

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

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

**REPLY COMMENTS OF THE  
COUNCIL OF THE GREAT CITY SCHOOLS**

The Council of the Great City Schools is pleased to submit reply comments to the Public Notice published by the Federal Communications Commission on September 22, 2017 (WC Docket No. 13-184), regarding the sufficiency of Category Two budgets for meeting the funding needs of the E-Rate Program, as well as other simplification issues for schools and libraries.

**Introduction**

The Council of the Great City Schools appreciates the efforts of the Commission and staff in recent years to modernize the E-Rate, prioritize broadband service for schools and libraries, and continuing to determine if further improvements can be made. We are encouraged by the Public Notice’s inquiry into the sufficiency of Category 2 funding, and continue to offer input to assist the Commission’s decision-making.

The financial support the E-Rate has helped many schools be a part of the immense technological advancements our society has seen in the last 15 years, and provided educators with access to modern communications that they may not have been able to obtain otherwise. The Council of the Great City Schools includes 69 of the nation’s largest urban school districts that represent less than one-half of one percent of the approximately 14,000 school districts in the U.S., yet enroll almost 7 million students, including approximately 25 percent of the nation’s Hispanic students, 30 percent of the nation’s African American students, and 25 percent of the nation’s children living in poverty. The value of the E-Rate is apparent every day to the members of the Council, as we serve the highest numbers and concentrations of disadvantaged children, employ the largest number of teachers, and operate in the greatest number of outdated and deteriorating buildings.

The Council supported the goals outlined in the E-Rate modernization effort, and remains eager to help the Commission convert the laudable proposal into effective policy. Our nation has an interest in improving our schools to make sure the American workforce has the skills needed to expand opportunities, grow our economy and compete in the international marketplace. In urban school districts, this means making sure that our students and teachers learn and work in safe, secure and modern classrooms that prepare graduates for college and careers after their K-12 experience.

The Commission's efforts to strengthen the E-Rate has provided additional benefits to schools and helped them with the kind of innovative changes urban districts want to make, like online assessments and computer adaptive testing, interactive instruction, blended learning, and 1:1 computing initiatives. Additional funding for Category 2 budgets and further refinements to the program will help deliver the benefits of next-generation broadband and high-speed wireless to more schools in our nation's cities.

## **Continue Support for Category 2 Budgets**

Like other commenters, the Council of the Great City Schools would urge the Commission to continue funding Category 2 services for internal connections and wireless deployment. Similar to the statement of the Schools, Health & Libraries Broadband Coalition (SHLB), the Council offers its general support for Category 2 funding and highlights the benefits it provides to applicants. SHLB stated, "The combination of raising the cap and establishing the category two budgets has expanded the availability of Wi-Fi funding, and the nation's schools and libraries have seen tangible results. The mere fact that the E-rate program actually funded category two requests over the past two funding years, after not having disbursed any category two funding in the previous two years, shows that the Modernization Orders' framework has made a positive difference."

The request for continuation of funding is significant, one reason being that most schools have not yet used their entire five-year allocation. The Council surveyed our members on the use of Category 2 funding, and received about a dozen responses from large urban school districts. In those responses, only one district indicated that almost 100% of the budgets had been used at all of their schools. The next closest district indicated that about 25% of their schools' budgets have been fully used, and the remaining districts all fell below that threshold. About half of the responses indicated that the number of school sites that had used all of their Category 2 funding was in the single digits.

As the Commission reviews the Category 2 utilization data, we would also like to highlight a comment submitted by the State E-Rate Coordinators Alliance (SECA). "SECA would like to take this opportunity to express our concern that the data available after three application funding years under the Modernization Order's 5-year Category 2 budget cycle does not tell the whole story. As with many things 'E-rate', there are a myriad of variables that affect why applicants have utilized or not yet utilized their Category 2 pre-discount budget and it is important to turn the page to see what the rest of the story unveils."

## Insufficiency of Category 2 Funding

We appreciate the Commission's question in the Notice about the sufficiency of Category 2 funding and the awareness it displays of an applicant's ability to make the goals of the program's Modernization Order an on-the-ground reality. The Council provided examples of the need for funding above the \$150 level in our 2014 comments on the Further Notice of Proposed Rulemaking, and we have included an excerpt from those comments in Appendix A.

The responses to the Council's recent survey on the sufficiency of Category 2 funding were similar to our 2014 examples in that the estimated operational cost for wi-fi networks varied greatly in school districts. The costs could differ based on school size, as smaller schools with lower enrollments generate a more modest Category 2 budget under the E-Rate funding mechanism and may require a higher per-pupil amount. While urban districts do operate many large schools, we would point that our school systems have buildings of all sizes including small schools. Out of 12,000 total school sites in our 69 member districts, approximately 2,000 city schools enroll less than 200 students, and some 4,500 schools in our urban districts have less than 400 students.

The additional funds needed for Wi-Fi also varied on the types of service needed. Districts recommending an additional \$50-100 per student in the budget tended to have existing wireless infrastructure but need some additional funds to ensure maintenance and upgrade schedules are performed and adhered to. Interestingly, districts recommending a lower amount of additional Category 2 funds indicated their existing budget covered items that needed updating, such as network switches, wireless controllers and wireless access points. But the districts responding that doubling or tripling the per-pupil budget was necessary indicated that their existing budgets were insufficient to purchase and install many of those same items, as well as other eligible services needed to deploy wireless networks, such as caching and firewalls. One district indicated that the individual school budgets meant they had to stop full school network upgrades and instead must rely on a more reactive, piecemeal approach based on equipment failure.

One common theme in the request for a larger Category 2 budget was the need to upgrade the cabling that served the schools. One district with 100,000 students in explaining the need for a larger Category 2 budget said, "We have been unable to replace our OM-1 fiber, which was industry-standard when we first wired our schools but cannot meet the Gbps speeds needed for our classrooms today. We are attempting to use conditioning patch cables to increase the Gbps backbone in the schools to help meet demand."

An even larger urban school district explained their similar cabling issues in greater detail. "Networks include both wired and wireless equipment. This means schools need a router, core switch, switches, wireless controller, and access points. The wireless equipment needs cabling, and the cabling for most of our schools are 20 years old or older. This has created challenges since fiber life is typically 15 to 20 years depending on site conditions. Most of our schools' backbone cabling can handle speeds up to 1 Gbps, but with the increased demands these need to be replaced with cabling and equipment that can accommodate up to 10 Gbps." This district indicated that the existing Category 2 budgets covered labor for break/fix services, basic care or bug fix and firmware type support, eligible equipment during repairs, and the replacement of wired equipment and some controllers at selected schools.

Another common theme in responses to the question of Category 2 budget sufficiency was the impact that reduced funding for Voice services had on districts' ability to pay for other technology services that are beyond the reach of Category 2 budgets. In its comments to the Commission's Notice, the Newark Public Schools made this exact point, stating, "Funding reimbursements, previously received from category one voice services, is no longer available to bridge these gaps. In addition, the need to budget and pay in full for all voice services has diverted funding for these, otherwise eligible, category two services." A number of districts referenced the loss of reimbursements they received before the Modernization Order as a factor in their inability to fund any wireless costs on their own. We also note that the Council made this same point in our FNPRM comments in 2014, explaining, "The Report and Order focused the program's existing resources on wireless deployment, but eliminated support for other existing services, shifting a significant financial burden onto district budgets and potentially putting the broadband targets out of reach."

## **Easing Applicant Burden**

Both the stakeholders submitting their initial comments to the Commission and the CGCS districts responding to our inquiry were essentially unanimous in calling for one fundamental change to the program: allowing the use of Category 2 budgets district-wide, rather than limiting them to the school level. The uniform calculation that currently exists does not reflect the varied costs of deploying and maintaining Wi-Fi at school sites. In urban districts, issues of equity and access are central to our mission of providing a high-quality education for all students regardless of the school they attend. High student mobility in urban areas means that students often attend multiple schools in the district, and further emphasizes the need to implement a standard wireless infrastructure throughout the school system. This is not always possible when individual school budgets for Category 2 can vary considerably based on student enrollment.

As Education Superhighway, the Consortium for School Networking, and Funds for Learning explained in their joint comments, "Each facility is provided the same basic budget formula regardless of the facility's age or its specific technology needs. A recently opened facility may not need as much support as an older facility, but the building-level budgets treat both facilities the same. This has created a situation where some Category Two funds go unused at one building while another building in the same system needs additional Category Two funds."

There are a number of reasons why individual schools have different per-pupil funding needs for wireless deployment in schools, such as the enrollment size issue discussed earlier in these comments. In smaller schools and those in areas of economic disadvantage, the existing Category 2 budgets are often not high enough to cover basic wireless needs. The age and location of buildings, the existing infrastructure and refresh cycle, and the size and scope of wireless deployments can also play an important role in selecting the proper solution for a school campus. For example, deciding between cloud or campus-based Wi-Fi solutions is dependent on the difference in function and features needed for a specific school.

The Commission cannot track these school-by-school needs, but can provide districts with the flexibility to meet differing costs and consolidate low budget balances from multiple schools by

allowing the transfer of unused funds to schools with eligible needs elsewhere in the school system. This change in program rules will allow school districts to spend the allotted funds more effectively and efficiently.

## Conclusion

As one of the E-Rate program's most dedicated stakeholders and supporters, urban public schools appreciate the opportunity to provide input on the Commission's Public Notice. The E-Rate allows city school districts to access the benefits of digital learning, and the program has helped many students and schools – regardless of income or location – integrate technology, media, and information-rich instructional content that is a necessary part of modern education. The Commission's work to deploy high-capacity wireless and broadband to all students, teachers, and schools is a sound investment for our nation, and one we wholly support. Recent changes to the E-Rate program have helped to identify where applicants need additional assistance, and further changes can help make the Commission's goals a reality. We must not waste this opportunity to make sure all students can benefit from modern instruction and learn in classrooms that mirror the technology-prevalent world beyond the school walls.

Respectfully Submitted,



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Council of the Great City Schools

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The Council of the Great City Schools is the only national organization exclusively representing the needs of urban public schools. Composed of 69 large city school districts, its mission is to promote the cause of urban schools and to advocate for inner-city students through legislation, research and media relations. The organization also provides a network for school districts sharing common problems to exchange information, and to collectively address new challenges as they emerge in order to deliver the best possible education for urban youth.

**Member districts:** Albuquerque, Anchorage, Arlington (Texas), Atlanta, Austin, Baltimore, Birmingham, Boston, Bridgeport, Broward County (Ft. Lauderdale), Buffalo, Charlotte-Mecklenburg, Chicago, Cincinnati, Clark County (Las Vegas), Cleveland, Columbus, Dallas, Dayton, Denver, Des Moines, Detroit, Duval County (Jacksonville), El Paso, Fort Worth, Fresno, Guilford County (Greensboro, N.C.), Hawaii, Hillsborough County (Tampa), Houston, Indianapolis, Jackson, Jefferson County (Louisville), Kansas City, Long Beach, Los Angeles, Miami-Dade County, Milwaukee, Minneapolis, Nashville, New Orleans, New York City, Newark, Norfolk, Oakland, Oklahoma City, Omaha, Orange County (Orlando), Palm Beach County, Philadelphia, Pinellas County, Pittsburgh, Portland, Providence, Richmond, Rochester, Sacramento, San Antonio, San Diego, San Francisco, Santa Ana, Seattle, Shelby County (Memphis), St. Louis, St. Paul, Toledo, Tulsa, Washington, D.C., and Wichita.

## **Appendix A**

### **Excerpt from CGCS Comments on FNPRM in 2014**

#### Category 2 and WI-FI

The Council appreciates the opportunity provided in the FNPRM to offer input on the \$150 per-pupil amount adopted for internal connections in the Report and Order. As the Order itself stated, costs for wi-fi deployment can be significantly higher in urban schools, yet for many of the poorest city school districts, the reimbursements available through the E-Rate have been reduced to 85%. Urban school systems that already have significant wi-fi systems in place indicated that the \$150 per-pupil allocation for Category 2 might be sufficient to keep their access layer current, pay for maintenance costs, or upgrade old wireless systems. But paying for all three over the next five years, or attempting to deploy wireless throughout dozens or hundreds of the nation's oldest school buildings typically exceeds the amount approved by the Commission.

Overcrowded classrooms are common in urban schools, with up to or more than 40 students, and sometimes two access points must be installed to ensure stability. In many urban schools, the condition of facilities and the construction materials used in the nation's oldest sites also has an impact on density needs. The cost of routers can also be higher in urban areas since schools with thousands of users need enterprise-class routers to ensure stable and secure access to the network. In some parts of the country, a school's outside and assembly areas are used for instructional time and need to be covered, also increasing the per-student amount.

There are additional factors in urban schools that can drive up the costs beyond the \$150 amount. Most major cities have labor stabilization agreements, mandating the wages paid to all contractors and workers, as well as the terms, conditions and costs on public projects. Due to the age of urban schools, installation projects have routinely higher costs because workers must be certified and insured to work in buildings with lead and asbestos. Despite the popular notion that cities have an abundance of service providers, many urban schools also see prices go up on major projects due to a limited pool of bidders. Finally, some cities and school districts have approved tougher radio frequency exposure standards, which also results in higher costs.

The result of these factors leads to an increase in costs for internal connections in urban areas, as the Commission found itself. One Council district with 50,000 students enrolled in 100 school sites received bids in 2013 for a subset of schools, and was able to project a district-wide cost of about \$30 million to install wireless service. This equals about \$600 per-student (pre-discount).

Another district estimated a similar cost of approximately \$700 per-pupil, based on a 30 students-per-classroom assumption. One district stated that the \$150 amount was sufficient for two years, but that the five-year estimate for deploying, maintaining, and upgrading wireless networks to cover their entire school system was closer to \$400 per student. A number of urban districts had estimates in this \$300-400 range, including one that recently completed their district-wide wi-fi installation for approximately \$325 per-student.