

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
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Modernizing the E-rate Program for Schools and Libraries)	WC Docket No. 13-184
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**REPLY COMMENTS OF NEW AMERICA’S OPEN TECHNOLOGY INSTITUTE AND
EDUCATION POLICY PROGRAM, AND COMMON CAUSE**

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Executive Summary

In the past year, the Federal Communications Commission has made significant strides toward the modernization of the E-rate program, which supports broadband connectivity at schools and libraries across the country. Yet the Commission must now finish the job it started last year by implementing additional changes to ensure that schools and libraries are able to make sufficient investments in scalable, future-proof infrastructure, and that the E-rate program rests on solid financial footing for the future. In these reply comments, we urge the Commission to address critical issues that were not dealt with in the July 2014 E-rate Modernization Order, including support for infrastructure investments to allow schools and libraries to meet growing, long-term connectivity needs. Specifically, we recommend that the Commission support those investments in scalable infrastructure—which in nearly all cases means fiber—by creating an upgrade or buildout fund that supports the one-time upfront costs with rules that are flexible to enable innovative solutions that meet local connectivity needs. We also reiterate our previous recommendations that the Commission raise the E-rate funding cap to ensure the long-term sustainability and predictability of the program. And finally, we remind the Commission to ensure that future changes to the E-rate program promote equity and parity across types of institutions, including support for non-traditional learners.

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I. Introduction

In the past year, the Federal Communications Commission (“Commission”) has made significant strides toward the modernization of the E-rate program, a critical component of the Universal Service Fund (USF) that supports broadband connectivity at schools and libraries across the country. Yet the Commission is at a critical juncture today: it can continue to move forward on the path toward a complete overhaul of the program in order to fully support 21st century connectivity both *to* and *within* schools and libraries, or it can pause, waiting to see if the partial reforms it enacted in the *July Report and Order*¹ are sufficient to meet the ever-growing needs of these institutions and their constituents. We believe that the choice is clear. The Commission must finish the job it started in July 2013 by implementing additional changes to the E-rate program to ensure that schools and libraries are able to make sufficient investments in scalable, future-proof infrastructure, and that the E-rate program rests on solid financial footing for the long term. These recommendations are consistent with Chairman Wheeler’s recent

¹ Modernizing the E-rate Program for Schools and Libraries, Report and Order, and Further Notice of Proposed Rulemaking, FCC 14-99 (July 23, 2014) (Report and Order).

remarks at the 2014 Education Technology Summit, where he acknowledged that the Commission must still address gaps in both affordability and access to fiber in order to meet the targets that it set for E-rate in the July *Order*.²

II. The Commission must address critical issues that were not dealt with in the July E-rate Modernization Order, including support for infrastructure investments to ensure that schools and libraries are able to meet growing, long-term connectivity needs.

In the July *Report and Order*, the Commission took an important first step in the process of updating E-rate to address critical gaps in the broadband infrastructure upon which our country's schools and libraries rely. But we will not meet the goal of providing high-speed Internet access to all students and library patrons across the country without more aggressive changes to the program that address the underlying connectivity challenges. As EducationSuperHighway emphasizes, "While the E-rate 2.0 Order takes a major step forward in enabling high-speed broadband in America's K-12 schools and libraries, it does not ensure that every school and library will have access to the connectivity it needs at a price it can afford."³ The Commission must now finish the job it started and make long-term changes that promote the affordable, robust, and scalable Internet access schools and libraries need in order to provide 21st century learning opportunities to students and learners of all ages. Fortunately, there is already significant consensus about the steps that the Commission should take to improve E-rate in the long run, particularly by supporting infrastructure investments and flexible rules that allow schools and libraries to seek solutions and configurations that meet local needs.⁴

² "FCC Chairman Wheeler Remarks at the Second Ed Tech Summit," Federal Communications Commission (September 29, 2014) available at <http://www.fcc.gov/document/fcc-chairman-tom-wheeler-remarks-second-ed-tech-summit>.

³ Comments of EducationSuperHighway, WC Docket No. 13-184 (September 15, 2014) at 3 (ESH Comments).

⁴ See e.g. Letter from a diverse coalition of over 100 organizations from the education sector, technology, and business communities (June 12, 2014) available at <http://leadcommission.org/sites/default/files/Final-Erate->

A. Expanded support for greater wireless capacity is important, but without a sufficient and scalable underlying connectivity, schools and libraries will not be able to meet current or future needs.

The changes that the Commission made in the *July Report and Order* address just one piece of the puzzle: improving wireless connectivity within schools and libraries. Yet these reforms will almost certainly fall short of helping schools and libraries obtain the capacity that they need if underlying infrastructure and connectivity challenges are not addressed in the second phase of E-rate reform. As the American Library Association (ALA) correctly notes, “while there is merit in addressing the long-standing inadequate funding for Wi-Fi and internal connections, the undeniable fact remains that if a library only has a 3 Mbps connection, a fully updated Wi-Fi network will still not provide adequate service to the student trying to upload a homework assignment or her parent finishing an online certification course.”⁵ Similarly, New America previously explained that “upgrading internal connections is critically important, [but] if it is not built upon a foundation of high-capacity connectivity to the premises, then the benefits of connecting every classroom and room in a library will be limited.”⁶ It is increasingly clear that the Commission must take additional steps to address connectivity *to* institutions in order to ensure that students, teachers, and library patrons are able to fully utilize these networks *within* institutional walls.⁷

Despite assertions from some commenters that schools and libraries have access to sufficient infrastructure and that additional bandwidth can be easily purchased under the existing

[Consensus-Letter.pdf](#) (LEAD Commission E-rate consensus letter) (urging the Commission to, among other things, “[e]ncourage investment in scalable, high-capacity, high-quality/reliable, cost-effective long-lasting broadband networks”).

⁵ Comments of the American Library Association, WC Docket No. 13-184 (September 15, 2014) at 3 (ALA Comments).

⁶ Comments of the New America Foundation’s Open Technology Institute and Education Policy Program, WC Docket No. 13-184 (April 7, 2014) at 4 (NAF PN Comments).

⁷ See, e.g., Comments of the Schools, Health & Libraries Broadband (SHLB) Coalition, WC Docket No. 13-184 (September 15, 2014) at 2 (SHLB Comments); ESH Comments at 3-4; ALA Comments at 4; Comments of the National Education Association, WC Docket No. 13-184 (September 15, 2014) at 2 (NEA Comments).

E-rate program⁸, the data suggest otherwise. The fact remains that a majority of schools and libraries across the country report inadequate capacity to meet current needs, and parents believe that their children are unprepared to compete for 21st century jobs on a global scale in large part due to poor technology infrastructure.⁹ According to the Commission’s own data, an estimated 35 percent of public schools and 85 percent of libraries do not have fiber buildouts to their facilities—and there is reason to believe that these percentages may be even lower, given that schools with better connectivity are more likely to report their data to the Commission.¹⁰ Information collected by organizations such as ALA and EducationSuperHighway confirms that adequate capacity remains a significant challenge for the vast majority of schools and libraries across the country; many report that they still rely on outdated infrastructure and have institutional connections with speeds similar to that of the average American household, despite serving an exponentially greater number of users.¹¹ Many of these schools and libraries are not in a position to meet the Commission’s capacity targets—and, more importantly, support 21st century digital learning—without additional help provided through the E-rate program.

⁸ See, e.g. Comments of Verizon, WC Docket No. 13-184 (September 15, 2014) at 3-5 (Verizon Comments).

⁹ Lucija Millonig, “Most U.S. Adults Give Schools a ‘C’ or Below for Tech. Access, Survey Finds,” *Education Week*, February 4, 2014, http://blogs.edweek.org/edweek/DigitalEducation/2014/02/most_us_adults_give_schools_c_or_below_for_tech_access_survey_finds.html.

¹⁰ “Wireline Competition Bureau & Office of Strategic Planning and Policy Staff Report,” WC Docket No. 13-184 (August 12, 2014) at 11-12.

¹¹ ALA reports that nearly 20 percent of libraries have download speeds of 1.5 Mbps while fewer than four percent have connections of 100 Mbps or higher, while between 25 and 30 percent of city and suburban libraries also report speeds of less than 10 Mbps (ALA Comments at 8). Although the outlook for schools may be somewhat better, according to EducationSuperHighway’s data, the median bandwidth per school in the U.S. is 33 Mbps and more than 80 percent do not meet the Commission’s capacity targets (“Connecting America’s Students: Opportunities for Action – An Analysis of E-rate Spending Offers Key Insights for Expanding Educational Opportunity,” EducationSuperHighway (April 2014) available at http://www.educationsuperhighway.org/uploads/1/0/9/4/10946543/esh_k12_e-rate_spending_report_april_2014.pdf.)

B. The only way to meet these challenges is to support investment in scalable, “future-proof” infrastructure, which in nearly all cases means fiber.

As New America has argued since this proceeding began, the Commission must prioritize significant investments in future-proof technologies which, in the vast majority of cases, means investments in fiber.¹² Fiber is the only solution currently available today that offers schools and libraries robust, high-speed capacity which can be easily scaled to meet future needs, making it a much smarter long-term investment than alternatives such as cable or fixed wireless. As the Schools, Health & Libraries Broadband (SHLB) Coalition explained in April, “It is economically inefficient to invest in any broadband service that has a shelf-life of five years or fewer when there are networks and facilities available today that can last much longer... Investing in any incremental technology today will simply require additional dollars to be spent to replace that technology in five or ten years.”¹³ Moreover, fiber is a more cost-effective solution in the long run. Despite potentially higher up-front investment costs, fiber can yield long-term savings and a decline in the price-per-megabit, ultimately making it a significantly less expensive way for the vast majority of schools to meet the Commission’s forward-looking goals. According to data collection and analysis completed by EducationSuperHighway, approximately 98 percent of schools and libraries will need access to affordable fiber connections in order to meet both the goals laid out by the Commission and to ensure that their networks are able to scale to meet future needs.¹⁴ Although wireless options, including mobile data access using Mi-Fi hotspots and

¹² Comments of the New America Foundation’s Open Technology Institute and Education Policy Program, WC Docket No. 13-184 (September 16, 2013) at 3-7 (NAF Initial Comments). *See also* Reply Comments of the New America Foundation’s Open Technology Institute and Education Policy Program, WC Docket No. 13-184 (November 8, 2013) at 2-6 (NAF Reply Comments); NAF PN Comments at 4-9; Reply Comments of the New America Foundation’s Open Technology Institute and Education Policy Program, WC Docket No. 13-184 (April 21, 2014) at 2-5 (NAF PN Reply Comments).

¹³ Comments of the Schools, Health & Libraries Broadband (SHLB) Coalition, WC Docket No. 13-184 (April 7, 2014) at 7.

¹⁴ ESH Comments at 6. (“[O]nly fiber optic and fixed wireless connections are today able to deliver greater than 100 Mbps broadband. Moreover, fixed wireless connections are generally twice as expensive as fiber, are only effective

portable devices, may offer a short-term solution for rural and particularly hard-to-reach areas, they are ultimately not a substitute for robust fiber investment in terms of speed, reliability, or price.¹⁵ At best, mobile wireless is a supplement to high-speed wired access in the majority of cases, and should only be seriously considered as an alternative under very rare circumstances.

C. The Commission can address these critical infrastructure gaps through an upgrade or buildout fund that supports the one-time upfront costs associated with investment in fiber.

Unfortunately, as noted above, a significant proportion of schools and libraries lack access to fiber today, which mean that many of still them rely on far more expensive, aging technologies that cannot deliver the speeds they need for reasonable prices. A survey from Consortium for School Networking (CoSN), which documents “the overwhelming need for investing in better school infrastructure,” identifies up-front capital costs as one of the key hurdles that prevent schools and libraries from getting the capacity that they need.¹⁶ We therefore urge the Commission to listen to the recommendation of a number of commenters, including New America, to create an “upgrade fund” (or “buildout fund”) to support one-time investment in high-capacity infrastructure.¹⁷ The SHLB coalition notes that a “build-out fund that is dedicated to supporting investment in high-capacity broadband networks can help to address this

in limited geographic situations, and cannot scale as effectively with demand. By contrast, fiber is a high-speed, scalable, cost-effective and future-proof broadband technology able to meet the speed needs of schools not just for the next school year, but also for the next generation.”) *See also* “Connecting America’s Students: Opportunities for Action – An Analysis of E-rate Spending Offers Key Insights for Expanding Educational Opportunity” at 11-13, which notes that “[d]istricts that reported the use of fiber had approximately nine times more bandwidth and 75% lower cost per Mbps compared to districts that did not use fiber” and that fiber not only allows faster connections, but is also far more cost effective on a per-megabit basis.

¹⁵ NAF PN Reply Comments at 4-5.

¹⁶ “CoSN Survey Highlights Need For Greater E-rate Funding and Overwhelming Lack of Broadband in Classrooms,” Consortium for School Networking (October 16, 2013) *available at* <http://www.cosn.org/about/news/cosn-survey-highlights-need-greater-e-rate-funding-and-overwhelming-lack-broadband#sthash.A08iEOsO.dpuf>.

¹⁷ NAF Reply Comments at 3-6. *See also* Comments of EducationSuperHighway, WC Docket No. 13-184 (September 16, 2013) at 14-19; SHLB Comments at 2-6.

shortage of adequate fiber connections.”¹⁸ As we have previously explained, this upgrade fund should be designed solely to connect schools and libraries to high-speed networks, and specifically to incentivize fiber builds that are scalable and can lead to long-term cost savings.¹⁹

For many applicants, this buildout fund will provide the incentives for forward-looking investment in scalable infrastructure and make it easier for schools and libraries to finance their networks up-front so that they can begin realizing savings more quickly. This result is especially true in rural and high-cost areas where the economics of the marketplace may mean that sufficient, affordable broadband capacity would not otherwise be available. Further, these types of investments can have added benefits for the surrounding communities. As the SHLB Coalition explains, “Funding network deployment by schools and libraries in rural areas will go a long way toward making rural areas more economically viable, and may provide incentives for the deployment of additional broadband investment to homes and businesses in the region.”²⁰ We highlighted several examples of community benefits that can come as a result of increased fiber investment in our April filing.²¹

D. The rules should be flexible to allow for innovative arrangements, to enable the sharing of connectivity with the surrounding community, and to ensure that schools and libraries can own their own fiber.

In crafting these rules, the Commission should also be mindful of the need for schools and libraries to have the flexibility to find solutions that fit their particular circumstances and allow for innovative arrangements that can benefit the entire community. This flexibility begins with equalizing the treatment of dark and lit fiber, a proposal that has ample support in latest

¹⁸ SHLB Comments at 3.

¹⁹ NAF PN Comments at 9.

²⁰ SHLB Comments at 4-5.

²¹ NAF PN Comments at 11-13.

round of comments filed in the docket.²² By providing support for modulating electronics for dark fiber as well as special construction costs, the Commission can give schools and libraries greater options in how infrastructure will be deployed and, in many cases, save money in the long term.²³ As ALA explains, “[w]e advocate for E-rate support for special construction charges for leased dark fiber when doing so is the most cost effective solution. The current rule skews the decision of libraries and schools to implement a lit fiber service even in cases when dark fiber may be a less expensive alternative.”²⁴ Commenters also note that harmonizing the treatment of dark and lit fiber is consistent with the Commission’s 2012 Rural Healthcare Order.²⁵

Moreover, the Commission should ensure that the rules support and encourage the participation of local and innovative alternatives to traditional broadband service providers. According to data from EducationSuperHighway, schools whose only choices for service are the incumbent telephone and cable companies pay an average of two to three times more than their counterparts in competitive areas,²⁶ which is why they explain that, “[i]n markets where municipal broadband networks or state research and education networks exist, the Commission should ensure that schools and libraries can access these networks and adopt policies that make it easier for these networks to serve schools and libraries within the rules of the E-rate program.”²⁷ There is significant evidence that local and municipally-owned networks often offer faster speeds, lower prices, and better service options than some of the largest commercial providers in the United States, despite the fact that they often operate on a much smaller scale and serve less-

²² SHLB Comments at 7 (“The E-rate rules should be changed to allow electronics and dark fiber construction to be eligible for E-rate support.”); ALA Comments at 13; ESH Comments at 15.

²³ See NAF Initial Comments at 6-7.

²⁴ ALA Comments at 13.

²⁵ *Id.*

²⁶ ESH Comments at 14-15.

²⁷ *Id.* at 16.

densely populated areas.²⁸ Partnering with state research and education networks can also provide numerous benefits to school and library systems.²⁹

Similarly, the Commission should remove any remaining restrictions that prevent schools and libraries from using E-rate support toward building their own network facilities, which in some instances will be the most cost effective way to meet these institutions' needs. As the SHLB Coalition explains, "In some areas no amount of subsidy is going to provide sufficient incentives for private sector carriers to provide affordable, cost effective broadband that is sufficient to meet President Obama's goals. While incumbent providers – many of whom are subsidized – should have the opportunity to bid to offer equivalent service; if they cannot (or will not) do so, then the Commission must allow the competitive market to fill the need by allowing the school or library system to build its own facilities."³⁰ Although some commenters have previously questioned whether schools and libraries should be able to build and run their own networks, there are numerous examples in the docket where applicants have successfully raised the capital to make such investments which ultimately yield long term cost savings for the community and lower the amount of funding requested from the E-rate program.³¹ The

²⁸ In our annual survey of residential broadband speeds and prices around the world, OTI has found that cities with municipal networks like Chattanooga, TN, Bristol, VA, and Lafayette, LA, offer far more competitive packages than large incumbent providers in big cities like New York and Washington DC (Nick Russo, Patrick Lucey, Danielle Kehl, and Hibah Hussain, "Reining in the Cost of Connectivity," New America Foundation [January 2014] available at http://oti.newamerica.net/sites/newamerica.net/files/policydocs/Reining_in_the_Cost_of_Connectivity-Full_Report.pdf). For more on the community benefits of locally owned networks, *also see* "The Art of the Possible: An Overview of Public Broadband Options," New America Foundation and CTC Technology & Engineering (May 2014) available at http://www.newamerica.net/sites/newamerica.net/files/policydocs/ArtofPossible-OverviewPublicBroadband_NAFOTI-CTC_0.pdf.

²⁹ See, e.g., benefits described in "The Current and Future Uses of Broadband in the Peninsula Library System," The Corporation for Education Network Initiatives in California (June 12, 2013) available at <http://www.cenic.org/wp-content/uploads/2013/08/PeninsulaCENICreportFINAL.pdf>.

³⁰ SHLB Comments at 11.

³¹ The Weslaco Independent School District in southern Texas, for example, invested in "a private fiber-optic ring for [its] school district that is extremely cost effective." According to their comments, "[i]n situations where the circumstances allow, installation of private fiber-optic cable, owned by the school district, could save millions of dollars annually," adding that without the investment "we would not be able to provide the same level of connectivity to our schools that we are now able to provide" (Comments of Weslaco Independent School District, WC Docket No. 13-184 [September 16, 2013] at 3).

Commission should therefore make it explicit that schools and libraries are permitted use E-rate support when they self-provision.

And finally, the rules should be flexible to allow for sharing of infrastructure with the surrounding communities and school-library partnerships where they may be beneficial.³² As SHLB explains, “a build-out program within the E-rate program can be structured to benefit the entire community” by sharing network facilities with other providers and users, and maintaining an open interconnection policy.³³ We urge the Commission not to fixate on concerns about schools and libraries requesting or needing “excess capacity” to support additional users in the community, but rather to take a more holistic approach that recognizes the important role that these institutions play as hubs for community connectivity in the 21st century.³⁴ This added flexibility, which will likely have a negligible impact on the E-rate fund overall, can be tremendously valuable to schools and libraries exploring innovative network models.³⁵

III. To ensure the long-term sustainability and predictability of the E-rate program, the Commission must adjust the E-rate funding cap.

As the State E-rate Coordinators Alliance (SECA) notes, “The E-rate program has the dubious distinction of being the only universal service mechanism that has been underfunded almost since its inception.”³⁶ Despite making changes to the structure of the program, eliminating support for outdated services, and identifying rollover funds to help finance wireless

³² See NAF Initial Comments at 9-15; NAF Reply Comments at 10-12.

³³ SHLB Comments at 5.

³⁴ Danielle Kehl, Sarah Morris, and Lindsey Tepe, “Connected Communities in an Age of Digital Learning: A Vision for a 21st Century E-rate Program,” New America Foundation (February 2014) available at http://newamerica.net/sites/newamerica.net/files/policydocs/ERate_Brief_NAF.pdf.

³⁵ NAF Reply Comments at 15. For more on this concept, also see Benjamin Lennett, Sarah Morris, Greta Byrum, “Universities as Hubs for Next-Generation Networks,” New America Foundation (April 2012) available at http://newamerica.net/publications/policy/universities_as_hubs_for_next_generation_networks.

³⁶ Comments of the State E-rate Coordinators Alliance, WC Docket No. 13-184 (September 15, 2014) at 5 (SECA Comments).

investment in the next few years,³⁷ the Commission has yet to fully address long-term concerns about whether E-rate will be able to support 21st century connectivity needs. The record clearly demonstrates that E-rate constituents are concerned³⁸ and that uncertainty about future funding limits the program's overall effectiveness.³⁹ Indeed, predictability of ongoing E-rate support is a critical factor for many applicants, and currently there is a significant risk that they may make shortsighted decisions—or be discouraged from even requesting funding at all—out of fear that E-rate funding will dry up in the future. It is therefore in the best interest of both the Commission and the applicant community to ensure that the E-rate cap is raised to address not only inflation costs but also the increased costs of supporting truly high-speed Internet infrastructure.

A. The Commission must address the fact that the E-rate funding cap has not even been properly adjusted to reflect inflation since 1997.

The Commission seeks comment on raising the E-rate funding cap in light of the fact that it has not been changed since 1997, and was not even adjusted for inflation until FY 2010.⁴⁰ SECA estimates that simply increasing the funding cap to reflect inflation for the first fourteen years that the program existed would result in an extra \$800 million per year in funding for E-rate today.⁴¹ Similarly, the Nebraska Office of the Chief Information Officer estimates that if the \$2.25 billion E-rate cap were indexed to inflation, it would be over \$3.4 billion in 2015-2016.⁴² It is imperative that the Commission rectify this situation immediately, which would inject critical additional dollars into a chronically underfunded program.

³⁷ Report and Order ¶268.

³⁸ See, e.g., SHLB Comments at 8; ALA Comments at 15; SECA Comments at 2; NEA Comments at 3; Comments of the Urban Libraries Council, WC Docket No. 13-184 (September 15, 2014) at 9 (ULC Comments).

³⁹ See, e.g., Comments of Cisco Systems, WC Docket No. 13-184 (September 15, 2014) at 2 (Cisco Comments); Comments of Hewlett Packard Company, WC Docket No. 13-184 (September 15, 2014) at 1 (HP Comments).

⁴⁰ Report and Order ¶269.

⁴¹ SECA Comments at 5.

⁴² Comments of the State of Nebraska Office of the Chief Information Officer, WC Docket No. 13-184 (September 15, 2014) at 6.

B. To meet the long-term connectivity goals that the Commission established in the July Order, additional funds beyond adjusting the cap to reflect inflation will be needed.

As noted above, however, there is also overwhelming support in the record for expanding E-rate funding, beyond inflation adjustment. Cisco explains, “The evidence is in, and the record is clear: E-rate has been underfunded for many years. Having failed to keep pace year after year, funding has stood – and remains – as a significant barrier to the achievement of the Commission’s E-rate goals.”⁴³ Over the past year, a broad range of stakeholders have urged the Commission to permanently expand funding for E-rate.⁴⁴ In fact, the only real opposition to expanding E-rate funding in the record appears to come from incumbent telecommunications and cable providers.⁴⁵ Although the Commission’s efforts to find cost savings in the program and eliminate support for outdated services are important, they are simply not sufficient to ensure that E-rate can support long-term needs. The National Education Association (NEA) refers to attempts to address shortfalls with rollover funds and other tinkering at the margins “as ‘rearranging the deck chairs’ because these actions do not actually address the underlying challenge to the program – which is a systemic lack of permanent funding.”⁴⁶

As ALA correctly notes, both changes to the E-rate program will impact funding needs in both the short and long term. During the first phase, the “ramp up to the higher level of connectivity,” E-rate funds will be needed to support one-time startup costs to facilitate better connectivity to schools and libraries as well as within institutional walls.⁴⁷ In the second phase, after the initial investments are complete, E-rate will need to continue to support monthly

⁴³ Cisco Comments at 2.

⁴⁴ See, e.g., LEAD Commission E-rate Consensus Letter at 2 (“Most of us believe that substantially increased funding will be necessary to achieve the 99 in 5 goal and note that the program has effectively been shortchanged by not having any CPI increase for the first fourteen years of the program, as is routine for other government programs.”).

⁴⁵ See, e.g., Verizon Comments at 3.

⁴⁶ NEA Comments at 8.

⁴⁷ ALA Comments at 15.

expenses for broadband service as well as further upgrades in future years. SECA estimates that there will be a funding shortfall of over \$4 billion in the next five years—averaging out to approximately \$900 million per year—based on their study of growth in Category 1 demand, inflation, and other factors.⁴⁸ Studies from EducationSuperHighway and CoSN similarly project that \$800 million per year of additional funding will need to be permanently injected into E-rate simply to meet and maintain the internal Wi-Fi and WAN connectivity goals that the Commission has set.⁴⁹ Again, predictable funding in both the short and long term will ensure applicants make the best decisions for investment, upgrading to higher connectivity now with the knowledge that E-rate will continue to support monthly expenses and upgrades in the future. Of course, we agree with the Chairman that ongoing assessments of the program should continue through improved data collection processes and regular program evaluation, but addressing the critical funding crunch must be an immediate priority for the Commission.

IV. The Commission should ensure that future changes to the E-rate program promote equity and parity across types of institutions, including support for non-traditional learners.

Finally, we urge the Commission to ensure service and speed equity in schools and libraries throughout the country. This evaluation should include addressing concerns about how the Commission crafts definitions in the E-rate program, including the definition of “non-traditional” learners and recent changes to how the term “rural” is used. And the Commission should also revisit its reliance on state definitions of primary and secondary school,⁵⁰ which vary from state-to-state and impact funding eligibility for the youngest learners in the United States.

⁴⁸ SECA Comments at 3.

⁴⁹ “Analysis of Costs to Upgrade and Maintain Robust Local Area Networks for all K-12 Public Schools,” Consortium for School Networking & EducationSuperHighway (April 2014) at 5, *available at* http://www.educationsuperhighway.org/uploads/1/0/9/4/10946543/esh_cosn_lan_wifi_analysis.pdf.

⁵⁰ NAF Initial Comments at 31-32; NAF Reply Comments at 29-31.

Further, the Commission’s recent changes to the definition of “rural” for the purposes of determining E-rate support have raised many concerns. A number of commenters have noted how these changes may impact the distribution of funds and could further exacerbate the existing digital divide.⁵¹

Moreover, we urge the Commission to consider further efforts to equalize treatment of libraries in future changes to E-rate. Libraries have, at times, received less attention in the E-rate reform proceedings, despite the critical role that they play in providing broadband access for learners of all ages. In particular, the Commission should carefully consider the needs of tribal libraries, which have disproportionately low levels of broadband access and often do not receive adequate E-rate funding. According to a report from the Institute of Museum and Library Services and the Association of Tribal Archives, Libraries, & Museums, only 15 percent of tribal libraries reported receiving E-rate discounts between 2011 and 2013, with only 17 percent indicated that they had ever even *applied* for E-rate funding, primarily due to the complexity of the program and lack of awareness.⁵² The study indicates that “when tribal libraries are able to access E-rate, it makes a significant contribution to digital access and opportunities in Native communities.”⁵³

⁵¹ See, e.g., Petition for Clarification and/or Reconsideration of NTCA- The Rural Broadband Association and Utah Rural Telecom Association, WC Docket No. 13-184 (September 17, 2014).

⁵² “Digital Inclusion in Native Communities: The Role of Tribal Libraries,” Institute of Museum and Library Services and the Association of Tribal Archives, Libraries, & Museums (2014) at 22, *available at* <http://www.atalm.org/sites/default/files/Report.pdf>. This disparity may be due in part to challenges that tribal libraries face in becoming eligible to participate in the E-rate program, which are explained in detail in the Comments of the Tribal Telecommunications Companies, and Tribal Organizations, WC Docket 13-184 (April 7, 2014) at 6.

⁵³ “Digital Inclusion in Native Communities” at 23.

V. Conclusion

We are encouraged by the steps that the Commission has taken in the past year to modernize the E-rate program to address critical gaps in wireless access and streamline program administration and data collection, but more work remains to be done to truly equip schools and libraries with the connectivity they need in the 21st century. In the words of the Chairman himself, “Although the most recent step in E-rate modernization necessarily placed an emphasis on Wi-Fi and broadband *within* schools and libraries, we know that we must still address the challenge of improving the broadband infrastructure *to* the building for many schools and libraries, particularly in rural America.”⁵⁴

Respectfully submitted,

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⁵⁴ “FCC Chairman Wheeler Remarks at the Second Ed Tech Summit.”