

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Modernizing the E-rate Program for Schools and) WC Docket No. 13-184
Libraries)
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To: The Commission

COMMENTS OF COX COMMUNICATIONS, INC.

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EXECUTIVE SUMMARY

Cox has long been a trusted partner to schools and libraries throughout its service territory in providing broadband access and other connectivity needs. It has seen firsthand how these needs have evolved and expanded as educators deploy new digital learning technology. Cox strongly supports the Commission's efforts to transform the E-rate program so it can more effectively meet schools' current needs. E-rate reform should be driven by the goal of maximizing the ability of schools to take full advantage of the program and the benefits of broadband in the manner that best serves the individual school. There should be no artificial capacity goals (e.g. one Gigabit per 1,000 students).

E-rate should support high-bandwidth broadband connections in a cost-effective manner. Consortium buying and other bulk purchasing approaches can be effective strategies for schools to obtain better prices. At the same time, E-rate applicants should not be forced into consortia or bulk-buying programs that do not meet their educational needs or result in the most economical outcomes. For example, requiring very large consortia can have the perverse result of limiting the number of providers with the geographic scope to provide the services, making the procurement less competitive.

The Commission should take care that its zeal to provide schools and libraries with a broad range of purchasing options for broadband connectivity does not create artificial incentives for applicants to select less cost-effective options. In particular, schools and libraries often underestimate the costs and maintenance burdens of utilizing dark fiber or constructing new fiber networks. The Commission therefore should establish safeguards to ensure that E-rate support is used effectively by requiring applicants to compare the cost of finished services, where available, to the all-inclusive costs of dark fiber or new construction. The Commission must particularly guard against allowing E-rate funds to be used to pay for fiber construction costs in a lump sum, as this certainly would create uneconomic incentives to construct new facilities.

The Commission should take steps to ensure that schools and libraries can obtain the internal connections that they need to benefit from broadband-intensive learning applications. For instance, internal connections support could be made available as part of recurring support for Internet access. The Commission also should place reasonable limits on internal connections funding, such as per-student or per-classroom limits and a requirement that applicants certify that they do not already possess a minimum level of connectivity prescribed in the ESL. To free up funding for broadband, the Commission should eliminate support for many outdated services, but should be cautious about eliminating support for voice, especially in the near term. Many schools and libraries still rely on voice services for other important needs, such as safety communications and alarm systems.

Finally, Cox strongly supports improving administrative efficiency in the E-rate program. The Commission should minimize paperwork burdens wherever possible, and avoid creating new ones under the umbrella of "transparency". Schools and libraries should receive their funding decisions by July 1 each year, and the Commission should open the application window earlier if necessary to achieve this. The ESL also should be simplified.

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Cox Communications, Inc. (“Cox”) presents these comments in response to the Commission’s notice regarding changes to the schools and libraries universal support mechanism (“E-rate”).¹

I. COX HAS A STRONG HISTORY OF PROVIDING THE BROADBAND AND TELECOMMUNICATIONS SERVICES THAT SCHOOLS AND LIBRARIES NEED TO MEET TODAY’S EDUCATIONAL GOALS

The E-rate program has been a successful platform to ensure that schools and libraries are connected and have access to modern communications networks.² Cox has experienced first-hand the success of E-rate, and indeed Cox’s participation in the E-rate program has increased year over year.

The E-rate program has allowed many schools to create a new digital and connected classroom with interactive online learning. Cox has worked with E-rate customers to enable this “modern classroom” in a number of markets. For example, Cox worked with the Osborn

¹ *Modernizing the E-rate Program for Schools and Libraries*, WC Docket No. 13-184, Notice of Proposed Rulemaking, FCC 13-100 (rel. July 23, 2013) (“NPRM”).

² *Modernizing the E-rate Program for Schools and Libraries*, WC Docket No. 13-184, Notice of Proposed Rulemaking, FCC 13-100, at ¶ 2 (July 23, 2013) (“*E-rate NPRM*”).

Elementary School District in Phoenix, Arizona, to deploy high-bandwidth broadband connections among all of the district's schools. This allows schools in the district to access a statewide education portal that includes an expansive collection of educational tools and resources. As a result, the district was able to meet the goals of the Arizona Education Standards, putting it well ahead of many other districts in the state. In addition, test results from pre-kindergarten students in Osborn classrooms with computers revealed a definite improvement in problem-solving skills. In part because of Osborn's E-rate success, the district has been selected as the only pilot district for a statewide student data collection system by the Arizona Department of Education. It will link student achievement data with teacher proficiency data and public access. Once implemented, the system will track the success of students from cradle to college as they matriculate through the system.

Also in Arizona, Cox substantially upgraded the broadband connections at the Tesseract School, a non-profit private institution, which enabled the school to implement learning opportunities that had been impossible with slower connections. These new capabilities facilitate project-based learning among students, faculty and worldwide with Tesseract's exchange schools in China and Peru. Students participate in distance learning from remote locations through an application called Illuminate™. With Illuminate™, students can form remote breakout groups, use digital whiteboards, participate in textual discussions, present to each other and raise their hands virtually when they are asked a question by the teacher. Cox Business provides the technology backbone so that those applications work seamlessly and new learning styles are now possible for students.

In Kansas, small community schools use broadband connectivity purchased from Cox and other providers to access distance learning opportunities from colleges within the state.

Many schools have combined this broadband access with other sources of funding to purchase tablet computers and other learning resources that significantly enrich the learning environment in rural schools. Another Kansas school district retrofitted a school bus that once was used to transport children with broadband access and distance learning equipment to bring teacher training to teachers at their own schools, significantly saving travel time and expenses.

As the Commission recognizes in the *E-rate NPRM*, schools' and libraries' digital needs will continue to evolve.³ Cox, as a trusted broadband partner to schools and libraries, supports the Commission's efforts to ensure that E-rate meets these evolving needs.

II. THE TRANSITION TO HIGHER BANDWIDTH SERVICES FOR SCHOOLS AND LIBRARIES SHOULD BE BASED ON EDUCATIONAL NEEDS

Cox supports the Commission's stated goal for the E-rate program of ensuring that schools and libraries have affordable access to 21st Century broadband that supports digital learning.⁴ In practice, this goal should allow schools and libraries to obtain the broadband connectivity and other communications services that are necessary to enable these institutions to attain their educational goals. Indeed, the capacity provided under the E-rate program has been increasing, signaling that these institutions already are looking to the E-rate program to help fund their higher bandwidth needs in order to meet their educational goals.

Over the last few years, Cox has upgraded the broadband access at a number of the E-rate-funded schools that it serves. For example, in Kansas, Cox recently upgraded the very rural Dodge City Public School system to a 1 Gigabit broadband Wide Area Network to connect all schools to the district's data center. Also in Kansas, Cox has provided temporary increases in

³ *Id.* at ¶ 2 (“The challenge we now face is modernizing the program to ensure that our nation’s students and communities have access to high-capacity broadband connections that support digital learning while making sure that the program remains fiscally responsible ...”).

⁴ *Id.* at ¶ 17.

capacity to schools on an as-needed basis (“burstable services”) to enable sufficient capacity during the state assessment testing period. This option allows schools to cost-effectively purchase the capacity they need without paying for it year-round.

Similarly, Cox recently became the internet access provider for the Scottsdale Unified School District in Arizona, and significantly increased the district’s broadband capacity to 1 Gigabit at each of the 32 schools in the district which serves approximately 27,000 students. With E-rate funding the broadband access, the district has been able to use other funding sources to purchase tablet computers. The E-rate-supported broadband service also enabled the district to implement a bring-your-own device program to further expand teacher and student access to digital learning devices and software. Increased broadband access services, combined with educational devices and software, have enabled the school to offer an array of digital learning opportunities to students.

In the Tempe Elementary School District in Arizona, Cox replaced the district’s former copper connectivity, which was not meeting the district’s needs, with 1 Gigabit fiber connections. Teachers can now run simultaneous, advanced applications and video feeds including Discovery Education and IDEAL e-learning that they could not run before. Moreover, the district can now have up to 600 simultaneous users web surfing, accessing resources, and communicating at the same time – a level of resource demands that would have brought the district’s former connections to a crawl.

Ensuring that schools are able to order the services that they choose for their educational goals is preferable to establishing artificial speed or capacity targets.⁵ Every school district has different educational needs requiring varying broadband capacity; it is up to the

⁵ *Id.* at ¶ 21.

district to determine the best use of their limited funds or what educational priorities to focus on in the upcoming year. As the White House’s recent ConnectED initiative recognizes, digital learning requires more than just higher-capacity connectivity – it also requires teacher training and integration of appropriate devices and software.⁶ Particularly given the economic pressure on the E-rate fund, Cox urges caution regarding policies that might create inefficient incentives for schools to order more services than necessary to meet their educational goals.⁷ Since Cox’s own experience has shown that schools are capable of assessing and ordering services that meet their needs, incentives for targeted or specified capacity would not likely serve the goal of maximizing the cost-effectiveness of the E-rate program.

III. E-RATE SHOULD SUPPORT 21ST CENTURY BROADBAND CONNECTIONS IN A COST-EFFECTIVE MANNER

A. Consortia and Other Bulk Purchasing Should Be Used Where Most Economical and Consistent With Schools’ Educational Goals

Cox agrees that bulk purchasing, including consortium purchasing and procurement via state master contracts, can be an efficient means of purchasing E-rate services.⁸ Under the current rules, Cox serves several consortia, and there is ample incentive for schools to come together to purchase in bulk through state master contracts, consortia, and similar arrangements. That said, it would be a mistake for the Commission to require schools or libraries to purchase through consortia, off of state master contracts or otherwise in bulk. Schools and libraries should

⁶ See, e.g., The White House, “ConnectED: President Obama’s Plan for Connecting All Schools to the Digital Age,” available at http://www.whitehouse.gov/sites/default/files/docs/connected_fact_sheet.pdf.

⁷ At a minimum, before setting a specific capacity goal, the Commission may want to collect information from schools on their bandwidth needs and what factors are preventing them from requesting higher speeds.

⁸ *Id.* at ¶¶ 179-90.

have the flexibility to purchase consistent with their educational goals, which may not be served by bulk purchasing in all circumstances. Also, further encouraging consortia purchasing may actually increase prices because fewer service providers will be qualified to bid cost effectively on the entire consortium area due to limits on the geographic area they serve.

B. Safeguards Should Be Put in Place to Guard Against Uneconomic Selection of Dark Fiber or New Construction

Similarly, the Commission should be careful of creating an artificial incentive to build new fiber networks that could cost more than finished services provided over existing networks and should implement safeguards to ensure that applicants make a realistic, all-inclusive cost comparison before requesting E-rate support for dark fiber or new construction. The Commission also should not provide E-rate support for “special construction charges” for new fiber networks without adequate safeguards to prevent abuse and waste.

Unfortunately, the costs and technical challenges of lighting dark fiber or constructing and maintaining new fiber networks are not always apparent to E-rate applicants at the outset. For example, Cox has seen a number of situations where schools or libraries purchased dark fiber but later were unable to maintain it. For example, one such school system purchased dark fiber and, when they were unable to manage it themselves, put out a Request for Proposal (“RFP”) to hire a company to manage it. Cox initially bid on the contract, but it quickly became clear that it was infeasible given that the network had not been constructed with customary features to enable maintenance such as tracer wire necessary to find and maintain the plant. In another case, a state network did not follow prudent planning practices and therefore did not upgrade the network as needed to meet demand. When schools were unable to receive the services that they required, the state permitted service providers to bid to augment the state network services. The result was an inefficient and unnecessarily complex collection of technical solutions.

Of course, examples exist of successful E-rate-funded fiber projects where schools systems have the knowledge and information technology staffing to make dark fiber an effective option. For instance, Cox serves the Clark County School District (“CCSD”) in Las Vegas which purchases dark fiber from Cox with E-rate support and has the staff expertise and knowledge necessary to run and maintain the network.⁹ This district built and maintains its dark fiber-based network with E-rate support, including navigating the changes in the E-rate rules regarding dark fiber. E-rate reforms should not undercut support to well-qualified applicants operating a cost effective dark fiber solution like CCSD.

The Commission should implement appropriate safeguards to identify dark fiber or new construction projects that are not cost-effective while not holding up projects that are well-planned and efficient. Specifically, the Commission could require schools and libraries that propose either to build new fiber networks or to purchase dark fiber to confirm that this is the most cost-effective approach. The Commission should require schools or libraries to (1) determine if an existing broadband network of sufficient capacity exists; (2) determine if the network can provide service to the school or library; and (3) compare the pricing of such services to the all-inclusive price of operating the network that the applicant proposes to build with dark fiber or new construction. If the National Broadband Map or any state broadband map developed under NTIA’s State Broadband Initiative indicates that at least one existing provider is offering broadband services of sufficient capacity where the school or library is located, there could be a rebuttable presumption that the school or library may not construct new facilities or propose to purchase dark fiber. Schools and libraries would be permitted to overcome the presumption with a showing that procuring or building fiber (including lighting dark fiber), as

⁹ See <http://ww2.cox.com/business/centralflorida/industries/education/cs-edu-clarkcounty.cox>.

well as lighting, maintaining and operating the network, is more cost-effective than the commercial service. Cox believes that such a presumption could go a long way to ensuring that E-rate funds are used cost-effectively.

Alternatively, the Commission could require E-rate applicants considering dark fiber or new construction to obtain bids for finished services and compare the cost of the finished service to the dark fiber or self-build options – including all the costs of lighting and maintaining the fiber – to ensure that the applicant selects the most cost-effective option over the life of the contract. The comparison would need to include the equipment, overhead and maintenance costs that would be associated with a network built on dark fiber or entirely self-built by the school or library.¹⁰

This sort of analysis will be particularly crucial if the Commission adopts its proposal to provide priority one support for modulating electronics to light leased dark fiber or provides additional support for installation costs of dark fiber.¹¹ It would make little sense to provide additional E-rate support to fund dark fiber, associated modulating electronics and installation costs in cases where it would be cheaper to purchase a finished service from an existing provider.

C. The Commission Should Make Prudent Changes to Ensure Schools Receive More Equitable Support for Internal Connections

It is agreed that high-bandwidth connections to the outside of the school wall are of little value unless schools are able to deliver that bandwidth to their classrooms. Cox therefore

¹⁰ Such an approach would be consistent with the Commission’s prior decision in the rural health care fund. *See, e.g. E-rate NPRM* at ¶ 81 (“In the *Healthcare Connect Fund Order*, the Commission allowed consortia to seek rural health care fund support to build and own their own network facilities if construction was determined to be the most cost-effective option after competitive bidding. However, the *Healthcare Connect Fund Order* also imposed several safeguards on the program to ensure that consortia only exercised their option to self-construct when it was absolutely necessary.”).

¹¹ *Id.* at ¶¶ 72-74.

supports reform to the E-rate program that allows schools or libraries to have more equitable access to support for their internal connections provided that these changes are done in an economical and cost-effective manner.¹² One such approach would be to permit internal connections to be funded as part of Internet Access on a monthly recurring basis as opposed to a non-recurring charge. This would allow applicants and service providers to spread the cost of an internal connection over an extended period and reduce the annual impact on the fund.

The additional cost of providing internal connections support to a greater number of schools can be mitigated with prudent safeguards. First, Cox generally agrees with the proposal set forth by SECA to simplify and limit internal connections¹³ (with reasonable provisions for flexibility, for instance, in cases where online testing requires computer labs or larger rooms to have more drops or wireless access points to accommodate many concurrent online testing sessions). Second, the Commission can gauge the demands on the fund as additional support for internal connections is provided and adjust its rules accordingly by, for example, setting a per-student cap on funding for internal connections as a means to limit demand on the fund.¹⁴ Finally, in order to ensure only schools with sufficient need receive internal connections funding, the Commission could require an applicant to certify that it does not currently have the minimum

¹² Cox supports providing sufficient funding for E-rate within the current overall budget for the federal universal service program as a whole. Cox does not believe that evidence currently shows that it is necessary to increase the USF contribution burden in order to achieve the Commission's E-rate goals. That said, if additional funding becomes available within the overall universal service program (such as unused high-cost funding from the Connect America Phase I program), the Commission could shift such funding to the E-rate program.

¹³ SECA proposes one router per building, one wireless access point per classroom and internal cabling of up to 3 drops per classroom. The inclusion of routers as supportable under internal connections should not eliminate current support for routers as part of priority 1 services. Of course, this definition may require revision if in the future additional customer premise equipment becomes essential for internal connections.

¹⁴ NPRM at ¶¶ 137.

internal connections in the ESL capable of delivering up to a prescribed bandwidth per 1,000 students.¹⁵

D. The Commission Should Eliminate Funding for Anachronistic Services, but Be Cautious About Immediate Changes to Supported Voice Services

Cox agrees that re-focusing funding to help applicants obtain higher broadband speeds in the classroom should be a primary focus of the E-rate program going forward. However, Cox cautions against elimination or sharp reduction of support for all voice services, particularly the school landline telephone services used to connect offices and classrooms to the outside world and in some cases to operate security and alarm systems. In Cox's experience, applicants rely on E-rate dollars to meet their needs for telephone service as well as their broadband needs, and reductions in support would create hardship in paying for voice services that applicants do not consider to be extraneous. While voice services are increasingly being provided over broadband, the cost of transitioning to such systems quickly can be prohibitive and many schools may want to keep their existing services in the near term. While such voice services should continue to be funded at the same rate of support as broadband services, it may be reasonable to limit the number of lines supported, such as by limiting support to a prescribed number of lines per 1,000 students. Any restrictions on support for voice service should apply equally to fixed and wireless voice services.

Cox also supports eliminating funding for paging, email, texting and web hosting to provide more funding for broadband services. Additionally, the Commission should eliminate support for wireless handsets by requiring device costs to be allocated out of the monthly support for wireless service, which could provide substantial additional funds for broadband.

¹⁵ See *infra* Section V.C. regarding simplification of the ESL.

IV. COX STRONGLY SUPPORTS GREATER ADMINISTRATIVE EFFICIENCY IN E-RATE

Cox agrees with the Commission that the E-rate program could be operated more efficiently if the administrative processes were streamlined. This would reduce costs and increase the money that schools, libraries and service providers have available to provide the services necessary to make available a 21st Century learning experience.

Cox has experienced some of the problems identified in the *E-rate NPRM* that contribute to the complexities faced by both E-rate participants and service providers. For example, delays in funding commitments may require applicants to face purchasing decisions without clarity as to the status of their applications and whether they will receive E-rate funding.¹⁶ Additionally, the complexity of the E-rate forms may force applicants to hire consultants, which imposes additional costs on E-rate applicants that cannot be recovered from the E-rate program and, as a result, reduces the benefits of participation in the program.¹⁷ Furthermore, the eligible services list (“ESL”) itself is overly complicated. To maximize the effectiveness of the program for E-rate participants, the process should be simplified as much as possible, and the ESL should be streamlined. These cost savings for the E-rate program and its participants can be used for more high-bandwidth broadband.

Cox believes that the streamlining proposals it offers will not negatively impact the Commission’s goals of eliminating waste, fraud and abuse in the E-rate program.¹⁸ Currently, the Commission has the ability to review records and investigate suspected fraud and abuse. The

¹⁶ *Id.* at ¶ 225.

¹⁷ *Id.* at ¶ 224. Another challenge that schools face is obtaining the requisite signatures on time for the various forms that must be submitted as part of the E-rate program.

¹⁸ *Id.* at ¶ 225-26.

Commission should proceed to eliminate waste, fraud and abuse through enforcement, not expensive new reporting or compliance requirements.

A. The Commission Should Minimize E-rate Paperwork Burdens

Cox strongly urges the Commission to eliminate all unnecessary filings that do not contribute to preserving critical safeguards for prevention of waste, fraud and abuse in the E-rate program. As an example of an unnecessary paperwork burden, filing FCC Form 471 annually in a multiyear contract of three years or less is unnecessary and does little to further the Commission's interests in eliminating waste, fraud and abuse. The Commission should implement its proposal to permit an applicant to file one FCC Form 471 for a multiyear contract of three years or less.¹⁹

The Commission also should eliminate the requirement that an E-rate contract be signed before FCC Form 471 is filed. It is common for applicants to be working on completing the E-rate forms and requirements up to the last minute of the bidding window, and the rigid signature requirement creates an unnecessary stumbling block that can result in penalties for schools – typically commitment adjustments months or years later – that are out of proportion to the value of the rule. A delay of a few days or even weeks in signing the agreement does not create risks of fraud or abuse as long as the school can certify that it has chosen a winning bid and completed negotiations for a contract by the time the Form 471 is filed. The signature should be required, however, on or before the date the service provider begins providing the supported services.

As the Commission streamlines existing paperwork burdens, it must avoid creating unnecessary new ones. The proposed rules designed to “increase transparency,” such as extensive reporting of E-rate spending, prices and bidding, also have the potential to increase

¹⁹ *Id.* at ¶ 241.

burdens on schools, libraries, and service providers.²⁰ Similarly, while Cox understands the Commission’s efforts to establish definitive metrics regarding high-capacity broadband, Cox remains concerned about any proposals that might impose added costs or filings to the already stressed budgets and staffing shortages faced by schools today.

B. The E-rate Funding Window Should Open Earlier

The Commission should open the E-rate application filing window earlier so that USAC has more time to review applications and make decisions. As noted above, USAC routinely fails to issue funding commitment decisions in a timely manner to allow E-rate applicants to make purchasing decisions on a normal fiscal year (and academic year) schedule. If necessary to permit USAC to make funding decisions timely, the application window should be opened and closed earlier so that USAC has sufficient time to approve requests by no later than July 1 of each year. Cox also has no objection to a deadline for USAC action on applications.

C. The ESL Should Be Simplified

In order to ensure that schools have access to the educational technology that they need, Cox also supports simplifying the ESL.²¹ The ESL includes many legacy service terms that can confuse applicants. For example, schools and libraries may struggle to select the correct service category where certain terms in the ESL are used for more than one category of service (e.g., a “T-1” can be transport or voice). The applicant just cares about the service delivered, not the physical method of delivery and the multiple listings can be confusing. The ESL should be revised to make it more user-friendly and reflective of current technology and terminology.

²⁰ *Id.* at ¶¶ 191-99.

²¹ *Id.* at ¶¶ 103-04.

