May 6, 2021

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
45 L Street NE
Washington, DC 20554

Re: Ex Parte Filing
Establishing Emergency Connectivity Fund to Close the Homework Gap, WC Docket No. 21-93;
Modernizing the E-rate Program for Schools and Libraries -- WC Docket No. 13-184

Dear Madam Secretary:

Pursuant to Federal Communications Commission's *ex parte* rules, I hereby submit the following summary of recent conversations with FCC staff concerning the Emergency Connectivity Fund (ECF) proceeding. Mr. Coree Kelly, CIO of the Southern Oregon Education Services District (Southern Oregon ESD), and Mr. Jason Eyre, Technology Coordinator of the Murray City School District (Utah) and the undersigned met by phone or video call with the following FCC staff:

> Monday, May 3, 2021: Ramesh Nagarajan, advisor to Acting Chairwoman Rosenworcel
>
> Tuesday, May 4, 2021: Lisa Hone, Kris Monteith, Johnnay Schrieber, Ryan Palmer, Kate Dumouchel, Gabriela Gross, Molly O'Conor, Joseph Schlingbaum
>
> Tuesday, May 4, 2021: Carolyn Roddy, advisor to Commissioner Simington
>
> Wednesday, May 5, 2021: Danielle Thumann, advisor to Commissioner Carr
>
> Wednesday, May 5, 2021: Austin Bonner and Alexa Cafasso, advisors to Commissioner Starks

In these meetings, we expressed concern that the draft ECF order gives a strong preference to funding hot spots provided by existing wireless mobile service providers and other already deployed technologies and would not allow schools and libraries to receive funding to deploy more innovative and cost-effective technologies.

Mr. Kelly explained that the Southern Oregon ESD covers 13 school districts and about 53,000 students. He said that SOESD purchased hot spots for each of the school districts when the pandemic forced schools to close last March, but hot spots did not provide a good experience for many districts and many families. He explained that in the best case scenario, the hot spots provided adequate service to only about 80 percent of the families in the district, but some districts, especially those in more rural markets, had a smaller success rate. (One rural school district – Butte Falls School District – purchased 20 hot spots and could not use any of them because of poor reception.) These school districts often had to pay the monthly fee for service even when the deployed hot spots were not being used. He said that while coverage maps show that traditional cellphone providers already serve these areas, his experience was that the cellular signal was so weak or non-existent that the hot spots could not provide adequate service for remote learning. There were so many families that were not being served by hot spots that

the Southern Oregon ESD, in partnership with the school districts, found community partners that were willing to help. These community partners were schools, libraries, hotels, motels, and restaurants. They allowed families to drive to these locations and connect to their wi-fi service while they sat in their cars to have class or get their homework done.

Mr. Eyre explained that the Murray City School District is situated in a relatively urban area in the heart of the Salt Lake Valley and serves about 6,500 students. He said that several wireless companies serve the area, but he found that their services do not work well in several neighborhoods, especially for families in multi-dwelling units (apartment buildings). He explained that the school district began exploring a private LTE network using the new CBRS spectrum in 2019 and expedited that effort when the pandemic forced schools to close in 2020. District student engagement analysis showed that at least 13 percent of school children did not have service from existing ISPs, and the Murray City School District was determined to provide a solution to connect *all* of their students. He engineered a network using outdoor class B radios for about $77,000. There were supply costs including antennas, non-penetrating 6-foot roof mounts, cables, and the EPC core. He also purchased routers from Cradlepoint that families could plug in at home and place on the windowsill to receive service. Because of his state's allocation method, Mr. Eyre was able to use ESSER 1 CARES Act funding to pay the costs and cover 90 to 95 percent of the homes in his school district. The CBRS signal provides decent coverage of about 1 mile radius but in the urban setting reaches up to 1.3 miles with clear line of sight. He was able to deploy the network in less than four months (January to April 2021).

Mr. Eyre also explained that the private LTE network was a much more cost-effective solution than using hot spots from a traditional cellphone provider. The money he would have spent to purchase hot spots and pay a monthly service fee (of $40/month) over 1 to 1.25 years was enough money to build the private LTE network that will last for at least five years. The private LTE network is now providing approximately 25 to 40 Mbps bandwidth down and about 1 Mbps up (although the upload speeds are sometimes greater). This private LTE service provides more bandwidth than the established service providers and is available at no charge to the families.

Mr. Eyre also said that the school's private LTE service overcomes some of the cultural/language barriers that make it difficult for some families to obtain connectivity. The service also avoided some of the legal impediments involved in obtaining access to individual units in a multi-home building, as residents can just place the router in the window and receive wireless service. The network is designed with enough capacity to serve all students in the district. He said many families also signed up for the school's service even though they already had Comcast Internet Essentials and other fiber-based services because there were so many children and parents at home that their bandwidth demands were greater than those services were designed to handle. Mr. Eyre said that the home routers last fall were slightly over $500 each but newer models have cut that in half and multiple vendors are in the process of manufacturing routers that will cost less than $200 later this summer once the chipsets are manufactured.

Mr. Kelly said that he was very hopeful that the new ECF funding would enable him to apply for funding to deploy a network similar to that of the Murray City School District, and he was disappointed to learn that the draft order limited funding to existing services which do not work for many families in his district.

We also discussed our recommendations for improvement to the draft order. We suggested that schools and libraries should have the flexibility to choose the technologies that work best for their local communities and **that the federal government should not be in the position of dictating what services should be used.** I also suggested that funding should be provided for alternative technologies as long as the schools/libraries certify that their choice of technology was the most cost-effective option, which is

the standard used in the traditional E-rate program. Paragraphs 38 and 39 of the draft order are particularly concerning – these paragraphs could preclude schools from using CBRS, TV White spaces or other spectrum-based services to bring affordable connectivity to students and library patrons that need help the most.

Further, these technologies should be allowed even where existing providers claim to provide service because those existing service providers often overstate the actual availability of service (as Mr. Kelly and Mr. Eyre both described). The legislative language does not preclude these technologies because they fit within the definition of an "advanced telecommunications and information service" that is specifically referenced in the statutory language.[1] Private LTE, and others, fit within the definition of eligible service as defined by the draft order as well; the only question is whether upfront deployment costs for new facilities can be eligible for ECF.[2]

We thus encourage the Commission to allow applicants to use CBRS, EBS or TV White spaces or other spectrum-based services to meet the needs of their students and patrons when such technologies are the most cost-effective option taking into account commercially available services.[3] It is our understanding the Commission may be concerned about cost and the speed at which new services can be installed. To address these issues, we propose that the ECF would provide funding for the deployment of new facilities if the school or library certifies that (1) the new facilities are the most cost-effective option and (2) if the amount of total funding is limited to the actual costs not to exceed the maximum funding available for other commercially available wireless services ($250 hotspot plus $25 monthly recurring charges for 10 months) multiplied by the number of students who need and are using the Internet connectivity. Such an exception would allow parity among the different types of fixed wireless services and would allow schools and libraries to explore installing private LTE services using CBRS, TV White spaces or other spectrum if traditional hot spots are ineffective for that geographic area. We also note that the Commission could require installation to be completed by a certain deadline, such as one year, similar to language already in the draft order at paragraph 29. Such a deadline would provide plenty of time as these technologies can be deployed quickly - in a few weeks or a few months.

Response to USTelecom

The Commission should not adopt USTelecom's standard for "unused" that would require schools and libraries to contact every service provider that might be able to provide service (how would they even know they had the correct list?) and obtain their written refusal to provide service.[4] First, this is a standard that schools and libraries that already took action to serve their students and patrons prior to this rulemaking cannot possibly meet because no such requirement existed when they were establishing service. Second, very few service providers will "refuse" to provide services; what will happen is that

---

[1] USTelecom and others have made the argument that the statutory language precludes any equipment not specifically listed in the statute. While incorrect, if that were true, it would lead to the illogical conclusion that existing service providers would be precluded from using any ECF funding to expand their networks by deploying new antennas, radios or other equipment or even to repair existing services. The SHLB Coalition supports the ability of existing service providers to use monthly recurring charges to expand their networks to meet demand as necessary, and we believe schools and libraries should have the same opportunity.

[2] Private LTE can be delivered via hot spots, but the Commission should allow other equipment as well. If a student or patron is located further away from the transmitting device, a more robust receiver is appropriate.

[3] We support the inclusion of the "most cost-effective option" language in the proposed rules in Appendix B and suggest that concept should also be included in the text of the Order in paragraph 39.

[4] USTelecom does not say the refusal would have to be written, but that would be the only way for schools and libraries to prove they had met the standard if they were later audited or such information were requested by USAC.

schools and libraries will have to find out through trial and error that hot spots do not provide sufficient coverage.[5] Even requiring "clear evidence demonstrating how they determined" service was or was not available is so vague as to be meaningless, does not tell applicants what they need to do to obtain funding, and would allow the Universal Service Administrative Company (USAC) too much discretion to deny applications. This is especially true because the quality of service can vary depending upon the location and type of each home. Instead, we propose that schools and libraries be allowed to certify that there are not aware of sufficient existing services. (Many schools will have this experience through the connectivity challenges they faced with remote learning this year.) We agree, however, with USTelecom's suggestion that applicants define the geographic area to be served and provided an estimated number of students or patrons to be served.

Cost Allocation and the Traditional E-rate program

The SHLB Coalition continues to believe that the Commission should take this opportunity to waive the E-rate cost allocation rule (at least temporarily) when schools or libraries wish to extend service from their building to the surrounding community.[6] Simply put, many more schools and libraries will be willing to allow extensions of service from their buildings to students and library patrons at home if they do not have to go through the complicated process of cost-allocating out the off-campus use from their traditional E-rate funding. The draft Order itself recognizes that cost allocation can be a confusing and time-consuming task in three separate places (see paragraphs 32, 41 and 43). We respectfully ask the Commission to delete the last sentence of paragraph 39 (which says that the FCC will not address the issue in this proceeding) and replace it with a statement waiving the cost allocation requirement in the traditional E-rate program until July 1, 2022. Similarly, the draft Order should not prohibit the use of equipment and services purchased with ECF on the school or library property.

Specific language changes to the draft Order:

Here are our specific recommendations for language changes to the Draft Order to reflect the policies above: [additional language in red, deleted language lined out]

"39. *Limited exception for network construction where there is no commercially available option sufficient for remote learning.* Despite this understanding of Congress' intent to speed funding to schools and libraries through commercially available broadband offerings, we provide a limited exception to this finding. The record reflects the fact that in some instances there is simply no commercially available service [for purchase] sufficient for remote learning available to reach students, school staff, and library patrons in their homes.[116] In only those limited instances, [117] network deployment construction (including deployment construction of wireless networks) is the only way to quickly bring connectivity to these students, school staff, and library patrons, and we believe that the "purchase" of equipment necessary to make advanced telecommunications and information services functional is consistent with Congress' intent to provide emergency connectivity to students, school staff, and library patrons that do not have any other options. Where there are no such services available, we will allow schools and libraries to seek Emergency Connectivity Fund Program support for the deployment of to construct or self-provision networks to connect students, school staff, and library patrons during the COVID-19 emergency period who would otherwise not be connected. We allow deployment of new facilities when the school or library certifies that it chose the most cost-effective option and if 10 percent or more of

---

[5] As noted above, mobile wireless company coverage maps are not a good predictor of where service will be sufficient and sometimes they are only indicative of where a phone call can be made in "roaming" mode.
[6] See SHLB Coalition et al. Petition for Rulemaking, WC Docket No. 13-184 (filed Jan. 26, 2021), https://www.fcc.gov/ecfs/filing/101260036427898.

students or school staff (or library patrons, in the case of libraries) do not have access to existing commercially available broadband services sufficient for remote learning or online access to library services. The 10 percent of students, school staff or library patrons could be assessed by building (school or library), the entire school district or library system, or by a specific geographic area, such as a neighborhood. ~~and we~~ We will not require schools and libraries to engage in competitive bidding. Some schools may have already deployed ~~constructed~~ wireless networks where there were no such commercially available options and cannot go back and conduct competitive bidding. We also considered requiring competitive bidding for applicants in areas with no such commercially available options,[118] but the timing does not work in light of the COVID-19 emergency and upcoming school year. To reduce the risk of using emergency funding on time-consuming infrastructure construction projects better suited for funding from other programs, applicants seeking support for network deployment ~~construction~~, including self-provisioned networks, must therefore ~~demonstrate~~ certify that there were no commercially available service options sufficient to support remote learning from one or a combination of providers; for networks already deployed ~~constructed~~ during the pandemic, services were provided to students, school staff, or library patrons during the funding period supported by the initial filing window; and for future construction, deployment ~~construction~~ will be ~~is~~ completed and services provided within one year of a funding commitment decision.

Footnote 112:

112 See, e.g., PIOs Comments at 19. We clarify that a CBRS base station or CBRS device (CBSD) is not a router eligible for support through the Emergency Connectivity Fund except as provided in the "Limited Exception" described below. See Joint Venture Silicon Valley et al. comments at 2.

Appendix B:

"Notes: (1) *Limited Exception for Deployment ~~Construction~~ of a Network Where No Commercially Available Services Sufficient for Remote Learning Exist*. In the limited instance where there is no commercially available service sufficient for remote learning ~~for purchase~~ available to reach students, school staff, and library patrons, eligible schools and libraries may seek support to ~~construct~~ deploy a third-party broadband network or a self-provisioned broadband network. Applicants seeking support for network ~~construction~~ deployment or self-provisioning must ~~demonstrate~~ certify that there were no commercially available options sufficient for remote learning available to 10% or more of the students and library patrons in the area, that they chose the most cost-effective deployment or self-provisioning option available, and that services were provided to students, school staff, or library patrons during the COVID-19 emergency period. Only if these conditions are met are the following services eligible with respect to ~~construction~~ deployment of third-party broadband networks or self-provisioned broadband networks:"

Draft language to allow ECF to fund new installation where other commercial options are available:

41. For students, teachers or library patrons that may have alternative commercial options, ECF support will be provided for new deployments where the district or library certifies that the services are cost-effective and where the following limitations are followed.   We limit funding to $500 per student served for a school year. That is the same amount the Commission has made available for other commercial options ($250 for a hotspot/end user device and $25 for monthly recurring charges for 10 months). Deployment or installation must be completed, and services must be provided, within one year of a funding commitment decision.

Conclusion

The technological landscape is rapidly changing, and the ECF policies should embrace these changes and incorporate the innovative benefits of these technologies. While we believe that schools and libraries should have the right to pursue their technology of choice, we support the policies above and also support the recommendations included in the *ex parte* letter filed by the Remote Learning Coalition parties yesterday. Adoption of those recommendations will provide greater experience with the deployment of these technologies in the marketplace that the Commission can then learn from to develop more comprehensive solutions in the future.

Sincerely,

John Windhausen
Executive Director
Schools, Health & Libraries Broadband (SHLB) Coalition
1250 Connecticut Ave. NW Suite 700
Washington, DC 20036
jwindhausen@shlb.org
(202) 256-9616