

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

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<i>In the Matter of</i>)	
)	
Connect America Fund)	WC Docket No. 10-90
)	
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**COMMENTS OF GENERAL COMMUNICATION, INC.
ON DESIGN OF THE REMOTE AREAS FUND**

General Communication, Inc. (“GCI”) hereby comments in response to the Wireline Competition Bureau’s Public Notice seeking comment on issues regarding the design of the Remote Areas Fund (“RAF”).¹ While the Public Notice seeks comment on the details of the RAF, these cannot rationally be determined outside of the context of the other elements of the Connect America Fund, both fixed and mobile. For a state such as Alaska, careful consideration must be given to the role that the RAF is expected to fulfill, and what support will be made available through the other funds. If the RAF were simply applied according to parameters designed for the 48 contiguous states, too much of Alaska would be left without terrestrial broadband service. This would leave rural Alaska trapped in a perpetually underserved state, and would also deprive rural Alaska of critical infrastructure improvements needed not only to support mass market broadband services, but also telehealth, distance learning and public safety. This underscores yet again the Commission’s need for a comprehensive vision for how to

¹ See *Wireline Competition Bureau Seeks Further Comment on Issues Regarding the Design of the Remote Areas Fund*, Public Notice, DA 13-69, WC Docket No. 10-90 (rel. Jan. 17, 2013) (“*Public Notice*”).

support universal service in Alaska, and that the Commission should not reduce existing support to Alaska until it has evaluated Alaska's needs and formulated such a vision.

As all Alaska commenters in this docket have repeatedly observed, Alaska has a unique demography and network architecture. Alaska does not have an already-present ubiquitous fiber backbone. Instead, Alaska's fiber is limited to areas along the National Highway System between Anchorage and Fairbanks, along the trans-Alaska oil pipeline, and, in southeastern Alaska, adjacent to the fiber cables connecting Alaska to Oregon and Washington. The vast majority of Alaska's land mass, and about a quarter of its population, is outside the fiber footprint in areas that lack roads and an intertied power grid.² While some areas in Alaska, such as the Mat-Su Valley, face challenges similar to rural areas in the lower 48—for example, individual dwellings sparsely spaced along rural roadways—the most significant universal service challenge in Alaska is deploying the middle mile necessary to connect entire communities both to one another and to the larger population centers in the state. Today, most of that middle mile connectivity is provided by satellite, with the exception of those communities of southwestern and western Alaska that are served by GCI's TERRA network, which was

² See Comments of General Communication, Inc., at 2-4, WC Docket No. 10-90, GN Docket No. 09-51, WC Docket No. 07-135, WC Docket No. 05-337, CC Docket No. 01-92, CC Docket No. 96-45, WC Docket No. 03-109, WT Docket No. 10-208 (filed Jan. 18, 2012); Reply Comments of the Alaska Rural Coalition, at 3-4, WC Docket No. 10-90, WT Docket No. 10-208 (filed Jan. 7, 2013); Reply Comments of the Alaska Rural Coalition, at 9, WC Docket No. 10-90, WC Docket No. 05-337 (filed July 23, 2012); Comments of Alaska Communications Systems, Inc., at 3 n.4, WC Docket No. 10-90, Docket No. 09-51, WC Docket No. 07-135, WC Docket No. 05-337, CC Docket No. 01-92, CC Docket No. 96-45, WC Docket No. 03-109, before the FCC (Jan. 18, 2012); Comments of the Regulatory Commission of Alaska, at 4-5, WC Docket No. 10-90, Docket No. 09-51, WC Docket No. 07-135, WC Docket No. 05-337, CC Docket No. 01-92, CC Docket No. 96-45, WC Docket No. 03-109, before the FCC (filed Jan. 18, 2012).

constructed by a mix of private capital and a loan/grant from the United States Department of Agriculture's Broadband Infrastructure Program.

Given Alaska's demographic and geographic diversity, it is difficult to comment on the implementation of the RAF without a complete picture as to how the rest of the Connect America Fund fits together and which areas will be covered by which mechanisms. Indeed, by proceeding with each mechanism on parallel but uncoordinated paths, Alaska faces the significant prospect that the universal service mechanisms will amount to a hodgepodge of measures that will not add up to broadband access for all Alaskans. This is especially true because satellite-based broadband services are not universally available outside highly populated areas—the ViaSat-1 satellite, by its own assessment, covers only “the most populated areas of Alaska.”³ Thus, to the extent that the RAF is relying on universal access to satellite broadband to fill in coverage gaps for terrestrial services, in much of rural Alaska, such service is not available.

Moreover, the Commission should look at connecting *communities* separately and differently from connecting individuals. When a *community* is not adequately connected with high capacity, low latency backbone services, not only does the mass-market broadband service for consumers suffer, but critical community institutions such as rural health clinics, schools and public safety will also lack the broadband connectivity that they need. Significantly, latency can be a critical dimension for these community anchor institutions. For telehealth, for example, modern electronic medical records systems are designed for the low latency environment present in the 48 contiguous states. But these systems become virtually unusable with any significant

³ ViaSat, High-Capacity Satellite System and ViaSat-1, <http://www.viasat.com/broadband-satellite-networks/high-capacity-satellite-system> (last accessed Feb. 19, 2013).

amount of latency. Similarly, distant medical consultations, including psychiatric sessions, improve greatly when latency is low. The same is true for interactive distance learning. As the Commission documented in its most recent broadband speed report, however, satellite services have significantly greater latency than any terrestrial broadband services: while terrestrial broadband services averaged less than 29.6 milliseconds of latency (with some having significantly less latency), advanced satellite technology averaged 638 milliseconds of latency.⁴

In Alaska, the key to maximizing broadband-deployment benefits is directly or indirectly (through supporting ETC capacity purchases) supporting the continued development and deployment of middle-mile facilities capable of sustaining both mass-market and *community* anchor tenant broadband services. All Alaska providers, including the Alaska Rural Coalition, ACS and GCI, have made this point. Furthermore, both the ACS Alaska-specific model for CAF Phase II and GCI's Alaska-specific Mobility Fund Phase II model demonstrate that the most costly components to construct are the middle-mile facilities necessary for broadband services. The reality is that no single fund will support all of the costs of deploying the necessary middle-mile broadband facilities. Instead, it will take leveraging support from all of the universal service support mechanisms—high cost, low income, e-rate and rural health care—to support continued deployment of the terrestrial middle-mile facilities that permit the delivery of necessary low-latency service.

⁴ See FCC, Office of Engineering and Technology and Consumer and Governmental Affairs Bureau, *2013 Measuring Broadband America February Report: A Report on Consumer Wireline Broadband Performance in the U.S.*, at 11 (Feb. 2013) (“*Third Broadband Speed Report*”), available at <http://transition.fcc.gov/cgb/measuringbroadbandreport/2013/Measuring-Broadband-America-feb-2013.pdf> (last accessed Feb. 19, 2013). A geosynchronous satellite with a 36,000 km orbit will have a minimum of 500 milliseconds round trip latency. *Id.* at 13.

Furthermore, simply permitting support to be disbursed under the RAF until the CAF Phase 2 and whatever rural broadband support are put into place would strongly favor satellite-based service. For a terrestrial service that requires the construction of new facilities—such as new middle-mile facilities—capital investment cannot be undertaken on the basis of support that may be fleeting. ETCs will need some period of stable support flows in order to justify the capital investment necessary to build the middle mile to connect rural communities with the rest of the state and world. A RAF distributed on a per-customer basis can be helpful, but only if there is some assurance that it will not disappear—for example, with respect to the price cap areas, as soon as CAF Phase 2 is in place.

In addition, Paragraph 10 of the Public Notice is particularly confusing. That paragraph posits that in areas served by rate-of-return carriers, the RAF would also be available to any ETC, including the rate-of-return carrier, for serving the “highest cost customers.” In the first instance, this seems to grant the rate-of-return carrier duplicative support: it can receive high-cost support for its entire study area as well as receiving RAF for any customer that it serves *directly or by reselling* another provider’s service (such as satellite broadband service). At a minimum, an RLEC should see its high-cost support reduced by the amount of RAF support provided within its study area boundaries to any other provider. Second, it is not at all clear why a rate-of-return incumbent LEC should receive additional support for directly building out an alternative technology under the RAF, when it could also have done so under the rate-of-return LEC broadband mechanisms, and when the Commission is otherwise phasing out terrestrial CETCs providing fixed service from receiving any support (unless a price cap LEC declines CAF Phase 2 support). That is blatantly not competitively neutral, and violates the “one

supported network” theory which was the basis for phasing out fixed location CETC high cost support.

With respect to RAF support in rate-of-return areas, the Public Notice seeks comment on tying the availability of RAF support to the \$250 per-line per month cap on high cost support.⁵ While this may make some conceptual sense, at least when tested at the study area level, it is important that the Commission recognize that the rate-of-return ILEC may not be the only CETC providing service in that area. For example, on Adak Island, both Adak Eagle Enterprises, the ILEC, and Windy City Cellular, its affiliated wireless CETC, continue to receive support in excess of \$250 per-line per month pursuant to an interim waiver, even though GCI is providing service on Adak for less than \$250 per-line per month.⁶ Such an area should be considered below \$250 per-line per month if there is any ETC providing service with support below that level.

⁵ See *Public Notice*, ¶ 8.

⁶ *Connect America Fund, Universal Service Reform—Mobility Fund, Petitions for Waiver of Windy City Cellular, LLC and Adak Eagle Enterprise, LLC*, Order, DA 12-2044, WC Docket No. 10-90, WT Docket No. 10-208 (rel. Dec. 20, 2012).

Finally, it must be noted that the Commission's recently released broadband speed report shows the fallacy of moving to a one-supported-network system without fully embracing reverse-auctions to select the supported network. Both CAF Phase 2 and the continuation of existing rate-of-return support favor the incumbent LEC as the supported broadband provider. In CAF Phase 2, for example, the incumbent LEC has the opportunity to elect to receive the CAF Phase 2 support before there can be an open reverse-auction.

The Commission's broadband report, however, shows that of all terrestrial technologies, DSL – the technology used by the vast majority of incumbent LECs, including in Alaska – has the highest latency of all terrestrial technologies, as well as the lowest performance when compared to advertised rates and lower overall performance.⁷ Prioritizing DSL deployments pushes broadband technology in the wrong direction. It would be better to let all providers compete to provide supported broadband services, rather than giving dead-end legacy technologies a right of first refusal.

Respectfully submitted,



John T. Nakahata
WILTSHIRE & GRANNIS LLP
1200 Eighteenth Street, N.W.
Washington, D.C. 20036
(202) 730-1300

Counsel for General Communication, Inc.

Tina Pidgeon
Chris Nierman
GENERAL COMMUNICATION, INC.
1350 I Street, N.W., Suite 1260
Washington, D.C. 20005
(202) 457-8815

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⁷ *Third Broadband Speed Report* at 11.