18 strengthening the United States approach to private sec-
19 tor-led standardization activities and the participation of
20 Federal representatives under subsection (a), the Sec-
21 retary, in consultation with private and public sector
22 stakeholders, shall—

23 (1) survey and review domestic and inter-
24 national smart city or community performance

1 standards, existing architectures, applications, and
2 deployments, and interoperability standards;

3 (2) make consensus-based recommendations—

4 (A) to identify gaps in the smart city or
5 community performance standards and inter-
6 operability standards under paragraph (1);

7 (B) to harmonize existing standards and
8 deployment efforts and enable greater inter-
9 operability across smart city or community
10 technologies;

11 (C) to coordinate domestic and inter-
12 national performance standards and interoper-
13 ability standards to promote uniform perform-
14 ance standards and interoperability standards
15 worldwide, including with respect to the need
16 for testing and demonstration; and

17 (D) for guidelines to enable interoperability
18 in the collection, storage, ownership, and shar-
19 ing of data;

20 (3) based on the recommendations under para-
21 graph (2), develop a consensus-based framework
22 that includes protocols and model standards for the
23 management and exchange of information, including
24 existing guidelines, best practices, and industry con-
25 sensus standards;

1 (4) ensure that cybersecurity and privacy are
2 core elements of the recommended performance
3 standards and interoperability standards; and

4 (5) lead international coordination efforts to de-
5 velop industry-led, technology-neutral, voluntary,
6 consensus-based global smart city or community per-
7 formance standards and interoperability standards.

8 **TITLE IV—INTERNATIONAL CO-**
9 **OPERATION AND BEST PRAC-**
10 **TICES**

11 **SEC. 401. DEVELOPMENT OF GLOBAL SMART CITY OR COM-**
12 **MUNITY BEST PRACTICES.**

13 (a) IN GENERAL.—The Secretaries may carry out ac-
14 tivities—

15 (1) to enable cities and communities in the
16 United States and other countries to work together
17 toward shared smart city- or community-related
18 goals;

19 (2) to promote smart city or community solu-
20 tions that provide measurable benefits to local gov-
21 ernments and residents;

22 (3) to enable an open, global marketplace for
23 smart city or community technologies based on vol-
24 untary, consensus-based, and technology-neutral
25 standards; and

1 (4) to connect innovators from industry and
2 academia to local governments to catalyze the emer-
3 gence of open and advanced technologies that—

4 (A) meet community needs; and

5 (B) advance innovation and open competi-
6 tion.

7 (b) ELIGIBLE ACTIVITIES.—The activities described
8 in subsection (a) may include grants, contracts, chal-
9 lenges, prize competitions, public-private partnerships,
10 and other innovative mechanisms.

11 (c) AUTHORIZATION OF APPROPRIATIONS.—

12 (1) IN GENERAL.—There is authorized to be
13 appropriated to the Secretaries to carry out this sec-
14 tion \$20,000,000 for each of fiscal years 2022
15 through 2026.

16 (2) LIMITATION ON USE OF FUNDS.—Funds
17 made available under paragraph (1) may not be used
18 to provide assistance to—

19 (A) a foreign country; or

20 (B) a foreign company (excluding any
21 United States subsidiary of a foreign holding
22 company).

23 **SEC. 402. TRADE PROGRAM.**

24 The Secretary, in consultation with the Secretary of
25 State, such other members of the Council as the Secretary

1 determines to be appropriate, and private stakeholders,
2 shall establish a strategic international smart cities and
3 communities trade program, which shall include trade mis-
4 sions—

5 (1) to promote the export of United States
6 smart cities or communities technologies;

7 (2) to stimulate job growth in the United
8 States;

9 (3) to identify potential partners and strategies
10 for companies in the United States in target foreign
11 market sectors;

12 (4) to organize events with local governments,
13 businesses, associations, academia, and other stake-
14 holders to promote smart city or community partner-
15 ships;

16 (5) to assist in the development of competitive
17 strategies and foreign market access for smart city
18 or community technology business interests of the
19 United States;

20 (6) to assist in developing appropriate Federal
21 policy relating to interests of businesses in the
22 United States and businesses in international smart
23 cities or communities;

1 (7) to assist in achieving commitments of the
2 United Nations Framework Convention on Climate
3 Change;

4 (8) to assist in lowering the cost to consumers
5 of smart cities or communities technologies;

6 (9) to leverage expertise in infrastructure to de-
7 liver solutions that can help make communities more
8 efficient, equitable, livable, and sustainable; and

9 (10) to work with the United States Agency for
10 International Development, the United States Inter-
11 national Development Finance Corporation, and the
12 Export-Import Bank of the United States to identify
13 opportunities to finance international investment in
14 smart cities or communities technology companies of
15 the United States.