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HOUSE OF REPRESENTATIVES

REPORT
119–176

INSTITUTE FOR TELECOMMUNICATION SCIENCES CODIFICATION ACT

JUNE 30, 2025.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. GUTHRIE, from the Committee on Energy and Commerce, submitted the following

R E P O R T

[To accompany H.R. 1455]

[Including cost estimate of the Congressional Budget Office]

The Committee on Energy and Commerce, to whom was referred the bill (H.R. 1455) to codify the Institute for Telecommunication Sciences and to direct the Assistant Secretary of Commerce for Communications and Information to establish an initiative to support the development of emergency communication and tracking technologies, and for other purposes, having considered the same, reports favorably thereon without amendment and recommends that the bill do pass.

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Purpose and Summary

H.R. 1455, the "Institute for Telecommunication Sciences Codification Act" or the "ITS Codification Act," was introduced by Representative Earl L. "Buddy" Carter (R–GA) on February 21, 2025. The bill amends the National Telecommunications and Information Administration (NTIA) Organization Act by providing additional statutory authority for the Institute for Telecommunication Sciences (ITS). It also requires the Assistant Secretary of Commerce for Communications and Information (Assistant Secretary) to establish an initiative to support the development of emergency communication and tracking technologies.

Background and Need for Legislation

The National Telecommunications and Information Administration (NTIA), an agency within the Department of Commerce, has the authority to assign and oversee the spectrum usage rights of federal government agencies as well as represent the federal government on spectrum policy matters before the Federal Communications Commission (FCC). For over 40 years, ITS has served as the premier engineering test center for the NTIA. ITS manages the telecommunications technology development programs of NTIA and the Department of Commerce as well as oversees certain telecommunications and spectrum test activities of other federal agencies through various interagency agreements. In certain instances, ITS will also engage directly with industry and academia through cooperative agreements. Codifying ITS will provide the test center with a solid foundation to continue its critical mission in conducting telecommunications technology and radiofrequency programs, as well as allow it to continue to study and develop emergency communications technologies so that these tools can help locate individuals when radio communication may be severely limited in the event of building collapses and natural disasters.

Committee Action

The Committee on Energy and Commerce held a hearing in the development of this legislation during the 119th Congress.

On January 23, 2025, the Subcommittee on Communications and Technology held a hearing. The title of the hearing was "Strengthening American Leadership in Wireless Technology." The Subcommittee received testimony from the following witnesses:

- Mr. Michael K. Powell, President & CEO, NCTA—The Internet & Television Association;
- Mr. Brad Gillen, Executive Vice President, CTIA—The Wireless Association;
- Ms. Diane Rinaldo, Executive Director, Open RAN Policy Coalition; and
- Mr. Chris Lewis, President & CEO, Public Knowledge.

On March 4, 2025, the full Committee on Energy and Commerce met in open markup session and ordered H.R. 1455, without amendment, favorably reported to the House by voice vote.

Committee Votes

Clause 3(b) of rule XIII requires the Committee to list the record votes on the motion to report legislation and amendments thereto. There were no record votes taken in connection with ordering H.R. 1455 reported.

Oversight Findings and Recommendations

Pursuant to clause 2(b)(1) of rule X and clause 3(c)(1) of rule XIII, the Committee held hearings and made findings that are reflected in this report.

New Budget Authority, Entitlement Authority, and Tax Expenditures

Pursuant to clause 3(c)(2) of rule XIII, the Committee finds that H.R. 1455 would result in no new or increased budget authority, entitlement authority, or tax expenditures or revenues.

Congressional Budget Office Estimate

Pursuant to clause 3(c)(3) of rule XIII, the following is the cost estimate provided by the Congressional Budget Office pursuant to section 402 of the Congressional Budget Act of 1974:

At a Glance

Commerce and Consumer Regulatory Legislation

As ordered reported by the House Committee on Energy and Commerce on March 4, 2025

On March 4, 2025, the House Committee on Energy and Commerce ordered 10 bills to be reported. This document provides estimates for 8 of those bills. One bill, H.R. 1721, passed the House of Representatives on April 28, 2025.

CBO estimates that enacting each piece of legislation would increase spending subject to appropriation.

None of the legislation would affect direct spending or revenues; thus, pay-as-you-go procedures do not apply.

CBO estimates that none of the legislation would increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2036.

None of the legislation contains intergovernmental mandates as defined in the Unfunded Mandates Reform Act. H.R. 1767 would impose private-sector mandates.

Bill	Net Increase or Decrease (-) in the Deficit Over the 2025-2035 Period (Millions of Dollars)	Changes in Spending Subject to Appropriation Over the 2025-2030 Period (Outlays, Millions of Dollars)	Mandate Effects?
H.R. 1455	0	4	No
H.R. 1679	0	2	No
H.R. 1721	0	1	No
H.R. 1737	0	1	No
H.R. 1765	0	9	No
H.R. 1766	0	*	No
H.R. 1767	0	3	Yes
H.R. 1770	0	2	No

* = between zero and $500,000.

Summary of legislation: On March 4, 2025, the House Committee on Energy and Commerce ordered 10 bills to be reported. This document provides estimates for 8 of those bills. One of the bills, H.R.

1721, was passed by the House of Representatives on April 28, 2025.

The legislation would:

- Codify some authorities and responsibilities at offices within the National Telecommunications and Information Administration (NTIA) and would require certain activities, including standardizing wireless communications networks;
- Require the Department of Commerce to report on the effect of imports on U.S. infrastructure, barriers to foreign trade faced by U.S. technology businesses, and the feasibility of a trans-Atlantic cable linked to specific countries; and
- Require the Consumer Product Safety Commission (CPSC) to establish a safety standard for retractable awnings, initiate a pilot program for using artificial intelligence, and report the findings to the Congress.

Estimated Federal cost: The costs of the legislation fall within budget functions 270 (energy) and 370 (commerce and housing credit).

Basis of estimate: For this estimate, CBO assumes that each piece of legislation will be enacted in fiscal year 2025 and that the estimated amounts will be available each year. CBO estimates that all eight pieces of legislation would affect spending subject to appropriation.

This cost estimate does not include any effects of interactions among the pieces of legislation. If all eight were combined and enacted as a single piece of legislation, the effects could be different from the sum of the separate estimates, but CBO expects that any differences would be small.

H.R. 1455, the ITS Codification Act, would codify the authority for and delineate the responsibilities of the Institute for Telecommunication Sciences (ITS), a research and engineering laboratory within the National Telecommunications and Information Administration. The bill also would require ITS to develop emergency communication and tracking technologies to locate people trapped in confined spaces, such as underground mines.

Using information from the NTIA about the cost of implementing the bill, CBO estimates that ITS would need four additional engineers and technicians, at an initial annual cost of about $160,000 each, with that amount increasing each year for anticipated inflation. Additionally, the institute would need to acquire simulation software licenses, pay for travel, and cover other miscellaneous expenses at an annual cost of about $100,000. Finally, ITS would need to make onetime equipment purchases of items such as a signal generator, a vector signal analyzer receiver, and a power amplifier for about $500,000 in 2026. On that basis, CBO estimates that implementing the bill would cost $4 million over the 2025–2030 period; any related spending would be subject to the availability of appropriated funds.

The bill also would require ITS to study radio frequency emissions, determine spectrum propagation characteristics, and test technologies that enhance spectrum sharing among federal and nonfederal entities, among other activities. Because ITS has similar responsibilities under current law, CBO estimates that implementing those requirements would have no additional cost.

H.R. 1679, the Global Investment in American Jobs Act of 2025, would require the Department of Commerce, the Government Accountability Office (GAO), and a federal interagency working group to study and report to the Congress on the ability of the United States to attract foreign direct investment and about barriers to foreign trade faced by advanced-technology firms in the United States.

Using information from the Department of Commerce, CBO expects that completing the study and report would require 10 economists and support staff, at an average cost of $190,000 each, for one year. On that basis, CBO estimates that implementing H.R. 1679 would cost $2 million in 2026. Based on the cost of similar activities, CBO estimates that the costs for GAO and the working group would be insignificant. Any related spending would be subject to the availability of appropriated funds.

H.R. 1721, the Critical Infrastructure Manufacturing Feasibility Act, would require the Department of Commerce to identify, within each critical infrastructure sector, high-demand products that are imported to the United States because of manufacturing, material, or supply chain constraints. The department would analyze the feasibility, costs, and benefits of producing such products in the United States and report the findings to the Congress.

Based on the cost of similar studies, CBO estimates that implementing H.R. 1721 would cost $1 million for the work of four employees in 2026, at a cost of about $220,000 each, along with the purchase of data and survey contracts. Any related spending would be subject to the availability of appropriated funds.

H.R. 1737, a bill to direct the Secretary of Commerce to submit to Congress a report containing an assessment of the value, cost, and feasibility of a trans-Atlantic submarine fiber optic cable connecting the contiguous United States, the United States Virgin Islands, Ghana, and Nigeria, would require the Secretary of Commerce, within one year of enactment, to report to the Congress on the cost, benefits, and feasibility, with respect to U.S. national security, of constructing such a fiber-optic cable.

Based on the cost of similar activities, CBO estimates that implementing the bill would cost $1 million over the 2025–2030 period; any related spending would be subject to the availability of appropriated funds.

H.R. 1765, the Promoting United States Wireless Leadership Act of 2025, would require the National Telecommunications and Information Administration to encourage trusted companies and standards-setting bodies to participate in setting standards for 5G and future generations of wireless communications networks. Under the bill, the NTIA would provide technical assistance to those entities to facilitate participation.

Using information from the NTIA, CBO expects that the agency would need eight employees, at an average annual salary of about $160,000 each, to meet the bill's requirements. After accounting for anticipated inflation, CBO estimates that salaries and additional expenses would cost $9 million over the 2025–2030 period. CBO estimates that having the National Institute of Standards and Technology facilitate industry participation in the international standard-setting process for 5G networks would cost an insignificant amount. Any related costs for both agencies would be subject to the availability of appropriated funds.

H.R. 1766, the NTIA Policy and Cybersecurity Coordination Act, would codify the duties currently undertaken by the Office of Policy Analysis and Development within the National Telecommunications and Information Administration and rename it the Office of Policy Development and Cybersecurity. Using information from the NTIA, CBO estimates that implementing H.R. 1766 would cost less than $500,000 over the 2025–2030 period; any related costs would be subject to the availability of appropriated funds.

H.R. 1767, the Awning Safety Act of 2025, would require the Consumer Product Safety Commission to issue a final safety standard on retractable awnings.

Using information from CPSC, CBO expects that the agency would need five full-time- equivalent employees for the first eighteen months after enactment, and two full-time employees annually thereafter, at an average cost of $200,000 per full-time employee to enforce the standard. After accounting for anticipated inflation, CBO estimates that implementing the bill would cost $3 million over the 2025–2030 period; any related spending would be subject to the availability of appropriated funds.

H.R. 1770, the Consumer Safety Technology Act, would require the Consumer Product Safety Commission to establish a pilot program to explore the use of artificial intelligence and report its findings to the Congress. The bill also would direct the Department of Commerce, in consultation with the Federal Trade Commission (FTC), to study and report to the Congress on how blockchain technology may be used for consumer protection services.

Finally, the bill would require the FTC to report to the Congress on its efforts and on recommendations to prevent anticompetitive behavior involving tokens—transferable representations of information recorded on a blockchain or similar technology.

Using information from the agencies and the costs for similar activities, CBO estimates that implementing H.R. 1770 would cost $2 million over the 2025–2030 period; any related spending would be subject to the availability of appropriated funds.

Pay-As-You-Go considerations: None of the legislation would affect direct spending or revenues; therefore, pay-as-you-go procedures do not apply.

Increase in long-term net direct spending and deficits: None of the legislation would increase net direct spending or deficits in any of the four consecutive 10-year periods beginning in 2036.

Mandates: H.R. 1767 would impose a private-sector mandate as defined in the Unfunded Mandates Reform Act (UMRA) by requiring awning manufacturers to comply with a prospective Consumer Product Safety Commission safety standard concerning fixed and freestanding retractable awnings. CBO expects that the standard may require awnings to be equipped with safety clips and to issue visual or audible alerts when in motion. Based on the cost of such additional equipment and the volume of covered awnings likely to be sold, CBO estimates that the cost of the mandate would not exceed the private-sector threshold established in UMRA ($206 million in 2025, adjusted annually for inflation).

H.R. 1767 contains no intergovernmental mandates as defined in UMRA.

None of the other pieces of legislation would impose private-sector or intergovernmental mandates as defined in UMRA.

Estimate prepared by: Federal costs: Zunara Naeem (National Telecommunications and Information Administration), Margot Berman (Department of Commerce), Cyrus Ekland (Consumer Product Safety Commission, Federal Trade Commission); Mandates: Rachel Austin, Andrew Laughlin.

Estimate reviewed by: Justin Humphrey, Chief, Finance, Housing, and Education Cost Estimates Unit; Sean Dunbar, Chief, Low-Income Health Programs and Prescription Drugs Cost Estimates Unit; Kathleen FitzGerald, Chief, Public and Private Mandates Unit; H. Samuel Papenfuss, Deputy Director of Budget Analysis.

Estimate approved by: Phillip L. Swagel, Director, Congressional Budget Office.

Federal Mandates Statement

The Committee adopts as its own the estimate of Federal mandates prepared by the Director of the Congressional Budget Office pursuant to section 423 of the Unfunded Mandates Reform Act.

Statement of General Performance Goals and Objectives

Pursuant to clause 3(c)(4) of rule XIII, the general performance goal or objective of this legislation is to codify the Institute for Telecommunication Sciences within the National and Telecommunications and Information Administration Organization Act.

Duplication of Federal Programs

Pursuant to clause 3(c)(5) of rule XIII, no provision of H.R. 1455 is known to be duplicative of another Federal program, including any program that was included in a report to Congress pursuant to section 21 of Public Law 111–139 or the most recent Catalog of Federal Domestic Assistance.

Related Committee and Subcommittee Hearings

Pursuant to clause 3(c)(6) of rule XIII, the following related hearing was used to develop or consider H.R. 1455:

On January 23, 2025, the Subcommittee on Communications and Technology held a hearing. The title of the hearing was "Strengthening American Leadership in Wireless Technology." The Subcommittee received testimony from the following witnesses:

- Mr. Michael K. Powell, President & CEO, NCTA—The Internet & Television Association;
- Mr. Brad Gillen, Executive Vice President, CTIA—The Wireless Association;
- Ms. Diane Rinaldo, Executive Director, Open RAN Policy Coalition; and
- Mr. Chris Lewis, President & CEO, Public Knowledge.

Committee Cost Estimate

Pursuant to clause 3(d)(1) of rule XIII, the Committee adopts as its own the cost estimate prepared by the Director of the Congressional Budget Office pursuant to section 402 of the Congressional Budget Act of 1974.

Earmark, Limited Tax Benefits, and Limited Tariff Benefits

Pursuant to clause 9(e), 9(f), and 9(g) of rule XXI, the Committee finds that H.R. 1455 contains no earmarks, limited tax benefits, or limited tariff benefits.

Advisory Committee Statement

No advisory committees within the meaning of section 5(b) of the Federal Advisory Committee Act were created by this legislation.

Applicability to Legislative Branch

The Committee finds that the legislation does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act.

Section-by-Section Analysis of the Legislation

Section 1. Short title

Section 1 designates that the short title may be cited as the "Institute for Telecommunication Sciences Codification Act" or the "ITS Codification Act."

Sec. 2. Institute for Telecommunication Sciences

Section 2 amends the NTIA Organization Act by providing additional statutory authority for ITS. This section requires ITS to serve as the primary laboratory for the executive branch of the federal government to, among other things, study radio frequency emissions, determine spectrum propagation characteristics, conduct tests on technology that enhances the sharing of electromagnetic spectrum between federal and non-federal users, and improve the interference tolerance of federal systems operating with, or using, federal spectrum. Section 2 also allows the head of ITS to enter into such agreements, including contracts, cooperative agreements, and interagency agreements as may be necessary to carry out these functions as provided under certain statutory authorities.

This section also requires the Assistant Secretary to establish an initiative to support emergency communication and tracking technologies for use in locating individuals trapped in areas where mobile connectivity may not be available due to building collapses and natural disasters and submit a report to Congress on this effort.

Changes in Existing Law Made by the Bill, as Reported

In compliance with clause 3(e) of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (new matter is printed in italics and existing law in which no change is proposed is shown in roman):

NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION ORGANIZATION ACT

TITLE I—NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION

PART A—ORGANIZATION AND FUNCTIONS

* * * * * * *

SEC. 106. INSTITUTE FOR TELECOMMUNICATION SCIENCES.

(a) ESTABLISHMENT.—

(1) IN GENERAL.—Under the authority provided to the Assistant Secretary under section 103, the Assistant Secretary shall operate a test center to be known as the Institute for Telecommunication Sciences (in this section referred to as "ITS").

(2) FUNCTIONS.—

(A) IN GENERAL.—In addition to any functions delegated by the Assistant Secretary under subparagraph (B), ITS shall serve as the primary laboratory for the executive branch of the Federal Government to—

(i) study radio frequency emissions, including technologies and techniques to control such emissions and interference caused by such emissions;

(ii) determine spectrum propagation characteristics;

(iii) conduct tests on technology that enhances the sharing of electromagnetic spectrum between Federal and non-Federal users;

(iv) improve the interference tolerance of Federal systems operating with, or using, Federal spectrum;

(v) promote activities relating to access to Federal spectrum by non-Federal users and the sharing of Federal spectrum between Federal and non-Federal users; and

(vi) conduct such other activities as determined necessary by the Assistant Secretary.

(B) ADDITIONAL FUNCTIONS.—The Assistant Secretary may delegate to ITS any of the functions assigned to the Assistant Secretary under section 103(b)(1).

(3) AGREEMENTS AND TRANSACTIONS.—In carrying out the functions described in paragraph (2), the Assistant Secretary, acting through the head of ITS, may enter into agreements as provided under the following authorities:

(A) Sections 11 and 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710; 3710a).

(B) Section 1535 of title 31, United States Code.

(C) Sections 207 and 209 of title 35, United States Code.

(D) Section 103(b)(2) of this Act.

(E) Section 113(g) of this Act.

(F) The first undesignated section of Public Law 91–412.

(G) Any authorization in any other Federal statute.

(4) FEDERAL SPECTRUM DEFINED.—In this subsection, the term "Federal spectrum" means frequencies assigned on a primary basis to a Federal entity (as defined in section 113(l)).

(b) EMERGENCY COMMUNICATION AND TRACKING TECHNOLOGIES INITIATIVE.—

(1) ESTABLISHMENT.—The Assistant Secretary, acting through the head of ITS, shall establish an initiative to support the development of emergency communication and tracking technologies for use in locating trapped individuals in confined spaces, such as underground mines, and other shielded environments, such as high-rise buildings or collapsed structures, where conventional radio communication is limited.

(2) ACTIVITIES.—In order to carry out this subsection, the Assistant Secretary, acting through the head of ITS, shall work with private sector entities and the heads of appropriate Federal agencies, to—

(A) perform a needs assessment to identify and evaluate the measurement, technical specifications, and conformity assessment needs required to improve the operation and reliability of such emergency communication and tracking technologies; and

(B) support the development of technical specifications and conformance architecture to improve the operation and reliability of such emergency communication and tracking technologies.

(3) REPORT.—Not later than 18 months after the date of the enactment of this section, the Assistant Secretary shall submit to Congress, and make publicly available, a report on the assessment performed under paragraph (2)(A).

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