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

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In the Matter of	:	
Modernizing the E-rate Program for Schools	:	WC Docket No. 13-184
and Libraries	:	
Wireline Competition Bureau Seeks Comment	:	CC Docket No. 02-6
On Category Two Budgets	:	

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COMMENTS OF ARUBA, A HEWLETT PACKARD ENTERPRISE COMPANY

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Aruba, a Hewlett Packard Enterprise company, appreciates the opportunity to file comments on Category Two budgeting for E-rate. We applaud the Commission and USAC for modernizing the E-rate program, including increases in funding and targeted support for internal connections and basic maintenance of internal connections. The five-year pre-discount budget established by the E-rate Modernization Order has been a success. Since the Order took effect, $2.5 billion in Category Two funds have been committed. The funding now available is enough to fund all timely and eligible funding requests, not only for Category One services, but also for the historically-underfunded Category Two services. To ensure ongoing success, Aruba encourages the Commission to continue to increase Category Two budgets. Additionally, as requested in the Commission's Public Notice, we provide comments from a policy perspective on how the E-rate program could be improved.

Category Two Budgets

Category Two funding is crucial to schools and libraries for creating a connection to the Internet, enabling student collaboration, and allowing students to learn in new styles through various teaching methods. Increased connectivity also allows more students to efficiently complete State testing requirements. Education is a building block to the success of our nation. With technology tightly integrated into everything we do today, Category Two services are fundamental to building the capabilities of the modern American workforce. Funding for technology adoption is an ongoing challenge for schools and libraries, and they need strong Category Two funding to improve their infrastructure.[1] State budgets are being cut,[2] while

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[1] Many K-12 schools facing financial difficulties could not have improved their infrastructure without E-rate funding. See, for example, https://www.youtube.com/watch?v=Nwv3eqoGyu0; http://www.arubanetworks.com/resources/ledyard-public-schools-in-ledyard-connecticut/; http://www.arubanetworks.com/resources/rio-rancho-public-schools/; http://www.arubanetworks.com/assets/cs/CS_Poway.pdf.

[2] For example, Connecticut is facing severe difficulties with education funding. See https://www.theatlantic.com/education/archive/2017/06/inside-connecticuts-school-funding-

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demand for technology continues to outpace funding.[3] Applicants' out of pocket costs continue to increase, and lack of sufficient resources may deter them from participating in the program.[4] E-rate funding is particularly critical in enabling smaller and rural school districts to teach their students to adapt to the technologies they will encounter in the workplace. Without these funds, many students would fall farther behind in technological knowledge. Based on these considerations, the Commission should consider increasing the Category Two budgets and ensuring that the funding is made available as quickly as possible to applicants.

To encourage applicants to participate in the E-rate program, USAC should continue improving the user experience with the EPC portal. The complexity of the application process may deter applicants from participating, particularly when they lack sufficient staffing resources. We also suggest that USAC consider targeted outreach to entities with BENs that have not used their Category Two budgets, since some entities – particularly those that are small or rural – may still be unaware of the funds available to them.[5]

In addition, as the Commission is aware, Wi-Fi will soon run out of spectrum.[6] As the Commission makes additional spectrum available for Wi-Fi, we anticipate the broad need for 802.11ax wireless products, which are better performing and improve Wi-Fi speeds and spectrum efficiency. Adequate and predictable E-rate funding will help ensure that schools and libraries can pay for, and students can benefit from, these improvements.

Program Improvements

In response to the Commission's invitation to provide feedback on improvement of the E-rate process from a policy perspective, we respectfully submit the following suggestions to

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turmoil/529035/; http://www.ctpost.com/local/article/Malloy-s-latest-budget-plan-shuffles-education-12281665.php.

[3] School districts in Texas, unable to afford the technology they need, have called for bond elections. See https://www.leanderisd.org/cms/One.aspx?portalId=79318&pageId=1206192; https://www.ectorcountyisd.org/Domain/7947; http://www.oaoa.com/news/government/ector_county_isd/article_c28bcefc-79fb-11e7-a0cb-5311280354df.html.

[4] Funds for Learning advocates that reinstating support for voice services would enable more entities to pursue Category Two upgrades. https://www.fundsforlearning.com/blog/2017/08/voice-expenses-rise-fcc-can-help-will-it.

[5] Consider, for example, a pop-up window that appears when an applicant completes a Form 470 for Category One services and informs the applicant of the Category Two funding available to it.

[6] See Comments of Hewlett Packard Enterprise Company, GN Docket 17-183 (Oct. 2, 2017) https://ecfsapi.fcc.gov/file/1003567229280/HPE%206%20GHz%20Comments%20(final).pdf.

support the goals of ensuring a fair and open competitive bidding process while also helping ensure that E-rate funds are used as cost-effectively as possible.

First, the Commission has recognized that "technical assistance is critical to building an efficient internal network," and that "such technical experience is often not available within a school district or library system, especially those located in rural areas."[7] E-rate applicants need help to determine the solutions that will meet their needs for a successful network deployment and even to determine a rough estimate of cost. Over the last several years, various stakeholders have urged the Commission to adopt procedures to allow E-rate applicants to obtain the technical information they need from technology providers to make informed planning and purchasing decisions and use their limited resources as effectively as possible. Clear guidance on permissible interactions between service providers and applicants would benefit applicants, service providers, and the program itself.[8]

Second, while the Commission has clarified that applicants that include specific manufacturers' products or services in their Forms 470 must also request and consider proposals

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[7] FCC Second Report and Order, ¶ 127 (Dec. 11, 2014), https://apps.fcc.gov/edocs_public/attachmatch/FCC-14-189A1.pdf.

[8] We encourage the Commission to review previously filed stakeholder comments, including: Letter filed by multiple stakeholders, http://apps.fcc.gov/ecfs/document/view?id=7521310720 (June 12, 2014) (including a request to "[m]odify the procurement rules to allow vendors to provide technical advice on network design to applicants"); Comments of Hewlett-Packard Co., WC Docket No. 13-184, http://apps.fcc.gov/ecfs/document/view?id=7520943921 (Sept. 16, 2013), http://apps.fcc.gov/ecfs/document/view?id=7521097141 (April 7, 2014), and http://apps.fcc.gov/ecfs/document/view?id=7521364982 (July 2, 2014); Comments of Verizon and Verizon Wireless, at 22, http://apps.fcc.gov/ecfs/document/view?id=7520944041 (Sept. 16, 2013) ("the Commission should clarify that it is not a violation of the gift rules for a service provider to undertake a short-term market or technology trial with schools or libraries that may involve free or discounted pricing"); Comments of Comcast Corp., at 27-28, http://apps.fcc.gov/ecfs/document/view?id=7520944020 (Sept. 16, 2013) (stating that competitive bidding rules deter service providers from giving valuable advice; recommending "steps to ensure schools and libraries have an adequate understanding of the network elements they need and encourage them to obtain as much information as possible from technology vendors and service providers to aid in choosing efficient, cost-effective broadband solutions that will provide all students with access to digital learning tools"); *Ex parte* letter, Comcast Corp., http://apps.fcc.gov/ecfs/comment/view?id=6017589813 (Feb. 20, 2014) ("many schools and libraries would benefit from access to templates that could assist them, as well as the ability to seek information from providers in a manner that is consistent with the competitive bidding process"); Comments of Cisco, at 13, http://apps.fcc.gov/ecfs/document/view?id=7520944003 (Sept. 16, 2013) ("Cisco has numerous resources available to assist its commercial customers in assessing their networking needs and designing networks to meet them effectively. Protecting the competitive bidding process, however, makes it difficult to make such resources available to Erate customers.").

for "equivalent" products or services, additional guidance would be useful regarding how equivalent proposals should be considered. We have seen requests that require equivalent proposals to go through additional steps of review; steps that are not required for proposals including the manufacturer-specific products identified in the Form 470. We encourage the Commission to provide guidance on this issue to ensure applicants fully consider cost-effective alternative solutions.

Finally, as the Commission continues to make decisions about budgets and what products should be eligible for E-rate support, we encourage the Commission to consider the value of network security and management services. An unsecure or compromised Wi-Fi system is often non-functional and defeats the purpose of providing E-rate funding for schools and libraries. Based on our research, more than 60% of education customers indicate student security is more important than it was last year. Recent headlines confirm that school districts around the country are increasingly becoming the targets of cyberattacks. [9] Networks are becoming the host of the "Internet of Things," and the number of devices connected to the network from many different sources (HVAC systems, security cameras, etc.) using different protocols can result in security vulnerabilities. Management of the network and security are critical to keep not only the network, but also the buildings, the students, and students' personal information safe and secure.

Respectfully submitted by:

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[9] The computer system of a New Jersey school district was held for ransom by a foreign hacker who demanded 500 bitcoins – about $128,000 – to hand control of the system back to school administrators. https://www.fedscoop.com/cybersecurity-in-k-12-education-schools-around-the-country-face-risk-of-cyber-attacks/. School districts around the country have been hit with cyber attacks in recent years. http://www.govtech.com/security/Are-the-Dangers-of-Cyberattacks-Targeting-School-Districts-Being-Overlooked.html. COSN's top findings in its 2017 K-12 IT Leadership Survey Report are that:
1. Mobile learning is the top priority for IT Leaders, followed by Mobile & Network Security.
2. Cyber Security and privacy are of increasing concern, with 62% of IT Leaders rating them more important than the prior year.
3. Budget constraints are ranked as the top challenge for the third straight year.
http://www.cosn.org/sites/default/files/CoSN_ITLdrship_Report_2017_040317.pdf.