



Education Networks of America

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VIA ELECTRONIC FILING

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: Modernizing the E-Rate Program for Schools and Libraries, DA 14-308, WC Docket No. 13-184

Dear Ms. Dortch:

ENA thanks the Commission for allowing additional comments on the E-Rate Modernization process. We have previously submitted very extensive comments to the NPRM and will provide limited comments focused on our most important issues in this document.

General Comments

ENA agrees with the Commission comments that some level of funding for specific products and services delivering Wi-Fi capability inside the school and library is needed to ensure end-to-end connectivity. We encourage the Commission to allow applicants to choose between purchase of equipment or service to accomplish the goals of internal Wi-Fi connectivity without restriction on means to accomplish the end result. A managed service that aggregates certain services “in the cloud” or virtualizes the hardware necessary may be the most cost effective way for certain school systems to purchase Wi-Fi and should be allowed to compete with other available options on a total cost of ownership basis.

ENA continues to stress the need for streamlining the administrative process of E-Rate and have included our summary recommendations in this area as part of this filing. The delays between application submission and E-Rate funds getting to work to provide needed service is a major challenge for recipients and service providers alike and needs to be addressed to meet the aggressive goals of the Commission.

ENA encourages the Commission to implement only certain simple, powerful reforms the first year and plan to perform annual analysis of results to reach a continuous improvement process. As you know, it is critical to carefully evaluate the local budget impact of removing currently supported services. Removing them will potentially result in unintended consequences on investment in broadband expansion because recipients who do not have the budget to absorb the currently supported service costs will most likely shift budget from broadband investment to support these services as described in Item 3.

ENA further believes, similar to the USAC Board, that the FCC should consider creating a group of applicants, service providers and consultants who can act as an ongoing sounding board to FCC E-Rate activities including this modernization effort.

Specific Comments

1. Response to Paragraphs 26, 27 and 29 - The Public Notice appears to consider owned fiber as a stand-alone technology choice when in fact it should be compared to all other options over consistent time horizons to determine the most cost effective solution. While owned fiber may have a lower cost to operate after repayment of a large upfront cost, lit fiber from service providers is also likely to be significantly lower in cost over a similar period of time, such as 15 years for owned fiber versus traditional one to five year time horizons associated with lit fiber. Program history shows that cost per unit has dropped tremendously over the past 15 years so the Commission should consider that information when comparing owned fiber versus other vendor provided technologies as part of this proceeding.
 - a. ENA does not disagree with the value provided through dark fiber, however total cost must be considered against other available services.
 - b. The metric that is typically missing when comparing dark fiber with lit fiber is that the comparison tends to be a blended cost of dark fiber over a long horizon with an assumption that today's cost for lit fiber will continue over the same horizon. We are typically seeing pretty dramatic rate differences for lit fiber when requesting quotes for 5 years versus 3 years and would be even more dramatic when we allow vendors for lit fiber to amortize their costs over 10 years as well. The proof of this is the overall reduction in cost per mb for all bandwidth modes over the last 15 years. In 10 years, we are likely to be purchasing 10 Gbps and 40 Gbps for schools for the same price that we purchase 100 Mbps and 1 Gbps today. This may not trend to all specific situations, but we are missing an opportunity if we don't allow lit and dark fiber to compete.
 - c. Recommendation - Replace mandates for owned fiber with mandates for long-term cost evaluations of all technologies (at a minimum dark versus lit fiber) using same time horizons.

2. Response to Paragraph 35 - The Public Notice (as well as numerous public speeches) is touting the use of consortia purchasing as a way to expand broadband service and reduce costs. ENA agrees that the consortia approach to purchase equipment, or other items that are not location specific, can generate volume-based cost savings. ENA has been involved in numerous statewide and regional last mile broadband consortia. We agree with the Commission's assertion that bulk buying of last mile broadband is not as effective as purchase of equipment using similar techniques. Last mile broadband consortia could be more cost effective or they could just be a blend where the high cost areas pay less and the easy to serve areas pay more to offset (a postalized rate is a popular concept).
 - a. ENA participates as a service provider for several consortia and we agree that, executed properly, consortia can add value and extend service in an equitable manner.

- b. Aggregating buying power at a state or consortia level with an award to a single, monolithic carrier because of its perceived coverage of the membership potentially eliminates involvement of many end users in the procurement process who may become dependent on the consortia, which may or may not proactively look for better and more cost effective solutions. Ultimately there is no one size fits all.
 - c. In addition, considering consortium purchasing as a panacea for better pricing tends to eliminate smaller local entities with specific fiber footprints from participating, and therefore actually can increase cost or reduce fiber service availability in some areas. The current system, while flawed in some respects, allows the local applicant to decide whether consortia or local vendors provide the most cost effective service and we believe the decision should remain at that level and be subject to reasonable price constraints as detailed below in (c).
 - d. The most cost effective guidelines for awards to Form 470 filings in place today are adequate to effectively consider both cost and quality of solutions – regardless of the purchasing method. As an overlay, the E-Rate program can review cost per unit of solutions to determine if cost requested (no matter the purchasing method) is reasonable. By looking at cost irrespective of purchasing method, high dollar outliers can be revealed and helped to find lower costs. That is really the simplest measurement to triage E-Rate funding requests and can speed up approval of the lower to medium cost applications while allowing further evaluation of higher cost requests. The data now collected on Block 5 should help make that simple calculation possible for broadband.
 - e. The Commission has discussed and requested further comments on whether consortia should receive incentives such as higher discount rates. We discourage any such preferences to any one purchasing method to the detriment of other methods. If the consortium method is truly cost effective and provides more total value to the applicant, no additional incentives will be needed for applicants to choose to be part of the consortium. In addition, if such incentives were adopted, how would consortia be managed as currently a “consortium” consists of any number of applicants banding together with no minimum. If an incentive system was adopted, it would likely lead to many new “consortia” being formed of small sizes to qualify for the incentive.
 - i. If an incentive is allowed, the Commission will need to make certain that applicants who file their own 471s based on consortium 470s/procurements are afforded the additional consortia incentive.
 - f. Recommendation - Replace preference for consortia or any specific type of buying vehicle with emphasis on total cost effectiveness and actual cost per unit regardless of purchasing vehicle – approve low to medium cost with limited review and focus review efforts on understanding and reducing high cost applications/areas. Allow locals to continue to make decisions on whether consortia or local vendor options are most cost effective. Do not provide a higher discount rate or other preference to consortia to the detriment of other cost effective purchasing methods.
3. Response to Paragraphs 41 – 46 - ENA understands the focus of the Public Notice to position more dollars to deliver broadband connectivity. However, ENA is concerned about the methods

to try to get there. The elimination of voice service eligibility would increase the amount of dollars available for E-Rate to **match** local applicant funds to purchase broadband. However, barring school districts and libraries stopping use of voice services, which we see as highly unlikely, the removal of matching dollars from voice creates a need for more local funds to buy required voice services. Because the applicants will use more local dollars than before for voice, they will have less local dollars to use to apply to broadband – no matter what the size of the E-Rate fund matching pool.

- a. Given that E-Rate currently allows entities to file for as much bandwidth as they need, why are applicants not filing for those levels of E-Rate. We believe the answer has at least three components:
 - i. Not enough local funds in general
 - ii. Not enough local funds to buy devices
 - iii. Not enough local funds to buy internal connections
 - iv. Even if E-Rate had infinite matching funds, if there are not enough local funds, the E-Rate funding will not be used
- b. Elimination of voice service funding will create more available E-Rate dollars but potentially decrease the amount of broadband implemented
 - i. Simple math – assuming that America’s schools continue to need and pay for the level of voice service in place today
 - ii. If a school district is currently spending \$1,000 on voice and paying 30% after E-Rate, their cost is \$300
 - iii. If they need to keep the voice service and E-Rate stops supporting voice service, their local cost becomes \$1,000
 - iv. At the starting point of the process, the technology budget has gone down by \$700
 - v. Unless they have something else that they were paying 100% for that is now E-rate funded (like perhaps Wireless), how do they pay the local match to take advantage of the additional E-Rate funds available for broadband?
- c. The FCC needs to look at the impact to local budgets as part of their efforts to understand the impact of their moves. It is good to create more E-Rate dollars. It is counterproductive to create more E-Rate dollars if the local match is not available.
- d. Recommendation - Replace concept of “increasing the fund size” with increasing the dollars available for local technology use (local budget focus). Increasing E-Rate or moving E-Rate eligibility around without evaluating local impact will not create the big impact desired. Elimination of voice services may create less not more broadband spending due to the need to use local dollars to pay for the previous E-Rate match on voice service.

Respectfully submitted,



Rex Miller

Senior Vice-President and Chief Financial Officer

Modernizing the E-Rate Program for Schools and Libraries Education Networks of America, Inc. NPRM Comments

The following NPRM comments are provided by Education Networks of America, Inc. (“ENA”). ENA is a managed service provider delivering Internet Access, voice, video and managed Wi-Fi services to K-12 schools and public libraries across the country. ENA has been involved in the E-Rate program since its inception and we have multi-year experience in working with virtually every segment of the school and library communities including rural and urban, large and small, district-wide and statewide, supporting every possible demographic. We are strong believers in the E-Rate program and strong believers in our local customers and their capabilities to implement the E-Rate program to reduce costs and increase service. We are responding to the NPRM to provide our thoughts on how to reduce the complexity of the program while improving results.

ENA proposes a series of recommendations, simplifications and basic measurements designed to meet the goals specified by the FCC in this NPRM. We believe the recommendations that follow will have significant impact in meeting overall program goals.

10 Key Recommendations to E-Rate Reform

Recommendation 1 – Increase the Fund

While proposals for streamlining program administration and maximizing cost-effective purchasing may serve to increase efficiency of the application of available funds, the amount of annual funding available must grow to achieve the objectives the ConnectED Initiative of connecting 99 percent of America’s students through high-speed broadband and high-speed wireless within five years. Internet connectivity services have grown significantly over the last fifteen years (as much as eighty times the 1998 baseline by ENA’s estimate) while Priority 1 costs have only doubled. Given that the program has a goal to increase broadband by another one hundred times within the next five years to get to 1 Gbps per school, we should expect Priority 1 demand to at least double to meet that service level.

Increasing the fund will:

- ensure the feasibility of reaching the ConnectED Initiative broadband targets to enable digital learning
- allow schools and libraries to keep up with the fast-paced transition to digital/IP-based services

Recommendation 2 – Retain the Current Funds Distribution Approach

We discourage the FCC from considering a funds distribution approach that involves a per-student or per-building allocation or cap on funds. While this would provide a fixed budget for schools and libraries, it would promote inequity for small and rural schools that either do not have the student or patron population to offset the costs of service or service upgrades or typically pay more for services in outlying areas. The goal is for all schools and libraries to achieve the ConnectED Initiative broadband goals.

Continuing the current funds distribution approach will:

- ensure that all schools and libraries will have equity of access to the funding needed for high-speed broadband access regardless of their size or rurality.

Recommendation 3 – Support All Advanced Services

Advanced services including broadband, traditional voice, VoIP, e-mail, cellular service, etc. are services actively used by schools and libraries today to support their mission critical work. Each is essential in its own way and to focus on only one service (broadband) would be damaging.

Supporting all advanced services will:

- relieve schools and libraries of the burden of replacing funding for these essential services from their local budgets which are already strained.
- allow schools and libraries to invest in increased broadband services with available local funds.
- allow schools and libraries the ability to implement advanced telecommunication mission critical services which will increase productivity, resulting in cost-savings.

Recommendation 4 – Revise the Priority System

We recommend while funding is still under the level of requests, that the FCC revise the E-Rate priority system temporarily to three levels with a long-term expectation to consolidate into one level if adequate funds are available in the future. We recommend the following revision to the Priority System - Priority 1a for Broadband Connectivity/Internet Access; Priority 1b for all other items previously in Priority 1 plus internal broadband such as Wi-Fi access points, related cabling and switches - delivered as either a purchased item or a managed service; and Priority 2 - all remaining Priority 2 items. Priority 1a would also include one-time costs for broadband build-out consistent with current measures/controls.

Revising the priority system will:

- focus the fund on meeting the ConnectED Initiative goals.
- allow schools and libraries to utilize new Wi-Fi technologies that are cost-effective and remove infrastructure limitations that can limit broadband access regardless of the Internet Access speeds, assuming additional funding is made available.

Recommendation 5 – E-Rate Application, Approval, and Data Gathering Reforms

Simplification of the E-Rate application and approval processes, namely information gathering via Form 471 and statistical sampling during the approval process, can meet initial program measurement requirements and streamlining needs. We assert that the E-Rate program should capture a simple measurement of broadband in existence using the Form 471 application process to get a baseline before implementing many of the concepts in this NPRM. E-Rate application processing reforms can meet multiple measurement and streamlining needs. (In our detailed comments, ENA enumerates specific changes to forms and processes which could enable significant simplification and improve data gathering.)

Program goals include:

- Broadband connectivity increases to 100 Mbps and higher
- More widely available and affordable services
- Detect inappropriate usage of funds

- Streamline and speed-up program processes to make sure all funds are deployed
- Measurement of each of these goals

ENA asserts that a revised 471 review process can address the majority of these goals using the following process:

- Perform electronic testing on 471 applications based on the following criteria:
 - Cost per unit – for example cost per megabit per second for bandwidth – compared to a cost ceiling
 - Total applicant request compared to prior year approved requests – significant increases would need to be reviewed – 30% or higher increase perhaps
- Identify outliers based on these cost and speed tests and require manual PIA review to determine reasons for high cost:
 - Many outliers will be resolved based on high cost areas but others will stand out
 - Allow SLD to select other outliers based on controls determined with FCC collaboration
- Allow remaining applications not selected for manual testing to be subject to statistical sampling
 - Using well-established statistical sampling methodologies (which appear to already be employed for invoice payment), select a further statistically valid sample for manual PIA testing (likely to be about 10% of the pool to achieve a 99% confidence level)
- Applications not selected for statistical sampling or outlier testing, will be approved without manual PIA review
- In addition to these tests, the 471 process can also provide needed information on broadband speeds requested versus program goals and provide a list of applicants that the FCC may determine need assistance
- If adopted, the value of the speed of processing and the cost testing information should override any risk that inappropriate applications will slip through the testing net.

The recommended simplifications of the application and approval processes will:

- allow more than 85% of applications to be approved via electronic testing.
- speed approvals for this 85% of applications – resulting in most schools and libraries knowing well in advance of the new fiscal year the amount of discount available, allowing for planning and implementation of the new technology services prior to beginning of the next school year.
- simultaneously capture all information needed to much more accurately determine progress against program goals.
- provide data to identify outliers that require inspection or applicants that need help to find cost effective services.
- reduce dramatically the number of process errors by applicants, therefore dramatically reducing the number of denials by USAC and resulting appeals to the FCC.

Recommendation 6 – Maintain Competitive Bid Requirements

ENA believes that competitive bid requirements of the program following local bid rules are the best way to get the most cost-effective service. We caution the FCC that cost is not the only factor in determining the best provider. Lowest cost and low quality does not meet educational, operational or FCC goals. That is why we suggest the program continues to specify the most cost-effective solution versus solely the lowest cost one.

The FCC should minimize involvement and additional rules on the competitive bidding process including purchasing efforts and allow state and local laws and procurement processes to control unless obvious issues of high cost arise.

The recommendation to minimize additional competitive bidding requirements of the program and to rely primarily on applicable state and local law for these requirements will:

- ensure that applicants continue to choose the most cost-effective solutions to their educational technology needs.
- avoid adding costly layers of bureaucracy to the procurement process, which could cause further delays in approvals of funding to applicants and consume a large portion of available USAC and FCC resources.

Recommendation 7 – Eliminate 100% Denials and Institute a Fine System

ENA believes that 100% funding denials or COMADs do not support program goals in many situations. Applicants and service providers should be able to expect E-Rate to be approved and paid timely, absent fraud or gross negligence. In general, the FCC needs to minimize ways of punishing applicants and vendors for errors. We suggest the following changes:

- If the local or state contract is valid, E-Rate should pay for eligible services delivered
- A fine system can be developed to penalize applicants and vendors for errors in the application process or violations which do not rise to the level of fraud or abuse.
- An improper payment should be defined as a payment made for service not delivered/used or for an ineligible service delivered if such was clearly known, or a very similar short list. All other payments should be considered proper even if there were procedural errors in procurement or paperwork.

The recommended change to policy to replace the current approach of denial of 100% of funding for administrative errors with a new policy of applying a set of pre-determined penalties or reductions in discount amounts in these situations should result in:

- ensuring that applications that meet the spirit of the program but are defective in some minor way are still funded at 80-90% of the applied-for amounts
- maintaining incentives for applicants to correctly follow the appropriate processes
- virtual elimination of the need for appeals

Implementation of the combination of both the recommended forms and process simplifications, and the change to a fines/penalties approach for application process errors should result in:

- freeing up substantial resources at USAC to refocus efforts on understanding situations where applications indicate very high cost services or where services are still unavailable
- freeing up resources at the FCC currently tied up in handling appeals to become available to assist applicants in identifying solutions where no cost-effective services are currently available

Recommendation 8 – Exemptions from USF and Related FCC Fees

Make services provided to schools and libraries exempt from USF and related FCC fees. The current approach consumes E-Rate funding cap without providing service. Applicant-selected service providers should be allowed to claim this exemption on any of the inputs they purchase that are used at least 80 percent or greater for providing service to schools and libraries. For example - providers purchasing lit

fiber service from a carrier and selling that as part of their service to a school or library should not be required to pay USF to the underlying carrier, ensuring that these costs are not passed on to the schools or library user.

Removing USF fees from services provided to schools and libraries can:

- ensure that available program funds are directed to meet objectives of the ConnectED Initiative.
- ensure that funds are fully utilized for delivering educational technology to students.

Recommendation 9 – Data Monitoring and Measuring via Form 471

We encourage inclusion of bandwidth speed in Form 471 Block 2 (or Block 5 under the 471 NPRM) as a mandatory field. The Form 471 is currently available to the public on the SLD website. We would encourage adding this information and other similar key information to the SLD’s Data Retrieval Tool (“DRT”) which is used by many to review aggregated information by applicant or service provider. The DRT is currently being used to support several popular third party web tools that report and allow searching of E-Rate information. Providing the data in these manners should allow the FCC to consider the information publicly available. We do not believe there is a need for a new database or publication of this information on data.gov.

The recommendation to make the data, collected from a revised form 471, available publicly through the existing DRT application will:

- make cost and service data available for all applicants to assist in determining relative cost-effectiveness of available services, improving the competitive procurement process
- avoid expensive duplication of effort in creating and making data publicly available to assist applicants

Recommendation 10 – Enhancing FCC’s Role in Promoting Advanced Services

E-Rate administration focus should change from “funding police” to advocate for advanced service goals. FCC processes should enable getting funding out timely rather than punishing schools and libraries for missteps not rising to the level of fraud. The FCC should work with schools and libraries for success and leave behind many of the current adversarial approaches to administration of the program.

Changing the FCC focus from funding police to advocate for advanced services will:

- allow the FCC to work to fill its mandate of broadband and other advanced services to schools.
- assist schools and libraries in meeting the goals of the ConnectED Initiative
- allow the FCC to focus on applicants who they may determine need assistance