its capital expenditures for wireless network improvements. These levels of capital expenditure and infrastructure investment would not have been possible under a capped high-cost regime, and certainly could not continue if CETC support is phased down.

Exhibit E to Annual ETC Report in Compliance with 3 AAC 53.460
GCI 2010 Wireless ETC CapEx

Row Labels	Add and expand Nortel CDMA and Ericsson GSM core systems, radio base stations and supporting infrastructure to provide wireless coverage.	Add and expand Nortel CDMA and Ericsson GSM radio base stations and supporting infrastructure to provide wireless coverage.	Battery plant and alternative power upgrades at primary sites	Install Ericsson GSM EDGE radio base stations (at a shared site with CDMA). Upgrade CDMA base station to EV-DO.	Install Nortel CDMA 1xRTT radio base stations and supporting infrastructure (shelters, towers, etc.) to provide wireless coverage.	Install Star Solutions GSM GPRS MSC and Vanu radio base station equipment and related support infrastructure	Install Starcom MSC and Vanu radio base station equipment and related support infrastructure	Site Additions and Upgrades	Maintenance work only	2010 Wireless ETC CapEx Total
Adak Telephone Utility										$ -
Anchorage**	$ 8,054,724									$ 8,054,724
ASTAC				$ 2,426	$ 7,792	$ 215,780				$ 225,998
Bristol Bay Telephone						$ 405,514				$ 405,514
CVTC					$ 448,521	$ 527,872				$ 976,393
Cordova						$ 157,461				$ 157,461
Fairbanks		$ 248,056								$ 248,056
Glacier State		$ 243,832								$ 243,832
Greatland									$ 1,874	$ 1,874
Interior Telephone Company			$ 7,834				$ 257,105			$ 264,939
Juneau		$ 46,666								$ 46,666
Ketchikan Public Utility										$ -
MTA		$ 499,195								$ 499,195
Mukluk Telephone Company								$ 278,482		$ 278,482
Nushagak Cooperative						$ 127,940				$ 127,940
OTZ Telecommunications, Inc.						$ 292,007				$ 292,007
United KUC								$ 623,912		$ 623,912
United Utilities, Inc.						$ 1,289,742				$ 1,289,742
Yukon Telephone Company						$ 443,521				$ 443,521
Grand Total	$ 8,054,724	$ 1,037,749	$ 7,834	$ 2,426	$ 456,313	$ 3,459,838	$ 257,105	$ 902,394	$ 1,874	$ 14,180,255

** Please note that a significant portion of the approximately $8 million in capital spent within the Anchorage Study Area also supports services within other study areas. Core switching, transport and "administrative "common equipment" required to serve all Alaskan communities are all based in Anchorage and, therefore, these capital expenditures are coded to this single location

GCI 2010 Wireless ETC CapEx

D. Upgrading Rural Alaska's Inadequate Backhaul for Broadband Is Necessary to Provide Comparable Universal Broadband Services

Alaska currently lacks adequate middle-mile facilities to support broadband services. While Alaska's challenges are particularly pronounced for services that are latency sensitive, they extend as well to consumer broadband offerings comparable to the lower 48. Capturing economies of scale will be critical to delivering broadband to rural Alaska, just as it has been to delivering rural wireless voice services.

As GCI explained in great detail in response to the Commission's inquiries in the National Broadband Plan ("NBP") proceeding, due to the vast distances, severe climate, difficult terrain, and widely dispersed population, the largest impediment to providing broadband to all of

Alaska, particularly rural Alaska, is the lack of cost-effective middle-mile connectivity.[23] Individual broadband service to the vast rural areas of Alaska is constrained by middle-mile capacity to a much greater degree than by last-mile technology. Indeed, at least for Alaska, middle-mile capacity issues demonstrate that the universal broadband speeds to be achieved and supported must be measured not just over the last mile, but to the Tier 1 POP.[24]

Satellite service – the current means of providing middle mile service in Alaska – is not a reasonable long term solution for meeting the Commission's and the NBP's goals for mass market and anchor institution broadband service. Satellite middle-mile transport has inherent latency, and thus, is not well-suited for critical applications such as telemedicine and distance learning, or for mass market applications that require real-time or near real-time performance.

Just as significantly, satellite services also have limited throughput capacity and thus are ill-suited for rapidly growing broadband services for the mass market. Satellite is not as scalable as terrestrial facilities. As part of its general operations, GCI vigorously watches for capacity saturation and service congestion, and periodically increases its estimates for capacity needs. Based on past growth and current usage, GCI operates under the assumption that the demand for mass market Internet bandwidth capacity will increase by three percent per month for the foreseeable future (*i.e.*, 43 percent per year), and attempts to stay ahead of bandwidth demand. It is not feasible to augment satellite capacity to keep up with such increases in demand, especially as availability of satellites and transponders becomes more limited with increased use. In

---

[23] *See generally* Comments of General Communication, Inc. – NBP Public Notice #11, GN Docket Nos. 09-47, 09-51, 09-137, 1-2 (filed Nov. 4, 2009).

[24] In focusing on 4 Mbps download and 1 Mbps upload speeds in the last mile as the measure of universal broadband, the NBP assumed that higher capacity backhaul would be available to support those last mile speeds. *See NBP* at 156, n.2 ("For purposes of the plan, 'actual speed' refers to the data throughput delivered between the network interface unit (NIU) located at the end-user's premises and the service provider Internet gateway that is the shortest administrative distance from that NIU.")

addition, satellites themselves need to be replaced approximately every 10 to 15 years, at a cost of hundreds of millions of dollars per satellite. By constrast, a project like TERRA-SW is multigenerational, with planned capacity upgrades over time. For all of these reasons, outside of the road network areas and areas adjacent to pipeline and undersea cable routes to the lower 48, ISPs throughout rural Alaska must limit the amount of traffic that they pass through the satellite middle mile, and mass market Internet speeds in Alaska remain extremely slow. Satellite middle mile transport thus is not the road to the broadband future that the Commission envisions.

Rural ILECs do not have the scale to build the terrestrial transport capacity needed to support broadband deployment at the NBP's universalization minimum speeds. As noted above, of the 17 Alaskan ILECs other than MTA, affiliates of ACS, and affiliates of GCI, the largest, Alaska Telephone Company, serves fewer than 100,000 access lines, and 6 other companies serve fewer than 1,000 access lines.[25] Furthermore, in Alaska, rural ILECs handle service within villages in their territories, but rarely between villages. Outside the road network, intra-region second-mile terrestrial networks are costly, and are sustained only with significant subsidization.

For example, a $30 million combination grant and loan from the Rural Utilities Service ("RUS") Distance Learning and Telemedicine Program funded initial construction of GCI-subsidiary Unicom's DeltaNet, a terrestrial microwave second-mile network in the remote Y-K Delta. DeltaNet connects approximately 40 rural villages, including Eek (population 296), Tuntutuliak (population 408), and Quinhagak (population 669), to Bethel (population 6,080), the regional hub, via terrestrial microwave facilities.[26] Bethel, in turn, links to the fiber network in Anchorage via two satellite networks, which in turn, connect to the Internet backbone in the

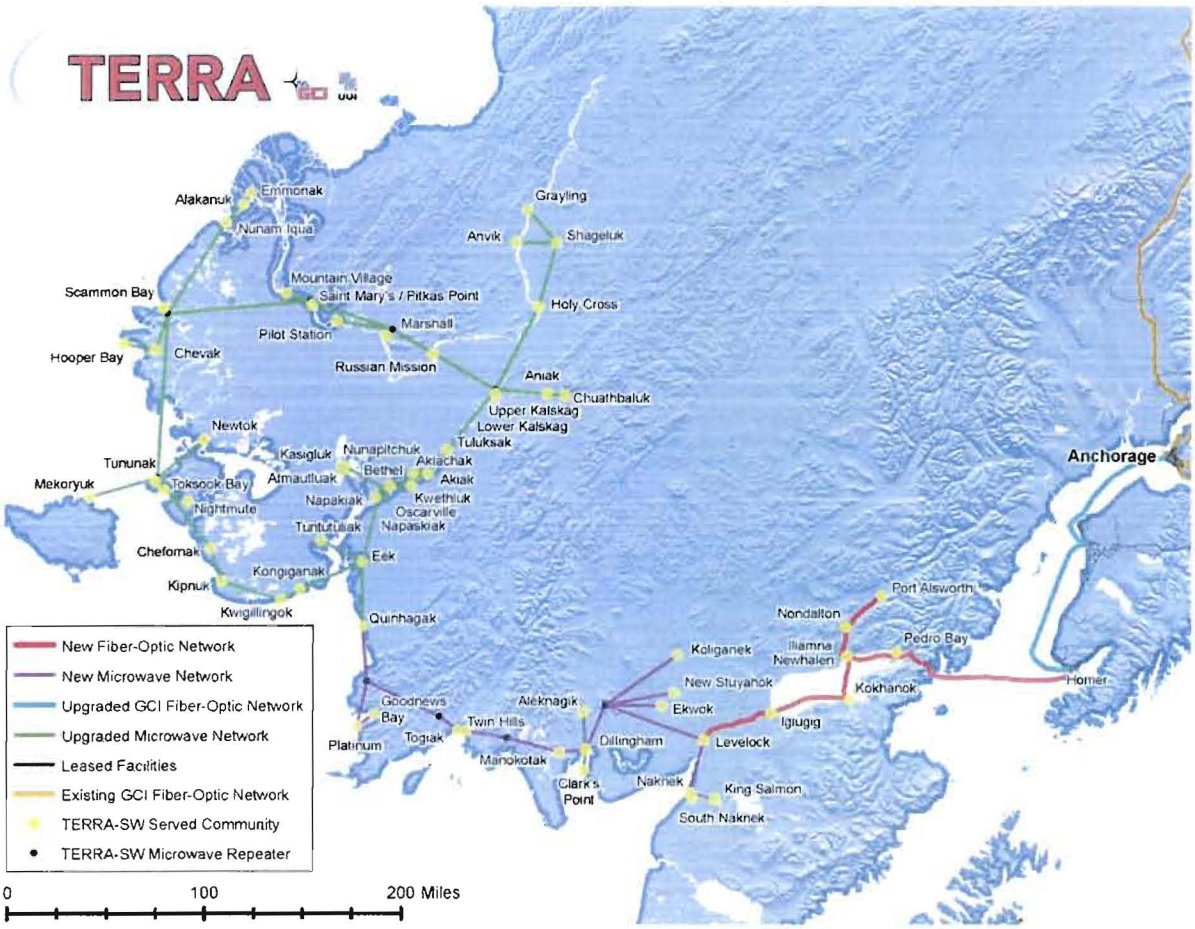
---

[25] *See USF Projections.*

[26] *Alaska Community Database Information Summaries*, Alaska Department of Commerce, Community, and Economic Development, http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm (last visited Apr. 18, 2011).

lower 48 by fiber. The installation of DeltaNet allowed the Y-K region to eliminate satellite hops between villages within the region – which was critical for improving intraregional health care delivery – but not the satellite links to connect the region to Anchorage and the rest of the world.

As the next step in terrestrial middle mile construction to off-road areas currently using satellite middle mile, GCI's subsidiary, United Utilities, sought and received an $88 million grant/loan combination from the BIP to leverage its DeltaNet. This project, TERRA-SW, will upgrade DeltaNet in the Y-K Delta, construct a similar regional network in the Bristol Bay region, and build a fiber network connecting the Y-K Delta and Bristol Bay with Anchorage so that these areas will be linked terrestrially to the Internet backbone. The construction of TERRA-SW will mean that both mass market consumers and anchor institutions will be able obtain broadband services without the latency introduced by satellite services. This will be particularly important for real-time applications such as telemedicine, in which lower 48 physicians may be directing health care delivery, such as conducting psychiatric sessions, in remote villages in the Y-K Delta. This deployment is a major step toward addressing middle-mile issues in Alaska, but this project addresses only a part of the state.



Map of TERRA-SW Network

TERRA-SW is only the beginning in terms of trying to meet Alaska's needs for a terrestrial middle mile backbone. In Round 2 of the RUS' BIP program, United Utilities applied for a $154 million grant/loan combination to support the construction of TERRA-NW, which would have leveraged the DeltaNet/TERRA-SW network to complete a microwave and fiber ring that linked to Nome and then eastward to the fiber running along the Alaska Pipeline.[27]

A statewide carrier such as GCI which receives funding under all of the universal service programs – High Cost, Rural Healthcare, E-Rate, and Lifeline – is uniquely positioned compared to regional providers to efficiently leverage universal service support to bring service to rural

[27] A significant advantage to the combined TERRA-SW and TERRA-NW deployments would have been the ability to offer protected ring service along the primary backbone route.

areas and to justify infrastructure deployment benefiting rural residents. As long as it can continue to receive universal service and other subsidies to support infrastructure deployment where user-directed support is not sufficient to help cover the high initial construction and operating costs of its rural networks, GCI is committed to investing in middle-mile infrastructure, providing modern broadband service over time to as many of the sparsely-inhabited, off-road regions of Alaska as it can on an economically feasible and sustainable basis.

II. AS THE COMMISSION REDEFINES UNIVERSAL SERVICE TO INCLUDE BROADBAND, IT SHOULD TAKE CARE TO ENSURE THAT IT DOES NOT INADVERTENTLY TERMINATE HIGH COST SUPPORT TO AREAS IN WHICH NETWORKS ARE STILL DEVELOPING

GCI supports the Commission's proposal to redefine universal service to include broadband services. Broadband has become a form of telecommunications to which a substantial majority of American households now subscribe "through the operation of market choices," is essential to education public health and public safety, and is being deployed in public telecommunications networks by telecommunications carriers – thus meeting all the specific tests set out in Section 254(c)(1). Moreover, Section 254(b) directs the Commission and the Joint Board to ensure that "Consumers in all regions of the Nation, including ... those in rural, insular, and high cost areas" "have access to telecommunications and information services, including ... *advanced telecommunications and information services*, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas."[28] Even if Section 254(c) were to be construed as limiting support only to statutorily-defined "telecommunications

[28] 47 U.S.C. 254(b)(3) (emphasis added).

services," it is hard to imagine a better case for the exercise of ancillary jurisdiction in order to fulfill one of Congress' express purposes in enacting Section 254.

As the Commission moves to define the broadband services that will be supported by Section 254, it should, however, also take care to adopt definitions that will continue rural and high cost support to the areas that need it most. For example, as discussed above, rural Alaska will not be able to receive mass market broadband services of 4 Mbps download and 1 Mbps upload actual throughput without substantial investment in the deployment of terrestrial middle mile facilities. There is no prospect that such facilities will develop without universal service support, especially now that the broadband stimulus funds have all been awarded.

This means that, if broadband were defined as 4 Mbps download and 1 Mbps upload, and providing broadband service at that level were to be a precondition for ETC designation, GCI would cease to qualify in all of the areas of rural Alaska that it serves today.[29] This would not only mean the end of GCI's rural wireless service and any extension of that service to the remaining unserved villages, but also that GCI could never qualify for the universal service funding necessary to construct the middle mile facilities needed to deliver 4 Mbps down/1 Mbps up broadband service. Similarly, because GCI's existing voice networks are a critical building block for current and future broadband networks, denying support to voice infrastructure will also be a step backward for broadband universal service goals. The Commission needs to avoid these recursive traps.

[29] The same is true for any other Alaska ETC serving communities off the fiber system.

III. THE COMMISSION SHOULD PLACE ALASKA ON A DIFFERENT UNIVERSAL SERVICE TRANSITION PATH THAN THE REST OF THE COUNTRY, INCLUDING AN EXPANDED TRIBAL LANDS EXCEPTION TO ANY INTERIM HIGH COST CHANGES

There can be little doubt that Alaska is likely to be the area of the country most in need of universal service support to deploy 21st Century broadband networks to all communities and anchor institutions. The NTIA's recently-released National Broadband Map demonstrates the lack of broadband in nearly all of Alaska.[30]

It is also clear that broadband deployment and expansion will not occur in rural Alaska, outside the road and pipeline system, without substantial universal service or other subsidy assistance. Neither GCI nor any other provider can deliver 4 Mbps download and 1 Mbps upload actual transmission between the end user and the Tier 1 Internet POP in areas not connected to the fiber, but accessible only by satellite. Nonetheless, the near-term USF reform proposals in the NPRM would withdraw approximately three-fourths of Alaska's high cost Universal Service support – all the CETC support (both wireline and wireless) and nearly half the ILEC support – by 2016, with no assurance that support will be replaced, either through the near-term first phase CAF or the longer term final CAF. Rather than head down such a counterproductive and disruptive path, the Commission should follow the path on which it started with the Tribal Lands exception to the CETC cap and exclude all Tribal Lands, which would include Alaska, from the interim USF reforms for both CETCs and ILECs, pending development of a final CAF suitable for the unique service needs of these areas. The Commission could then design a more appropriate transition for Alaska and other tribal lands

[30] *National Broadband Map*, NTIA, http://broadbandmap.gov/speed (last visited Apr. 18, 2011).

that does not deprive them of support needed to continue to deploy advanced telecommunications networks during the intervening years.

The Commission acknowledged the unique role of CETCs in Alaska and other Tribal Lands in 2008 in adopting an exception to the interim cap on high-cost universal service support for CETCs that serve Tribal Lands. As the Commission recognized, Tribal Lands – including Alaska – have been under-deployed, and universal service support to CETCs is a critical part of closing the gap in between communications infrastructure in Tribal Lands and that is available in rural areas more generally.[31] As the Commission noted, "[b]ecause many tribal lands have low penetration rates for basic telephone service, we do not believe that competitive ETCs are merely providing complementary services in most tribal lands, as they do generally."[32]

This digital divide in Native Lands remains today. As Senator Inouye recently noted,

> According to the most recent data, less than 70 percent of households on Tribal lands have basic telephone service compared to the national average of approximately 98 percent. Further, it is estimated that broadband reaches less than ten percent of tribal lands, compared to 95 percent of households nationwide. In Hawaii, Native communities face the challenges of being rural, remote, and non-contiguous – both on island as well as between islands. Alaska shares many of these same challenges with its rural and remote villages that are isolated and not connected to road systems.[33]

These same reasons support an expanded Tribal lands mechanism for all high-cost support and an exemption of Tribal lands from near-term reform proposals that would withdraw high-cost support in Alaska. It bears noting that no Alaska commenters – including both the Governor and

---

[31] *High-Cost Universal Service Support Federal-State Joint Board on Universal Service; Alltel Comm'c'ns, Inc., et al. Petitions for Designation as Eligible Telecomms. Carriers; RCC Minnesota, Inc., and RCC Atlantic, Inc. New Hampshire ETC Designation Amendment,* Order, 23 FCC Rcd. 8834, 8848 ¶ 32 (2008).

[32] *Id.*

[33] Senator Daniel Inouye, Opening Statement at Closing the Digital Divide: Connecting Native Nations and Communities to the 21st Century Hearing *(Apr. 5, 2011) available at* http://commerce.senate.gov/public/index.cfm?p=Hearings.

the Regulatory Commission of Alaska – supported the Commission's proposed five year phase out of CETC support raised in the NOI. Through the Tribal Lands exception, high cost support to CETCs is continuing to support the deployment of modern telecommunications services to rural Alaska, especially through GCI's rural wireless deployment.

Nor does it make sense to make significant reductions in the ILEC support that currently flows to Alaska. The Regulatory Commission of Alaska estimates that ILEC support would fall by at least 47 percent as a result of the changes proposed in the NPRM. There is no reason to believe that Alaska's ILECs could sustain that level of reduction in support. As it is, once intrastate access reform is completed, their retail residential rates are likely to range from near to substantially above nationwide average rates.

There is simply no reason to take such a disruptive path. It should be beyond dispute that Alaska has, and will continue to have, a need for universal service support that substantially exceeds the amount of support that will be received by Alaska carriers during the Commission's development and implementation of the long term CAF. The RCA, as part of its process of certifying compliance with Section 254(e), also already requires Alaska's wireless ETCs to demonstrate annually that they used the support received to reinvest in the provision of supported services. The better path would be to leave these current levels of support in place, pending the development of a final CAF.

Finally, the Commission should make clear that, if it adopts its proposal to cap per line support for any carrier within the "continental" United States at $250 per line per month, that cap does not apply to Alaska. At the Commission's meeting in which it adopted the NPRM, and in the press conference following the meeting, the Commission staff made clear that this proposal did not apply to Alaska. Rather than use the term "continental" United States, which could be

ambiguous, the Commission should apply the proposed $250 per line cap, if at all, to ETCs operating in the "contiguous" states.

IV. ANY LONG TERM CONNECT AMERICA FUND WILL HAVE TO RECOGNIZE THAT ALASKA HAS BOTH HIGH INITIAL CAPITAL INVESTMENT REQUIREMENTS AND HIGH OPERATING COSTS, AND SEPARATELY ADDRESS BOTH MIDDLE MILE AND LAST MILE

To bring broadband to rural Alaska that can meet the NBP's proposed minimum standards and provide higher capacity service to anchor institutions, the Commission cannot simply distribute support to last-mile broadband providers. Instead, the Commission will need to focus on two distinct projects: construction and operation of terrestrial middle-mile facilities, and construction and operation of last-mile distribution facilities. Attempting to address these distinct projects through a single support program focused on last-mile broadband providers would be a mistake, and would most likely not result in delivering needed services.

A. Continued Support to Bridge the Terrestrial Middle Mile in Rural Alaska is Essential to Meet the Commission's and the NBP's Objectives.

Without upgraded middle-mile facilities, rural Alaska will never have broadband service with actual throughput of 4 Mbps downlink and 1 Mpbs uplink, or 1 Gbps connections the anchor institutions that support low latency real-time applications. As discussed above, with the exception of areas that will be served by GCI's BIP-funded TERRA-SW middle mile network, rural Alaska sits at the far end of satellite links that have limited capacity, are difficult to augment to keep pace with the rapid growth in data traffic that accompanies broadband deployment, and that must be replaced every 10-15 years with expensive new satellites. Without upgrading these middle mile facilities, although some last-mile networks (such as GCI's high speed cable modem networks) are capable of multimegabit local transmission speeds, mass

market end users will continue to be limited to Internet throughput that typically does not exceed 256 kbps.

GCI's TERRA-SW and TERRA-NW projects provide a microcosm of why a separate support mechanism is needed for middle mile, separate from last mile service support. TERRA-SW, for example, was an $88 million project award. The 65 communities served by TERRA-SW have an average population per community of only 452 people in 140 households. When completed later this year it will connect over 9,000 households and nearly 7,000 businesses in 65 southwest Alaska communities for the first time in history. But with ongoing revenues from services to be provided projected to be approximately ****BEGIN CONFIDENTIAL**** [redacted] ****END CONFIDENTIAL****– with substantial amounts of that for providing e-rate and rural healthcare supported services – and with operating costs in the range of ****BEGIN CONFIDENTIAL**** [redacted] ****END CONFIDENTIAL**** -- it would have been nearly impossible to service the debt – even at a very low interest rate of 5 percent. Similarly, TERRA-NW was projected to have a total capital cost of $155 million, with annual operating expenses of ****BEGIN CONFIDENTIAL**** [redacted] ****END CONFIDENTIAL**** and anticipated revenues of ****BEGIN CONFIDENTIAL**** [redacted] ****END CONFIDENTIAL****. At an annual interest rate of 5 percent, the interest on ****BEGIN CONFIDENTIAL**** [redacted] ****END CONFIDENTIAL**** alone would approach ***BEGIN CONFIDENTIAL**** [redacted] ***END CONFIDENTIAL****.

It should be no mystery why these middle mile facilities are so costly to construct and operate across Alaska's wide expanses. For the ongoing TERRA-SW project, for example, construction has had to be carefully timed. New tower construction must be completed in Alaska's short 3-4 month construction season that is dependent on barges traveling ice free

routes. Fiber has to be laid across frozen tundra, so heavy equipment does not sink. Undersea and underlake fiber is installed during the fall months so as not to interfere with Alaska's salmon runs. All the personnel and machinery have to be airlifted or barged in. For example, an entire camp was set up to house and feed workers doing the winter installation from Igiugig to Levelock. This summer, four mountaintop remote camps will be established for workers to build new microwave repeater sites, and crews will move between villages to install the first ever microwave towers in 14 villages.

As for the four mountaintop repeaters, pre-fabricated shelters are constructed and stocked off-site, to be airlifted to mountaintop sites. Similar pre-fabricated shelters with two 9 kWh generators and 9,000 gallons of fuel storage are all airlifted to the remote mountaintops. Annual refueling missions – requiring 18 helicopter roundtrips to deliver all 9000 gallons of fuel – will keep the primary power sites (a first for GCI) running year-to-year.

Then there are the unexpected turns that come from working in such a harsh environment. Fiber installation this winter included crossing the Kvichak River. GCI expected to cut a trench across the ice and walk the fiber along in the trench. But the ice kept freezing over before the crews got across, so GCI had to get an under-ice scuba diver (with the air delivered from equipment on land, or in this case, on the ice) to come in, cut a hole in the ice (as for ice fishing), swim under the ice and surface in another hole about every 300 feet. Using this process, the diver laid by hand nearly 1600 feet of fiber on the riverbed.

Because of the extremely high initial capital expenditures necessary, as an internally financed or all-debt financed project, neither TERRA-SW nor TERRA-NW would have met conventional business requirements for feasibility. Thus, TERRA-SW, which received BIP funding, could not have been implemented "but for" the federal assistance; without such

assistance, the communities and users served by TERRA-SW would have remained without broadband service for the foreseeable future. For TERRA-NW, GCI will have to continue to search for an external source of funding to make this project possible, as the current financial markets are unlikely to fund it.

With little prospect of a new round of broadband stimulus funding, and given the essential role that terrestrial middle mile plays with respect to being able to deliver actual broadband transmission speeds to the Internet point of presence of 4 Mbps download and 1 Mbps upload, the only way that the Commission can predictably see these critical middle mile facilities built is to fund them through the USF. Although the Commission could attempt to set up some sort of "pass-through" via the support paid to last-mile broadband providers, such support would be indirect, would be less likely to be efficient, and would not take account of the fact that mass market broadband may be only a piece of the broadband services – including to anchor institutions – that can be enabled through a robust middle mile.

One thing is certain – without universal service support to deploy terrestrial middle mile facilities Alaska cannot come fully into the world of 21st Century telecommunications. Substantial support – either in the form of very large up-front grant or grant/loan payments – to support construction costs or in the form of longer term revenues for providing services over time, will be necessary. Any long-term CAF that seeks to have a hope of achieving the Commission's broadband objectives will have to directly address the unique costs and challenges of building out Alaska's terrestrial middle mile.

B. Last Mile Services Also Need High Cost Support to Remain Affordable and Reasonably Comparable.

Delivery of last-mile services in rural Alaska is also characterized by very high capital and operating expenditures. In Alaska, last-mile facilities, just like middle-mile facilities, can be

built only during narrow seasonal windows, and must be able to survive extreme weather. Replacement parts and maintenance crews must be flown in when needed. And, as discussed above, the cost of power in rural Alaska's villages is far above that commonly found in the lower 48 – as much as nine times the national average of $.10 per kWh for retail commercial electricity. A GCI rural wireless earth station, for example, costs, on average, approximately $48,000 annually just to power and maintain. For rural wireless and cable-based voice services, each community has its own local switch in order to ensure that residents can call each other and local emergency responders in the event that satellite links to Anchorage are disrupted, such as by occasional solar flares. Given the small size of these communities, all of these factors drive the costs of providing service far above what GCI could reasonably collect from local end users in subscription fees.

GCI is able to deliver last-mile services despite these high costs in large part because, as discussed above,[34] it can provide centralized management of its local networks and is able to spread these centralized costs across multiple revenue streams. To illustrate, the earth station described above would be largely useless without satellite tethers to operating equipment and systems in Anchorage performing critical signaling and other functions (of course, these satellite tethers and centralized functions generate their own, additional, operating expenses). Similarly, while GCI's rural wireless deployments have local switches that can transfer calls within the local community, those rural services depend on core facilities in Anchorage to provide the Home Location Router functions, SS7 signaling, support for 2G data services such as GPRS and EDGE, and network monitoring. But while these efficiencies reduce the cost of providing last

[34] *See supra* p. 19.

mile service in remote Alaska, they are not alone enough to enable GCI to provide last mile service at affordable and reasonably comparable rates.

These costs suggest that the Commission cannot reasonably expect to ensure that rural voice or broadband services will be available without support for both initial capital expenditures *and* ongoing operational costs as well. A community of 100 subscribers, at a service rate of $40 per month, will generate only $48,000 in annual revenues. Even at 1000 subscribers, that community can only expect to generate $480,000 annually at $40 per month in service revenue. Even if the monthly service revenue per subscriber could be increased to $100 per month, that would still only be $1,200,000 to cover expenses. Given rural Alaska's isolation, there is simply no way that providers will not need ongoing support for operations and maintenance, in addition to initial buildout support.

V. IN ALASKA, LIMITING OR BIASING NEW CONNECT AMERICA FUND SUPPORT TO ILECS THROUGH A RIGHT OF FIRST REFUSAL WOULD UNDERMINE 21ST CENTURY BROADBAND DEPLOYMENT AND HARM PUBLIC SAFETY

Offering the current voice carrier of last resort – presumably a wireline ILEC – a right of first refusal for single-provider CAF funding[35] (even if limited to last mile rather than middle mile support) would embrace the past rather than the future, and would harm public safety.[36] Given the high costs of providing service in rural Alaska, the Commission cannot reasonably expect that wireless services will continue to be provided in rural Alaska in the absence of continued universal service support, and thus it cannot assume that the public safety benefits that wireless brings would continue in rural Alaska were the Commission to eliminate all support to CETCs.

There is no debating that rural wireless service is critical to public safety. While a landline connection can place an emergency call only from a single location, a mobile wireless service allows that emergency call to be made from anywhere the emergency might be occurring. For instance, a person whose snowmachine breaks down in the middle of a frozen snowpack or tundra cannot summon help using the landline phone at his or her house. That person needs to have a mobile phone and mobile service.

---

[35] *See CAF NPRM* at ¶ 431.

[36] Moreover, the Commission's proposal ignores the fact that some states have sought innovative ways to share carrier of last resort responsibilities among multiple carriers. *See, e.g.*, Alaska Admin. Code tit. 3 § 53.290 (2011); Hawaii determines the carrier of last resort via a bidding process, *see* Haw. Code R. § 6-81-55 (2011); Missouri designated the ILEC as the COLR, but allows other LECs to apply for COLR status as well, *see* Mo. Code Regs. Ann. tit. 4, § 240-31.040 (2011); *see also* S.C. Code Ann. § 58-9-280 (2011) (contemplating the existence of multiple COLRs). In Alaska, the Regulatory Commission of Alaska has adopted regulations that enable it to allocate COLR obligations among multiple facilities-based local exchange carriers.

A GCI Field Maintenance Group technician's story from late 2009 demonstrates the significance of GCI's rural wireless service:

> I thought you would enjoy the picture attached, taken yesterday, December 1, as I made a 60-mile swing on the snowmobile machine trail checking out RW [rural wireless] equipment issues in "The Tundra Villages," *i.e.*, Atmautlauk, Nunapitchuk and Kasigluk. About five miles out of Atmautlauk heading back to Bethel I stopped when I came across these young GCI customers who had a broken chain drive in the middle of a frozen lake. In the old days this would have been a real emergency, but the young man told me, "No problem." He had just used his GCI cell phone to call his dad to come give them a tow back to their house. When I snapped the picture he was on the line with his parts supplier, ordering a new drive chain so he could pick up parts in Kasigluk and hopefully fix the machine same day. The terrain in the middle of the frozen lake was flat enough that standing on the seat gave him the height he needed to complete a call. (The bushes in the picture are actually trail markers planted by Atmautlauk Search and Rescue.) These young people acted like it was no big deal at all. It seems that all of us in the GCI Rural Wireless projects have ushered in a paradigm shift for Bush Alaska. I stayed until their tow arrived; their dad was also a GCI Rural Wireless believer, of course.

GCI Mobile Wireless in the Field

In addition, GCI has received anecdotal reports of law enforcement officials who now can stay in contact with their agencies and the public more easily when they travel to a village

outside the regional center that before had no wireless service. When mobile broadband comes to rural areas, law enforcement and public safety officials will also be able to access the Internet to communicate with their headquarters and other first responders. Moreover, many areas of rural Alaska lack Public Safety Answering Points ("PSAPs") and have not had dedicated local public safety officials. Thus, there has been limited active use of 911 services. GCI's statewide network has triggered a more formal dialogue about the potential for increased and expanded 911 usage in the future.

Furthermore, seasonal workers and/or those individuals in migrating communities, *e.g.*, workers on fishing boats, will not generally have easily accessible fixed line service. For these individuals, wireless service is more likely than wireline to be the primary mode of connectivity. By expanding wireless service in rural Alaska, these individuals have better access to communications for emergencies, for transacting business, and for keeping in contact with family and friends.

Thus, from a public policy perspective, rural Alaska presents a setting that challenges the conventional wisdom that if only one broadband network is to be funded, it should be the wireline network. With absolutely no evidence that wireless carriers will continue to operate wireless networks in rural Alaska in the absence of high cost support, and if the Commission is going to choose to support only network, there is a clear public safety imperative for supporting a last mile wireless network rather than a wireline network. Clearly, the far better alternative would be to recognize that in extremely hard to serve areas, it is better to support both wired and wireline networks.

VI. INTERCARRIER COMPENSATION REFORM FOR ALASKA SHOULD TAKE ACCOUNT OF ALASKA'S UNIQUE MARKET STRUCTURE

As discussed above, Alaska has a unique market structure. Alaska constitutes a single MTA, was never part of a Bell Operating Company, and has never had a system of access tandems. Instead, IXCs have interconnected directly with local end offices and, in some cases, remote switches. Except with respect to traffic heading to and from some wireless carriers, transit services, as they have developed in the lower 48, do not exist in Alaska.

Although Alaska historically had very high intrastate access charges, that will soon no longer be the case. Last summer, the Regulatory Commission of Alaska adopted an intrastate access reform plan that will begin to be implemented imminently.[37] Historically, Alaska LECs billed 20 percent of the cost of the local loop (as set in access charge cases) to long distance carriers as the Carrier Common Line, Non-Traffic Sensitive, or "Bulk Bill" charge. Each month, LECs would bill a share of the Bulk Bill cost to each long distance carrier, based on the long distance carrier's percent share of the LEC's intrastate minutes. Long distance carriers would, in turn, include this cost in the per-minute rates charged to end-users. As access minutes have declined, however, the effective cost per minute under the Bulk Bill regime has risen. And, because only long distance carriers, not wireless carriers, pay Bulk Bill charges, the effect of these rising costs was to drive long distance traffic to wireless carriers.[38]

---

[37] *Consideration of Modifying Alaska Access Charge Policies and the Use of the Alaska Universal Service Fund to Promote Universal Service in Alaska*, Alaska Regulatory Commission, Order No. 8 R-08-3 and Order No. 4 R-09-3, Alaska Regulatory Commission (rel. Apr. 18, 2010).

[38] In addition, carriers faced significant uncertainty, as their share of Bulk Bill charges could vary significantly based on the reporting of other carriers. This uncertainty was compounded by the ability of carriers to make reporting adjustments as many as eighteen months after initial reporting. Not surprisingly, this system gave rise to many expensive disagreements.

In its intrastate access reform order, the RCA restructured loop recovery. Long distance carriers will no long pay Bulk Bill charges to LECs. Instead, LECs will bill the Alaska Universal Service Fund for the CCL portion formerly paid by long distance carriers under Bulk Bill. LECs will also increase end-user Network Access Fee ("NAF") charges from $ 3.00 per line to $ 5.75 per line (with the exception of the Anchorage, Juneau, Greatland and Sitka study areas subject to lower per line caps).[39] As part of the reforms, long distance carriers must ensure parity between their inter- and intrastate long distance rates by offering consumers intrastate plans that mirror interstate plans, and the RCA has likewise indicated that it expects commercial rates to be lowered as result of cost savings and competition.

Once the CCL is billed directly to the Alaska USF rather than to long distance carriers, Alaska intrastate access rates for end office switching will be approximately equal to interstate access rates. For non-access traffic, many of these arrangements provide for bill-and-keep compensation. Wireline to wireline local traffic is generally bill-and-keep. In cases in which traffic from a long distance carrier transits a LEC to reach a wireless carrier, GCI has in place agreements with ACS and other Alaska LECs, to pay compensation equivalent to the intrastate local switching rate. Likewise, when GCI wireless receives long distance traffic from ACS, GCI has in place agreements to receive $.007374 per minute. In other words, Alaska is already moving towards the Commission's goal of a more rational intercarrier compensation system. Applying intercarrier compensation reforms designed for the lower 48 to Alaska would likely disrupt these existing arrangements and undo progress towards the very goals the Commission has articulated.

---

[39] One result will be a substantial increase in the amount of the Alaska USF charges.

Against this backdrop – existing intercarrier agreements, many of which provide for bill and keep and/or reciprocal compensation, and ongoing intrastate access charge reductions – there is no need to rush in reforms in Alaska that may be ill-suited to Alaska's unique geography and market. There is a substantial risk, as well, that any reforms designed for the lower 48 could have unintended and harmful consequences in Alaska. For example, reforms such as bill and keep at the edge, or even meet point billing, would be simply unworkable in Alaska due to the predominance of satellite and other high-cost middle-mile transport in Alaska. Reforms designed for networks that do not face similar middle mile transport costs or that permit meet point billing will almost certainly distort intercarrier compensation arrangements in Alaska because they will not be designed to accommodate and fairly allocate Alaska's uniquely high middle mile transport costs or will assume network design that is simply not present. The Commission should avoid these risks and recognize the unique Alaska market structure by treating Alaska separately in any intercarrier compensation reforms it adopts.

Finally, as the FCC proceeds with intercarrier compensation reform, it should ensure that these reforms and related universal service reform, including any access recovery mechanisms, be implemented in a manner that allows continued deployment of and support for advanced communications services throughout Alaska.

CONCLUSION

In conclusion, GCI fully supports the FCC's effort to modernize and refocus USF and ICC to ensure all Americans have access to robust, affordable broadband. GCI is proud of the important role it has played and continues to play as a CETC in Alaska, deploying broadband and supporting critical Alaska public safety needs that only a wireless carrier can meet. GCI

urges the FCC to tailor universal service and ICC reform to reflect Alaska's unique needs as it has done in the past. In the near-term, the FCC should extend the Tribal Lands CETC exception to all forms of high cost universal service support. In the long-term, the FCC should also ensure that the CAF supports deployment of both terrestrial middle mile and last mile facilities in order to deliver broadband to rural Alaska.

Respectfully submitted,

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

Counsel for General Communication, Inc.

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

April 18, 2011