

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

**In the Matter of:**  
Modernizing the E-Rate Program for  
Schools and Libraries

WC Docket No. 13-184

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**COMMENTS OF THE E-RATE MANAGEMENT PROFESSIONALS  
ASSOCIATION**

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**1. INTRODUCTION**

The E-Rate Management Professionals Association (E-mpa)<sup>1</sup> respectfully submits comments on the Commission’s Notice of Proposed Rulemaking (NPRM) published on July 17, 2019 (WC Docket No. 13-184) regarding the establishment of a permanent five-year “category two” budget approach, and the potential transition to district-wide or library system-wide budget calculations, replacing the “per entity” budget calculations in place from FY 2015 until FY 2019.<sup>2</sup>

E-mpa supports both proposals and applauds the Commission’s willingness to put its best minds toward making the E-Rate Program efficient, effective, and as free as possible from waste, fraud and abuse. Further, the Commission is to be commended for being willing to examine what is working, and what is not, and to seek to provide the best possible program for all stakeholders. In these comments, E-mpa respectfully recommends a number of improvements to the “category two” budget approach herein referred to as the “category two budget” that the Commission proposes to make permanent.

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<sup>1</sup> The E-Rate Management Professionals Association (E-mpa®) is an association of E-rate professionals and consultants whose mission is to promote excellence and ethics in E-rate professional management and consulting through certification, education and professional resources. E-mpa members assist one-third of E-rate beneficiaries with their applications. [www.e-mpa.org](http://www.e-mpa.org)

<sup>2</sup> *Modernizing the E-Rate Program for Schools and Libraries*, WC Docket No. 13-184, Notice of Proposed Rulemaking, FCC 19-58 (rel. July 9, 2019) (*Notice*).

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## 2. IMPLEMENT A PERMANENT, FIVE-YEAR CATEGORY TWO BUDGET

E-mpa firmly supports the implementation of a permanent category two budget. Category two goods and services are vitally important for all applicants, and the codification of this proposal will give both applicants and service providers confidence that category two funding will continue in a reliable and predictable manner. Schools and libraries frequently plan expenditures over multiple years, and the knowledge that funding for their technology infrastructure is consistent will allow them to make more accurate long-term plans. E-mpa also makes the following comments pertaining to the questions posed by the Commission.

### 2.1 START THE NEW BUDGET IN FY 2020

E-mpa believes that any gap in category two funding will have serious consequences for all constituents in the program. Applicants will be forced to pay out of pocket for their recurring maintenance and managed broadband expenses. Unreliable funding may discourage applicants from requesting this valuable funding as well as discourage service providers from participating in the program.

There are two significant challenges with implementing the permanent category two budget in time for the FY 2020 filing window:

1. The Commission will need to weigh the numerous options the E-Rate constituency will undoubtedly put forward in response to this NPRM, and issue its rulemaking;
2. USAC will then need to adjust the E-Rate Productivity Center (EPC) to accommodate the programmatic alterations the Commissions directs.

E-mpa recognizes that effecting changes of this (projected) magnitude is daunting under the best of circumstances, and comments that a flawless transition with no deadlines would be difficult. This difficulty is clearly compounded by compressed time frame due to the opening of the FY 2020 filing window in Q1 of 2020. However, balancing the needs of the E-Rate community against the difficulties of the technical aspects of implementing the rulemaking, E-mpa recommends that pushing the filing window for category two products and services for FY2020 back long enough to accommodate the changes and allow for category two funding would be well worth the slight delay in processing applications.

## 2.2 IMPLEMENT THE FIVE-YEAR BUDGET AS A SERIES OF FIVE-YEAR BLOCKS

E-mpa recommends that the Commission implement the five-year budget as a series of discreet five-year blocks, beginning in FY 2020. The five-year category two budget blocks should be synchronized for all entities, receiving their full allotment of funding in the first year of the five-year block, then refresh automatically every five years.

E-mpa also recommends that funds should not carry over between blocks.

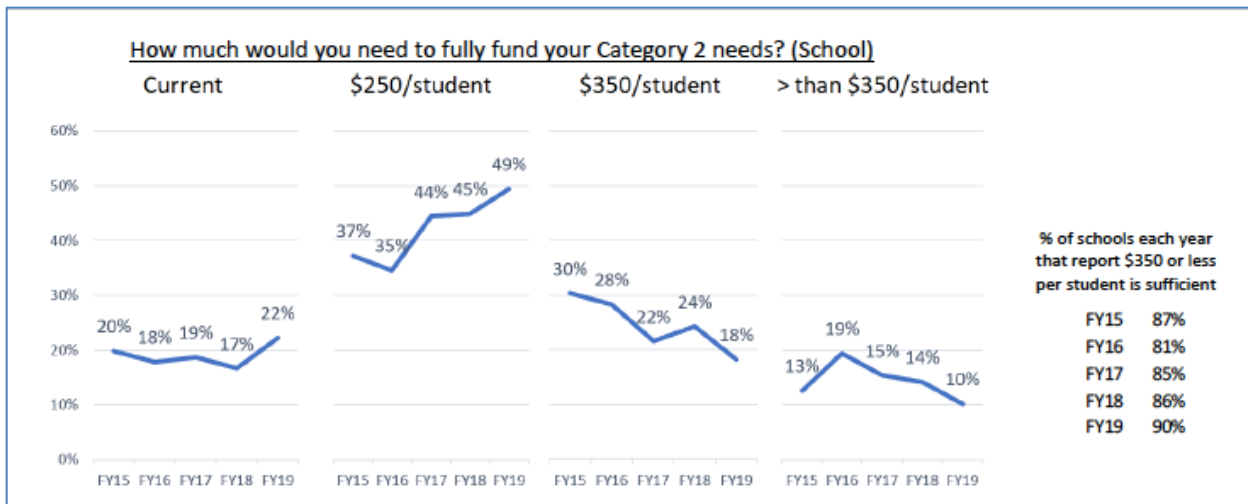
## 2.3 INCREASE THE PER-STUDENT BUDGET TO \$250.00

While mindful of the ramifications of any increase in the per-student category two budget, E-mpa's research shows that the current per-student rate is too low to adequately address the technology infrastructure needs of applicants. The current methodology USAC uses to fit funding requests under the applicant's category two budget is to require applicants to reduce their requests by removing enough items to bring the funding requests under the available category two budget. This has the side effect of making it appear that USAC is fully funding the funding requests they receive, but this is not the case. In reality, this practice masks the real shortfall, preventing a meaningful discussion of the actual gap between that which was originally requested, and that which was funded. Because of this unintended consequence, the Commission has been denied critical information on the real demand for E-Rate category two products and services.

In a recent survey conducted by Funds for Learning, with 1,763 applicant responses, the results were in line with E-mpa's recommendation of \$250 per student.<sup>3</sup> Of those surveyed, 22% answered that the current budget level was adequate, 49% answered that \$250.00 per student would be adequate, 18% answered that \$350.00 per student would be adequate, and 10% answered that they estimated that they would need more than \$350.00 per student.

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<sup>3</sup> 2019 E-rate Trends Report, Funds for Learning ex Parte Submission, WC Docket No. 13-184, Aug. 1, 2019.



Further, prior to the implementation of the five-year category two budget, all category two (priority two) requests, at all discount levels, were significantly higher. The reason the category two budget was implemented in the first place was due to the large urban centers requesting the vast majority of the available category two (previously referred to as “priority two”) funding. While E-mpa applauds the Commission’s desire to ensure that all applicants have access to E-Rate category two funding, it is also true that the request levels prior to the implementation of the category two budget method represents a factual gauge of the real need for category two products and services.

E-mpa has collected data from several applicants for the five years prior to FY 2015, when the category two budget method was implemented. (Chart 1 – FY 2010 to FY 2014 FRN Totals, attached) The following totals represent the sum of all priority two funding requests from FY 2010 to FY 2014, and use the latest student population counts for each district as found on the district website.

- Over that five-year period, the New York City Department of Education (NY) had a per pupil request of \$1,226.46.
- Over that five-year period, the Los Angeles Unified School District (CA) had a per pupil request of \$371.31.
- Over that five-year period, the Cleveland City School District (OH) had a per pupil request of \$653.59.
- Over that five-year period, the Bridgeport Public Schools (CT) had a per pupil request of \$1,771.41.

In the *2014 Modernization Order*, the FCC stated “Based on the five-year school and library budgets we find sufficient above, total category two pre-discount requests over the next five-years will amount to no

more than \$8.8 billion to deploy LANs and WLANs in schools and libraries throughout the country.”<sup>4</sup> Actual pre-discount demand for category two products and services from 2015-2020<sup>5</sup> totaled \$5.425 billion, well under the original estimate.

Although the Commission has stated that the current budgetary amounts are sufficient, only 22% of applicants surveyed by Funds for Learning agree with this assessment, while a significant majority, 78%, disagree. Further, there is sufficient funding not currently being utilized under the existing category two budget method to allow for an upward adjustment in the category two budgets, and E-mpa urges the Commission to do so.

#### **2.4 EQUALIZE THE LIBRARY BUDGET AT \$5.32\* PER SQUARE FOOT**

The \$2.45\* per square foot budget is too low for rural libraries and should be set at the same level as urban libraries. There is no valid pricing evidence to show that category two products and services in urban libraries would cost more than the same products and services in rural libraries. In fact, just the opposite is true. In most cases products and services obtained in rural areas are generally more expensive than similar products and services obtained in urban areas.

\*indexed for inflation

#### **2.5 INCREASE THE MINIMUM BUILDING BUDGET TO \$30,000.00 PER BUILDING**

E-mpa recommends that the Commission consider raising the per building minimum category two budget to \$30,000. This amount will more adequately provide funding support to properly equip a library or small school with modern WLAN and LAN technology.

The current \$9,793.04 per building minimum (adjusted for inflation) is too low to adequately equip any school or library building with the proper technology needed to support advanced information services. The original estimate of \$9,200 as a minimum was established based on ALA’s consultation with its

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<sup>4</sup> *Modernizing the E-Rate Program for Schools and Libraries*, Report and Order and Further Notice of Proposed Rulemaking, 29 FCC Rcd 8870, para. 118 (2014) (*2014 Modernization Order*)

<sup>5</sup> USAC Estimates of Demand in \$millions reported to the FCC for E-Rate FY2015 (\$1,665.2), FY2016 (\$1,125), FY2017 (\$904.04), FY2018 (\$745.32) and FY2019 (\$985.12)

library members.<sup>6</sup> However, this amount has been determined over the past five years as too low to properly equip a library branch or single site school.

Library participation in E-rate has dropped from 40% in 2012 to 21% in 2019. The decrease in participation is primarily due to the phase out of voice services. However, with the low minimum amount for a small school or library branch of \$9,793.04, there is not much incentive for the libraries to participate in category two funding.

ALA conducted a survey of its members in 2012 to find out why they were not participating in E-rate filings.<sup>7</sup> The answers:

- Application process too complicated: 34.5%
- Not worth the time: 32.2%
- CIPA: 29.1%
- We wouldn't qualify: 15.5%
- No longer necessary: 7.9%
- Consortium does it for us: 6.6%
- We tried and failed in the past: 2.1%
- Other: 23.8%

With less than \$10,000 available for category two products and services along with the CIPA requirements, the libraries in general choose not to file for E-Rate funding support for category two products and services even though they desperately need to upgrade their LANs and WLANs to provide affordable access to information services for the patrons they serve.

The same concerns apply to small schools. In the *2014 First Modernization Order*, the Commission determined that a 17-student classroom would cost \$2,500 to equip. Therefore, a 170-student school would need approximately \$25,000. According to a study by the University of Georgia, a 17-student classroom for elementary students should be 882 square feet.<sup>8</sup> The average class size for secondary schools is 1,024 square feet and should house approximately 14-15 students. The total estimated cost to properly equip a

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<sup>6</sup> *2014 Modernization Order*, para. 103.

<sup>7</sup>[http://www.ala.org/research/sites/ala.org.research/files/content/initiatives/plftas/2011\\_2012/budget+funding-ipac.pdf](http://www.ala.org/research/sites/ala.org.research/files/content/initiatives/plftas/2011_2012/budget+funding-ipac.pdf)

<sup>8</sup><https://www.scarsdaleschools.k12.ny.us/cms/lib/NY01001205/Centricity/Domain/1105/2014-11-9%20Meeting%20of%20Greenacres%20Building%20Committee%20Meeting%20Handout%203%20-%20Classroom%20Size%20Standards.pdf>

small school, containing four classrooms, one cafeteria, and three offices, is \$43,107.85. Each additional classroom will add approximately \$5,000. A detailed breakdown can be found in the attached Chart 2: Sample Small School Network.

Therefore, E-mpa recommends that the Commission increase the per building minimum category two budget to \$30,000.

### **3. E-MPA SUPPORTS A “PER SYSTEM” BUDGET INSTEAD OF A “PER BUILDING” BUDGET**

E-mpa supports a single category two budget for eligible entities under the same administrative authority. The transition to a single category two budget will reduce the administrative burden on applicants and USAC.

Examples:

- A library system
- A single site library
- A public school district
- A single site school

#### **3.1 THE APPLICATION PROCESS WILL BE SIMPLER AND LESS TIME-CONSUMING**

Applicants will only need to report the total number of goods and services purchased, not apportioned by recipient of service. The degree to which this will simplify the application process cannot be overstated. This will greatly simplify and shorten the Form 471, reduce the time required by an applicant to complete the form, and reduce potential errors made during the filing process. It will also simplify later parts of the funding process, such as completing the FCC Form 500 and Service Substitutions.

#### **3.2 THE REVIEW PROCESS WILL BE SIMPLER AND LESS TIME-CONSUMING**

The back-end processes will be streamlined as well. The applicant’s category two budget will be tracked as a single amount, rather than a separate sum per building. One number, reduced yearly by amounts spent on category two products and services each year, is a much simpler process than a category two budget per entity, all of which currently need to be tracked separately. A simplified application and simplified back-end processes will significantly reduce the time to process applications, which will allow funds to be committed and disbursed in a timelier manner.



### 3.3 APPLICANTS WILL GAIN GREATER CONTROL OVER THEIR TECHNOLOGY EXPENDITURES

Allocating an applicant's category two budget by district, or library system will allow the applicant the freedom to allocate its budget dollars as it sees fit in order to best meet the technology needs of the district or library system. If, for example, a district determines that an older high school requires a greater per-student expenditure than a recently built elementary school, the district can put its resources where they will do the most good. Prior to FY2015, many applicants had schools at different discount levels (some at 90%, some at 80%, for example), and their high-discount schools generally received significantly more E-Rate funding than their lower discount schools. As a result, their higher-discount schools may be more current in their technology than their lower-discount counterparts. A per-district budget will allow districts to help those lower-discount schools "catch up" by reapportioning some of the funding that under the current "per entity" budget cannot be so reallocated. In short, this change will provide greater flexibility for an individual school district to adjust to its individual needs. E-mpa supports this change as it will allow the decision-making to be made at the local level where the knowledge of what is needed most at each site ensures that funding will be fully utilized.

### 3.4 IMPROVED ALLOCATION OF RESOURCES

The per-building budget does not recognize that different buildings have different levels of need. Under the current system, more funding may be provided for schools with lesser demand for bandwidth and equipment than other higher-demand schools. For example, the technology needs of an elementary school are very different from the needs of a high school. The enrollment of an elementary school vs the enrollment of a high school does not account for the curriculum differences and subsequent differences in technology needs. Changing to a district-wide budget would allow school districts to allocate their funding more efficiently, and to those schools with greater demand for bandwidth and equipment.

### 3.5 SHARED RESOURCES WILL BE MUCH SIMPLER TO TRACK

Under the current system, if an applicant wishes to purchase a single, shared router for the district, it must apportion the cost among the entities using the router. For example, if the router is shared among five schools, each of the five schools must contribute some of their category two budget toward the router. It can be evenly shared, 20% per entity, pro-rated based on student enrollment, or divided in a different way, as long as the methodology used is based on tangible criteria that reaches a realistic result. Such allocation is complicated and prone to error. School districts, especially large, urban school districts, change constantly. New schools open, older schools close, schools merge, and split, and are reconstituted in place.

By the current rules of the program, a new school cannot use a shared router if it has not contributed to its cost. The budget method being proposed here will remove these barriers.

### 3.6 E-MPA SUPPORTS ELIMINATING THE EQUIPMENT TRANSFER RULES

The equipment transfer rules would no longer apply if the district-wide or library system-wide category two budget method is adopted since equipment could be installed and then moved to any building within the school district or library system.

#### 3.6.1 GREATER FLEXIBILITY FOR ALL APPLICANTS

E-mpa supports allowing applicants to freely move equipment among eligible locations. Requiring applicants to utilize the appeal process, or to leave the equipment in place for three years when it is no longer needed at the original location but can be beneficial at another eligible site, seems unnecessary. E-mpa supports removing the by-location requirement to allow the applicant the freedom to move E-rate funded products to different eligible locations, to best meet the technology needs of the applicant.

#### 3.6.2 ASSET TRACKING WOULD STILL BE REQUIRED

E-mpa supports continuing to require applicants to track their E-rate purchased assets, maintaining make, model, serial number, and all movements for five years from date of purchase. However, USAC will no longer need to track equipment transfers, reducing administrative burden on the program.

## 4. E-MPA SUPPORTS VIEWING ALL CHARTER SCHOOLS AS INDEPENDENT, RATHER THAN DEPENDENT, ENTITIES

In response to the Commission's question regarding the status and potential treatment of charter schools under the proposed district-wide budget, E-mpa supports revising the Commission's stance on charter schools. In cases where a charter school can legitimately certify a Form 471, they should be allowed to file on their own and have exclusive access to the category two funding allocated for the students they support.

In the *2014 Modernization Order*, the FCC made charter schools, private schools and other schools that operate independently of a public school district eligible for the \$150 per student budget.<sup>9</sup> Additionally,

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<sup>9</sup> *2014 Modernization Order*, para.105.

the Commission allowed such independent schools eligible to apply for discounts separately.<sup>10</sup> Independent charter schools and private schools calculate a single discount percentage rate based on their enrollment.<sup>11</sup> In some states, there are charter schools that are considered “dependent” upon their chartering agency/district, yet they operate completely independent from the district/agency in every aspect of normal business operations. They have their own administrative procedures, procure and sign their own contracts, and are responsible for outfitting their own facility(ies). We agree that there is some concern that all schools should benefit from the opportunity to modernize facilities and upgrade bandwidth. In some cases, although a charter school is chartered to a school district, the district provides no technology support to that charter. The most effective way to ensure that the funds designated for charter schools go to charter schools is to allow them to file independently, regardless of the organization to which they are chartered.

Currently an entity submitting a Form 471 must certify that it is authorized to order supported services listed on the application.<sup>12</sup> E-mpa supports a rule that allows entities that are authorized to order supported services listed on its application to file independently from its parent organization. In such a case, a school that is considered “dependent” on their chartering district, but needs to file on its own, could still use the district discount to file. Libraries currently use the discount of the district where the main branch is located, and their profiles in EPC are pre-populated with the discount that is appropriate based on what is in the district’s profile.

State law classifies charter schools, and E-mpa understands that state law must dictate the level of autonomy that a school is allowed. E-mpa suggests the Commission issue within its rulemaking a statement indicating its expectation that dependent charter schools receive their “fair allotment” of E-Rate funding.

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<sup>10</sup> *Id.* para. 220.

<sup>11</sup> *Id.* para. 130 (54.505 Discounts).

<sup>12</sup> FCC Form 471 Certifications.

## 5. E-MPA SUPPORTS ALLOWING APPLICANTS TO SPEND THEIR CATEGORY TWO BUDGET IN NON-INSTRUCTIONAL FACILITIES

E-mpa supports removing the delineation between instructional and non-instructional facilities and allowing applicants to spend their category two budget in their non-instructional facilities. Since these buildings have no students, this measure will not increase the district's overall budget, but would allow applicants greater flexibility to address their academic and administrative needs as they see fit.

## 6. E-MPA SUPPORTS A ONE-TIME COLLECTION OF DISCOUNT AND BUDGET INFORMATION PER FIVE-YEAR BUDGET BLOCK

E-mpa recommends that USAC would collect discount and budget information in the first year of each five-year category two budget block, and after a thorough review, these figures would remain the same for the balance of the five-year category two budget block.

Applicants should have the option to submit updated enrollment and eligibility information to USAC each year. If an update is not requested by the applicant, the numbers from the first year or most previously approved update would continue to be used throughout the five-year category two budget block.

## 7. E-MPA SUPPORTS THE FCC'S CURRENT RULE NOT REQUIRING REPAYMENT IF AN APPLICANT LOSES STUDENTS AND ITS BUDGET DECREASES DURING THE FIVE-YEAR CYCLE

In the *2014 Modernization Order*, the Commission stated, "We note, however, that there may be funding years in which an entity loses students and therefore spent more than its available budget in the prior four funding years. In these instances, we will not require repayment of any E-rate support, but there will be no available funding for that funding year... the 80 percent discount level school with 1,000 students requests E-rate discounted support of \$120,000. In the next funding year, if enrollment is down to 750 students, there is no obligation to repay the E-rate support made for the purchase in excess of \$90,000."<sup>13</sup>

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<sup>13</sup> *2014 Modernization Order*, para. 115.

E-mpa supports continuing this method of not requiring repayment for instances when the enrollment drops in a subsequent year.

## **8. E-MPA SUPPORTS THE FCC’S CURRENT POSITION REGARDING STUDENTS WHO ATTEND MULTIPLE SCHOOLS**

In the 2014 Modernization Order, the Commission stated, “Students who attend multiple schools, such as those that attend educational service agencies (ESAs) part-time, may be counted by both schools in order to ensure appropriate LAN/WLAN deployment for both buildings.”<sup>14</sup>

E-mpa supports continuing this method of allowing the same student to be counted at both educational institutions where the student attends. For example, a high school student who attends classes at two completely separate institutions such as the district high school and the area vocational school would be counted for purposes of the category two budget calculation for both the high school and the area vocational school.

## **9. E-MPA SUPPORTS CLARIFYING THAT VIRTUAL STUDENTS MAY NOT BE INCLUDED IN THE ENROLLMENT FOR PURPOSES OF CALCULATING THE CATEGORY TWO BUDGET EXCEPT UNDER CERTAIN CIRCUMSTANCES**

Applicant schools with virtual students must be able to provide sufficient Internet Access and connectivity to the students. However, by definition, a virtual student is not physically present at the “brick and mortar” building and therefore the Internet provided to the student’s home is not eligible for E-Rate discount. Following the same line of thought, E-mpa does not support counting virtual students in the enrollment used for establishing the category two budget for schools and libraries. If, however, a student attends part-time virtually and part-time physically at a school building, the student’s part-time attendance physically in-person at the building would be counted.

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<sup>14</sup> *Id.*

## 10. E-MPA SUPPORTS THE EXTENSION OF THE ELIGIBILITY OF BMIC, MIBS, AND CACHING

According to the USAC Estimated Demand for FY2019, requests for Basic Maintenance of Internal Connections (BMIC) and Managed Internal Broadband Services (MIBS) made up less than 6.5% of all requests for category two services. According to USAC data as of 8/6/2019, caching services requests were \$8.14 million or 0.82% of all category two requests. Combined, these services represent only 7.3% of the category two services requested in FY2019. Various schools and libraries continue to use these category two services, and therefore a need has been established that these services should continue to be supported by E-Rate funding. Smaller schools and libraries who do not have technology staff on-site will frequently use BMIC or MIBS services to support their networks. Caching is an excellent choice for applicants located in areas with limited Internet Access which allows applicants to provide ready access to Internet resources by caching this information in advance of the student or library session. Therefore, we support continuing these items as eligible for E-rate discount as category two products and services.

## 11. E-MPA SUPPORTS THE ADDITION OF ADVANCED FIREWALL FEATURES TO THE ELIGIBLE SERVICES LIST

E-mpa supports the expansion of the eligibility rules for firewalls to include next generation firewall features, specifically, anti-virus, anti-spam, intrusion detection, intrusion prevention, and denial of service (DDoS) attack protection. The need for advanced firewall services is not theoretical. Attacks on K-12 networks are constantly in the news.<sup>15</sup> Akamai Technologies recorded more than 15,000 cyberattacks aimed at the education industry crossing its network during the week ending August 11.<sup>16</sup> Akamai also observed that 4.33% of all http requests to the education market, over 126 million requests, were generated by bots.<sup>17</sup> A recent report on the growing threat of ransomware found that the education industry suffered

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<sup>15</sup> See, e.g., <https://edtechmagazine.com/k12/article/2017/03/school-it-leaders-share-strategies-defending-against-ddos-attacks>; <https://www.prosysis.com/the-rising-tide-of-ddos-attacks-in-k-12-and-what-to-do-about-them/>.

<sup>16</sup> <https://www.akamai.com/us/en/resources/our-thinking/state-of-the-internet-report/web-attack-visualization.jsp>

<sup>17</sup> <https://www.akamai.com/us/en/multimedia/documents/state-of-the-internet/state-of-the-internet-security-ddos-and-application-attacks-2019.pdf>, p. 15

three times as many ransomware attacks as healthcare, the next highest industry.<sup>18</sup> The threats continue to grow; overall, DDoS attacks are growing by 16% annually.<sup>19</sup> Education networks need help in protecting their networks: while 92% of participants in a recent cybersecurity pilot found the protection effective, 92% said cost was an obstacle to implementation.<sup>20</sup>

In the past, the Commission has not allowed advanced firewall protections in order to focus funding on other options, finding that such services were not “necessary” to bring broadband into, and provide it throughout, schools and libraries.” If these services were not necessary in the past, they are necessary now, and will be even more crucial as time goes by.

E-mpa strongly recommends that the Commission provide E-rate support for Internet filtering. The Commission proposed making filtering eligible in the FY2009 E-Rate Eligible Services List NPRM.<sup>21</sup> The response to that NPRM was almost entirely supportive of funding for filtering. Several commenters (*South Dakota Department of Education, State E-Rate Coordinators Alliance, The Council of the Great City Schools, Wisconsin Department of Public Instruction, Bascom Global Internet Services, eChalk*) pointed out that while the Act did not create any new funding mechanism, it did not prohibit funding for filtering through the E-Rate program.<sup>22</sup>

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<sup>18</sup> [https://cdn2.hubspot.net/hubfs/277648/Insights/BitSight\\_Insights\\_-\\_The\\_Rising\\_Face\\_of\\_Cyber\\_Crime\\_Ransomware.pdf](https://cdn2.hubspot.net/hubfs/277648/Insights/BitSight_Insights_-_The_Rising_Face_of_Cyber_Crime_Ransomware.pdf)

<sup>19</sup> <https://www.akamai.com/us/en/multimedia/documents/state-of-the-internet/soti-summer-2018-web-attack-report.pdf>

<sup>20</sup> <https://cenic.org/blog/item/protecting-schools-from-cyberattacks>

<sup>21</sup> FCC 08-173, paras. 14-15

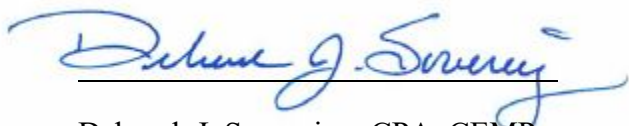
<sup>22</sup> See, for example, <https://ecfsapi.fcc.gov/file/6520169187.pdf>, <https://ecfsapi.fcc.gov/file/6520169316.pdf>, and <https://ecfsapi.fcc.gov/file/6520169394.pdf>.

## 12. SUMMARY

E-mpa supports the Commission's proposal to make permanent the category two budget approach adopted by the Commission in 2014. By making the category two budget approach permanent, schools and libraries across the nation will be able to receive the funding support they need to meet their technology goals on a regular and predictable basis. We are thankful for the Commission's diligence in taking the time necessary to fully understand the various methods proposed to successfully implement the category two budget, and we appreciate the Commission's consideration of the comments set forth by E-mpa.

Respectfully submitted:

E-RATE MANAGEMENT PROFESSIONALS ASSOCIATION

A handwritten signature in blue ink that reads "Deborah J. Sovereign". The signature is written in a cursive style and is positioned above a horizontal line.

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August 15, 2019



**CHART 1: FY 2010 - 2014 FRN TOTALS**

<b>Cleveland City School District</b>	
BEN	129481
State	OH
2010	\$12,988,975.26
2011	\$3,567,254.40
2012	\$3,567,251.40
2013	\$1,981,131.60
2014	\$3,351,948.12
<b>Total</b>	<b>\$25,456,560.78</b>
<b>Student Population</b>	<b>38,949</b>
<b>Per Pupil Requests</b>	<b>\$653.59</b>

<b>Los Angeles Unified School District</b>	
BEN	143454
State	CA
2010	\$35,091,423.14
2011	\$46,164,855.55
2012	\$76,506,679.89
2013	\$50,553,156.13
2014	\$64,466,468.71
<b>Total</b>	<b>\$272,782,583.42</b>
<b>Student Population</b>	<b>734,641</b>
<b>Per Pupil Requests</b>	<b>\$371.31</b>

<b>Bridgeport School District</b>	
BEN	122549
State	CT
2010	\$3,049,640.46
2011	\$7,044,424.75
2012	\$7,044,424.63
2013	\$11,801,930.55
2014	\$11,801,930.67
<b>Total</b>	<b>\$40,742,351.06</b>
<b>Student Population</b>	<b>23,000</b>
<b>Per Pupil Requests</b>	<b>\$1,771.41</b>

<b>New York City Department of Education</b>	
BEN	153135
State	NY
2010	\$183,000,000.00
2011	\$388,000,000.00
2012	\$323,000,000.00
2013	\$453,000,000.00
2014	\$2,109,148.08
<b>Total</b>	<b>\$1,349,109,148.08</b>
<b>Student Population</b>	<b>1,100,000</b>
<b>Per Pupil Requests</b>	<b>\$1,226.46</b>

**CHART 2: SAMPLE SMALL SCHOOL NETWORK**

<b>Assumptions</b>					
	<b>Drops</b>			<b>Access Points</b>	
	<b>Rooms</b>	<b>Per room</b>	<b>Total</b>	<b>Per room</b>	<b>Total</b>
Classrooms	4	6	24	1	4
Cafetorium	1	4	4	2	2
Offices	3	4	12	1	3
<b>Totals</b>			<b>40</b>		<b>9</b>

<b>Budget</b>				
<b>In-Building Costs</b>				
	<b>Qty</b>	<b>Unit cost</b>	<b>Total cost</b>	<b>Model</b>
Drops	40	\$ 250.00	\$ 10,000.00	Cat 6 home runs
WAPs	9	\$ 1,212.95	\$ 10,916.55	Sample Access Point
Controller License	9	\$ 134.65	\$ 1,211.85	Sample Controller License
Switches	2	\$ 4,966.54	\$ 9,933.08	Sample 48-port Switch
WAN module	1	\$ 2,757.08	\$ 2,757.08	Sample WAN Module
Rack	1	\$ 1,152.10	\$ 1,152.10	Sample Rack
UPS	1	\$ 1,471.30	\$ 1,471.30	Sample UPS
<b>Total In-Building Cost</b>			<b>\$ 37,441.96</b>	
<b>Shared costs for district infrastructure</b>				
	<b>Qty</b>	<b>Unit cost</b>	<b>Total cost</b>	<b>Model</b>
Router	2%	\$90,285.71	\$ 1,805.71	Sample Router
WAN module	100%	\$ 2,757.08	\$ 2,757.08	Sample WAN Module
Firewall	2%	\$40,219.19	\$ 804.38	Sample Firewall
WLAN controller	2%	\$14,935.56	\$ 298.71	Sample WLAN Controller
<b>Total Shared Cost</b>			<b>\$ 5,665.89</b>	
<b>Total Cost</b>			<b>\$ 43,107.85</b>	