

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

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

REPLY COMMENTS OF GENERAL COMMUNICATION, INC.

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I. INTRODUCTION AND SUMMARY

General Communication, Inc. (“GCI”) replies to the comments filed in response to the *E-rate 2.0 NPRM*.¹ The comments emphasize that E-rate recipients need, more than anything, an increase in the amount of available recurring funding. GCI supports the call to increase recurring E-rate support to at least \$5 billion annually. Secondly, GCI agrees with the wisdom of creating additional one-time support for one-time expenditures, such as deploying internal connections sufficient to utilize the bandwidth that can be delivered to the school’s or library’s doorstep.

The comments also highlight the need to create a Priority 0 for connectivity between our most rural communities and Tier 1 Internet access points. Without Priority 0, the major proposals to cope with a funding shortage, including merging Priority 1 and Priority 2 and setting per-student or per-library patron budgets or caps, will disproportionately and devastatingly affect rural schools and libraries. And even with Priority 0, any cap or budget limit that does not

¹ *Modernizing the E-rate Program for Schools and Libraries*, Notice of Proposed Rulemaking, FCC 13-100, 28 FCC Rcd. 11,304 (2013) (“NPRM”).

exclude the costs of reaching rural communities will leave those already underserved communities further behind.

GCI agrees with those commenters, including the State of Alaska, who argue that the existing system of discounts tied to poverty and rural status is the most appropriate given the wide variations in geography, climate, demographics, and state of telecommunications networks. The FCC absolutely should preserve the enhanced discounts for rural communities—and if it redefines rural using National Center for Education Statistics (“NCES”) locale codes, it should, as the State of Alaska suggests, include within “rural” any “fringe” area that lacks roads connecting it to an urban area, particularly when there is also no fiber connection to the community. Failure to take a lack of roads and fiber into account would, for example, treat Unalaska and Galena, Alaska as “urban,” although neither of these Rural-Fringe designated communities is connected by road or have proximity to another town or community. Indeed, Unalaska is on the Aleutian chain, more than 800 air miles from Anchorage. The Commission should also consider an enhanced discount for rural (as redefined) tribal lands.

GCI also agrees that E-rate should remain technologically neutral. Different technologies will be appropriate—and cost-effective—in different settings. Fiber will not be economically or technically feasible for every community, particularly in the most remote, rural areas, and microwave will also have its limits. As the State of Alaska makes clear, a range of technological options, from fiber to satellite, will need to be available to deliver as comparable a service as possible between rural and urban areas. Similarly, cost-effectiveness should remain the foundational test for schools and libraries when evaluating different technical and procurement options: it makes no more sense to procure a non-cost-effective dark fiber solution than a non-cost-effective microwave managed service.

Finally, to the extent that the Alaska Rural Coalition (“ARC”) is requesting either non-cost-effective support for overbuilding existing terrestrial middle-mile facilities or direct FCC rate intervention, the Commission should reject those pleas. No good public policy case can be made for non-cost-effective overbuilding, particularly by LECs that do not today provide service between LEC service areas (which in off-road Alaska is generally every village). This rulemaking is not the appropriate forum for any complaints the ARC’s members may have with respect to rates. In any event, ARC’s claim that GCI’s terrestrial fiber-microwave TERRA network in western Alaska is a monopoly network is belied by the actual facts: GCI has lost bids in TERRA-served areas—including for E-rate supported services—to satellite-based providers, indicating the presence of actual market substitutes and competitors. Furthermore, if the goal is to promote investment in new middle-mile facilities, the last thing that that should be done is to artificially slash rates for middle-mile services, as ARC proposes. That risks creation of “no-opolies,” as new middle-mile facilities become uneconomic to deploy.

II. THE STATE OF ALASKA AND CONNECTED NATION CONFIRM ALASKA’S NEED FOR FURTHER E-RATE SUPPORT.

E-rate support has been essential for overcoming the challenges of deploying communications facilities to Alaska’s schools and public libraries. But the demand for adequate access—and the need for E-rate support—is still great in Alaska. As the Alaska Department of Education and Early Development (“Alaska EED”) explained, almost thirty percent of its Internet-connected schools and libraries have connections with bandwidth at less than 3 Mbps, while almost sixty percent at are less than 10 Mbps.² Only twenty-seven percent of connected

² Initial Comments by The State of Alaska Dep’t of Educ. and Early Dev. and The Alaska State Library at 2, CC Docket No. 02-6 and WC Docket No. 13-184 (filed Sept. 16, 2013) (“Alaska EED Comments”).

schools—almost exclusively located on road systems—have bandwidth of 50 Mbps or higher, while only one library has a connection of greater than 25 Mbps.³ More than half of Alaska’s schools rely to some degree on satellite connectivity.⁴ But even these numbers obscure the reality outside of the 150⁵ schools located in the larger Anchorage and Matanuska-Susitna (“Mat-Su”) school districts, most of which enjoy relatively easy access to both road and fiber infrastructure. The majority of Alaska’s 350 non-urban schools have extremely inadequate bandwidth or rely on satellite connectivity.⁶

Similarly, Connected Nation shows that, for connectivity, rural Alaska schools and libraries fall far behind their counterparts in urban areas and across a ten-state average: only five percent of rural Alaska schools and less than one percent of libraries have download speeds of 100 Mbps or greater, compared to a ten-state average of twenty-three percent of rural schools and two percent of rural libraries enjoying connectivity of 100 Mbps or greater.⁷ Only forty-five percent of non-rural Alaska schools and less than one percent of non-rural libraries meet this benchmark, compared to a ten-state average of fifty-three percent of schools and four percent of libraries.⁸

³ *Id.*

⁴ *Id.* at 5-6.

⁵ See 2013-2014 Anchorage School District School List, available at http://www.asdk12.org/forms/uploads/School_List.pdf (showing a total of 98 schools); Matanuska-Susitna Borough School District Site, available at <http://www.matsuk12.us/> (showing a total of 47 schools).

⁶ See Alaska Department of Education & Early Development FAQ, available at <https://education.alaska.gov/faq.html>.

⁷ Comments by Connection Nation, Inc. at 9, WC Docket No. 13-184 (filed Sept. 16, 2013) (“Connected Nation Comments”).

⁸ *Id.*

This is not at all surprising. As the Alaska EED explains, much of the state is not even connected by roads, which means that Alaska does not have the widespread fiber backbone deployment that characterizes much of the rest of the country.⁹ E-rate has been successful in Alaska because it has been flexible enough to be adaptable to Alaska's unique circumstances, including supporting the costs of connecting schools and libraries in remote parts of Alaska back to Anchorage, and from Anchorage to the Internet in Seattle. That needs to continue.

III. ADDITIONAL RECURRING SUPPORT IS NECESSARY, AND ADDITIONAL ONE-TIME SUPPORT IS APPROPRIATE FOR ONE-TIME COSTS.

The record clearly demonstrates that additional recurring support is necessary.¹⁰ Many commenters noted that the continual shortfall of support below the level of support requests

⁹ Alaska EED Comments at 3-4.

¹⁰ *See, e.g.*, Initial Comments of the State E-rate Coordinators' Alliance at 4-8, WC Docket No. 13-184 (filed Sept. 16, 2013) ("SECA Comments"); Comments of Funds For Learning at 5, WC Docket No. 13-184 (filed Sept. 16, 2013) ("Funds for Learning Comments"); Comments of Anchorage Sch. Dist. at 1, WC Docket No. 13-184 (filed Sept. 12, 2013) ("Anchorage School District Comments"); Comments of The E-rate Reform Coal. at 4, 7 ("E-rate Reform Coalition Comments"); Comments of the Educ. and Library Networks Coal. at 10-11, WC Docket No. 13-184 (filed Sept. 16, 2013) ("EdLiNC Comments"); Comments of the Nat'l Ass'n of Elementary Sch. Principals at 3-5, WC Docket No. 13-184 (filed Sept. 16, 2013) ("NAESP Comments"); Comments of the Nat'l Ass'n of Secondary Sch. Principals at 3-7, WC Docket No. 13-184 (filed Sept. 16, 2013) ("NASSP Comments"); Comments of the Nat'l Ass'n of State Bds. of Educ. at 2, WC Docket No. 13-184 (filed Sept. 16, 2013) ("NASBE Comments"); Comments from the Wis. Dep't of Pub. Instruction at 10, WC Docket No. 13-184 (filed Sept 15, 2013); Initial Comments of the Nat'l Educ. Ass'n at 2-5, WC Docket No. 13-184 (filed Sept. 16, 2013) ("NEA Comments"); Initial Comments By The Cal. Dep't. of Educ. (CDE) Related to the E-Rate Notice of Proposed Rulemaking at 6, CC Docket No. 02-6 and WC Docket No. 3-184 (filed Sept. 16, 2013) ("California Department of Education Comments"); Comments from the Kan. Dep't of Educ. at 6, WC Docket No. 13-184 (filed Sept. 16, 2013) ("Kansas Department of Education Comments"); Initial Comments of the S.D. Dep't of Educ. and the S.D. Bureau of Info. and Telecomm. Regarding Notice of Proposed Rulemaking at 21, WC Docket No. 13-184 (filed Sept 16, 2013) ("South Dakota Department of Education Comments"); Initial Comments by the W. Va. Dep't of Educ. Related to the E-Rate Notice of Proposed Rulemaking at 68-69, WC Docket No. 13-194 (filed Sept. 16, 2013) ("West Virginia Department of Education Comments").

prevents eligible recipients from obtaining funding and discourages applicants from even seeking support, particularly for Priority 2. Demand for Priority 1 services alone exceeded the cap in funding years 2012 and 2013. Based on current trends, commenters like Funds for Learning estimate that “the demand for P1 services will exceed the E-rate funding cap by over \$700 million in FY2014 and over \$1 billion in FY2015.”¹¹ In fact, current demand on the fund does not even represent the actual demand, which is “repressed because most applicants no longer bother to apply for the dwindling” support available.¹² To combat the shortfall, commenters broadly argued for a permanent increase in the fund to at least \$5 billion that would provide applicants with some certainty that appropriate levels of funding will be available to them going forward, which is essential to the success of the program.¹³ This increase is essential to meet the Commission’s ambitious connectivity goals.¹⁴ Of course, other E-rate reforms are both necessary and prudent to meet the Commission’s goals even if the recurring size of the fund is increased to \$5 billion per year.

GCI also supports the concept of establishing a fund for one-time support for one-time costs, as suggested by NATOA and EducationSuperHighway, although such a fund would not supplant the need for sufficient support for recurring costs.¹⁵ Short-term, one-time capital

¹¹ Funds for Learning Comments at 15.

¹² NASSP Comments at 4. *See also* SECA Comments at 7-8, 14 (“Many applicants with E-Rate discounts less than 80% no longer bother to request Priority 2 because available funding has traditionally run out after the higher discount bands of applications (80% - 90%) have been funded.”); NASBE Comments at 2.

¹³ *See* EdLiNC Comments at 10-11.

¹⁴ *See, e.g., id.* at 10 (noting that a \$5 billion cap “should at least meet current application demand levels”); *see also* SECA Comments at 7; E-Rate Reform Coalition Comments at 7.

¹⁵ Both NATOA and EducationSuperHighway acknowledge that such a fund would necessarily be “in addition to increasing the current E-rate fund.” Comments of The Nat’l Ass’n of Telecomms. Officers and Advisors at 2, WC Docket No. 13-184 (filed Sept. 16, 2013)

investments as suggested by these commenters could be used to “install the underlying infrastructure required to meet America’s K-12 and library broadband needs,” particularly with respect to internal connections, which are generally purchased.¹⁶ Additionally, GCI notes, applicants for one-time support should be required to demonstrate that the infrastructure investment proposed is the most cost-effective solution for any given applicant. In other words, a one-time investment is not a sufficient substitute for recurring support for any given applicant, unless the one-time expenditure is the most cost-effective solution.

IV. PRIORITY 0 FOR RURAL TRANSPORT TO THE TIER 1 INTERNET POP IS AN ESSENTIAL ELEMENT OF ANY REFORM.

Even if the Commission increases the E-rate cap to \$5 billion, funding requests will likely still exceed the total fund cap. In that case, a mechanism to allocate support, such as prioritizing some requests over others within the cap, remains necessary.¹⁷ Establishing a Priority 0 to fund critical data transport “from rural communities to fiber-based aggregation points in urbanized centers” would help ensure that rural communities can obtain the support they need to be able to connect across long distances from their communities to the Internet—costs that do not exist for urban/suburban schools and libraries. To avoid disrupting the ability of rural schools and libraries to reach from their communities to the Internet, Priority 0 support should continue to be calculated under the current discount matrix; as noted by GCI and others,

(“NATOA Comments”). *See also* Comments of EducationSuperHighway at 14-20, WC Docket No. 13-184 (filed Sept. 16, 2013) (“EducationSuperHighway Comments”).

¹⁶ EducationSuperHighway Comments at 9; *see also* NATOA Comments at 2-3; Alaska EED Comments at 12 (distinguishing Priority 1 recurring service from Priority 2 purchases).

¹⁷ *See, e.g.*, NEA Comments at 8 (arguing that “there would still have to be prioritization to the extent that demand exceeded funding”).

rural communities disproportionately lack adequate Internet connectivity and need *more* support for middle-mile infrastructure to remote locations, not less.¹⁸

Establishing Priority 0 support for distant connections from a rural community to the Internet will help to ensure that these communities are not, for example, as disproportionately adversely affected by a revision or elimination of the Priority 1/Priority 2 categories to include more internal connections as would otherwise be the case.¹⁹ Similarly, although GCI believes that per-student/patron caps would still be a bad idea, disproportionately affecting rural schools because of very small student populations,²⁰ Priority 0 would be a way to remove the distance component from what was being subjected to a per-student/patron cap. It would therefore reduce the anti-rural nature of Fund for Learning’s per-student/patron cap proposals, as discussed below.

V. THE EXISTING SYSTEM OF DISCOUNTS TIERED BY POVERTY LEVEL AND RURAL NATURE REMAINS THE MOST APPROPRIATE WITH MINOR ADJUSTMENTS.

A. The Commission Should Retain the Fundamental Matrix and Tier Structure.

Commenters broadly support retaining the fundamental structure of the existing discount matrix and reject the idea of moving to a per-student/patron cap, although many commenters argue that the discount matrix should be revised in some way.²¹ However, the per-student/patron

¹⁸ See *supra* at Section II; see also California Department of Education Comments at 8.

¹⁹ See Comments of General Communication Inc. at 8-9, WC Docket No. 13-184 (filed Sept. 16, 2013) (“GCI Comments”). Priority 0 will not eliminate the added costs that rural communities could face from longer distances to traverse within a community, and thus could still see some loss of support from merging Priority 1 and Priority 2, even with Priority 0.

²⁰ See Alaska EED Comments at 15.

²¹ See, e.g., EdLiNC Comments at 23, 31; Comments of The Wireless Internet Serv. Providers Ass’n at 4, WC Docket No. 13-184 (filed Sept. 16, 2013) (“WISPA Comments”); NEA Comments at 11; Bureau of Indian Affairs/Educ. Comments at 6-7, WC Docket No. 13-184 (filed Sept. 16, 2013); California Department of Education Comments at 11; Initial Comments of The Iowa Dep’t of Educ. Regarding Notice of Proposed Rulemaking at 8, WC

budget or cap proposal is too simplistic and not adaptable. As GCI explained in its initial comments, a per-student cap “would inherently discriminate against rural areas that are distant from fiber backbones and have few students and fewer buildings.”²² The Alaska EED urges the Commission to continue to rely on a structure that considers both the “poverty and the locale of an applicant” in making funding decisions, instead of transitioning to a per-student, per-patron, or per-building method that would “place remote locations at an extreme disadvantage.”²³ The EED noted that one remote school district, the Alaska Gateway School District, would see its funding reduced by almost 400% based on a per-student method.²⁴ The seven schools in this district are already limited to connections of less than 10 Mbps,²⁵ and further reduction of funding could be devastating.

Other commenters make similar arguments.²⁶ The National Education Association argues that the existing discount matrix better targets the “neediest students,” whereas the per-

Docket No. 13-184 (filed Sept. 16, 2013) (“Iowa Department of Education Comments”); Kansas Department of Education Comments at 5; Initial Comments of Ky. Dep’t of Educ. Regarding Notice of Proposed Rulemaking at 4, WC Docket No. 13-184 (filed Sept. 16, 2013) (“Kentucky Department of Education Comments”); Alaska EED Comments at 11.

²² GCI Comments at 12-13.

²³ Alaska EED Comments at 14.

²⁴ *Id.*

²⁵ *Id.*

²⁶ *See, e.g.*, Comments of The U.S. Telecom Ass’n at 11, WC Docket No. 13-184 (filed Sept. 16, 2013) (“USTA Comments”); Comments of the Indep. Tel. & Telecomms. Alliance at 8, WC Docket No. 13-184 (filed Sept. 16, 2013) (“ITTA Comments”); Comments of Verizon and Verizon Wireless at 15, WC Docket No. 13-184 (filed Sept. 16, 2013) (“Verizon Comments”) (noting that the per-student cap is inapplicable to small schools); E-Rate Cent. Comments in Response to the July 23, 2013 Notice of Proposed Rulemaking at 6, WC Docket No. 13-184 (filed Sept. 16, 2013) (“E-Rate Central Comments”); California Department of Education Comments at 11; Kansas Department of Education Comments at 5-6; South Dakota Department of Education Comments at 19-20; Comments of the State of Hawaii at 4, WC Docket No. 13-184, (filed Sept. 16, 2013) (“Hawaii Department of

student/patron model ignores the greater need of those students, and fails to “adequately account for the fact that rural schools and libraries likely face higher costs for E-rate supported services.”²⁷ The California Department of Education warns that relying on a per-student cap instead of using some form of the discount matrix could “exacerbate the digital divide in hard-to-serve areas.”²⁸ The West Virginia Department of Education notes that “areas like Alaska . . . would suffer as a result.”²⁹ And the Education and Libraries Networks Coalition (“EdLiNC”) also highlights the role of the discount matrix and priority system in ensuring equitable distribution of funds among applicants.³⁰

The current discount tiers are also easily adapted to various pricing structures. For example, the tiers can equally apply to distance-sensitive and flat-rate pricing. It is not clear how a per-student/patron or per-building model would cope with those differences.

SECA proposes to reduce the discounts for a revamped Priority 2 (which would include voice services, but not internal connections essential to broadband) to a uniform fifty percent.³¹ However, it is difficult to see how this proposal would work in practice: How would the Commission allocate funding if there was not sufficient support to support all Priority 2 funding requests at fifty percent? GCI agrees with many commenters that there is a clear need to ensure adequate connectivity within schools to meet educational needs.³² Initial one-time support, as

Education Comments”); West Virginia Department of Education Comments at 66-67; Wisconsin Department of Education Comments at 9.

²⁷ NEA Comments at 11.

²⁸ California Department of Education Comments at 11.

²⁹ West Virginia Department of Education Comments at 66.

³⁰ EdLiNC Comments at 32-33.

³¹ SECA Comments at 20-24.

³² *See, e.g.*, Comments of Cisco Systems, Inc. at 7, WC Docket No. 13-184 (filed Sept. 16, 2013); Comments of the Nat’l Cable & Telecomms. Ass’n at 8, WC Docket No. 13-184

discussed above in Section III, may most easily accomplish infrastructure build-out and upgrades. Recurring Priority 2 support may be adjusted accordingly, as upgraded infrastructure should enable applicants to reduce costs over time.³³ A flat fifty-percent discount, as proposed by SECA, could work to meet schools' and libraries' needs for those recurring costs. However, it is critical that schools, school districts, and libraries be informed early whether they will obtain support. Under the current regime, schools and libraries often do not find out whether they will obtain support until eight or nine months into the funding year—long after they must make decisions about whether to go ahead with E-rate supported projects.

B. To the Extent the Commission Removes Support for Voice Services or Shifts Such Support to Priority 2, It Should Make Clear That Videoconferencing Remains a Priority 1 Service.

The Commission should maintain the Priority 1 status of videoconferencing services that are essential for distance learning even if it decides to reduce or eliminate funding for stand-alone voice services. Proposals by SECA and others to reduce or eliminate funding for voice services focus primarily on ordinary voice telephone services, including both POTS and VoIP services, and fail to realize the effect defunding voice services will have on essential videoconferencing services.³⁴ While SECA mistakenly asserts that voice services “do not

(filed Sept. 16, 2013) (“NCTA Comments”); EducationSuperHighway Comments at 4-5; Alaska EED Comments at 9.

³³ See EducationSuperHighway Comments at 22.

³⁴ See SECA Comments at 22-23. See also Alaska EED Comments at 5 (describing the current need for “basic phone service” in its discussion of re-categorizing voice services).

facilitate 21st Century learning,”³⁵ other commenters implicitly acknowledge that any reduction in funding for voice services must be limited to “stand-alone legacy voice services.”³⁶

Videoconferencing services are a “cornerstone for distance-learning,”³⁷ and remote schools are “often dependent upon videoconferencing delivery of coursework by highly qualified educators.”³⁸ In Alaska, videoconferencing enables schools to provide remote classes with highly qualified teachers in subjects such as math, science, and others across the whole district, or to provide students with access to district-wide programs and nationwide competitions without extensive traveling.³⁹ In areas like that served by the Yukon Koyukuk School District, videoconferencing can enable students to take classes needed to complete high school without having to live away from their families in order to graduate.⁴⁰ As the Alaska EED explained, videoconferencing services allow “our students receive the same quality of teaching that their urban counterparts enjoy.”⁴¹ Creating these sorts of opportunities—“allow[ing] students and teachers to take advantage of the rapidly expanding opportunities for interactive digital learning”⁴²—is a key goal of E-rate, and should be supported as a Priority 1 designation.

³⁵ SECA Comments at 22.

³⁶ *See, e.g.*, Comcast Comments at 24 (limiting its proposal to “stand-alone legacy voice services”).

³⁷ GCI Comments at 14.

³⁸ Alaska EED Comments at 3. *See also* Iowa Comments at 5 n.4 (advocating for videoconferencing to remain a Priority 1 service); Building the Broadband Future: The Communications Needs of Kansas Schools, Libraries, and Hospitals, at 11, attached to Kansas Comments; South Dakota Department of Education Comments at 2-3.

³⁹ GCI Comments at 4-5, 14.

⁴⁰ GCI Comments at 5.

⁴¹ Alaska EED Comments at 3.

⁴² NPRM 11,313 ¶ 17.

C. The Commission Should Adopt Its Proposal to Define Rural According to NCES Categories, But Should Include in Rural Those “Fringe” Areas without Road Connections to the Urban Center.

GCI generally supports the use of NCES locale identifiers to define rural areas for the discount matrix, as proposed by the Commission, because these codes are the most accurate available for determining the distance of rural areas to urban centers, and thus reliably estimating increased costs to provide middle-mile transport.⁴³ As a starting point, as the Commission proposes, all schools and libraries whose local code is “town-distant”, “town-remote”, “rural-distant” or “rural-remote” should be designated as “rural.”⁴⁴

However, as the Alaska EED noted, the NCES codes do not provide a reliable indicator for those communities that “*are not connected to their associated urban areas by roads*” when these communities are not served by a fiber middle-mile backbone.⁴⁵ The Alaska state highways map, which shows these isolated population centers throughout Alaska, is instructive.⁴⁶ Such communities are servable only by fixed microwave or satellite connections. Therefore, as suggested by the Alaska EED, GCI urges the FCC to “take into consideration *extreme* remote locations, those not connected by a road system,”⁴⁷ when the community is not served by a fiber-based middle mile. This change would have the practical effect of re-designating as rural a small number of areas off the road system that are currently “city,” “suburb,” “town-fringe,” or “rural-fringe.” The Chugach School District, for example, is currently designated as NCES City-Large,

⁴³ See NPRM at 11,321 ¶ 54.

⁴⁴ See *id.* at 11,380 ¶ 277.

⁴⁵ Alaska EED Comments at 5 (emphasis in original).

⁴⁶ See Alaska Department of Transportation & Public Facilities, Alaska State Tourist Map, available at <http://www.dot.state.ak.us/AkStateTouristmapMAP.pdf>.

⁴⁷ Alaska EED Comments at 5 (emphasis in original).

but all of its schools other than Whittier are off-road and can be served only over satellite middle-mile. Thus, for network purposes, these are as remote as villages in western Alaska, even though they may be near Anchorage as the crow flies.

Chugach School District Map

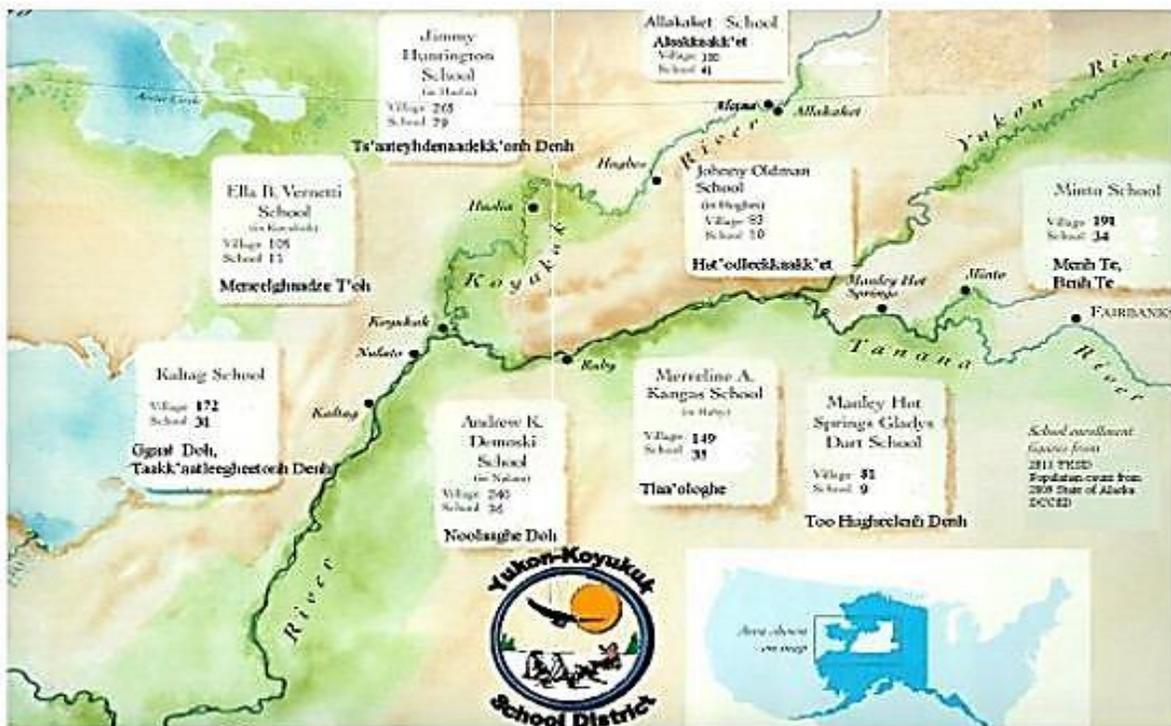


The Yukon-Koyukuk School District (“YKSD”) is also extremely remote despite its NCES designation as Suburban-Small. Suburban-Small is defined as “[t]erritory outside a principal city and inside an urbanized area with population less than 100,000.”⁴⁸ But YKSD is not an “urbanized area,” although its main office is located in Fairbanks. The district comprises nine village schools, located throughout a geographic area larger than the state of Washington,

⁴⁸ National Center for Education Statistics, Common Core of Data, Identification of Rural Locales, at New Urban-Centric Locale Codes, http://nces.ed.gov/ccd/rural_locales.asp#defs (emphasis added).

serving 1400 full-time students. Seven of these communities are reachable only by small aircraft, and local travel within the communities typically requires boats during the summer months and snow machines or dog sleds in the winter.⁴⁹ Thus, despite its relative nearness to Fairbanks, YKSD is extremely remote and can be served only by satellite middle mile.

Yukon-Koyukuk School District Map



As suggested by some commenters, the Commission should not abandon the additional rural discount.⁵⁰ Even with a higher priority in the event that funding requests exceed the cap, rural schools must pay for the cost to reach the Internet backbone: this covers much greater

⁴⁹ Yukon-Koyukuk School District, District Overview, <http://www.yksd.com/domain/3>.

⁵⁰ See, e.g., Funds for Learning Comments at 20 (advocating for deeper discounts for institutions in high cost “remote rural” areas); see also NEA Comments at 11 (noting the higher cost to rural institutions).

distances than an urban/suburban school, which may have a Tier 1 POP in the same city.⁵¹ This means that, in absolute dollars, rural districts can continue to expect to be paying more per student than urban districts—thus needing more support.⁵²

D. The Commission Should Adopt the National Indian Education Association’s Proposal for an Enhanced Tribal Discount, with Some Modifications.

GCI urges the Commission to adopt the basic idea, advanced by the National Indian Education Association (“NIEA”), of an enhanced tribal discount.⁵³ Such an enhanced discount makes sense given the lack of technology infrastructure on tribal lands. However, rather than exempt schools from matching requirements as suggested by NIEA, which could create enhanced opportunities for fraud and abuse, it would be better to provide an additional discount (*e.g.*, five percent more, such that the maximum discount for a school on tribal lands would be ninety-five percent). In addition, this additional discount should be limited to “rural” areas, as that term is redefined by the Commission (and modified as discussed in Section V.C, above). Finally, the discount should apply to service to tribal lands, irrespective of the identity of the serving entity (*i.e.*, whether or not the provider is “tribally-owned”): the goal for E-rate should be service, not who serves.

⁵¹ See, *e.g.*, GCI Comments at 6.

⁵² See Funds for Learning, FY2013 E-rate Funding Requests: Telecommunications and Internet Access by Schools and Libraries, 17 (July 3, 2013), *available at* <http://www.fundsforlearning.com/docs/2013/07/FY2013%20P1%20School%20Demand%20Analysis%202013-07-03.pdf>; see also Funds for Learning, Universal Service Funding for Schools and Libraries Data, 30 (April 3, 2013), *available at* <http://www.fundsforlearning.com/docs/2013/04/FFL%20Presentation%20at%20April%203%202013%20Meeting.pdf>.

⁵³ See NIEA Comments in the Matter of Modernizing the E-rate Program for Sch. and Libraries at 2, WC Docket No. 13-184 (Sept. 16, 2013).

VI. E-RATE SHOULD REMAIN TECHNOLOGICALLY NEUTRAL AND FOCUSED ON THE MOST COST-EFFECTIVE SOLUTION.

As the Alaska EED demonstrates, even just in Alaska, there is too much diversity for a one-size-fits-all approach.⁵⁴ Some areas have fiber backbones, but many do not. Some areas will only have satellite middle mile. Local conditions vary, including the size of the local area to be traversed. From a technology standpoint, even with terrestrial middle mile in place, some areas may be better served by wireless (fixed or mobile) than by a wired last mile. However, if the consumer market is wireless, it may still be possible—and a better, cost-effective solution—to provide dedicated wired or microwave service to the school or library. The Commission can best address this diversity by leaving a wide range of technological and purchasing options available to schools and libraries, so that the school or library can choose fiber, microwave, or satellite as available. As Alaska EED argues:

[S]chools and libraries should be given the flexibility to select the best technology that fits their particular needs. Fiber is not an option for many locations in Alaska due to weather and geography. Where fiber is not available microwave connectivity becomes the terrestrial alternative for servicing communities of 300 or fewer people. But microwave connectivity is not available throughout many regions of Alaska, making satellite connectivity the only option.⁵⁵

The key check needs to be cost-effectiveness, as it has been. In this regard, the Commission should not mandate fiber purchases, whether lit or dark, but should permit those

⁵⁴ See Alaska EED Comments at 6 (explaining that microwave connections are the best alternative for many communities where weather and geography make fiber connections unavailable, but noting that satellite connections are the only viable option for many communities throughout Alaska).

⁵⁵ *Id.* See also Initial Comments of Kentucky Dep’t of Educ. Regarding Notice of Proposed Rulemaking at 2, WC Docket No. 13-184 (filed Sept. 16, 2013) (stating that “it is important that local [school] officials have the flexibility to select the technologies that will most directly meet their needs [of delivering broadband to classrooms].”); Funds for Learning Comments at 53 (stating that “[t]here is no one-size-fits-all approach to technology and telecommunications.”).

options when those are the most cost-effective options. This is the same path the Commission took with respect to the Rural Health Care Program.⁵⁶ The comments overwhelmingly support technological neutrality,⁵⁷ and the cost-effectiveness test is a principled way to screen out wasteful overbuilding from socially beneficial overbuilding.

VII. THE COMMISSION SHOULD REJECT THE ALASKA RURAL COALITION'S REQUEST FOR NON-COST-EFFECTIVE SUPPORT FOR MIDDLE-MILE OVERBUILDS OR FOR PRICE CAPS OR SUPPORT CAPS ON MIDDLE-MILE FACILITIES.

The Commission should reject the ARC's suggested reforms, which would not advance the Commission's objectives of providing the most cost-effective means of enabling schools and libraries to meet ambitious connectivity and bandwidth goals. ARC's comments are an incoherent hodgepodge of suggestions and assertions. Most of what ARC presents is not responsive or relevant to the systemic questions presented in the NPRM. This rulemaking proceeding is not the place to adjudicate specific allegations regarding the pricing of non-dominant interexchange services.

⁵⁶ See *Rural Health Care Support Mechanism*, Report and Order, FCC 12-150, 27 FCC Rcd. 16,678, 16,736 ¶ 124 (2012) ("Rural Health Care Support Order").

⁵⁷ See, e.g., Comments of AT&T Inc. at 4, CC Docket No. 13-184 (filed Sept. 16, 2013); Comments of CenturyLink at 6, WC Docket No. 13-184 (filed Sept. 16, 2013); Comments of CTIA – The Wireless Association at 1-2, WC Docket No. 13-184 (filed Sept. 16, 2013); NCTA Comments at 9; Comments of Sprint Corp. at 5, WC Docket No. 13-184 (filed Sept. 16, 2013); SECA Comments at 19; E-Rate Central Comments at 2 & 4; South Dakota Department of Education Comments at 8; Comments from the State of Arkansas at 14, WC Docket No. 13-184 (filed Sept. 16, 2013).

A. To the Extent ARC Is Proposing to Direct E-rate Support to Non-Cost Effective Middle-Mile Overbuilds, the Commission Should Reject That Proposal.

Although it is difficult to determine what ARC is proposing in its discussion of middle-mile transport,⁵⁸ the gist seems to be that ARC seeks “Commission support or regulatory intervention” to create alternatives to the middle-mile transport infrastructure already in place regardless of whether there is a business case for such facilities.⁵⁹ In other words, it appears that ARC is proposing that the Commission dedicate support to non-cost-effective overbuilds.

The Commission should reject that proposal. E-rate today supports middle-mile services as part of supporting telecommunications and Internet access services by supporting the ability of schools and libraries to purchase middle-mile services—making it affordable for them. E-rate functions in a non-market distorting way, by having schools and libraries solicit bids for the provision of E-rate supported services (together with the remainder of the telecommunications and Internet access services the school or library needs) and requiring the school to select the most cost-effective provider, with price as a mandatory factor that must be weighted more than any other factor.⁶⁰

The FCC has recognized the significance of this cost-effectiveness mandate in differentiating between wasteful and non-wasteful overbuilding.⁶¹ Thus, if a provider is charging

⁵⁸ See Comments of the Alaska Rural Coalition at 10-12, WC Docket No. 13-184 (filed Sept. 16, 2013) (“ARC Comments”).

⁵⁹ *Id.* at 10.

⁶⁰ See 47 C.F.R. 54.511(a); see also *Schools & Libraries Universal Service Support Mechanism; A National Broadband Plan for Our Future*, Sixth Report and Order, FCC 10-175, 25 FCC Rcd. 18,762, 18,764-65 ¶¶ 5-6 & 18,788-89 ¶ 55 (2010) (“Sixth Report and Order”).

⁶¹ See Sixth Report and Order at 18,771-72 ¶ 17 n.46; Rural Health Care Support Order at 16,712-14 ¶¶ 73-75.

rates so high that another provider can enter and serve while undercutting those rates, E-rate will support that second provider's service. But E-rate will not and should not support the second provider just to create a second provider. There is no reason to depart from that approach in Alaska.

B. TERRA Is Not a Monopoly.

Despite ARC's assertions to the contrary, the TERRA-SW system does not have a monopoly in the areas it serves and instead must compete with satellite connections.⁶² In fact, GCI has lost bids to satellite providers in TERRA-SW-served areas. Contrary to ARC's assertions that "satellite broadband is fundamentally inadequate to support digital learning,"⁶³ users—including schools and libraries—have clearly indicated that they consider satellite services to be a substitute, at least at present. For example, just this year the Lower Yukon School District chose a bid by AT&T Alaska to provide services via satellite under the E-rate program, including six locations in the TERRA-SW area, over a bid by GCI to provide services over TERRA.⁶⁴

C. Price Caps for Alaska Middle-Mile Transport Would Undermine, Not Promote, Additional Alaska Middle-Mile Deployment.

The Commission should reject ARC's proposal to use the E-rate proceeding as an opportunity to impose price-cap regulation on terrestrial middle-mile transport services. ARC's proposal to institute price regulation or support caps on terrestrial middle-mile transport services

⁶² See ARC Comments at 10-11.

⁶³ *Id.* at 8.

⁶⁴ See Prefiled Testimony of Frederick W. Hitz III, Petition for Relief from Carrier of Last Resort Responsibilities in Certain Locations by AT&T Alaska, at 17 (filed February 22, 2013), available at <http://rca.alaska.gov/RCAWeb/ViewFile.aspx?id=d325f517-091d-491f-8907-77cad7ccdda8>.

in Alaska would be profoundly counterproductive. Deploying terrestrial middle mile is highly capital-intensive and high-risk. GCI has invested over \$200 million in building its TERRA network, and more investment will be necessary to complete and close a TERRA ring. This is not an investment in which an 11.25% return has ever been guaranteed. On the contrary, “[e]ven with a substantial subsidy and a federal guaranteed loan—which of course must be repaid with interest,” GCI’s investment in the TERRA network “carried and still carr[ies] substantial risk[s]”; “that construction in such a remote area, with extreme conditions in an extreme weather environment, would exceed expected costs”; “that there will not be sufficient demand to support the services”; and that the tenuous economy in the area TERRA serves will fail.⁶⁵ Inserting price regulation in this competitive market only serves to depress revenues and deter future investment. That extends the time necessary to cover and earn an adequate return to attract investors, and it reduces the funding available to continue to invest in network deployment.

ARC trumpets an erroneous claim of monopoly, but as FCC Chairman Kennard once observed with respect to broadband, regulation when facilities do not exist can create a “no-opoly”—an absence of the new facilities that are desired.⁶⁶ Price regulation adds no new

⁶⁵ *Id.* at 15.

⁶⁶ See William E. Kennard, Chairman, FCC, Remarks at the National Cable Television Association (June 15, 1999), *available at* <http://transition.fcc.gov/Speeches/Kennard/spwek921.html> (“Sometimes people talk about broadband as though it is a mature industry. But, the fact is that we don’t have a duopoly in broadband. We don’t even have a monopoly in broadband. We have a NO-opoly. Because, the fact is, most Americans don’t even have broadband. We have to get these pipes built. But how do we do it? We let the marketplace do it. . . . the best decision government ever made with respect to the Internet was the decision that the FCC made 15 years ago NOT to impose regulation on it. This was not a dodge; it was a decision NOT to act. It was intentional restraint born of humility. Humility that we can’t predict where this market is going.”).

facilities to compete with GCI's, nor does it provide additional capacity or redundancy: it simply makes the business case for all actual or potential middle-mile facilities-based providers worse.

For the same reason, the Commission should also reject ARC's suggestion that the Commission use the Connect America Cost Model ("CACM") as a "benchmark" for setting price caps for Alaska middle-mile transport.⁶⁷ The ARC vociferously opposes use of the CACM to determine support for rate-of-return carriers in the same areas in which it would apply that model here.⁶⁸ While audacious in its hypocrisy, ARC cannot have it both ways. It is right when it states in its high cost advocacy that a model, even if eventually perfected for ACS, is still not necessarily transferable to the rest of Alaska, much more of which is off-road than in the ACS service areas. That is equally true here.

D. The Commission Should Not Entangle E-rate with CAF Support.

ARC proposes treating a carrier receiving E-rate support as a subsidized competitor.⁶⁹ In the first place, that is out of place in this proceeding, as it has nothing to do with the distribution or uses of E-rate support. More fundamentally, it is a bad idea. It conflates a limited enterprise market of service to schools and libraries, targeted by the E-rate program, with mass market, targeted by the Connect America Fund (CAF), although the two markets have vastly different characteristics.

Moreover, the solution to middle-mile services for mass market, as GCI has previously said in the relevant dockets, is to support the ability of eligible telecommunications carriers to

⁶⁷ See ARC Comments at 11.

⁶⁸ See, e.g., Comments of the Alaska Rural Coalition at 16-19, WC Docket 10-90, et al., (filed Jan. 18, 2012); Comments of the Alaska Rural Coalition at 7, WC Docket No. 10-90, et al., (filed July 17, 2013); Comments of the Alaska Rural Coalition, WC Docket No. 10-90, et al., at 10-11 (filed July 25, 2013).

⁶⁹ See ARC Comments at 13-14.

acquire necessary middle-mile support, without skewing that procurement between buying services and building facilities.⁷⁰ In Alaska, this is particularly important because the LECs themselves do not provide interexchange services, including services between non-contiguous village-centric service areas. These services are provided by interexchange carriers, some of which may be LEC affiliates. Given their small size and geographic scope, the LECs are not the natural providers of inter-village transport in Alaska.

VIII. THE COMMISSION SHOULD PHASE IN FUNDING REDUCTIONS GRADUALLY AND SUPPORT EXISTING MULTIYEAR CONTRACTS FOR SERVICES THAT ARE DEEMED ELIGIBLE.

GCI supports suggestions that the Commission continue to support existing multiyear contracts for services that are removed from the Eligible Services List. As the Alaska EED explained, many schools and libraries may be locked into multiyear contracts for these services.⁷¹ It would be a hardship for such schools and libraries to have to unexpectedly bear the entire cost for these services when they had relied on E-rate funding to enter contracts for currently-eligible services. By the same token, the Commissions should gradually phase out support for services it removes from the ESL as suggested by the Alaska EED: “a phase out period that begins with FY2015 that asks the applicant to pay an increasing percentage in

⁷⁰ See, e.g., Reply Comments of General Communication, Inc. with Respect to Sections XVII.A-K of the Further Notice of Proposed Rulemaking at 11, WC Docket No. 10-90, et al (filed Feb. 17, 2012) (arguing that it “makes much more sense to treat the interexchange middle-mile costs as expenses. . . . To do otherwise would create an artificial incentive for the rate-of-return LEC to construct new interexchange middle-mile facilities—which it could put in its ratebase and on which it could earn the prescribed rate of return—rather than purchasing services that would be expenses, which the ILEC would not be able to mark-up in calculating universal service payments.”) (internal citations omitted); Comments of General Communication, Inc. at 28-30, WC Docket No. 10-90, et al (filed Jan. 18, 2012); General Communication, Inc. Petition for Reconsideration at 21-22, WC Docket No. 10-90, et al. (filed Dec. 23, 2011).

⁷¹ Alaska EED Comments at 7.

subsequent funding years until they are carrying the full burden of the service without E-rate support”⁷² would allow applicants sufficient time to accommodate those changes in their budget. This is particularly important for services like stand-alone voice that many schools and libraries find “vitaly necessary.”⁷³

⁷² *Id.*

⁷³ SECA Comments at 22. *See also* Anchorage Comments at 1.

IX. CONCLUSION

GCI appreciates this opportunity to participate in the Commission's efforts to reform the E-rate program and applauds the Commission's ambitious goals. To be successful, not only must E-rate 2.0 be better funded, but it must retain the flexibility to address unique rural situations and underlying infrastructure resources that has made E-rate 1.0 a success. The Commission can do that by retaining the current discount structure, while also creating a Priority 0 for transport between rural communities and the Internet. Supporting these distant rural connections, without interposing artificial caps, is critical to developing the middle-mile infrastructure that Alaska will need to deliver high-capacity, low-latency bandwidth to every school and library in Alaska.

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