

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of	)	
	)	
Ensuring Children’s Safe Use of Screens and	)	WC Docket No. 26-133
E-Rate-Funded Services	)	
	)	
Modernizing the E-Rate Program for	)	WC Docket No. 13-184
Schools and Libraries	)	
	)	
Establishing the Emergency Connectivity	)	WC Docket No. 21-93
Fund to Close the Homework Gap	)	
	)	
Promoting Fair and Open Competitive	)	WC Docket No. 21-455
Bidding in the E-Rate Program	)	

**COMMENTS OF
THE SCHOOLS, HEALTH & LIBRARIES BROADBAND COALITION**

The Schools, Health & Libraries Broadband Coalition (SHLB) submits these comments in response to the Commission’s Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking reviewing the E-Rate program.¹ SHLB is a long-time advocate for the E-Rate program and its stakeholders.² For that reason, SHLB appreciates the Commission reviewing the E-Rate program to ensure that the Commission is fulfilling its statutory duties with

¹ *Ensuring Children’s Safe Use of Screens and E-Rate-Funded Services; Modernizing the E-Rate Program for Schools and Libraries; Establishing the Emergency Connectivity Fund to Close the Homework Gap; Promoting Fair and Open Competitive Bidding in the E-Rate Program*, WC Docket Nos. 26-133, 13-184, 21-93, and 21-455, Notice of Proposed Rulemaking, FCC 26-41 (June 26, 2026) (*Notice or NPRM*).

² SHLB is a broad-based public interest coalition of more than 330 organizations that share the goal of promoting open, affordable, high-quality broadband for anchor institutions and their communities. SHLB members include schools, libraries, representatives of health care providers and telehealth networks, state broadband offices, private sector companies, state and national research and education networks, consulting firms and consumer organizations. For a current list of SHLB members, see <https://www.shlb.org/shlb-members-private>.

respect to schools and libraries under section 254 of the Communications Act.³ In particular, the Commission must follow Congress’s directive that it “enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services for all public and nonprofit elementary and secondary school classrooms [] and libraries” through the establishment of competitively neutral rules.⁴ Several of the inquiries in the *NPRM*, however, appear to directly contradict this directive and should therefore not be acted upon. Instead, the Commission should focus its efforts on improving, strengthening, and streamlining the E-Rate program to ensure that schools and libraries have the tools necessary to prepare students, educators, and library patrons for an increasingly digital world.⁵

³ 47 U.S.C. § 254(c)(3) and (h).

⁴ 47 U.S.C. § 254(h)(2)(A).

⁵ See, e.g., The White House Task Force on AI Education, AI.gov, <https://www.ai.gov/initiatives/education> (last visited Sept. 25, 2026) (The task force was created to “help our Nation’s K-12 youth and lifelong learners develop new skills for a changing workforce. By establishing a strong framework that integrates early student exposure with comprehensive teacher training and other resources for workforce development, we will ensure that every American has the opportunity to learn about AI.”)

EXECUTIVE SUMMARY

Our nation's schools and libraries are the portals of learning through which citizens young and old access the knowledge and opportunities that allow America to thrive and our democracy to flourish. Congress recognized this truth when it assigned the Commission the task of providing specific, predictable and sufficient universal service support such that schools and libraries could provide access to advanced communications services to their students and their patrons. The Commission has undertaken this important mission by establishing the E-Rate program, which provides funding to schools and libraries in every state throughout the country to ensure they are effectively able to connect and serve their communities.

Since Congress enacted the current universal service statute in 1996, the Commission has endeavored to ensure that the E-Rate program continues to provide schools and libraries – both rural and urban -- with needed connectivity, adapting and strengthening the program along the way. It is a bedrock principle of the bipartisan statute that universal services are to evolve over time as technology advances, and the Commission has modernized the program over those years to account for the changing needs of an ever-more digital world.

That is why it is disheartening and surprising that the Commission in the current proceeding asks questions that run directly counter to the goals of universal service and Congress's directives. While most of the country and world are racing ahead to prepare for the future facing our nation's citizens and students, the Commission is asking whether it should shelve or significantly reduce the E-Rate program, which is the financial pillar supporting most schools' and libraries' digital connections. The statute provides the Commission no authority to do so. To the contrary, section 254 of the Communications Act requires the Commission to continue to provide subsidies to schools and libraries for telecommunications services and to

enhance access to advanced telecommunications and information services. Good public policy dictates that the E-Rate program should be strengthened and improved in the face of the country's current and future connectivity needs.

In its comments, SHLB asks that the Commission find the following:

- Consistent with the statute, the Commission must continue to ensure that schools and libraries have access to advanced telecommunications and information services, including Internet access and internal connections.
- Consistent with the statute, the Commission cannot make the following changes to the program:
 - The Commission cannot eliminate support.
 - The Commission cannot exclude certain geographic areas from receiving support.
 - The Commission cannot exclude Internet access and the installation and maintenance of internal connections from future support.
 - The Commission cannot base E-Rate support on educational outcomes.
 - The Commission cannot limit E-Rate support based on “screen time.”
 - The Commission cannot limit E-Rate support to eligible telecommunications carriers.
- In fact, rather than seriously considering making any of those changes, the Commission should retain or adopt program aspects that help participants, rather than imposing new overly burdensome and complicated requirements. Specifically, the Commission should:
 - Support advanced cybersecurity;
 - Retain the ability for applicants to invoice USAC directly;
 - Retain E-Rate support for special construction, self-provisioned networks, and managed internal broadband services (MIBS);
 - Retain the current discount matrix; and
 - Streamline program administration.
- The Commission should take steps to enhance program participation rather than proposing changes that would make participation more difficult.
 - The Commission should continue to allow schools and libraries flexibility in meeting their Children's Internet Protection Act (CIPA) requirements.
 - The Commission should not adopt its proposal to impose overreaching and excessive requirements on the consultants that many program participants rely on for help in navigating an already complicated application and funding process.
 - The Commission should also enhance competition for services provided through the E-Rate program by continuing to allow applicants to consider existing contracts as bids in the competitive bidding process.

We appreciate the Commission's review of this important program and look forward to working with the Commission to ensure that E-Rate continues to serve the universal service connectivity needs of schools and libraries as Congress has mandated.

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I. INTRODUCTION

SHLB advocates for policies and programs that enable anchor institutions to obtain and promote open, secure, high-quality broadband services to support connectivity and opportunity for all. We cannot overstate how much universal service support through the E-Rate program has been, and continues to be, a critical funding resource for schools and libraries and the rural and urban communities they serve. It is the largest, federal educational technology program that provides consistent, predictable financial support to ensure that high-speed broadband is available and affordable to these critical community anchor institutions. Without this necessary funding, the communities they serve would be left behind: students lacking access to adequate broadband could not complete assignments and testing, participate in online learning, or otherwise prepare for their future; unconnected individuals, adult learners, and veterans would not be able to find employment, start their own businesses, or engage with essential services that define modern-day life; and those residing in remote and Tribal areas would not have access to remote education and online resources provided by libraries.

The E-Rate program has also been enormously successful. Most eligible K-12 schools participate in the program: data reports that over 100,000 schools receive E-Rate funding commitments out of an approximate 120,000 eligible K-12 schools nationwide.⁶ The American Library Association estimates that about half of all public libraries (out of nearly 17,000 locations) participate in E-Rate. The program has also successfully incorporated strong practices that uphold and promote integrity and accountability. For example, the GAO recently released a

⁶ This figure includes both public and private school participation. John Harrington, Funds For Learning, E-rate Keeps Schools and Libraries Connected, available at <https://www.fundsforlearning.com/news/e-rate-keeps-schools-and-libraries-connected/> (Sept. 10, 2025).

report finding that, when comparing multiple federal programs, only E-Rate met the nine key requirements and best practices for preventing waste, fraud and abuse.⁷

At its core, E-Rate ensures that all students, regardless of whether they hail from a wealthy or underserved community, have the opportunity to flourish and learn at school and in their communities. Yet the need to ensure that schools and libraries are connected to high-speed Internet is greater than ever as technologies continue to evolve and these institutions pursue online learning platforms, digital collections, and virtual community programs. To question E-Rate's continued existence jeopardizes not only the strides that have been made to align students' educational endeavors with the resources they need to succeed, but risks jeopardizing continued progress to close the digital divide. To incorporate modern digital tools and maintain the high-speed connections needed to support them, E-Rate funding must remain strong and predictable for the tens of thousands of schools and libraries in rural and urban areas that rely on the program's funding.

In 2026, broadband access for schools and libraries is essential. Modern schools and libraries rely on broadband to support classroom instruction, cloud-based educational platforms, online assessments, cybersecurity, administrative and building operations, student information systems, and communication with parents and communities. A recent economic study makes this point clear: “[b]ecause broadband has become an essential educational input rather than a

⁷ Federal Awards: Selected Programs Did Not Fully Include Identified Practices to Enhance Oversight and Fraud Prevention, GAO-26-107444, <https://www.gao.gov/products/gao-26-107444> (Dec. 4, 2025) (GAO Oversight Report); *see also* Memo from Mark Stephens, Managing Director, FCC, to Fara Damelin, Inspector General, FCC, “Inspector General’s Top Management and Performance Challenges for FY 2025 for the Federal Communications Commission,” https://www.fcc.gov/sites/default/files/fy25_fcc_tmpc_mngt-response_10292024.pdf, at 1 (Oct. 29, 2024) (FCC OMD IG Response) (finding that the improper payment error rate fell from 1.59% to 1.27%, which is below the improper payment threshold and therefore “the E-Rate Program is no longer considered to be susceptible to a significant risk of improper payments.”).

discretionary expenditure, schools and libraries are unlikely to eliminate connectivity altogether. Instead, many institutions would be forced to reallocate scarce resources away from other educational priorities to maintain broadband services.”⁸

Furthermore, eliminating E-Rate would have serious negative effects on the U.S. economy. The same study reveals that removing roughly \$2.6 billion in annual E-Rate support would reduce annual real GDP by about \$4.2 billion, or about \$1.60 in lost economic activity for every \$1 of support removed.⁹ Eliminating E-Rate would also reduce real wages by about \$2.8 billion and tax revenues by about \$1.5 billion each year.¹⁰

Given the critical importance of the E-Rate program, it is beneficial for the Commission to conduct periodic reviews to ensure that it is fulfilling Congress’s universal service directives and whether improvements could be made to the program to strengthen it, streamline its administration, and further those goals.

To that end, SHLB offers comments on the *NPRM* to assist the Commission in achieving Congress’s universal service objectives for schools and libraries. As an initial matter, we note that much of the item seeks comment on questions or open-ended issues rather than concrete proposals for new rules.¹¹ We also emphasize that there are many instances where the Commission’s questions either exceed the authority provided to the Commission by Congress, or

⁸ Appendix, The Brattle Group, The Economic Impact of the E-Rate Program, <https://www.shlb.org/e-rate-economic-study>, 1 (Oct. 8, 2026) (Brattle Group E-Rate Report).

⁹ *Id.* at 18-19.

¹⁰ *Id.* at 18.

¹¹ For this reason, SHLB previously urged the Commission to recategorize the *NPRM* to a Notice of Inquiry (NOI). Changing the *NPRM* to an NOI would have better provided clarity on both the substance of the item (that it is meant to ask questions and gather information rather than propose rules) and the procedures E-Rate program stakeholders and commenters can expect (that the Commission is gathering information now as an NOI and would presumably seek comment on specific rule changes later as part of a traditional *NPRM*). As drafted, commenters do not know how to respond to proposed rule changes in the future when there is no cohesive proposed plan presented now.

conflict with the universal service directives in the statute. The Commission should rather ensure that its rules adhere to the statutory mandate to provide schools and libraries with discounts on services by telecommunications carriers, and to “enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services for all public and nonprofit elementary and secondary school classrooms [] and libraries.”¹² This should be the touchstone against which all of the Commission’s decisions regarding the E-Rate program are measured, including those in this *NPRM*.

II. THE COMMISSION’S LEGAL AUTHORITY RELATED TO THE E-RATE PROGRAM

A. Section 254 Requires the Commission to Ensure that Schools and Libraries Have Access to Advanced Telecommunications and Information Services

In section 254 of the Communications Act, Congress tasked the Commission with preserving and advancing universal service, consisting of access to advanced telecommunications and information services.¹³ Congress specifically singled out “[e]lementary and secondary schools and classrooms, health care providers, and libraries” as entities that should receive access to advanced telecommunications services, as well as additional “special services.”¹⁴

In section (h)(1)(B), Congress required telecommunications providers to offer services to schools and libraries for educational purposes at discounted rates and provided a framework for the manner in which these providers were to be reimbursed for the services.¹⁵ Congress also instructed the Commission to adopt competitively neutral rules providing all public and nonprofit

¹² 47 U.S.C. § 254(h)(2)(A).

¹³ 47 U.S.C. § 254(b)(2).

¹⁴ 47 U.S.C. § 254(b)(6) and (c)(3).

¹⁵ 47 U.S.C. § 254(h)(1)(B).

elementary and secondary schools and libraries with access to advanced services.¹⁶ To implement these statutory mandates, the Commission established the E-Rate program.

B. The Commission Cannot Take Actions that Conflict with Section 254(h)

The Commission Cannot Eliminate or Limit Support Based on Current Broadband Availability. In the *NPRM*, the Commission asks sweeping questions regarding the current state of school and library connectivity and the E-Rate program’s progress in providing universal service pursuant to section 254.¹⁷ For example, the Commission asks if “Congress’s directive in section 254(h) of the Communications Act [has] been satisfied? Does the Commission have the authority to limit or sunset to reflect today’s extensive connectivity rates?”¹⁸ In both instances, the answer is decidedly “no.”

The plain text of the statute shows that connecting schools and then sunseting the program was clearly not Congress’s objective. There is nothing in the text of the statute empowering the Commission to terminate the program, including (as the *NPRM* asks) after a certain period of time or after certain benchmarks are met. On the contrary, in the Telecommunications Act of 1996, Congress recognized that universal services would evolve over time, and required the Commission to ensure that the program keeps pace with those evolutions. Section 254 defines universal service as “an **evolving** level of telecommunications services that the Commission **shall** establish **periodically** under this section, taking into account **advances** in telecommunications and information technologies and services.”¹⁹ Congress intended for the Commission to adjust the services supported as technology advanced, not to

¹⁶ 47 U.S.C. § 254(h)(2)(A).

¹⁷ *NPRM*, FCC 26-41, ¶ 12.

¹⁸ *Id.*

¹⁹ 47 U.S.C. § 254(c)(1)(emphasis added).

eliminate support based on a static definition of service as the Commission suggests when it asks if E-Rate should be “limited or sunset.”²⁰ Such an action by the Commission would be in direct contradiction to Congress’s direction in section 254 that universal service support evolve to address advances in service. Treating E-Rate as a finished project is like deciding to stop maintaining a highway because it has already been built.

Furthermore, the Commission’s mandate from Congress is to “**enhance**” school and library access to advanced services,²¹ and the Commission cannot take actions that conflict with this directive. Specifically, the Commission cannot “limit or sunset” universal service support to schools and libraries and remain in compliance with section 254. Nothing in the statute provides the Commission that authority.

The Commission asks, “would there be an impact on schools’ and libraries’ ability to afford these services if the E-Rate program was terminated or limited?”²² Not only would the loss of E-Rate support adversely affect schools and libraries’ ability to afford currently funded services, it would force them to redistribute budgetary resources to make up the difference, which in turn would harm students and library patrons through the loss of other services and resources. Staffing cuts would need to be made, educational programs sacrificed, facility upgrades or repairs postponed or cancelled, and expenses related to student safety and cybersecurity would be reduced. Loss of E-Rate support would result in real and significant harm and would further strain school and library budgets that are already stretched thin.

²⁰ *NPRM*, FCC 26-41 ¶ 12.

²¹ 47 U.S.C. § 254(h)(2)(A).

²² *NPRM*, FCC 26-41, ¶ 18.

According to the Brattle Group E-Rate Report, the economic loss attributable to eliminating or reducing E-Rate support exceeds the E-Rate support removed because higher connectivity costs leave less money for other productive activities, and those effects ripple through suppliers, labor markets, household income, consumer spending and tax revenues.²³ Specifically, eliminating E-Rate’s roughly \$2.6 billion in annual support would reduce real GDP by about \$4.2 billion, real wages by about \$2.8 billion and tax revenues by about \$1.5 billion each year.²⁴ Eliminating Category 2 funding alone, which supports internal Wi-Fi and networks, would cut about \$1.2 billion in support and reduce GDP by roughly \$2.5 billion.²⁵ Because schools and libraries in the South receive the most support and that region has the highest ratio of E-Rate funding to educational output, it would see the largest losses in GDP, labor income and tax revenue.²⁶ Rather than cutting or terminating the E-Rate Program, the Commission should instead continue to provide E-Rate support that schools and libraries depend upon and which Congress has mandated.

The Commission Cannot Exclude Certain Geographic Areas from Receiving Support.

The Commission also asks whether it should “phase out E-Rate funding for schools and libraries in areas with the lowest NSLP participation rates, given the likelihood of greater resources and tax bases” or whether support should be “limited to rural areas or to areas served by a single provider.”²⁷ This action would also be in direct contradiction to Congress’s direction in section 254.

²³ Appendix, Brattle Group E-Rate Report at 19.

²⁴ *Id.* at 18.

²⁵ *Id.* at 19.

²⁶ *Id.* at 20-21.

²⁷ *NPRM*, FCC 26-41, ¶¶ 25-26.

The text of the statute does not limit or narrow E-Rate support exclusively to certain geographic areas, whether based on rurality or the availability of broadband service, as asked in the *NPRM*. Rather, the statute makes clear that, among the principles that must guide the preservation and advancement of universal service is the requirement that access to advanced telecommunications and information services should be provided in all regions of the Nation. Specifically, the statute directs the Commission to enhance access to advanced services for “all public and nonprofit elementary and secondary school classrooms, health care providers, and libraries.”²⁸

Congress could have added a geographic limitation (for example, Congress could have used the term “rural” in discussing support for schools and libraries, as it did in other parts of section 254) but it did not do so when describing the universal services it expected to be provided to schools and libraries. The Commission cannot, consistent with the statute, eliminate support to schools and libraries based on NSLP participation, lack of rurality, or the presence of a certain number of service providers.

Further, the Commission seeks comment on whether support should be limited to rural areas. To the contrary, however, the Commission’s own analysis shows that urban students lag behind their rural peers when it comes to meeting the Commission’s broadband benchmarks for students.²⁹ Only half of urban students had access to 1 Mbps per student—the Commission’s goal—while 55 percent of rural students did.³⁰

²⁸ 47 U.S.C. § 254(h)(2)(A).

²⁹ *Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 25-223, 2026 Section 706 Report, FCC 26-55, ¶ 49 Fig. 12 (Aug. 14, 2026).

³⁰ *Id.*

The Commission Cannot Exclude Categories of Eligible Services from Future Support.

The Commission states that its decision to provide E-Rate support for Internet access and the installation and maintenance of internal connections was “sustained on judicial review under the deference framework set out in *Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc.*” and asks whether those decisions “are nevertheless consistent with the statute’s text and structure, and whether the Commission should revisit them.”³¹ SHLB believes the answer to the first question is ‘yes’ and the answer to the second question is ‘no’, and providing E-Rate support for “Internet access and the installation and maintenance of internal connections” clearly falls within the best reading of the statute.³² To start, Section 254 makes clear that the Commission must “enhance [] access to advanced telecommunications and information services,”³³ services that include access to the Internet and to internal networks. Furthermore, sections 254(h)(5) and (6) specifically note that schools and libraries may receive support under section 254(h)(1)(b) for “Internet access, Internet service, or internal connections,” making clear that Congress intended for these services to be supported.³⁴

The Commission also asks, “[w]hat services are supported by E-Rate funding, and would there be an impact on schools’ and libraries’ ability to afford these services if the E-Rate program was terminated or limited.”³⁵ The reality is that schools and libraries around the country require both category 1 and category 2 E-Rate funding. Internet connectivity to the

³¹ *NPRM*, FCC 26-41, ¶ 16.

³² *Loper Bright Enterprises et al. v. Raimondo*, 603 U.S. 369 (2024) (holding that only the “best reading” of a statute is permissible) (*Loper Bright*).

³³ 47 U.S.C. § 254(h)(2)(A).

³⁴ 47 U.S.C. § 254(h)(5)(A)(ii) and (h)(6)(A)(ii) (CIPA requirements only apply to schools and libraries receiving discounts on “Internet access, Internet service, or internal connections”).

³⁵ *NPRM*, FCC 26-41, ¶ 18.

building (category 1) is just as important as connectivity within the building (category 2). Most, if not all, of the school and library operations supporting educational purposes rely on broadband connectivity and internal connections (or wi-fi) to function. As a result, the Commission should reject any calls to limit or terminate either category 1 or category 2 E-Rate funding.

Also, as stated above, schools and libraries have integrated digital technologies within nearly all aspects of their educational and library services including teaching and learning (e.g., digital learning platforms, cloud-based instructional resources, online assessments), and essential operations (e.g., cybersecurity systems, administrative operations, and communication with students, parents, library patrons, and the public). Put simply, access to affordable, high-capacity broadband is a fundamental prerequisite for successfully operating a school or library.

The Commission Cannot Base E-Rate Support on Educational Outcomes. The Commission also asks “whether Congress intended for the Commission’s decisions about the E-Rate program to be based, in whole or in part, on educational outcomes.”³⁶ The Commission provided the answer to this question in the same paragraph when it stated, “neither Congress nor the Commission have established principles or specific goals for educational outcomes.”³⁷ Nothing in section 254 authorizes the Commission to condition universal service support to schools and libraries based upon educational outcomes. The Commission’s role is limited to providing access to telecommunications and advanced services. In fact the statute uses the term “educational purposes” only once, in reference to services provided by telecommunications carriers in section 254(h)(1)(b).³⁸ The term is absent from the directive to enhance access to

³⁶ *Id.* ¶ 28.

³⁷ *Id.*

³⁸ 47 U.S.C. § 254(h)(1)(b).

advanced services in section 254(h)(2)(A).³⁹ Nothing in the statutory section creating the Commission gives the agency any authority with respect to evaluating educational outcomes, and the Commission lacks such expertise.⁴⁰ In short, there is no statutory authority for the Commission to limit universal service support to schools and libraries on the basis of educational outcomes.

The Commission Cannot Limit E-Rate Support Based on Screen Time. In addition, there is no rational reading of section 254 that would allow the Commission to impose screen time limitations on student and library patrons.⁴¹ Section 254(h)(2)(A) requires the Commission to “enhance[] access to advanced telecommunications and information services” and imposing screen time limits on students, educators and library patrons would directly contradict this mandate.

The Commission questions whether “screened” devices are being used for “educational purposes,” but the Commission has no expertise on this issue. Recently the administrative agency with relevant expertise in this area, the Department of Education, released guidance stating that decisions related to screen time are best made by states, school districts, educators, families, researchers, and education technology providers.⁴² The Commission should rightly defer any policies related to screen time to the federal agency with educational expertise, as well as to the state and local departments of education and school boards that administer local

³⁹ 47 U.S.C. § 254(h)(2)(A).

⁴⁰ 47 U.S.C. § 151.

⁴¹ *NPRM*, FCC 26-41, ¶ 30; *Loper Bright*, 603 U.S. 369.

⁴² Letter from Kirsten Baesler, Assistant Secretary Office of Elementary and Secondary Education, Department of Education, <https://www.ed.gov/media/document/guidance-education-technology-and-screentime-schools-114386.pdf> (Aug. 20, 2026) (DOE Screen Time Letter) (“The U.S. Department of Education believes these decisions are best made by states and local communities, with input from parents and teachers”).

education. Simply put: the Commission lacks the authority and the expertise to issue rules or condition E-Rate funding on screen time limits or restrictions.

Furthermore, Congress made clear that the Commission has no authority to determine whether specific content should be available within schools and libraries, reserving the right to block content to “a local educational agency, elementary or secondary school, or library.”⁴³ If Congress had intended to authorize the Commission to limit access to content, it would have been included in this list. Its exclusion shows that the Commission cannot now find language in the law that does not exist in order to restrict access to content by imposing screen time limitations on universal service support received by schools and libraries.

The Commission Cannot Limit E-Rate Support to ETCs. In the *NPRM* the Commission seeks comment on its decision to allow entities other than Eligible Telecommunications Carriers (ETCs) to receive E-Rate support.⁴⁴ Section 254(e) states that “only an eligible telecommunications carrier designated under section 214(e) of this title shall be eligible to receive specific Federal universal service support.”⁴⁵ However, the “specific” universal service support referenced in that section of the statute does not include the “special” universal service support provided to health care and educational providers and libraries under section 254(h).⁴⁶ Section 254(h)(1)(B) applies to “[a]ll telecommunications carriers serving a geographic area” – the requirement specifically is not limited to telecommunications carriers designated as ETCs under section 214(e). And section 254(h)(1)(B)(ii) explicitly states that telecommunications

⁴³ Pub. L. 106–554, § 1(a)(4), 114 Stat. 2763, 2763A–336, <https://www.govinfo.gov/content/pkg/PLAW-106publ554/pdf/PLAW-106publ554.pdf>.

⁴⁴ *NPRM*, FCC 26–41, ¶ 15.

⁴⁵ 47 U.S.C. § 254(e).

⁴⁶ 47 U.S.C. § 254(c)(3) and (h).

carriers may receive universal service support “notwithstanding the provisions of subsection (e) [the ETC designation requirement] of this section.”⁴⁷

Furthermore, section 254(h)(2)(A) is not limited to telecommunications services, but includes information services, which need not be provided by telecommunications carriers. Congress created a separate section of the universal service statute for schools, libraries, and health care providers, explicitly stated that the Commission should provide additional special services for these entities beyond the specific universal services listed in section 254(c)(1), and did not provide a limitation within section 254(h) for support to go solely to ETCs. The best reading of the statute is therefore the one the Commission has already adopted – special universal service support to schools, libraries and health care providers is not limited to ETCs.

C. The Commission Has Taken Actions to Improve the E-Rate Program Consistent with the Statute

E-Rate Funding Paid Directly to Applicants. The Commission seeks comment on whether section 254(h) requires only “that a telecommunications carrier extend a discount to an eligible school or library and then recoup it as an offset to its universal service contribution or as reimbursement from the support mechanism—not that the fund make payments directly to schools, libraries, and consortia, which is one of two invoicing methods currently allowed under program rules.”⁴⁸ Because there is no ETC limitation in section 254(h), the Commission has the discretion to allow E-Rate support to be paid directly to school and library applicants through the BEAR process. Section 254(h)(1)(B) requires the Commission to retain a discount mechanism reimbursement process for service providers, but there is no prohibition on the adoption of an

⁴⁷ 47 U.S.C. § 254(h)(1)(B)(ii).

⁴⁸ *NPRM*, FCC 26-41, ¶ 14. One method provides E-Rate payments to service providers (the Service Provider Invoicing (SPI) process), and the second provides E-Rate payments to applicants (the Billed Entity Applicant Reimbursement (BEAR) process).

alternative reimbursement mechanism for applicants. In fact, the current process enhances the efficiency and administration of the program, benefiting both applicants and service providers.

Support for Special Construction/Self-Constructed Networks. The Commission also seeks comment on limiting E-Rate support for special construction due to concerns about “subsidized overbuilding.”⁴⁹ As an initial matter, we note that the Commission seems to conflate the terms “special construction” and “self-constructed networks.” Special construction for leased lit service has been eligible for E-Rate support since the program’s inception. In the 2014 *E-Rate Second Modernization Order* the Commission authorized E-Rate support for self-provisioned networks owned by applicants, and for special construction for dark fiber services.⁵⁰ At that time the Commission explained the difference between the two services, stating, “[W]e distinguish dark-fiber leases and other arrangements from self-construction of networks, in which a school or library owns a full network or fiber run, including all the fiber strands and conduit. Dark-fiber leases more closely resemble lit-fiber contracts than self-provisioning in this regard, in that schools and libraries only lease the fiber strands that they actually put to use.”⁵¹

For either term, however, concerns about overbuilding are unfounded. The E-Rate program requires applicants to solicit competitive bids for service and to select the most cost-effective option. When applicants seek bids for either self-constructed networks or dark fiber services, they must also consider bids for leased lit services.⁵² Self-constructed network and dark fiber special construction bids may only be selected if they are the most cost-effective bids

⁴⁹ *NPRM*, FCC 26-41, ¶ 22.

⁵⁰ *Modernizing the E-rate Program for Schools and Libraries; Connect America Fund*, WC Docket Nos. 13-184 and 10-90, Second Report and Order and Order on Reconsideration, FCC 14-189, ¶¶ 30-54 (Dec. 19, 2014) (*E-Rate Second Modernization Order*).

⁵¹ *Id.*, ¶ 31 n.49.

⁵² 47 C.F.R. § 54.503(c)(iv) and (v).

received. In some cases, this may be due to the fact that no other service provider serves that area or because an existing provider chose not to submit a bid. And in some cases, it may be more economical and cost-effective for an applicant to self-construct a network or rely on special construction rather than pay for leased lit service over a period of several years. These options save the program money, allowing E-Rate support to be provided to more applicants. Therefore, the Commission should continue to fund them.

E-Rate Discount Rate Calculation. The Commission seeks comment on “whether the use of the National School Lunch Program (NSLP) eligibility and urban/rural status in determining an applicant’s discount rate remains an effective method for calculating support and ensuring that we are satisfying the universal service principles established by Congress in section 254 of the Communications Act” or “whether adjustments to the current discount rate system could better allocate the limited E-Rate funding.”⁵³ Specifically, the Commission asks if the discount rate for rural schools and libraries should be higher than the discount rate for urban schools and libraries, while also recognizing that the current E-Rate rules already “provid[e] rural schools and libraries with higher discounts than their urban counterparts in the same discount tier.”⁵⁴ The Commission also asks if “a disproportionate share of funding flow[s] to large, well-resourced school districts with substantial local tax bases.”⁵⁵ This is not the case.

When the Commission established the E-Rate discount matrix it acknowledged the need for additional support for schools and libraries in high-cost and low-income areas.⁵⁶ The

⁵³ *NPRM*, FCC 26-41, ¶ 25.

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, FCC 97-157, ¶ 492 (May 8, 1997) (Universal Service First Report and Order).

Commission recognized that, although the discount matrix did not make the rates identical in high and low-cost areas, “we find that the matrices distribute substantially more funds, particularly on a per-capita basis, to reduce prices paid by schools and libraries in areas with higher telecommunications prices than they do to reduce prices in areas in which such prices are already relatively low. The greater price reduction in terms of total dollar amounts for schools and libraries in high cost areas results primarily because the discount rates are based on percentages that lead proportionally to more funds flowing to those schools and libraries facing proportionally higher prices.”⁵⁷

Based on the Universal Service Administrative Company’s (USAC) Open Data tool, in Funding Year (FY) 2025, 85 percent of E-Rate funding commitments went to schools and libraries at the highest discount levels.⁵⁸ This demonstrates that the current discount percentage mechanism, which provides a greater discount for schools and libraries in low-income and rural areas, is working successfully. There is no need to change the discount system at this time.

D. The Commission’s Review Should Explore Areas to Improve the Program

To fulfill the universal service requirements of section 254 for schools and libraries, the Commission has established the E-Rate program. While the statute sets out overarching goals and provides certain guidance, the Commission has discretion to establish the mechanism by which those universal service goals will be achieved. Rather than looking to limit or sunset the program, the Commission can and should examine ways to improve the program to better achieve the statutory goals of providing access to advanced telecommunications and information services.

⁵⁷ *Id.*, ¶ 494.

⁵⁸ Open Data’s E-Rate Search Commitments Tool shows that, of the total \$2,688,561,780.61 committed in FY 2025, \$2,281,684,469.44 went to applicants receiving a 70 percent or larger discount percentage.

Cybersecurity. The Commission should build on the success of the current cybersecurity pilot program and take this opportunity to address program participants’ requests to allow E-Rate funding to support more advanced cybersecurity services.⁵⁹ At minimum, the Commission should update the E-Rate program’s technologically outdated firewall definition to include advanced features like intrusion detection that are now standard components of firewalls. Cyberattacks can cripple a network, making useless the facilities and services for which E-Rate support has been expended. As the Commission has recognized, “the shift to modern connectivity has brought with it increased cybersecurity threats and attacks, particularly for K-12 schools and libraries. Recent information shows that such schools and libraries are vulnerable to increased cybersecurity threats and attacks, often leading to the disruption of school and library operations, loss of learning, reductions in available bandwidth, significant monetary losses, and the leaking and theft of students’, school staff members’, and library patrons’ personal information and confidential data.”⁶⁰

The evolution of cybersecurity threats and remediation methods are precisely the types of “advances in telecommunications and information technologies and services” that Congress directed the Commission to consider when periodically examining and establishing universal services.⁶¹ Consistent with section 254(c)(1), advanced cybersecurity services are essential to education, public health, or public safety and are consistent with the public interest, convenience,

⁵⁹ See, e.g., Consortium for School Networking et al., Comments Responding to the Commission’s Proposal to Establish a Schools and Libraries Cybersecurity Pilot Program, WC Docket No. 23-234, <https://www.fcc.gov/ecfs/document/10130561408829/1>, 9-11 (Jan. 29, 2024); Comments Responding to the Wireline Bureau’s Public Notice Regarding Allowing the Use of E-Rate Funds for Advanced or Next-Generation Firewalls and Other Network Security Services, WC Docket No. 13-184, [Coalition E-rate Firewall Comments as Filed 2 13 23.pdf](#) (Feb. 13, 2023).

⁶⁰ *Schools and Libraries Cybersecurity Pilot Program*, WC Docket No. 23-234, Report and Order, FCC 24-63, ¶ 5 (June 11, 2024).

⁶¹ 47 U.S.C. § 254(c)(1).

and necessity.⁶² The Commission has the authority to designate advanced cybersecurity services eligible for support as special services for schools and libraries under section 254(c)(3).⁶³ And they are necessary to enhance access to advanced telecommunications and information services for schools and libraries under section 254(h)(2)(A).⁶⁴ Providing E-Rate support for advanced cybersecurity services therefore is consistent with section 254.

We also note that while the Commission can and should make advanced cybersecurity services eligible under E-Rate, it should recognize that schools and libraries need additional funding and appropriate flexibility to balance their connectivity and cybersecurity needs.

Streamlining Program Administration. The Commission should also take this opportunity to ensure that the processes used to administer the E-Rate program are transparent, efficient, and effective for schools and libraries. Over the years, the Commission has taken action to adopt a variety of changes to E-Rate program application processes, many of which SHLB supported. For example, earlier this year it clarified guidance around transition of services, cost-allocation, and eliminating the FCC Form 486.⁶⁵ Most recently, the Commission initiated two proceedings requesting comment on administration of the universal service

⁶² 47 U.S.C. § 254(c)(1)(A) and (D).

⁶³ 47 U.S.C. § 254(c)(3).

⁶⁴ 47 C.F.R. § 254(h)(2)(A).

⁶⁵ See *Promoting Fair and Open Competitive Bidding in the E-Rate Program*, WC Docket No. 21-455, Schools and Libraries Universal Service Support Mechanism, CC Docket No. 02-6, Report and Order and Order on Reconsideration, FCC 26-30 (May 1, 2026); see also *Schools and Libraries Universal Service Support Mechanism*, CC Docket Nos. 02-6, 96-45, and 97-21, Report and Order and Further Notice of Proposed Rulemaking, FCC 23-56 (July 21, 2023) (streamlining certain E-Rate processes for Tribal libraries and other E-Rate applicants).

programs and its oversight of USAC.⁶⁶ SHLB was pleased to offer a variety of recommendations it believes could strengthen program administration efforts, such as increasing outreach between USAC and program stakeholders and suggesting ways to reduce administrative burden.⁶⁷ Efforts like these not only enable the Commission to explore how to address stakeholder concerns and streamline program implementation, but ensure that the programs operate as intended and remain accessible and efficient for the beneficiaries relying on their support.

III. THE CHILDREN’S INTERNET PROTECTION ACT IS WORKING AS CONGRESS INTENDED

In the *NPRM*, the Commission seeks comment on various issues related to its implementation of the Children’s Internet Protection Act (CIPA), which was created to protect children from accessing harmful material while using certain federally funded Internet services and internal connections.⁶⁸

A. The Commission Should Allow Schools and Libraries Technical Flexibility to Comply with CIPA

The Commission seeks comment on whether technology protection measures should require filtering at the network level or the device level and whether the restrictions should apply only to computers owned by schools and libraries.⁶⁹ Some SHLB members filter at the network level, some at the device level, and some do both. Decisions about filtering should be made at

⁶⁶ See *Wireline Competition Bureau and Office of the Managing Director Seek Comment on Reforms of USAC Processes and Oversight*, CC Docket Nos. 96-45, 97-21, Public Notice, DA 26- 367 (WCB-OMD, Apr. 15, 2026); see also *Maximizing Efficiencies in Universal Service Administration*, WC Docket No. 26-173, Notice of Proposed Rulemaking, FCC 26-52 (Aug. 7, 2026).

⁶⁷ See, e.g., Comments of the Schools, Health & Libraries Broadband (SHLB) Coalition and the American Library Association, WC Docket No. 26-173, [SHLB ALA Comments - USF Admin NPRM - 9 30 26.pdf](#), 7-22 (Sept. 20, 2026).

⁶⁸ 47 U.S.C. § 254(h)(5)(B)(i).; *NPRM*, FCC 26-41, ¶ 34 *et seq.*

⁶⁹ *NPRM*, FCC 26-41, ¶¶ 35-36.

the local level based on the local networking environment. SHLB also believes the best reading of the statute is the Commission’s current interpretation that the CIPA restrictions only apply to the use of devices that are owned by schools or libraries receiving E-Rate support for Internet access, Internet service or internal connections.

First, the plain language of the statute specifically references the school and library computers, not computers owned by students or patrons. It states that the CIPA filtering requirement includes monitoring the online activities of minors and the operation of a technology protection measure (commonly called “filtering”) “with respect to any of its computers” and does not refer to the network or services themselves.⁷⁰ Second, the prevalence of third-party devices in schools does not mean those devices are allowed on a school or library network. Typically, to connect to a school or library network, a potential user needs to register on the network and/or create an account. As a practical matter, the choice made by a school or library may depend on the number of computers available to students, the design of the filter, other restrictions on devices on school grounds (e.g., banning the use of personal electronic devices during the school day), and the cost of various approaches. Finally, the Commission also has not identified evidence demonstrating that its current approach needs to be changed.⁷¹ As such, SHLB believes that the current interpretation of CIPA – that requirements apply only to school- or library-owned computers – is the best and correct reading of the statute, and SHLB urges the Commission to allow schools and libraries to determine the best way to meet the technology protection measure requirements for their schools and patrons.

⁷⁰ 47 U.S.C. § 254(h)(5)(B)(i).

⁷¹ The sole report cited by the Commission regarding teenagers viewing pornography does not indicate that any of that viewing is occurring via school-owned devices or E-Rate funded networks. *NPRM*, FCC 26-41, ¶ 34 n.131.

B. The Commission Does Not Have the Authority to Adopt Many of the Changes Raised in the *NPRM* Regarding CIPA

Much of the *NPRM*'s section on CIPA simply exceeds the authority granted to the Commission by the statute because, in enacting CIPA, Congress set forth detailed requirements for schools and limited the Commission's authority in many instances. First, the Commission seeks to add definitions to the statute not authorized by Congress. For example, the Commission asks whether it can add a definition of "child" to adopt rules that apply to some minors but not others.⁷² Yet the statute details what is required under CIPA and applies all of those restrictions to "minors," a term that is already defined as anyone under the age of 17.⁷³ The Commission's proposal thus bypasses Congress's specific choice to define those protected by CIPA and would impermissibly expand the Commission's authority by creating a new definition that Congress itself did not make.⁷⁴ Accordingly, the Commission lacks the authority to establish a new definition of "child."

Second, the Commission does not have the authority to limit the number of hours students spends on their device ("screen time")⁷⁵ under CIPA's definition of "harmful to minors"⁷⁶ or under the definition of what is "inappropriate for minors."⁷⁷ The statute itself defines "harmful to minors" specifically to include those visual depictions taken as a whole to appeal to a "prurient interest" in nudity, sex or excretion; depicts specific sexual acts in a

⁷² *Id.*, ¶ 41 (seeking comment on whether the Commission should adopt a definition of "child" or establish another definition of any individual under the age of 13).

⁷³ 47 U.S.C. § 254(h)(7)(D).

⁷⁴ 5 U.S.C. § 706(2)(C).

⁷⁵ The Commission seems to include as "screen time" any use of a computer, tablet or other electronic device in the classroom when such use is different from use of an electronic device for social media, to consume entertainment or play video games.

⁷⁶ *NPRM*, FCC 26-41, ¶ 37.

⁷⁷ *Id.*, ¶¶ 37-42, 49-53.

“patently offensive” way; and lacks serious literary, artistic, political or scientific value.⁷⁸ All three criteria must be met to satisfy the definition of “harmful to minors.” Congress’s definition focuses on the type of content, not the amount of time an electronic device is used. The Commission therefore cannot limit student, teacher or patron use of electronic devices based on some arbitrary number of hours.

Further, the statute also prohibits the Commission from identifying content that is “inappropriate for minors.”⁷⁹ The statute directs each school or library to address access by minors to “inappropriate matter on the Internet;” it did not direct the Commission to make that determination. In fact, CIPA prohibits any agency or instrumentality of the U.S. Government from establishing criteria for deciding what is inappropriate content for minors. That determination can only be made by the E-Rate applicant.⁸⁰

This same argument – that decisions regarding what is inappropriate for minors shall be made at the local level – is applicable when the Commission seeks comment on whether it should revisit its prior determination that social networking websites are not per se “harmful to minors.”⁸¹ Even if the Commission incorrectly believes it has such authority (despite the statute not defining that social networking sites are harmful to minors), defining which social networking sites would be banned would be extremely difficult and such a definition could likely

⁷⁸ 47 U.S.C. § 254(h)(7)(G).

⁷⁹ 47 U.S.C. § 254(l)(1).

⁸⁰ See 47 U.S.C. § 254(l)(2) (“A determination regarding what matter is inappropriate for minors shall be made by the school board, local educational agency, library or other authority responsible for making the determination. No agency or instrumentality of the United States Government may establish criteria for making such determination; review the determination made by the certifying school, school board, school district, local educational agency, library, or other authority; or consider the criteria employed by the certifying” E-Rate applicants.) The Commission included this language in its rules at 47 C.F.R. § 54.520(c)(4).

⁸¹ *NPRM*, FCC 26-41, ¶ 39.

capture sites that schools have determined serve educational purposes, including sites that contain videos that assist students and teachers with educational concepts, including math tutorials, preparation and study tips for Advanced Placement tests, examples of successful extracurricular programs, and college essay advice. As such, the Commission cannot and should not go beyond the statutory definition of “harmful to minors” and “inappropriate for minors” with respect to social networking sites.

The same arguments apply to the Commission’s questions about “unauthorized access” by students online.⁸² Specifically, the Commission seeks comment on the meaning of “unauthorized access” and whether it encompasses any material devoid of “educational purpose.”⁸³ The Commission also seeks comment on whether “unauthorized access” could mean a student accessed the Internet in excess of a prescribed number of hours.⁸⁴ The best reading of the statute is that Congress was referring to illegal activities where a student would access a site or information that was not available to the public, as it clarified by stating “unauthorized access, including so-called ‘hacking’ and other unlawful activities by minors online.”⁸⁵ The further definition of “unauthorized access” demonstrates that Congress did not intend the term to cover any access to electronic devices, the Internet, or specific content that the Commission or a locality wanted to block, but specifically was focused on illicit activity. The Commission’s

⁸² *Id.*, ¶ 38.

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ 47 U.S.C. § 254(l)(iii). Furthermore, that provision is included in the section detailing the components of the Internet Safety Policy that each applicant must adopt. Congress has not given the Commission a role in detailing the parameters beyond confirming the existence of the five items to be included in the policy.

suggested interpretation is overly broad and does not reflect the best reading of that statutory provision.

In addition to the limitations discussed above on the Commission’s authority to modify or expand CIPA’s scope, the Commission simply lacks the resources to establish additional rules for every school, school district and library in the United States. The Commission seeks comment on limiting the use of electronic devices, when it lacks expertise in evaluating use of electronic devices in an educational setting. The Commission also lacks expertise in establishing digital educational curriculum, including how such education should best be delivered. Those determinations should be left to the actual experts – educators.⁸⁶

State and local experts are debating these issues, and the nation’s federalist principles allow for states to be the “laboratories of democracy.”⁸⁷ And as the Administration itself noted, Artificial Intelligence tools are becoming more pervasive, and their proper use is the subject of great debate.⁸⁸ Therefore local schools should be allowed to decide whether instruction familiarizing students with these tools is appropriate and prepares their students for higher education or the job market.

C. The Commission Should Not Adopt Additional Burdensome Procedural Requirements for CIPA

The Commission also seeks comment on whether it should establish more detailed requirements on the contents and format of Internet Safety Policies, such as whether it should establish notice and timing requirements for their adoption by local boards, whether to require annual public hearings regarding their content, and whether the Commission should routinely

⁸⁶ See DOE Screen Time Letter; see also <https://www.ed.gov/about/news/press-release/us-department-of-education-releases-guidance-responsible-use-of-education-technology-classroom>.

⁸⁷ *New State Ice Co. v. Liebmann*, 285 U.S. 262 (1932).

⁸⁸ DOE Screen Time Letter at 1.

require their submission or approve them.⁸⁹ In addition, the Commission seeks comment on whether minor non-compliance with the statutory requirements should be allowed to be cured.⁹⁰

SHLB opposes additional detailed and burdensome procedural paperwork beyond the statutory requirements for compliance with section 254. First, the statute clearly sets forth the policies that schools and libraries must include in their Internet Safety Policies.⁹¹ The Commission does not have the authority to include additional requirements or content. Second, local public boards already have procedures for notifying the public of their business, and there is no reason for the Commission to set notice requirements specific to the E-Rate program. Local governing boards allow stakeholder feedback at the local level where policies can be discussed and tailored to meet local needs. SHLB further believes the Commission should not add a requirement that Internet Safety Policies be reviewed annually. Rather, if parents or guardians are interested, they can contact their local school or library board and ask questions, and the local school or library board can decide how it wishes to respond. In fact, schools and libraries already have their own incentive to adopt and implement robust Internet Safety Policies: they care about the safety of students, staff and patrons. Third, the Commission should not routinely review, approve or retain the Internet Safety Policies from individual school districts, because that will unnecessarily add to the program's administrative costs without any corresponding benefit. The statute does not require the Commission to do any of those tasks. Instead, the Commission should continue to review Internet Safety Policies only during audits. Overall, it is essential that the Commission carefully consider the burdens of additional

⁸⁹ *NPRM*, FCC 26-41, ¶¶ 43-45, 47.

⁹⁰ *Id.*, ¶ 47.

⁹¹ 47 U.S.C. § 254(l).

regulations on applicants. Overly burdensome requirements will discourage participation in the E-Rate program.⁹²

Finally, the Commission should not change its current approach on allowing schools and libraries to correct minor deficiencies. The statute addresses what should happen when there is non-compliance with certain requirements. Recovery is only authorized in those rare circumstances when a school or library **knowingly** fails to ensure the use of its computers in accordance with the requirement that it enforce “a policy of Internet safety that includes the operation of a technology protection measure . . . that protects against access through such computers to visual depictions” that are obscene, child pornography or harmful to minors and is enforcing the operation of the technology protection measure.⁹³ Knowingly failing to comply with the certification means the school or library is either making no attempt to comply or a school or library has clear knowledge that its content filter is not blocking prohibited visual depictions and does nothing to attempt to correct its deficiencies.⁹⁴ Congress’s inclusion of the word “knowingly” sets a higher standard than mere non-compliance with the content filtering requirement. In addition, the statute specifically limits recovery to the certification of the use of technology protection measure; it does not authorize recovery for procedural errors such as failing to provide public notice or simply not retaining proof that the public hearing was held.

The statute also allows applicants to “remedy the failure” by ensuring the use of a technology protection measure. The cure is effective as soon as the deficiency is cured. This provision demonstrates that Congress cared primarily about ensuring students were protected

⁹² If the Commission adopts any additional requirements for CIPA, however, those requirements should be clear and determined well in advance of the relevant funding year.

⁹³ 47 U.S.C. § 254(h)(5)(C)(i), (h)(6)(C)(i), (h)(5)(F)(ii), and (h)(6)(F)(ii).

⁹⁴ 47 U.S.C. § 254(h)(5).

from harmful material, and wanted to incentivize schools and libraries to cure any deficiencies as soon as possible. As such, if there is an alleged deficiency, the Commission should allow the school or library to come into compliance, instead of punishing the applicant for a minor issue by directing USAC to dismiss or deny the application. All of the other CIPA requirements, including the five Internet Safety Policy components listed in section 254(l)(1)(A), were purposefully not included in the required statutory certifications. Because the statute only provides for recovery when an entity does not comply with the certification, recovery or denial is not an appropriate remedy for the other statutory provisions.

IV. SEVERAL OF THE COMMISSION’S PROPOSALS FOR CONSULTANTS ARE OVERBROAD AND WILL HARM APPLICANTS

As the Commission noted, consultants play an important role in the E-Rate program, assisting applicants and service providers.⁹⁵ Since 2010, the Commission has required applicants to identify their consultants on their Forms 471. While SHLB strongly supports efforts to promote integrity in the E-Rate program, it believes several of the Commission’s proposals with respect to consultants are unnecessary and overbroad, will result in higher costs to applicants, and could actually reduce compliance with program rules instead of strengthening them.

Definition of “consultant.” The Commission proposes a definition of consultant that is overbroad, including every person who is not employed by the school, library, or service provider, and could be read to include billing agents, sales agents, accountants, school board members, and attorneys.⁹⁶ The proposed definition includes any non-employee who assists any applicant or service provider, whether or not for a fee, with any aspect of participating in the E-

⁹⁵ *NPRM*, FCC 26-41, ¶ 55.

⁹⁶ *Id.*, ¶ 57.

Rate program.⁹⁷ This overbroad definition would appear to require registration, training, disclosures and annual certifications from other parties not directly submitting forms and who do not access the E-Rate Productivity Center (EPC), potentially including, for example, third-party vendors who send out a company's invoices and attorneys providing legal advice to program participants. Further, the Commission has not justified the sweeping breadth of its definition and the resulting costs.

Additionally, the Commission proposes to “establish[] a clear definition of a consultant”⁹⁸ when it already has an established definition. SHLB urges the Commission to keep its existing definition rather than adopt the proposed definition in the *NPRM*. The most recent version of the FCC Form 470 instructions that the Commission submitted to the Office of Management and Budget for approval, in December 2013, contained the following definition: “A consultant is any non-employee of the entity applying for funding that assists in filling out the application materials for a fee.”⁹⁹ This is the definition that appears on USAC's website and that program participants have understood for many years.¹⁰⁰

There is no acknowledgment in the *NPRM* of this existing definition, adopted by the Commission in forms approved by OMB. Nor does the Commission offer a justification for

⁹⁷ *Id.*

⁹⁸ *Id.*, ¶ 58.

⁹⁹ See Instructions for Completing the Schools and Libraries Universal Service Description of Services Requested and Certification Form (FCC Form 470) at 7, Item 7 (Dec. 2013), *available at* <https://docs.fcc.gov/public/attachments/DOC-326788A1.pdf>. The FCC Form 471 instructions from 2013 contained the same definition. See Instructions for Completing the Schools and Libraries Universal Service Services Ordered and Certification Form (FCC Form 471) at 9, Item 6g (Dec. 2013), *available at* <https://docs.fcc.gov/public/attachments/DOC-326790A1.pdf>. The 2013 form instructions can be found in the forms database on the Commission's website. See <https://www.fcc.gov/licensing-databases/forms>. The Commission appears to have delegated responsibility for form instructions to USAC.

¹⁰⁰ See “Consultant Registration Numbers,” USAC Website, <https://www.usac.org/e-rate/applicant-process/competitive-bidding/consultant-registration-numbers/> (last visited Oct. 2, 2026).

expanding that definition, beyond suggesting that its proposed definition will strengthen program integrity.¹⁰¹ But during the time the existing definition of “consultant” has been in effect, improper payments and evidence of fraud in the E-Rate program have only decreased. As previously mentioned, the Commission reported that the FY 2024 E-Rate improper-payment error rate fell from 1.59 percent to 1.27 percent. Because 1.27 percent is below the statutory 1.5 percent threshold used to identify programs susceptible to significant improper-payment risk, the Commission states that E-Rate is no longer considered susceptible to a significant risk of improper payments.¹⁰² Additionally, the GAO recently released a report finding that when comparing multiple federal programs, only E-Rate met the nine key requirements and best practices for preventing waste, fraud and abuse.¹⁰³ Accordingly, there is no reason to believe that expanding the definition of “consultant” will have a measurable positive effect on program integrity, and the Commission has not provided such a justification in the *NPRM*.

At the same time, the overbroad proposed definition would have significant negative consequences. The Commission would saddle this even larger proposed group with excessive certification and registration requirements. Specifically, the Commission proposes an annual certification form that must be completed by every consultant.¹⁰⁴ Many of the certifications appear to be high-level summaries of the program rules, but a few of the proposed certifications are vague and may discourage applicants and service providers from obtaining expert assistance. For example, the certifications would include disclosure of any “association and/or relationship the consultant may have that could potentially pose an actual conflict or an appearance of a

¹⁰¹ See, e.g., *NPRM*, FCC 26-41, ¶ 56.

¹⁰² FCC OMD IG Response.

¹⁰³ GAO Oversight Report.

¹⁰⁴ *NPRM*, FCC 26-41, ¶ 59-63; proposed 47 C.F.R. § 54.517.

conflict of interest.”¹⁰⁵ The Commission does not define what would constitute an “appearance of a conflict of interest” or explain why the mere “appearance” of a conflict of interest would be problematic under program rules or lead to waste, fraud or abuse. The lack of a proposed definition is too vague to comply with the Administrative Procedure Act’s requirements that federal agencies provide notice of their rules.¹⁰⁶

Consultant Certifications. Similarly, the Commission’s proposed certification requiring consultants to notify USAC of any “potential misconduct” is likely to lead to more program non-compliance rather than improving program integrity.¹⁰⁷ This requirement may discourage applicants from seeking outside guidance about the program rules and compliance. For example, if employees in an organization responsible for E-Rate compliance seek to confirm their organizations are correctly following all of the rules, they may be discouraged from hiring an outside expert knowing that the consultant may feel obligated to report “potential misconduct,” even though the consultant’s judgment of what constitutes “potential misconduct” may not be accurate. Further, what do “reasonable measures” to be informed look like?¹⁰⁸ “Potential misconduct” is unreasonably vague and does not provide sufficient notice for consultants to comply with the rule.¹⁰⁹

¹⁰⁵ See proposed 47 C.F.R. § 54.517(a)(1)(vii).

¹⁰⁶ 5 U.S.C. § 553(b).

¹⁰⁷ See proposed 47 C.F.R. § 54.517(a)(1)(ix), (2)(iv).

¹⁰⁸ See proposed 47 C.F.R. § 54.517(a)(1)(ix), (2)(iv).

¹⁰⁹ 5 U.S.C. § 553(b).

Registration Requirements. The additional registration requirements proposed by the Commission are unnecessary and costly.¹¹⁰ The Commission has proposed to require more detailed information – including consultants’ home addresses, date of birth, personal phone number and partial social security number – than is required of actual applicant and service provider program participants.¹¹¹ There is no proven connection between the collection of this information and protections against waste, fraud and abuse. The Commission notes that the information and registration system will allow USAC to validate the identity of each consultant, but there is no indication that any consultants in the program are pretending to be someone they are not.¹¹² Furthermore, consultants already register with USAC in order to gain access to the EPC system.

SHLB is concerned that the proposed requirements for consultants would increase the paperwork burden for applicants, as well as their costs, without providing any additional protection against waste, fraud and abuse. As described above, the E-Rate program has been praised by GAO for its current anti-fraud measures and has a low improper payment rate.¹¹³ A program in such good standing does not need to adopt additional, onerous requirements for program participants and the consultants assisting them. Finally, SHLB believes the Commission should not regulate the contractual relationship between consultants and their clients.¹¹⁴

¹¹⁰ The Commission has identified only four incidents in the 30 years of the program’s existence to justify these burdensome regulations on every consultant, and on many individuals who are not consultants under the Commission’s current definition.

¹¹¹ *NPRM*, FCC 26-41, ¶¶ 64-69.

¹¹² *NPRM*, FCC 26-41, ¶ 66.

¹¹³ GAO Oversight Report.

¹¹⁴ *NPRM*, FCC 26-41, ¶¶ 70-71.

V. THE COMMISSION SHOULD RETAIN THE KALAMAZOO STANDARD

In the *NPRM*, the Commission proposes to eliminate the *Kalamazoo Order*'s standard for continuing service under an existing contract after a competitive bidding process, and replace it with a requirement that parties sign a new contract at the conclusion of the competitive bidding process.¹¹⁵ SHLB believes the Commission should continue to allow its existing process, whereby applicants can use an existing contract as a bid in a competitive bidding process, as established in the *Kalamazoo Order* in 2002.¹¹⁶

First, the Commission mischaracterizes the *Kalamazoo Order* as providing an “exception” to the competitive bidding rules.¹¹⁷ But that is not the case. Under the guidance in the *Kalamazoo Order*, applicants still must conduct a competitive bidding process that complies with E-Rate program requirements.¹¹⁸ Applicants must carefully consider all bids, including the bid that is in the existing contract. They must select the most cost-effective services. They must wait 28 days before making a selection. No rules are excused or waived. Importantly, the Commission did not waive its rules in the *Kalamazoo Order*; instead, it clarified that an existing contract could be used as a bid without the vendor submitting a new bid.¹¹⁹

Second, the Commission expresses “concern” about applicants that, relying on the *Kalamazoo Order*, conduct a new competitive bidding process in order to “correct underlying

¹¹⁵ *Id.*, ¶¶ 73-75.

¹¹⁶ *Request for Review of the Decision of the Universal Service Administrator by Kalamazoo Public Schools*, CC Docket No. 96-45, Order on Reconsideration, 17 FCC Rcd 22154, 22157, ¶¶ 5-6 (WCB 2002) (*Kalamazoo Order*). This order reversed a prior Bureau decision finding that Kalamazoo's actions violated the competitive bidding rules.

¹¹⁷ *NPRM*, FCC 26-41, ¶ 73 (stating that, with the proposed change, applicants would “no longer be able to rely on the narrow, uncodified exception to competitive bidding that was adopted early in the program's history.”).

¹¹⁸ *Kalamazoo Order*, 17 FCC Rcd at 22157, ¶¶ 5-6.

¹¹⁹ *Id.* at 22154, ¶ 1.

competitive bidding issues related to the contract.”¹²⁰ The Commission asserts in the *NPRM* that it has never allowed applicants to “cure” competitive bidding violations by conducting a new competitive bidding process.¹²¹ But this assertion is contrary to precedent.

In a 2015 decision granting a petition for reconsideration, the Bureau found that rebidding services *did* cure competitive bidding issues with the original procurement and allowed the applicant to continue service under its existing contract.¹²² The service provider, SEND Technologies, had argued that alleged competitive bidding violations in the applicant’s FY 2002 competitive bidding process were “irrelevant” to the funding requests submitted by the applicant in FYs 2003 and 2004 because the services had subsequently been rebid.¹²³ In 2003 and 2004, the applicant conducted new competitive bidding processes that complied with the competitive bidding rules, then opted to continue service under the multiyear contract it had executed with SEND Technologies in 2002 after determining that it was the most cost-effective option.¹²⁴ Relying on the *Kalamazoo Order* as precedent, the Bureau granted SEND Technologies’ petition, titling its decision in the Bureau’s March 2015 streamlined universal service decisions

¹²⁰ *NPRM*, FCC 26-41, ¶ 74.

¹²¹ *Id.*, ¶ 74 n.217 (“We have consistently held that applicants may not use improperly awarded contracts for E-Rate support. . . . Contracts that violate the Commission’s fair and open competitive bidding rules cannot be ‘cured’ under the *Kalamazoo Order on Reconsideration* precedent.”) (citations omitted). The three orders cited do not in fact support that assertion because none of them involved a rebid of eligible services purchased under a multiyear contract. In none of those three orders did the applicant conduct a new competitive bidding process, in compliance with the E-Rate competitive bidding rules, then opt to continue service under an existing contract, after satisfying the requirements outlined in the *Kalamazoo Order*. As such, the three orders cited in the *NPRM* have no bearing on the *Kalamazoo Order* and cannot be cited to support a limitation on the *Kalamazoo Order*’s applicability.

¹²² *Streamlined Resolution of Requests Related to Actions by the Universal Service Administrative Company*, CC Docket Nos. 96-45, 02-6, Public Notice, DA 15-387, at 5 & n.15 (WCB, Mar. 27, 2015) (citing the *Kalamazoo Order*) (*March 2015 PN*).

¹²³ SEND Technologies, LLC / Nexus Systems, Inc. (Jackson Parish School District), Petition for Reconsideration, CC Docket No. 02-6, at 7 (Mar. 24, 2008).

¹²⁴ *Id.* at 4.

public notice as “*Allowing Multi-Year Contract Despite Previous Taint During an Unsupported Year.*”¹²⁵ The Bureau’s grant of SEND Technologies’ petition for reconsideration makes clear that applicants *have* been allowed to continue service under a multiyear contract and receive E-Rate funding after rebidding the services, provided that the rebid complied with the Commission’s competitive bidding rules.

As a matter of sound public policy, rebidding eligible services *should* cure any issues with the original competitive bidding process and allow the applicant to receive E-Rate funding for the remaining years of the contract. The Commission should consider the policy consequences if it were to prohibit rebidding to cure alleged competitive bidding violations:

- If applicants cannot rebid services where USAC has found competitive bidding violations in the original procurement, they will never be able to correct mistakes they make in the competitive bidding process. Applicants will be stuck in multiyear contracts with no access to E-Rate funding for the life of the contract.¹²⁶
- This outcome would discourage E-Rate applicants from entering into multiyear contracts. Because multiyear contracts generally allow applicants to obtain lower prices, discouraging them would increase the costs of eligible services (as well as creating more work for applicants and for USAC).
- Rebidding to cure competitive bidding violations has been standard practice in the E-Rate program for more than 20 years. E-Rate applicants routinely rebid services associated with multiyear contracts where USAC has found alleged competitive bidding violations in the original procurement.¹²⁷ For that reason, if the Commission were to determine now that this practice is not allowed under the E-Rate rules, that determination would harm numerous E-Rate applicants.

Third, the *NPRM* seems to suggest that if an applicant and a service provider execute a new contract at the end of the competitive bidding process (as the Commission’s proposed rule

¹²⁵ *March 2015 PN*, DA 15-387, at 5 & n.15.

¹²⁶ Some E-Rate contracts provide that the contract is contingent upon the applicant receiving E-Rate funding and may be canceled if funding is denied. But this language does not help applicants that do receive funding commitments in the early years of the contract.

¹²⁷ The appeal process can take anywhere from several months to several years, so applicants will take this step even if USAC’s findings have no merit.

would require), instead of continuing service under their existing multiyear contract, then the applicant would be able to get E-Rate funding for the requested services. The Commission states that “[c]ontracts that violate the Commission’s fair and open competitive bidding rules cannot be ‘cured’” by relying on the *Kalamazoo Order*.¹²⁸ But a new contract associated with a new competitive bidding process that complies fully with the rules would not “violate the Commission’s fair and open competitive bidding rules,” so presumably any alleged problems with the original competitive bidding process would not attach to—or “taint”¹²⁹—the new contract. If this is indeed the Commission’s position, then the Commission is elevating form over substance: An applicant that chose to continue service under an existing multiyear contract after a rebid is ineligible for funding for the remaining years of the contract, but an applicant that executes a new contract after a rebid is eligible for funding for the remaining years of the contract, even if the new contract features the *exact same terms and pricing* as the original contract. As a policy matter, this is a perverse and arbitrary outcome.

Finally, the Commission has not considered the additional paperwork and process that will be required by this new rule. Many service providers that are selected as the winning bidder after the expiration of an existing contract do not sign an entirely new contract with their applicant-customers. Instead, they may sign an amendment or issue a service order with the new pricing and/or locations without any signatures. This proposed new rule appears likely to require companies to alter their existing contracting processes that are currently E-Rate compliant. While companies support Commission efforts to combat waste, fraud and abuse in the E-Rate

¹²⁸ *NPRM*, FCC 26-41, ¶ 74 n.217.

¹²⁹ *Id.* (quoting *Petition for Reconsideration of a Decision of the Wireline Competition Bureau by Lazo Technologies, Inc.*, CC Docket No. 02-6, Order, 26 FCC Rcd 16661, 16664, ¶ 7 (WCB 2011)).

program, such efforts should have a clear connection to preventing waste, fraud and abuse instead of adding hoops for the parties to jump through.

VI. THE COMMISSION SHOULD RETAIN MIBS AS AN ELIGIBLE SERVICE AND SHOULD NOT ADOPT ADDITIONAL COMPETITIVE BIDDING REGULATIONS

The Commission seeks comment on whether Managed Internal Broadband Services (MIBS) should continue to be a supported service and, if so, how the Commission should define and ensure cost-effective purchasing for MIBS.¹³⁰ The Commission also seeks comment on whether it should adopt additional rules for competitive bidding.¹³¹ SHLB strongly supports that the Commission retain MIBS as an eligible service, as rural and small schools are the most likely to need and purchase MIBS.¹³² Nor should the Commission adopt additional rules related to competitive bidding as proposed in the *NPRM*.

MIBS. As the Commission’s Eligible Services List states, MIBS are “services provided by a third party for the operation, management, and monitoring of eligible broadband internal connections components.”¹³³ Eligible expenses include the management and operation of the LAN/WLAN, including installation, activation, and initial configuration of eligible components and on-site training on the use of eligible equipment.¹³⁴ In short, MIBS assists applicants with some of the complexity of managing their technology, ensuring that E-Rate funded networks

¹³⁰ *NPRM*, FCC 26-41, ¶ 84.

¹³¹ *Id.*, ¶ 83.

¹³² Comments of the Schools, Health & Libraries Broadband (SHLB) Coalition, WC Docket No. 13-184, https://assets.noviams.com/novi-file-uploads/shlbc/SHLB_FY_2026_ESL_Comments.pdf, at 1-4 (Nov. 13, 2025); Comments of the Schools, Health & Libraries Broadband (SHLB) Coalition, WC Docket No. 13-184, https://assets.noviams.com/novi-file-uploads/shlbc/SHLB_ESL_FY27_Comments_-_7_30_26.pdf, at 2 (July 30, 2026).

¹³³ *Modernizing the E-Rate Program for Schools and Libraries*, WC Docket No. 13-184, Order, 40 FCC Rcd 10048, 10059, 10070 (WCB 2025) (adopting the ESL for funding year 2026).

¹³⁴ *Id.*

continue to function properly and reliably on an ongoing basis.

SHLB members report that E-Rate support for MIBS services can provide efficient, cost-effective network management solutions for school and library applicants, especially for those that serve small to mid-size or rural communities. In fact, the majority of applications including MIBS services appear to be requested by small to mid-size applicants. For example, of the 2,253 schools/school districts that applied for MIBS funding in FY25, 2,090, or 93 percent, serve less than 5,000 students.¹³⁵ Many smaller schools and libraries lack the dedicated IT staff or requisite skills and technical expertise to manage their broadband networks as effectively as their larger counterparts with more readily available resources, particularly as technologies evolve. In addition, many schools and libraries are unable to hire full-time staff because they only have enough work for a part-time staff member, because they do not have the budget, or because they cannot attract qualified candidates for an information technology position. Accordingly, SHLB members stress the positive and vital impact of MIBS support, especially for small- to mid-size applicants that often serve rural communities, and urge the Commission to continue supporting MIBS as an eligible E-Rate service.

Cost-effectiveness generally. The Commission also seeks comments on additional measures to help ensure applicants select cost-effective services in situations where no bid or only one bid is received.¹³⁶ In response, SHLB urges the Commission not to limit applicant choices by artificially setting market prices. The proposals to cap reimbursements, set specific prices, or develop a rates database using information from

¹³⁵ Reply Comments of Funds For Learning, LLC, on the Proposed Eligible Services List for Funding Year 2027, WC Docket Nos. 13-184 and 26-133, <https://www.fcc.gov/ecfs/document/26110071262/1>, at 5-6 (Aug. 14, 2026).

¹³⁶ *NPRM*, FCC 26-41, ¶ 83.

open data are ill-advised.¹³⁷ The Commission has attempted to manage rates in the Rural Health Care (RHC) program previously, and had to rescind those rules because they could not be implemented.¹³⁸ The same issues would arise here: open data does not contain enough information to make an apples-to-apples comparison between vendors and services. Furthermore, no vendor would submit a bid under these proposals because vendors would not know what price they would be able to charge; it would be dependent upon whether other vendors also bid. Applicants cannot force vendors to bid.¹³⁹ SHLB believes the number of bids submitted, especially to rural and small schools and libraries, would decrease, thereby harming competition. At a minimum, the Commission should wait to adopt any new competitive bidding rules until after the competitive bidding portal is operating and it can determine the scope of any problem.

¹³⁷ *Id.*, ¶ 83.

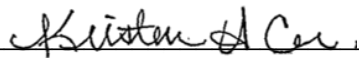
¹³⁸ See *Promoting Telehealth in Rural America*, WC Docket No. 17-310, Order on Reconsideration, Second Report and order, Order, and Second Further Notice of Proposed Rulemaking, 38 FCC Rcd 827, 831-33 ¶¶ 9-15 (2023) (rescinding rules adopted in 2018 requiring the use of a Rates Database due to “significant anomalies” found in the rates the Database generated).

¹³⁹ Although the Commission adopted a rule requiring vendors to bid in certain circumstances, it does not appear to have followed through to implement the rule. *E-Rate Second Modernization Order*, FCC 14-189, ¶ 72.

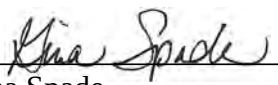
VII. CONCLUSION

SHLB appreciates this opportunity to offer recommendations to improve, strengthen, and streamline the continued provision of universal service support to schools and libraries through the E-Rate program.

Respectfully submitted,



Joseph Wender, Executive Director
Kristen Corra, Policy Counsel
Schools, Health & Libraries Broadband Coalition
1250 Connecticut Ave. NW, Suite 700
Washington, DC 20036
kcorra@shlb.org
571-306-3757



Gina Spade
Jennifer McKee
Broadband Legal Strategies, LLC
1118 Rankin Dr.
Lawrence, KS 66049
gina@broadbandlegal.com
202-789-3530

Counsel for Schools, Health & Libraries Broadband Coalition

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APPENDIX

The Economic Impact of the E-Rate Program

PREPARED BY

Paroma Sanyal
Wonjun Chang

The Brattle Group

PREPARED FOR

Schools, Health & Libraries Broadband Coalition (SHLB)

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NOTICE

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Executive Summary

The Federal Communications Commission is considering eliminating or significantly reducing E-Rate support (\$2.6 billion in 2025) for broadband connectivity and related services provided to schools and libraries. While eliminating the program would reduce Universal Service Fund expenditures, it would also increase the effective cost of broadband services for public and private K-12 schools and libraries that increasingly rely on digital connectivity to support teaching, learning, school operations and security, cybersecurity, internal and external communications, and access to online educational and informational resources. Nearly every critical function in schools and libraries now relies on the network, including door locks and access controls, security cameras, bus scheduling and transportation systems, cafeteria payment systems, payroll, student information systems, attendance and grading platforms, and communications with students, staff, and families. Because broadband has become an essential educational input rather than a discretionary expenditure, schools and libraries cannot simply replace connectivity with teachers, books, buildings, or other educational resources. Paying more for connectivity therefore leaves less money available for the other goods and services needed to provide education and library services.

We use Brattle's BEYOND computable general equilibrium ("CGE") model to estimate the economy-wide contribution of E-Rate. Our primary counterfactual eliminates the program while recognizing that broadband and internal network infrastructure remain necessary inputs. The results indicate that eliminating approximately \$2.6 billion in annual E-Rate support would reduce real GDP by approximately \$4.2 billion annually, real wages by \$2.8 billion, and tax revenues by approximately \$1.5 billion. Thus, each dollar of E-Rate support is associated with approximately \$1.60 in GDP. The measured economic loss exceeds the amount of federal support removed because without E-Rate, schools and libraries must devote more of their own budgets to connectivity, leaving less available to support the overall level of education and library services. As school spending generates greater follow-on economic activity than broadband spending, institutions purchase fewer non-broadband goods and services from other suppliers and use less labor, and those reductions propagate through household income, spending, and tax revenues.

Eliminating just support for connectivity infrastructure (Category 2), including routers, switches, Wi-Fi access points, cabling, managed internal broadband, and related infrastructure needed to

distribute connectivity within schools and libraries, would also have substantial effects. Eliminating Category 2 alone (approximately \$1.2 billion in annual support) produces an estimated \$2.5 billion decline in GDP, \$1.6 billion reduction in real wages, and \$0.9 billion reduction in tax revenues.

Finally, we find that even unsubstantiated concerns about waste, fraud, inefficient procurement, or otherwise unproductive expenditures do not materially change these conclusions. Even under a deliberately conservative assumption that 2.5% of E-Rate support generates no intended economic benefit given that the improper payment level has already been found to be lower than 1.5%,¹ the associated GDP loss is approximately \$113.9 million, or only about 2.7% of the GDP loss from eliminating E-Rate altogether. The results demonstrate that eliminating a productive program to prevent a comparatively small amount of ineffective spending can impose economic costs substantially greater than the inefficiency being addressed.

The FCC's review should therefore distinguish between monetary savings and economic benefits. The fact that most schools and libraries are now connected does not eliminate the market failure E-Rate addresses. Availability of broadband is different from the ability to finance the level of connectivity and internal infrastructure required for modern education. Our results indicate that E-Rate generates economic benefits substantially exceeding its cost and that significant reductions in the program would impose costs on schools, libraries, workers, taxpayers, and the broader U.S. economy.

Importantly, reducing E-Rate expenditures should not be equated with an equivalent saving to taxpayers. Because E-Rate is financed through USF contributions rather than general federal revenues, reducing the program lowers the amount collected through the USF mechanism. Concerns about whether the existing USF contribution base remains efficient and sustainable are important, but they are analytically distinct from whether E-Rate itself generates economic value.

There may be broader market failures in education that lead to underinvestment in educational resources generally. The FCC, however, is charged with communications policy rather than education policy. Within that mandate, E-Rate allows the FCC to address one specific dimension of the broader underinvestment problem – inadequate investment in communications and broadband infrastructure. Thus, even if E-Rate cannot correct all of the market failures affecting

¹ See, IG finding on improper payment threshold. FCC, “Inspector General’s Top Management and Performance Challenges for FY 2025 for the Federal Communications Commission,” October 29, 2024, https://www.fcc.gov/sites/default/files/fy25_fcc_tmptc_mngt-response_10292024.pdf.

educational investment, it can help ensure that underinvestment in connectivity does not further constrain the production of educational services.

I. Introduction

Affordable, high-speed broadband connectivity has become a fundamental input into modern education and libraries. Digital learning platforms, cloud-based instructional resources, online assessments, cybersecurity systems, administrative operations, and communication with students, parents, library patrons, and the public all depend on reliable broadband connectivity. As schools and libraries have integrated digital technologies within nearly all aspects of their educational and library services including but not limited to teaching and learning, providing services to library patrons, and all other aspects of essential operations such as security (doors, locks, security cameras), HVAC systems, transportation routing, lunch programs access to affordable, high-capacity broadband is a fundamental necessity prerequisite for delivering educational services effectively and universally.

Recognizing the growing importance of educational connectivity, Congress established the Schools and Libraries Universal Service Support Mechanism, commonly known as the E-Rate program, as part of the Telecommunications Act of 1996.² Administered by the Federal Communications Commission (“FCC”), E-Rate provides discounts on broadband services, internal network infrastructure, Wi-Fi equipment, and related communications services to eligible schools and libraries.³ Today, E-Rate supports connectivity for tens of thousands of schools and libraries serving millions of students throughout the United States. By reducing the cost of broadband services, the program seeks to ensure that educational institutions, particularly those serving lower-income communities whether in rural or urban areas, can provide students and educators with access to the digital resources necessary for modern learning.

Although E-Rate was initially conceived as a mechanism to expand Internet access in schools and libraries, its role has evolved alongside technological change.⁴ Broadband underpins virtually every aspect of educational delivery, including learning management systems; video instruction; standardized testing; cloud computing; cybersecurity, digital textbooks, e-books,

² FCC, “Universal Service: Schools & Libraries,” last accessed August 13, 2026, <https://www.fcc.gov/general/universal-service-schools-libraries>, (“Universal Service: Schools & Libraries”).

³ Universal Service: Schools & Libraries.

⁴ FCC, “In the Matter of Addressing the Homework Gap through E-Rate Program,” Report and Order and Further Notice of Proposed Rulemaking, WC Docket No. 21-31, Released July 29, 2024, <https://docs.fcc.gov/public/attachments/FCC-24-76A1.pdf>.

and databases; special education services; basic building operations including security and HVAC, library reference and databases, and communication with parents, administrators, and library patrons. The expansion of digital learning has accelerated this transformation and demonstrated the extent to which educational continuity depends on reliable broadband connectivity. Public libraries also serve as critical community connectivity hubs, providing broadband access to individuals who may lack reliable or affordable service at home and enabling access to education, employment, healthcare, government services, and other essential digital resources. Broadband connectivity represents one of the key enabling technologies through which these educational benefits are realized. Consequently, evaluating the E-Rate program solely on the basis of its direct expenditures risks understating its overall economic contribution. Numerous studies have shown that educational attainment contributes to higher lifetime earnings, increased labor productivity, greater workforce participation, and stronger long-run economic growth.⁵ Investments that improve educational outcomes therefore generate benefits that extend beyond students, schools, and libraries to employers, taxpayers, and the broader economy.

Recent policy discussions have questioned whether the FCC should continue supporting broadband connectivity through the E-Rate program.⁶ Proposals to eliminate or substantially reduce E-Rate funding are in part evaluated in terms of the resulting reduction in Universal Service Fund (“USF”) expenditures.⁷ However, this perspective overlooks how schools and libraries are likely to respond if broadband subsidies are withdrawn. Broadband is not, and cannot, be viewed as a discretionary expenditure. Schools and libraries cannot simply discontinue Internet service without disrupting instruction, online assessments, student information systems, cybersecurity protections, building security, collection management, database and research access, bus scheduling, cafeteria electronic payment system and numerous administrative functions, including payroll. Consequently, the elimination of E-Rate is unlikely to result in a proportional reduction in broadband consumption. Instead, many schools

⁵ Tamborini, Christopher R., Chang Hwan Kim, and Arthur Sakamoto, “Education and Lifetime Earnings in the United States,” *Demography* (2015), 52: 1383–1407, <https://pmc.ncbi.nlm.nih.gov/articles/PMC4534330/>, (“Education and Lifetime Earnings in the United States”). See also, Hanushek, Eric A., Woessmann, Ludger, “Education and Economic Growth,” *International Encyclopedia of Education*, 2010:60-67, <https://hanushek.stanford.edu/publications/education-and-economic-growth>, (“Education and Economic Growth”).

⁶ FCC, “In the Matter of Ensuring Children’s Safe Use of Screens and E-Rate-Funded Services; Modernizing the E-Rate Program for Schools and Libraries; Establishing the Emergency Connectivity Fund to Close the Homework Gap; Promoting Fair and Open Competitive Bidding in the E-Rate Program,” Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, WC Docket No. 26-133, Released June 26, 2026, <https://docs.fcc.gov/public/attachments/FCC-26-41A1.pdf>, (“2026 NPRM and FNPRM”).

⁷ 2026 NPRM and FNPRM.

and libraries would be forced to reallocate limited financial resources away from other educational priorities to maintain broadband services. The relevant economic question is therefore not simply how much would be “saved” by eliminating E-Rate,⁸ but rather how those savings would be offset by reduced educational investments and their broader economic consequences.

This paper develops a comprehensive economic assessment of the E-Rate program using Brattle's BEYOND computable general equilibrium (“CGE”) model. Unlike traditional fiscal analyses that measure only the direct budgetary effects of program expenditures, a CGE framework captures the interactions among households, firms, government, labor markets, and production sectors to estimate the broader macroeconomic consequences of changes in educational broadband investment. The model quantifies changes in gross domestic product (“GDP”), employment, labor income, household welfare, industry output, and tax revenues arising from alternative E-Rate policies.

The analysis evaluates three policy scenarios and the national, regional and state level.

- First, at the national, regional, and state level, we estimate the economic loss that occurs if E-Rate support is eliminated. We treat broadband and internal network infrastructure as essential inputs that must be used alongside teachers, buildings, instructional materials, and other resources; they cannot simply be replaced by those other inputs. When E-Rate support is removed, schools and libraries must pay more of the connectivity cost from their own budgets. Because those budgets are limited, they can support a lower overall level of education and library services, and their demand for the other inputs used to provide those services also falls. The model traces those effects through suppliers, labor markets, household income, spending, and tax revenue.
- Second, at the national and regional level it estimates the economic loss that will occur if just the Category 2 E-Rate support is eliminated and schools and libraries respond to the price shock. The underlying assumptions are the same as the base model where all E-Rate funding is eliminated.
- Third, at the national level we estimate a scenario where we retain the full E-Rate program support but assume that 2.5% of both Category 1 and Category 2 support fails to generate the economic benefit that the funding is intended to produce. This scenario is not intended to represent estimates of the actual level of fraud or waste in E-Rate. Rather, this provides

⁸ E-Rate is funded through the Universal Service Fund (USF), which is financed by contributions from telecommunications providers based on their interstate and international telecommunications revenues. Therefore the “savings” will reduce these contributions.

sensitivity tests that allow us to evaluate how much program inefficiency could be tolerated before materially reducing E-Rate's estimated net economic benefits.

II. Policy Background: E-Rate as a Solution to Market Failure

A. The E-Rate Program and Market Failure

The economic rationale for public investment in educational broadband extends well beyond ensuring that schools and libraries have Internet access. From the perspective of welfare economics, broadband connectivity in educational institutions exhibits several characteristics associated with market failure, resulting in private investment levels that are lower than what would maximize overall social welfare.⁹ The E-Rate program addresses these market failures by reducing the cost of broadband connectivity for schools and libraries and encouraging investments whose benefits extend well beyond the institutions that receive support.¹⁰

An important market failure is the existence of positive externalities. Schools and libraries make decisions regarding broadband investments based primarily on their own budgets and operational needs. However, the benefits generated by educational connectivity extend well beyond the schools and libraries themselves.¹¹ Students who receive a high-quality digital education are more likely to acquire the technological skills that translate into higher lifetime earnings, increased labor productivity, greater innovation, and higher tax revenues. A similar argument can be made for libraries and the under-connected citizens of the communities they serve. Public libraries serve as critical community connectivity hubs, providing broadband access to individuals who may lack reliable or affordable service at home and enabling access to

⁹ Welfare economics is the branch of economics concerned with how the allocation of resources affects social well-being and with the conditions under which markets produce economically efficient outcomes. Market failure arises when those conditions do not hold and decentralized market decisions therefore fail to produce the socially efficient allocation of resources. Externalities (positive and negative) are a canonical example. When an activity generates benefits for people who do not pay for them (positive externality), the decision-maker considers the private benefit but not the full social benefit of the activity. The result is underinvestment relative to the socially efficient level.

¹⁰ Austan Goolsbee and Jonathan Guryan, "The Impact of Internet subsidies in Public Schools," National Bureau of Economic Research, August 2002, <https://www.nber.org/papers/w9090>, ("The Impact of Internet subsidies in Public Schools").

¹¹ See, for e.g., Education and Economic Growth; Education and Lifetime Earnings in the United States.

education, employment, healthcare, government services, and other essential digital resources. Additionally, employers benefit from a more digitally literate workforce, while society benefits from a more productive economy. Investments in connectivity contribute not only to improved educational outcomes but also to the long-term accumulation of human capital.¹²

Educational institutions also face considerable uncertainty regarding future technology needs.¹³ Because schools and libraries must make infrastructure investments under considerable uncertainty regarding future demand, private investment may lag the socially optimal level of broadband capacity. Because schools and libraries cannot capture these broader economic returns and appropriately internalize the risks, they have an incentive to invest less in broadband than is socially optimal. Public support through E-Rate helps narrow the gap between privately optimal and socially optimal investment. Public support remedies these market failures.

Congress recognized the growing importance of advanced telecommunications services for education when it enacted the Telecommunications Act of 1996.¹⁴ Section 254 of the Act directed the FCC to establish mechanisms to preserve and advance universal service, explicitly identifying schools and libraries as institutions that should have access to advanced telecommunications and information services.¹⁵ The underlying objective is not merely to increase Internet access, but to enable schools and libraries to acquire the communications infrastructure necessary to support modern education and digital learning.¹⁶

Since its inception, the E-Rate program has evolved alongside technological change. By 2010, approximately 95 percent of E-Rate participants already had terrestrial broadband connectivity, although nearly 80 percent reported that their existing connections did not fully meet their

¹² Jeff Falk, “Internet-access Spending Improves Academic Outcomes, Study of Texas Schools Finds,” Rice News, March 15, 2021, <https://news.rice.edu/news/2021/internet-access-spending-improves-academic-outcomes-study-texas-schools-finds>.

¹³ Steve Joordens, Irameet Kaur, “Re-imagining Education for an Uncertain Future: Can Technology Help Us Become More Human?” Advanced Learning Technologies Lab, last accessed August 13, 2026, <https://ecampusontario.pressbooks.pub/futureofhighereducation/chapter/re-imagining-education-for-an-uncertain-future-can-technology-help-us-become-more-human/>.

¹⁴ FCC, “Telecommunications Act of 1996,” last accessed August 13, 2026, <https://www.fcc.gov/general/telecommunications-act-1996>.

¹⁵ Legal Information Institute, “47 U.S. Code § 254,” last accessed August 13, 2026, <https://www.law.cornell.edu/uscode/text/47/254>, (“47 U.S. Code § 254”).

¹⁶ 47 U.S. Code § 254.

educational needs.¹⁷ Cost remained a significant barrier, with 39 percent of respondents identifying broadband service costs and 27 percent identifying installation costs as limiting factors in expanding connectivity.¹⁸ A seminal paper by Goolsbee and Guryan, evaluated the early effects of the E-Rate program (1996 – 2000) and found that E-Rate substantially increased Internet investment in public schools. By the end of the sample period, the authors estimate that there were about 66% more Internet-connected classrooms than there would have been in the absence of the subsidy.¹⁹

As educational technology increasingly shifted toward broadband-intensive applications, the FCC expanded the program to support higher-capacity broadband services and modern internal network infrastructure. A major milestone occurred in 2014 with the adoption of the E-Rate Modernization Orders, which redirected support toward high-speed broadband connectivity and internal Wi-Fi networks while phasing down support for legacy voice services.²⁰ The Orders also established the current two-category funding structure that remains in place today.

- Category 1²¹ supports broadband services that connect schools and libraries to the Internet, including internet access, data transmission services, etc. and certain special construction costs associated with deploying broadband infrastructure. These services provide the external connectivity necessary to bring broadband to each educational institution. For Funding Year 2025, the FCC reported approximately \$1.55 billion in Category 1 disbursed funds.²²

¹⁷ FCC, “2010 E-Rate Program and Broadband Usage Survey: Report,” DA 10-2414, <https://docs.fcc.gov/public/attachments/DA-10-2414A1.pdf>, (“2010 E-Rate Program and Broadband Usage Survey: Report”).

¹⁸ 2010 E-Rate Program and Broadband Usage Survey: Report.

¹⁹ The Impact of Internet subsidies in Public Schools.

²⁰ FCC, “In the Matter of Modernizing the E-rate Program for Schools and Libraries,” Report and Order and Further Notice of Proposed Rulemaking, WC Docket No. 13-184, Released July 23, 2014, <https://docs.fcc.gov/public/attachments/FCC-14-99A1.pdf>.

²¹ FCC, “In the Matter of Modernizing the E-rate Program for Schools and Libraries,” Report and Order and Further Notice of Proposed Rulemaking, WC Docket No. 13-184, Released July 23, 2014, <https://docs.fcc.gov/public/attachments/FCC-14-99A1.pdf>, Appendix A.

²² FCC, “Wireline Competition Bureau Directs USAC to Fully Fund Eligible Category One and Category Two E-Rate Requests,” CC Docket No. 02-6, Released May 20, 2025, <https://www.fundsforlearning.com/wp-content/uploads/2025/05/USAC-to-Fully-Fund-Eligible-Category-One-and-Two-E-rate-Requests.pdf>, (“Wireline Competition Bureau Directs USAC to Fully Fund Eligible Category One and Category Two E-Rate Requests”).

- Category 2²³ supports the internal broadband infrastructure required to distribute connectivity throughout schools and libraries, such as wireless access points, routers, switches, internal cabling, network electronics, etc. and services, and maintenance necessary to operate these networks. Whereas Category 1 funds connectivity *to* the school, Category 2 funds the infrastructure that delivers broadband *within* the school. For Funding Year 2025, the FCC reported approximately \$1.05 billion in Category 2 disbursed funds.²⁴

B. The Continuing Need for E-Rate Support

Today, this support is particularly important because broadband has become an essential production input for education rather than a discretionary technology purchase, and schools and libraries are budget constrained. Eliminating E-Rate without providing replacement support or a significant increase in school and library funding would further constrain already-strained school budgets, resulting in reduced educational spending and a lower overall welfare outcome.

Modern schools and libraries rely on broadband to support classroom instruction, cloud-based educational platforms, online assessments, cybersecurity, administrative and building operations, student information systems, and communication with parents and communities. E-Rate reduces the share of these connectivity costs that institutions must pay from their own budgets. Without that support, the same connectivity needs consume a larger share of available budgets, leaving less money for the other goods and services needed to provide education. In the model, this appears as lower education-sector output. For a broadly unchanged student population, that decline is best understood as a reduction in the quantity or intensity of education services provided per student, not as higher tuition, fewer students, or a direct estimate of learning outcomes. Lower education activity also means less demand for labor and for the suppliers that serve schools, which is one channel through which the effect spreads to the broader economy.

E-Rate addresses affordability through both subsidies and price protections. The program discounts the cost of eligible connectivity for schools and libraries, while its Lowest Corresponding Price (“LCP”) rule generally prevents participating providers from charging them

²³ FCC, “In the Matter of Modernizing the E-rate Program for Schools and Libraries,” Report and Order and Further Notice of Proposed Rulemaking, WC Docket No. 13-184, Released July 23, 2014, <https://docs.fcc.gov/public/attachments/FCC-14-99A1.pdf>, Appendix A.

²⁴ Wireline Competition Bureau Directs USAC to Fully Fund Eligible Category One and Category Two E-Rate Requests.

more than the lowest price offered to similarly situated non-residential customers for comparable services.²⁵ Thus, E-Rate has two effects on affordability of educational broadband. On one hand it reduces the portion of the bill paid by schools and libraries, easing some of the budget constraint faced by schools. On the other hand, it disciplines the underlying prices against which those discounts are applied. If E-Rate support were eliminated, schools and libraries would lose the subsidy that directly lowers their connectivity costs and, to the extent providers and services were no longer subject to E-Rate requirements, could also lose the LCP protection associated with the program. In that circumstance, schools and libraries, particularly those with limited competitive alternatives, could face both a substantially larger share of connectivity costs and less protection against higher underlying prices. Our paper focuses only on the effect of changing the direct E-Rate support and does not model the potential for raised connectivity costs through potential price increases. As such, our modeled effects of E-Rate support elimination can be interpreted as lower bounds.

Academic literature further shows that broadband connectivity is an essential educational input rather than simply another technology expenditure.²⁶ Researchers have shown that improvements in broadband procurement and network investment substantially reduce connectivity costs while dramatically increasing available bandwidth, allowing schools to expand digital learning opportunities without proportionate increases in spending.²⁷ More generally, analysts have argued that broadband infrastructure should be viewed as part of the educational production function because it supports instructional delivery, student engagement, administrative efficiency, and long-term human capital development.²⁸

Additionally, broadband spending by schools and libraries also exhibits important network externalities.²⁹ Network externalities arise when the value of a good or service increases as more users start consuming it. This implies that the value of broadband connectivity increases

²⁵ 2026 NPRM and FNPRM.

²⁶ See, e.g., Mattia Caldarulo, Karen Mossberger, Anthony Howell, “Community-wide broadband adoption and student academic achievement,” *Telecommunications Policy*, February, 2023, <https://www.sciencedirect.com/science/article/abs/pii/S0308596122001471>; Cole Campbell, “Need for Speed: Broadband and Student Achievement,” July 29, 2022, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4176256.

²⁷ Gaurab Aryal, Pallavi Pal, Charles Murry, Arnab Palit, “The Benefits from Bundling Demand in K-12 Broadband Procurement,” *American Economic Journal*, <https://www.aeaweb.org/articles?from=f&id=10.1257%2Fmic.20250039>.

²⁸ Rosa Sanchis-Guarner, “Broadband as human capital infrastructure,” London School of Economics, March 19, 2026, <https://blogs.lse.ac.uk/politicsandpolicy/broadband-as-human-capital-infrastructure/>.

²⁹ Lauren H. Mandel, et al., “Broadband for Public Libraries: Importance, Issue, and Research Needs,” *Government Information Quarterly*, July 2010, <https://www.sciencedirect.com/science/article/abs/pii/S0740624X10000250>.

as more students, educators, library patrons, educational institutions, government agencies, and digital service providers become connected. Connecting a school or library can create benefits beyond that institution by expanding the network through which students, educators, families, libraries, government agencies, and digital-service providers interact and exchange information. Because an individual school or library does not capture all of these broader benefits when making its own broadband investment decisions, private investment may fall below the socially efficient level. These network effects can further increase the social returns to broadband investment relative to the private returns perceived by individual schools and libraries.

It is worth noting that the widespread availability of broadband does not imply that the need for investment in educational connectivity has ended. Connectivity is not a one-time infrastructure achievement: the capacity required by schools and libraries has increased as educational technology has evolved from basic Internet access to cloud computing, video instruction, online assessments, cybersecurity, one-to-one devices, and, increasingly, artificial intelligence. The FCC has recognized this dynamic explicitly in setting progressively higher connectivity goals for schools, moving from a benchmark of 100 Mbps per 1,000 students toward a longer-term goal of 1 Gbps per 1,000 students. The growth of AI is likely to increase these demands further. AI-enabled tutoring, adaptive learning, real-time translation and accessibility tools, generative educational applications, and increasingly cloud-based administrative systems require reliable, low-latency, high-capacity networks and robust internal Wi-Fi infrastructure. The U.S. Department of Education has similarly identified AI as an increasingly important educational technology while emphasizing that universal access to the underlying technology and infrastructure is necessary if its benefits are to be broadly shared.

Thus, a school being "connected" does not imply that additional connectivity investment has no value, just as universal access to electricity did not eliminate the need to expand electrical capacity as new uses emerged. The relevant economic question is whether network capacity keeps pace with the applications that students and educators increasingly rely upon. This issue is particularly consequential for AI because inadequate connectivity could create a new dimension of the digital divide: schools with sufficient resources can upgrade networks and adopt bandwidth-intensive AI applications, while schools facing tighter budgets may be unable to do so. Reducing E-Rate because most schools have achieved basic connectivity could therefore confuse achievement of an earlier policy objective with elimination of the underlying need for investment. In an AI-intensive economy, maintaining and upgrading school and library networks is better understood as continued investment in human-capital infrastructure –

infrastructure that allows students to acquire and use the technologies increasingly shaping higher education and the labor market.

A central objective of E-Rate is to make high-quality connectivity affordable for schools and libraries, rather than simply ensuring that broadband infrastructure is technically available. E-Rate accomplishes this by providing discounts on eligible broadband and network services, thereby reducing the price that schools and libraries must pay from their own budgets. The discount ranges from 20 percent to 90 percent, with higher discounts generally available to schools and libraries serving higher shares of low-income students or their rural status. By requiring recipients to pay the remaining share, the program preserves incentives for cost-conscious purchasing while substantially reducing affordability barriers. Thus, the E-Rate discount mechanism is fundamental to the program. It translates the availability of broadband services into connectivity that schools and libraries can actually afford to purchase and sustain.

C. Current FCC Review

The FCC's current Notice of Proposed Rulemaking (“NPRM”) “Ensuring Children’s Safe Use of Screens and E-Rate-Funded Services”, represents the most comprehensive review of the E-Rate program in more than a decade, and seeks comment on additional rules governing how schools and libraries use services supported by E-Rate and related programs.³⁰ Although the Commission states that it is seeking comment on a broad range of policy issues rather than proposing a predetermined outcome, several questions raised in the NPRM could substantially reduce the scope of E-Rate support. Most notably, the Commission asks whether the E-Rate program should continue indefinitely given the substantial expansion of broadband availability since its creation in 1996. Specifically, the NPRM seeks comment on whether “the E-Rate program should be limited or sunset to reflect today's extensive connectivity rates” and asks “at what point should policymakers conclude that the program's core objective has been achieved.”³¹ The Commission also asks whether Congress intended E-Rate to operate indefinitely once schools and libraries had largely achieved broadband connectivity. Additionally, it also questions whether E-Rate should be limited to rural areas. These questions go beyond program administration and directly raise the possibility of scaling back or eventually eliminating E-Rate support. The NPRM also includes questions about whether support should continue for internal connections, managed internal broadband services, and other Category 2

³⁰ 2026 NPRM and FNPRM for Ensuring Children’s Safe Use of Screens and E-Rate Funded Services.

³¹ 2026 NPRM and FNPRM for Ensuring Children’s Safe Use of Screens and E-Rate Funded Services.

expenditures, or whether E-Rate should focus more narrowly on the external broadband connection itself.

Another major development is the FCC's April 2026 Report and Order on competitive bidding.³² The Order focuses on program integrity rather than reducing the substantive categories of E-Rate support.³³ The FCC states that the objective is to create greater transparency in procurement, reduce improper payments, and strengthen safeguards against waste, fraud, and abuse.

III. Framing the Economic Question and Estimation Methodology

A. Understanding the Implications Stemming from the FCC's Proposal

The current FCC proceeding raises questions not only about how E-Rate should be administered, but also about the appropriate scope and level of support provided through the program.³⁴ As explained above, the Commission seeks comment on whether the range of eligible services should be narrowed, whether existing funding mechanisms and budgets should be revised, and whether support should be more closely limited to core connectivity. These proposals could materially reduce the subsidy received by schools and libraries even if parts of the E-Rate program itself remains in place. Economically, a reduction in E-Rate acts like an increase in the amount schools and libraries must pay themselves for broadband and network infrastructure. Because these are necessary inputs used alongside teachers, buildings, instructional materials, and other resources, higher out-of-pocket connectivity costs leave less budget available to support the overall level of education and library services.

³² FCC, "In the Matter of Promoting Fair and Open Competitive Bidding in the E-Rate Program," Report and Order and Order on Reconsideration, WC Docket No. 21-455, Adopted April 30, 2026, <https://docs.fcc.gov/public/attachments/FCC-26-30A1.pdf>.

³³ FCC, "In the Matter of Promoting Fair and Open Competitive Bidding in the E-Rate Program," Report and Order and Order on Reconsideration, WC Docket No. 21-455, Adopted April 30, 2026, <https://docs.fcc.gov/public/attachments/FCC-26-30A1.pdf>.

³⁴ 2026 NPRM and FNPRM for Ensuring Children's Safe Use of Screens and E-Rate Funded Services.

The FCC's current NPRM implicitly asks whether these market failures continue to justify federal intervention. In particular, the Commission seeks comment on whether the E-Rate program should continue indefinitely given the substantial increase in broadband availability since the program's creation and whether the program's scope should be narrowed or otherwise modified. These questions assume that because broadband infrastructure has become more widely available, the original justification for E-Rate may have diminished. However, from an economic perspective, increased broadband availability does not necessarily eliminate the underlying market failures.

Availability addresses only the supply of broadband infrastructure. The central issue addressed by E-Rate concerns the budget constraint faced by schools, the incentives schools and libraries face when deciding how much to invest in broadband and digital infrastructure relative to competing educational priorities and the private and social optimum amount that should be spent. Similar to the broader education spending, by lowering the effective cost of broadband connectivity, E-Rate encourages investments whose social returns exceed their private returns. The program therefore functions not simply as a transfer payment but as a corrective policy designed to reduce the gap between a constrained sub-optimal choice and between privately and socially optimal investment in educational broadband infrastructure.

There may be broader market failures in education that lead to underinvestment in educational resources generally. The FCC, however, is charged with communications policy rather than education policy. Within that mandate, E-Rate allows the FCC to address one specific dimension of the broader underinvestment problem – inadequate investment in communications and broadband infrastructure. Thus, even if E-Rate cannot correct all the market failures affecting educational investment, it can help ensure that underinvestment in connectivity does not further constrain the production of educational services.

To understand the implications of the FCC's proposals, we first model broadband and internal network infrastructure as essential educational inputs that cannot simply be replaced with other major education inputs. When E-Rate funding is reduced, schools and libraries must devote more of their own budgets to connectivity, which reduces the overall level of education and library services they can support and, in turn, their demand for other inputs. We then model a second scenario in which Category 2 support is eliminated. These scenarios allow us to estimate both the direct effect on educational activity and the broader economy-wide effects that follow from lower demand for labor, suppliers, household spending, and other activity.

B. Methodology

The analysis uses BEYOND, Brattle’s computable general equilibrium model of the U.S. economy. A CGE framework represents households, firms, government, labor, capital and product markets as an interdependent system, so a change in E-Rate support can affect more than the schools and libraries receiving the subsidy. In practical terms, when institutions must devote more of their budgets to connectivity, the overall level of education activity falls and they purchase less from other suppliers and use less labor. Those suppliers and workers then experience lower income and spending, creating additional effects elsewhere in the economy. BEYOND captures these feedbacks through changes in prices, wages, sectoral output, consumption, and tax revenues as the economy adjusts to a new equilibrium.

The primary analysis compares the base equilibrium, which includes school and library E-Rate support, with a No E-Rate support counterfactual in which that support is removed. Broadband and internal network infrastructure remain necessary inputs, so schools and libraries cannot simply substitute away from connectivity when its effective cost rises. Instead, the higher amount they must pay from their own budgets reduces the overall level of education and library activity they can support. The reported impact is No E-Rate minus Base, so a negative value represents an economic loss caused by removing the program.

a. Funding Categories

TABLE 1: E-RATE FUNDING CATEGORIES

Category	Annual funding	Share	Definition and BEYOND treatment
Category 1	\$1.548B	59.5%	Connectivity to the school and library: data transmission and internet access, including leased fiber and other broadband services. Modeled primarily as relief to wired, wireless, and satellite telecom costs.
Category 2	\$1.053B	40.5%	Connectivity inside the school and library: routers, switches, wireless access points, cabling, managed internal broadband, and maintenance. Modeled primarily through annual capital-service relief.
Total	\$2.600B	100.0%	Schools, school districts, school consortia, and libraries.

Note:

The dollars are Average annual committed school funding requests with funded status, FY2021–FY2025. Each school district, independent school, library system, or independent library receives a five-year, pre-discount Category 2 budget. The first fixed cycle was FY2021–FY2025.

Note that for Category 2, this is the amount of pre-discount eligible expenditures over the entire five-year cycle. A district does not receive one-fifth of the budget each year. It can use a large share in one year and little or nothing in another.

b. Primary Explanatory Variables

TABLE 2: EXPLANATORY VARIABLES

Variable	Measure	How it is used
E-Rate funding	Average annual Category 1 + Category 2 school and library commitments	Primary explanation of absolute losses: larger funding removals generally produce larger state and regional losses.
Education-sector size	Benchmark education-sector output	Represents the benchmark amount of education services produced. Changes in education output are interpreted as changes in the quantity or intensity of services, not enrollment or learning outcomes.
Funding intensity	E-Rate funding as a share of education output	Measures the size of the direct shock to the education sector. Multipliers also reflect interstate spillovers and the size of the local funding denominator.

Note:

All states other than Alaska: Category 1 is allocated to current telecommunications inputs, and 75% of Category 2 is represented as annual capital-service relief.³⁵

Alaska: 10% of total school E-Rate funding is allocated to current telecommunications inputs; 90% is treated as capital-related, and 75% of that amount becomes annual capital relief.

Schools account for about 96.9% of the E-Rate funding modeled. School E-Rate funding relative to education-sector output is therefore the most useful sector-scale measure of exposure; public-library funding is included in a much broader government-services activity and represents only about 3.1% of modeled funding.

³⁵ Category 2 formally includes some managed and maintenance services in addition to equipment and internal connections. The 75% factor is not an assumption that 75% of Category 2 funding is literally spent on capital each year; rather, it approximates the annual resource cost associated with multiple vintages of network equipment that remain in service at the same time. To translate a multi-year stream of capital investment into an annual flow of capital services, we first construct the capital stock by accumulating each year's investment and allowing earlier investment vintages to depreciate over time. The resulting capital stock therefore reflects both new investment and the undepreciated portion of investments made in prior years. We then convert this stock into an annual capital-services flow by applying the user cost of capital, which reflects both depreciation and the required return on capital. This approach recognizes that capital expenditure creates assets that provide productive services over multiple years, rather than treating the full expenditure as an input consumed in the year in which it occurs. We assume a depreciation rate of 13% and a rate of return of 7%.

IV. Quantifying the Economic Impact of Removing or Reducing E-Rate Support

In Scenario 1, we treat current connectivity as essential to schools and libraries. Eliminating E-Rate therefore increases the amount they must pay from their own budgets for broadband and network infrastructure. Because those inputs cannot simply be replaced by other education inputs, the higher connectivity cost reduces the overall level of education and library services they can support. In Scenario 2, we apply the same logic but remove only the capital- and infrastructure-related support represented in the Category 2 scenario.

A. National Impact

a. Overall Summary

The figure below shows the overall impact on GDP, wages and tax revenues when E-Rate funding is completely eliminated and when only Category 2 funding is eliminated.

FIGURE 1: NATIONAL ANNUAL LOSS FROM ELIMINATING ALL/CATEGORY 2 ONLY E-RATE SUBSIDIES FOR SCHOOLS AND LIBRARIES



Note; National economic losses. Dollar values are in real 2024 dollars; losses are shown as absolute magnitudes.

b. Scenario 1: National Loss if All E-Rate Funding (\$2.6 billion) is Eliminated

Removing school and library E-Rate support reduces real GDP by \$4.2 billion, real wages by \$2.8 billion, and total real tax revenue by \$1.5 billion. Relative to \$2.6 billion of average annual

school and library commitments, the loss multipliers are 1.60x for GDP, 1.06x for wages, and 0.57x for tax revenue. Schools continue to require broadband and internal network infrastructure, and those needs do not disappear when E-Rate is removed. Because broadband is a necessary input that cannot simply be replaced with teachers, books, buildings, or other educational resources, schools must devote more of their own budgets to connectivity. That leaves less money available to support the overall level of education services. As education activity declines, schools also purchase fewer of the other goods and services used to provide education. This reduction in demand spreads through suppliers and the broader economy, contributing to declines in GDP, wages, household spending, and tax revenue.

The national impact is broad-based: removing E-Rate support raises schools' and libraries' effective connectivity and network-infrastructure costs, reducing education activity and, in turn, demand for labor, suppliers, and other goods and services throughout the economy. Put differently, the model estimates that each dollar of E-Rate support is associated with approximately \$1.60 in GDP: eliminating roughly \$2.6 billion in annual support for schools and libraries reduces annual real GDP by approximately \$4.2 billion.

c. Scenario 2 Summary: National Loss if Only Category 2 Funding (\$1.2 billion) is Eliminated

Removing approximately \$1.2 billion of capital- and infrastructure-related E-Rate support affected in the Category 2 scenario reduces real GDP by \$2.5 billion, real wages by \$1.6 billion, and total real tax revenue by \$0.9 billion. Relative to this modeled funding amount, the loss multipliers are 2.1x for GDP, 1.4x for wages, and 0.8x for tax revenue. The effect is large because Category 2 supports the internal network infrastructure that makes an external broadband connection usable throughout a school or library.

B. Regional Impacts

The average annual E-Rate funding from FY2021 through FY2025 was concentrated disproportionately in the South and West. Schools and libraries in the South received the largest average annual amount, about \$999 million, followed by the West at \$786 million. Average annual funding was substantially lower in the Midwest, at \$454 million, and in the Northeast, at \$361 million.

Regional absolute losses mainly follow the amount of E-Rate funding removed. Regional multipliers require more care. Because E-Rate is removed nationwide, a region's GDP loss includes spillovers from weaker activity in other regions, while the multiplier denominator

includes only that region's own E-Rate funding. Funding intensity helps describe the size of the direct local shock, but a relatively small local funding base can also produce a high multiplier when nationwide spillovers are large relative to that denominator.

FIGURE 2: REGIONAL ANNUAL LOSS FROM ELIMINATING ALL/CATEGORY 2 ONLY E-RATE SUBSIDIES FOR SCHOOLS AND LIBRARIES



a. Scenario 1: Regional Impact if All E-Rate Funding is Eliminated

Regional differences in absolute losses are driven largely by the amount of E-Rate support removed, while funding relative to the size of the education sector helps describe the size of the direct local shock. Regional multipliers also reflect nationwide spillovers and the size of each region's own funding denominator.

- The South receives the largest amount of E-Rate support and has a high funding-to-education-output ratio, resulting in the largest estimated dollar losses in GDP, labor income, and tax revenues.
- The West exhibits a similar level of funding intensity and consequently experiences the second-largest economic impacts, with California accounting for much of the absolute loss and Alaska's relatively capital-intensive broadband investments contributing to the regional results.
- The Midwest falls near the national average in both funding levels and funding intensity, producing correspondingly moderate economic impacts.
- By contrast, the Northeast receives the smallest amount of E-Rate funding and experiences the smallest absolute reductions in GDP and tax revenues. Its 2.02x GDP multiplier is nevertheless the highest among the four regions because the regional GDP loss includes spillovers from the nationwide removal of E-Rate, while the multiplier denominator includes only the Northeast's own comparatively small funding amount.

TABLE 3: REGIONAL STATISTICS AND GDP LOSS WHEN ALL E-RATE SUPPORT IS ELIMINATED

Region	E-Rate funding	School funding / education output	GDP loss	GDP x
South	\$999M	0.150%	\$1.58B	1.58x
West	\$786M	0.147%	\$1.10B	1.40x
Midwest	\$454M	0.120%	\$744.5M	1.64x
Northeast	\$361M	0.078%	\$728.2M	2.02x

TABLE 4: REGIONAL EFFECTS ON WAGES AND TAX REVENUE WHEN ALL E-RATE SUPPORT IS ELIMINATED

Region	Wage loss	Wage x	Tax-revenue loss	Tax x
South	\$1.06B	1.06x	\$550.1M	0.55x
West	\$736.9M	0.94x	\$410.1M	0.52x
Midwest	\$491.7M	1.08x	\$268.7M	0.59x
Northeast	\$458.9M	1.27x	\$264.6M	0.73x

Although the composition of E-Rate spending is broadly similar across regions, with Category 1 accounting for a comparable share of funding in the South, Midwest, and Northeast, the West has a somewhat larger Category 1 share because of high-cost states such as Alaska. Overall, these differences in spending composition are relatively modest. Absolute losses are closely related to the amount of E-Rate funding affected, indicating that regional economic impacts are explained primarily by differences in the scale of E-Rate funding and the relative size of regional education sectors rather than by differences in how E-Rate funds are allocated across service categories. The South and West have both large funding bases and relatively high school and library funding intensity, which helps explain their larger dollar losses. School and library funding intensity is the program amount relative to the size of the education sector and therefore measures how large the direct shock is for the receiving sector.

The Northeast has a high GDP multiplier compared to other regions. Its 2.02x regional multiplier compares the region's total GDP loss with only the E-Rate funding removed in that region. Because E-Rate is removed in every state at the same time, the GDP loss includes both the Northeast's own direct and follow-on losses and spillover losses from weaker activity elsewhere in the country. When schools and libraries in other regions face higher effective costs and economic activity weakens, lower demand, income, and interstate business activity feed back into the Northeast.

The denominator, however, includes only the Northeast's own E-Rate funding. Because that funding base is relatively small, nationwide spillover effects are large relative to the

denominator, which pushes the measured multiplier upward. In other words, a high regional multiplier does not necessarily mean that E-Rate dollars are more economically productive in the Northeast; it can also reflect the region's exposure to economic losses originating elsewhere in the country. School and library E-Rate funding intensity remains useful for describing the size of the direct local shock to education, but it should not be treated as a stand-alone predictor of the multiplier.

b. Scenario 2: Regional Impact if Category 2 E-Rate Funding is Eliminated

The table below shows that if only Category 2 funding is eliminated, the regional effects are still quite large. The pattern is similar to the removal of all E-Rate funding. However, all the multipliers are larger than the base case implying that removing a dollar of Category 2 funding has a larger impact on GCP, wages and tax revenues than removing an average funding dollar of E-Rate.

TABLE 5: REGIONAL FUNDING AND ECONOMIC LOSS WHEN CATEGORY 2 E-RATE SUPPORT IS ELIMINATED

Region	C2 funding affected	C2-only GDP loss	GDP x
South	\$447.7M	\$980.0M	2.19x
West	\$385.2M	\$606.5M	1.57x
Midwest	\$204.9M	\$458.6M	2.24x
Northeast	\$157.0M	\$456.5M	2.91x

C. State-Level Impact

For the state-level impact we only model scenario 1, where all E-Rate subsidies are eliminated. The amount of E-Rate funding removed is the strongest predictor of absolute state losses. States with large funding programs remove more purchasing power and cost relief from the education sector, producing larger changes in GDP, wages, and tax.

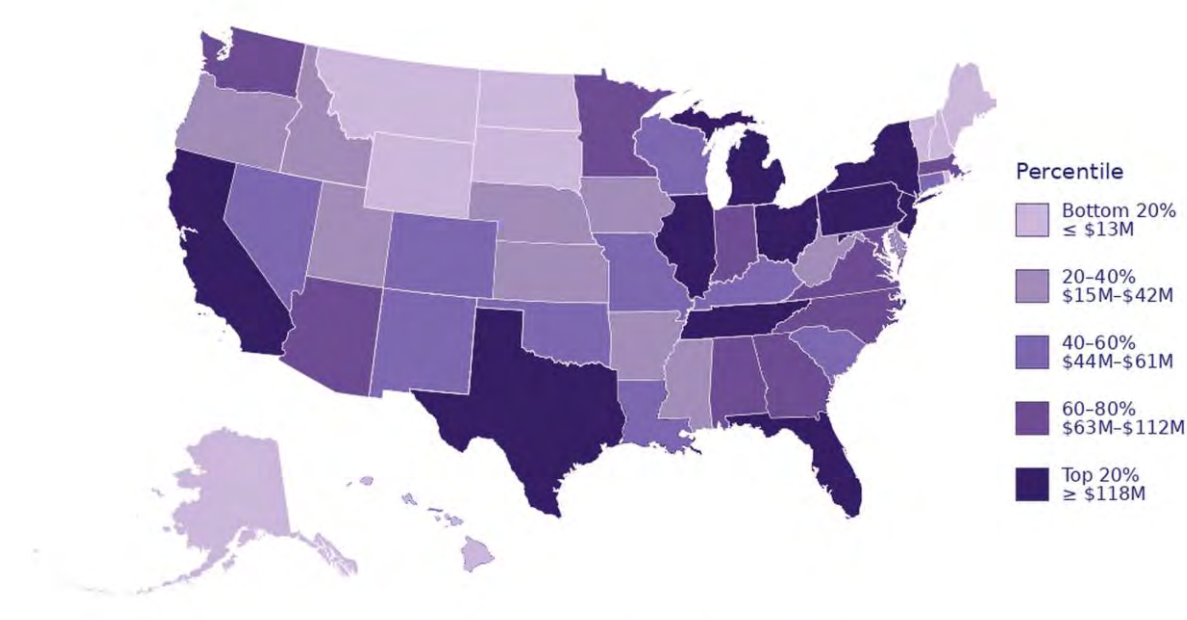
a. Scenario 1: State-Level Impact on GDP, Wages and Tax

California and Texas have the largest GDP losses because they combine large E-Rate funding amounts with very large economies and education sectors. Their loss multipliers are sizable, but not the highest, because the funding removed is small relative to the scale of their education sectors. By contrast, states such as Tennessee, Alabama, and New Mexico receive less E-Rate funding in absolute terms but have higher funding relative to education output, making the direct shock to their education sectors proportionally larger. Funding intensity therefore helps

explain the size of the initial state-level shock, although it does not by itself determine the loss multiplier because states also experience spillovers from E-Rate removal elsewhere in the country. California has the largest modeled GDP loss (\$630 million), followed by Texas (\$350 million), New York (\$300 million), and Florida (\$230 million). These four states also have four of the largest E-Rate funding amounts in the model. Tennessee stands out because its school funding is relatively large compared with the size of its education sector (about 0.259%), making the direct education-sector shock comparatively large for a smaller state economy.

The map below provides a nationwide view of these state-level GDP losses. Darker shading indicates larger annual real GDP losses from eliminating E-Rate support.

FIGURE 3: DISTRIBUTION OF ANNUAL STATE-LEVEL REAL GDP LOSSES FROM REMOVING E-RATE SUPPORT



Sources and Notes: BEYOND Model Results. GDP losses are measured relative to the baseline.

The map also shows that the economic effects are geographically broad. States with larger E-Rate funding amounts generally experience larger absolute GDP losses, while losses also spread across state economies through suppliers, household income, spending, and interstate trade.

FIGURE 4: TEN LARGEST STATE GDP LOSS FROM ELIMINATING ALL E-RATE SUBSIDIES FOR SCHOOLS AND LIBRARIES

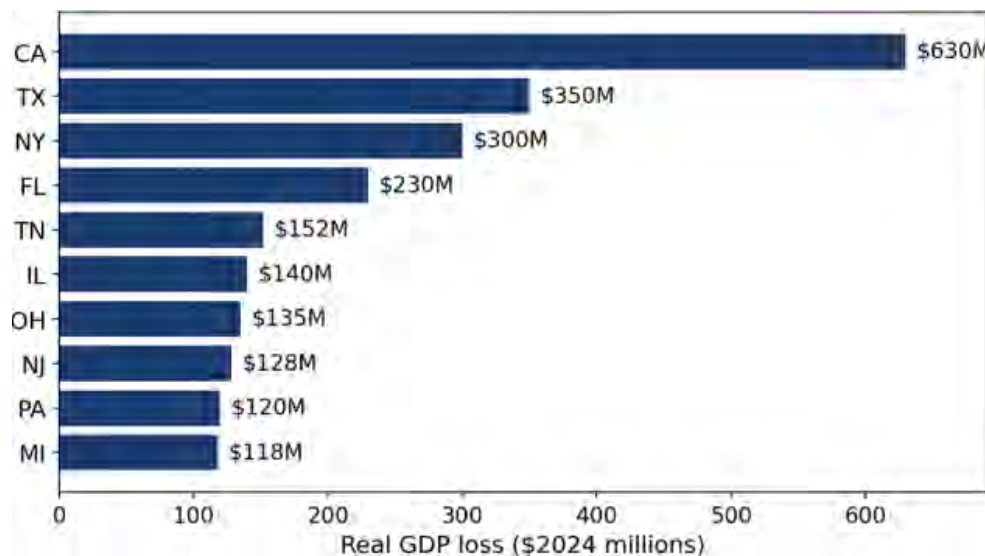


TABLE 6: SUMMARY STATISTICS ON THE TEN LARGEST STATE GDP LOSS FROM ELIMINATING ALL E-RATE SUBSIDIES FOR SCHOOLS AND LIBRARIES

State	Region	E-Rate funding	School funding / education output	GDP loss	GDP x
CA	West	\$346.9M	0.117%	\$630.0M	1.82x
TX	South	\$243.2M	0.159%	\$350.0M	1.44x
NY	Northeast	\$161.5M	0.081%	\$300.0M	1.86x
FL	South	\$126.0M	0.128%	\$230.0M	1.83x
TN	South	\$88.5M	0.259%	\$152.0M	1.72x
IL	Midwest	\$94.4M	0.117%	\$140.0M	1.48x
OH	Midwest	\$75.8M	0.126%	\$135.0M	1.78x
NJ	Northeast	\$56.2M	0.096%	\$128.0M	2.28x
PA	Northeast	\$66.0M	0.083%	\$120.0M	1.82x
MI	Midwest	\$73.8M	0.159%	\$118.0M	1.60x

b. State-Level Loss Multipliers

A loss multiplier compares a state's total economic loss with that state's own E-Rate funding. The multiplier tends to be higher when funding is large relative to education-sector output. Although funding intensity is useful for understanding the size of the direct local shock, it is not a stand-alone predictor of the multiplier. Because E-Rate is removed in every state simultaneously, each state also experiences spillovers from weaker activity elsewhere in the country. A state with a relatively small local funding denominator can therefore have a high multiplier even when its absolute GDP loss is modest. For that reason, the multiplier should not be interpreted as a ranking of how effective E-Rate is across states.

Why do several Northeast states rank highly? The same intuition that explains the Northeast regional multiplier also applies at the state level. E-Rate is removed in every state simultaneously, so each state's GDP loss includes interstate and national spillovers from weaker activity elsewhere, while the multiplier denominator includes only that state's own E-Rate funding. This is especially important for smaller-funding Northeast states such as New Hampshire, Rhode Island, and Maine: nationwide spillover losses are large relative to their local funding denominators. A high state multiplier therefore does not necessarily mean E-Rate dollars are inherently more economically productive in that state.

FIGURE 5: TEN LARGEST STATE GDP LOSS MULTIPLIER ELIMINATING ALL E-RATE SUBSIDIES FOR SCHOOLS AND LIBRARIES

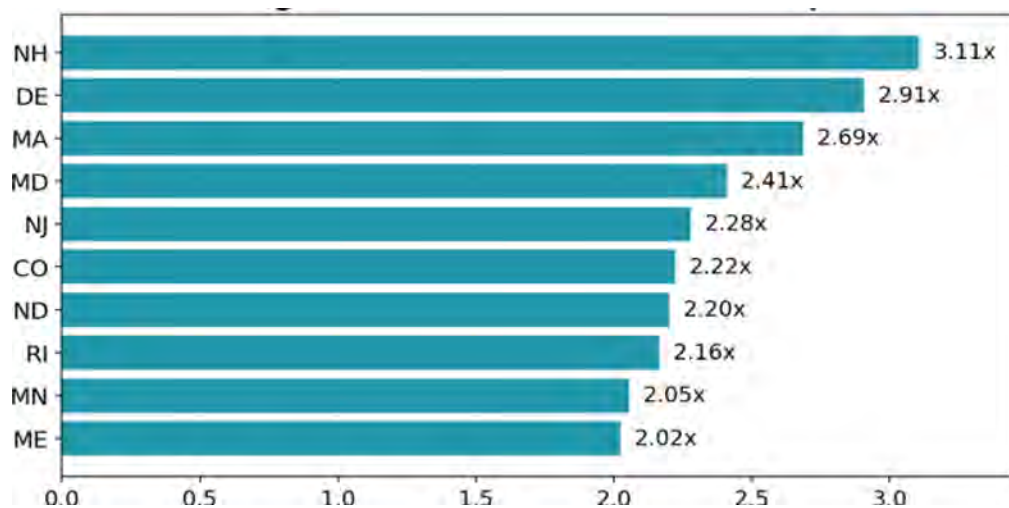


TABLE 7: SUMMARY STATISTICS ON THE TEN LARGEST STATE GDP LOSS MULTIPLIER FROM ELIMINATING ALL E-RATE SUBSIDIES FOR SCHOOLS AND LIBRARIES

State	Region	E-Rate funding	School funding / education output	GDP loss	GDP x
NH	Northeast	\$4.2M	0.046%	\$13.0M	3.11x
DE	South	\$5.2M	0.089%	\$15.0M	2.91x
MA	Northeast	\$35.0M	0.054%	\$94.0M	2.69x
MD	South	\$34.5M	0.084%	\$83.0M	2.41x
NJ	Northeast	\$56.2M	0.096%	\$128.0M	2.28x
CO	West	\$27.0M	0.072%	\$60.0M	2.22x
ND	Midwest	\$3.5M	0.079%	\$7.8M	2.20x
RI	Northeast	\$5.1M	0.065%	\$11.0M	2.16x
MN	Midwest	\$30.7M	0.090%	\$63.0M	2.05x
ME	Northeast	\$6.0M	0.081%	\$12.1M	2.02x

D. Sensitivity Analysis

The FCC reports that the FY2024 E-Rate improper-payment error rate fell from 1.59% to 1.27%. Because 1.27% is below the statutory 1.5% threshold used to identify programs susceptible to significant improper-payment risk, the FCC states that E-Rate is no longer considered susceptible to a significant risk of improper payments.³⁶ However, to investigate a hypothetical scenario where there is a higher “waste” in the system we run a sensitivity analysis where we assume that 2.5% of the E-Rate funds is “wasted” due to fraud. The unproductive share can be interpreted broadly to include funds lost through fraud or improper payments, expenditures on unnecessary or overpriced services and equipment, inefficient procurement, investments that are poorly utilized, or other circumstances in which an E-Rate dollar does not produce the connectivity or internal-network benefits represented in the model.

This scenario therefore deliberately adopts a more demanding test of the program's economic value than simply assuming that every E-Rate dollar is fully productive or below the 1.5% threshold. For Category 1 support, an ineffective dollar is assumed not to generate the modeled benefit associated with providing or maintaining broadband connectivity. For Category 2, it does not generate the modeled benefit associated with internal network infrastructure and capital services. At a 2.5% inefficiency assumption, for example, the analysis effectively treats only 97.5 cents of every dollar of E-Rate support as generating its intended economic benefit, while the remaining 2.5 cents produces no corresponding productive return.

TABLE 8: NATIONAL GDP LOSS FROM HYPOTHETICAL UNPRODUCTIVE E-RATE SPENDING COMPARED TO E-RATE ELIMINATION

Assumed ineffective share	Support ineffective	GDP loss	Wage loss	Tax-revenue loss	GDP loss vs. full removal
2.50%	\$65.0M	\$113.9M	\$67.7M	\$32.1M	2.70%

From the table and chart, we see that the economic cost of ineffective E-Rate spending rises roughly in proportion to the assumed share of support that fails to generate its intended benefit but remains far smaller than the cost of eliminating the program altogether. If 2.5% of support is ineffective, about \$65 million of E-Rate funding is assumed to generate no productive benefit, producing an estimated \$113.9 million decline in GDP, \$67.7 million in lost wages, and

³⁶ FCC, “Inspector General’s Top Management and Performance Challenges for FY 2025 for the Federal Communications Commission,” October 29, 2024, https://www.fcc.gov/sites/default/files/fy25_fcc_tmptc_mngt-response_10292024.pdf.

\$32.1 million in lost tax revenue.³⁷ Note that a 2.5% ineffective share produces a GDP loss equal to only 2.7% of the loss associated with full E-Rate removal. Our analysis therefore suggests that concerns about inefficiency do not, by themselves, provide an economic rationale for wholesale program elimination: the benefits generated by the productive majority of E-Rate spending remain much larger than the losses associated with plausible levels of ineffective spending. These results do not imply that waste or fraud is unimportant from a program-management perspective. Within this economy-wide modeling framework, moderate ineffective use is a second-order issue for the aggregate result. Program-integrity and oversight concerns can therefore be addressed without treating moderate ineffective use as economically equivalent to eliminating E-Rate.

V. Conclusion

Schools and libraries make connectivity investments within constrained budgets and additionally do not capture all the benefits those investments generate. Reliable broadband supports education, digital skills, access to information, and ultimately human-capital formation, with benefits that accrue to students, employers, taxpayers, and the broader economy. Network effects further increase the social value of widespread connectivity. E-Rate addresses this divergence between constrained sub-optimal private returns and social returns by lowering the effective cost of connectivity and encouraging investment closer to the socially efficient level. The relevant question for policymakers is therefore not simply how much the Universal Service Fund spends on E-Rate, but what economic activity and social value those expenditures support.

The FCC is considering eliminating or significantly reducing E-Rate support for broadband connectivity and related services provided to schools and libraries. Eliminating the program would increase the effective cost of broadband services for public and private K-12 schools and libraries that increasingly rely on digital connectivity to support teaching, learning, school operations and security, cybersecurity, internal and external communications, and access to online educational and informational resources.

³⁷ This is a counterfactual scenario used as an illustration. As noted above, FCC's OMB has found that less than 1.5% of the funds is wasted because of fraudulent activities.

Our analysis finds that terminating E-Rate is economically consequential. Using Brattle's economic impact model, we estimate that eliminating approximately \$2.6 billion in annual E-Rate support for schools and libraries would reduce annual real GDP by approximately \$4.2 billion, real wages by \$2.8 billion, and tax revenues by approximately \$1.5 billion. Put differently, each dollar of E-Rate support is associated with approximately \$1.60 in economic output. The reason the economy-wide loss exceeds the amount of support removed is that broadband remains a necessary input. Without E-Rate, schools and libraries devote more of their own budgets to connectivity, leaving less available to support other education and library activities. As that activity declines, institutions buy less from suppliers and use less labor, and those reductions spread through household income, consumption, and tax revenues.

Our analysis also explores the consequences of eliminating only the capital- and infrastructure-related support represented in the Category 2 scenario, which the FCC has raised questions about in the NPRM. Our results show why Category 2 support should not be viewed as ancillary to the program's core connectivity mission. Category 2 finances the internal infrastructure that allows an external broadband connection to be used throughout a school or library. Removing Category 2 support alone produces an estimated \$2.5 billion annual GDP loss, \$1.6 billion reduction in real wages, and \$0.9 billion reduction in tax revenues. These losses are substantial relative to the roughly \$1.2 billion of Category 2 support removed. Connectivity to a building has limited value if the institution lacks the internal network necessary to deliver that connectivity where students, teachers, staff, patrons and the buildings' countless systems actually use it.

The effects are also geographically broad. States receiving the largest amounts of E-Rate support generally experience the largest absolute economic losses, while the magnitude of the shock relative to the local education sector helps explain differences across states and regions. California alone experiences an estimated GDP loss of approximately \$630 million, followed by Texas at approximately \$350 million, New York at approximately \$300 million, and Florida at approximately \$230 million.

Additionally, the sensitivity analysis provides important context for concerns about waste, fraud, inefficient procurement, or other unproductive expenditures. Program integrity remains a legitimate policy objective, but the appropriate economic comparison is between the cost of ineffective spending and the benefits that would also be lost by reducing the program. Even conservatively assuming that 2.5% of E-Rate support generates no intended economic benefit, the estimated GDP loss associated with that inefficiency is insignificant compared to the GDP loss associated with eliminating E-Rate altogether. Thus, the existence of some ineffective

spending does not imply that eliminating or substantially reducing the program increases economic welfare. Indeed, eliminating an economically productive program to prevent a relatively small amount of ineffective spending can impose costs far greater than the problem it seeks to solve.

These results in aggregate underscore that changes to E-Rate have consequences for national, state and regional economies through the education sector and its extensive linkages to other industries. The analysis demonstrates that any claimed fiscal savings from eliminating E-Rate substantially understate the true economic costs. Any reduction in E-Rate spending should also be characterized correctly from a fiscal perspective. Because E-Rate is financed through the USF rather than through general federal revenues, eliminating or reducing E-Rate does not create conventional budgetary saving for taxpayers; instead, it reduces the amount that must be collected through the USF contribution mechanism. If the concern is that the existing USF contribution mechanism is increasingly costly, narrow, or unsustainable, that is fundamentally a question of USF contribution reform, who contributes, what revenue base is assessed, and how the burden is distributed, not evidence that economically valuable E-Rate expenditures should be reduced. Conflating these two issues risks solving a financing problem by cutting an underlying program which generates significant benefits.

Schools and libraries operate under constrained budgets and must allocate limited resources across teachers, instructional materials, facilities, security, technology, and other essential services. This broader budget constraint is not something the FCC can directly solve. The FCC can, however, address the portion of that constraint associated with communications and connectivity. E-Rate effectively relaxes schools' budget constraints with respect to broadband and internal network infrastructure, allowing them to obtain the connectivity required for modern education without diverting as many resources from other educational inputs. Viewed from a partial-equilibrium perspective, E-Rate addresses the connectivity component of the broader market failure problem in education. Eliminating E-Rate without an offsetting source of education funding would reverse that relief, tightening schools' overall budget constraints and forcing greater tradeoffs between connectivity and other educational services, leading to significant economic loss.