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

In the Matter of	)	
	)	
High-Cost Universal Service Support	)	WC Docket No. 05-337
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	

REPLY OF HAWAIIAN TELCOM, INC.

Hawaiian Telcom, Inc. ("HTI") hereby submits its Reply to the comments filed in response to the Notice of Inquiry regarding high-cost universal service support mechanism for non-rural carriers.[1] Section 254 of the Communications Act was intended to ensure affordable telecommunications and advanced services were available to insular, high cost, and rural areas of the country. As numerous comments have made clear, the Federal Communications Commission's ("FCC" or "Commission") current non-rural universal service mechanism defines urban areas in such a way that many high-cost low density areas are denied critically needed universal service funds.

HTI serves an island state that should be treated as an insular area under Section 254 of the Communications Act. Although HTI is classified as a non-rural carrier, the majority of its service area is rural in nature and high cost. In implementing the Court of Appeals' directive to reconsider its universal service mechanism, the Commission should ensure that insular areas receive the specific consideration required by Section 254 and

[1] *High-Cost Universal Service Support, Federal-State Joint Board on Universal Service*, Notice of Inquiry, WC Docket No. 05-337, CC Docket No. 96-45 (rel. Apr. 8, 2009) ("NOI").

that any cost averaging is done over sufficiently small areas, such as wire center by wire center, so rural areas are not deprived of funding because they are served by a carrier that also serves urban areas.

I. HTI SERVICE AREAS ARE INSULAR AND EXPENSIVE TO SERVE.

HTI faces unique circumstances that make serving its customers difficult and costly. First, HTI serves a geographically isolated area made up of several islands with diverse climate, topography, and character. Second, Hawaii's population is dispersed throughout the islands with the exception of a single population center in Honolulu. And, finally, HTI lacks other sources of funding for network investment. This combination of factors makes providing service to Hawaii's historically underserved and economically challenged population particularly difficult and underscores the need for sufficient universal service for rural and insular areas.

A. Hawaii's geographical characteristics increase the costs of providing telecommunications services.

Hawaii is made up of a series of volcanic islands separated from the mainland United States by deep ocean waters. The state's six main islands (Kauai, Oahu, Molokai, Lanai, Maui, and Hawaii) are themselves divided by deep ocean channels that span distances of over one hundred miles. Unlike the rest of the United States, Hawaii is the only state for which deep sea submarine cables and microwave links are essential to provide intrastate and interstate service. Fiber, although the best choice for inter-island connectivity, requires deep sea submarine cables which are expensive to install and maintain. It is more vulnerable to damage from a variety of sources including volcanic activity, earthquakes, sea storms and watercrafts. Maintenance of undersea fiber requires specialized ships, none of which is based in Hawaii.

Conditions within each Hawaiian Island increase the difficulty of providing service. Outside of the Honolulu area, Hawaii is sparsely populated with mountainous, uneven terrain. Population centers and conservation areas tend to keep developments closer to the coastline which increases exposure of facilities to hazards such as hurricanes, tsunamis, and salt erosion. Route diversity over the mountain ranges or through isolated corridors between mountains is expensive to design, build, and maintain. For example, coastal salt erosion can shorten the useful life of equipment by up to 80 percent and can require the use of more expensive materials such as stainless steel down guys and messengers as opposed to conventional galvanized equipment.[2] In addition, historically HTI has received substantial damage to its plant due to lava flows, earthquakes, tsunamis, and other natural disasters which create additional hardship to providing and maintaining service to customers in Hawaii.

Thousands of streams throughout the state have created gulches and valleys which further isolate remote communities. Wireless communications are difficult and "spotty" due to mountainous topography, dense vegetation, and a lack of commercial power. HTI provides wireline facilities to these remote customers over expensive, long "last mile" loops. For instance, to serve certain communities on the islands of Hawaii and Molokai which are inaccessible by land vehicles, HTI must transport equipment and materials via helicopter or construct them without the benefit line trucks or certain tools. Similarly, HTI cannot access other areas of the islands with construction or maintenance vehicles

[2] It is these types of conditions that make serving insular areas so difficult and expensive and underlie Congress's specific requirement that consumers in such areas have access to telecommunications and advanced services similar in type and price to those provided in urban areas. *See* 47 U.S.C. § 254.

due to weight restrictions on bridges or roads. Further difficulties are caused by soil composition. For example, the island of Hawaii has high soil resistivity, due to the presence of oxides, and soft water, which does not conduct electricity as well as hard water. Oxides make equipment grounding difficult and expensive; soft water raises the costs of undergrounding and trenching. Adding to these difficulties, terrain conditions vary greatly across short distances and change due to volcanic activity. Although HTI has crafted creative, custom solutions to many of these challenges, such efforts involve considerable expense, far above that of serving mainland United States areas.

Perversely, the violent storms, seismic activity, landslides, and other challenges that make serving Hawaii so difficult also physically isolate communities, making reliable telecommunications even more essential.[3] These natural disasters cut off areas of Hawaii, forcing those in these remote communities to depend on HTI's services. When HTI's facilities survive such a disaster, they are critical for the provisioning of emergency services and rebuilding efforts. This underscores the importance of high levels of redundancy and reliability. In those cases in which HTI's equipment has been destroyed, such as following Hurricane Iniki in 1992, new equipment may have to be brought from neighboring islands or the mainland United States by air or sea, substantially delaying the restoration of service – and the rebuilding of communities.

[3] Hawaii's remote location makes it strategically important not only for national defense and homeland security but also vulnerable to foreign attack. Hawaii is critical to the stability and security of the Asia Pacific region and is home to the U.S. Pacific Command HQ. Hawaii's key role in these areas bolsters further the need for strong and redundant communications networks.

B. Most of Hawaii is sparsely populated and difficult to serve.

Oahu makes up 9.4% of the land mass in Hawaii, yet seventy two percent of Hawaii's population lives on this island, with most of those people residing in the city Honolulu.[4] The remaining population – approximately 335,000 people, are scattered throughout the other islands. Thus, the majority of the islands have an extremely low population density.[5]

Low population density, combined with Hawaii's topography, leads to long access loops, low loop densities, and increased costs. A main cause of this in many of HTI's wire centers is the development of residential subdivisions in remote areas of the islands. Many of these areas lack commercial water systems and electricity and have substandard private roads and dense foliage. For example, although the Puna district on the island of Hawaii is approximately the same geographical size as the island of Oahu, HTI has only four central offices to serve the population of 31,000, resulting in loops exceeding 35,000 feet in length. To reach these customers, HTI needs to install remote equipment and facilities at various points, without the use of paved roads or commercial power in some areas, greatly increasing the cost to provide service on a per-customer basis.

C. HTI's access to funding to serve its low density areas is limited.

Because of the large population of Honolulu, HTI does not qualify as a rural carrier because costs are averaged across the state. Therefore, HTI is ineligible to receive

[4] Hawaii Department of Business, Economic Development & Tourism, 2007 State of Hawaii Data Book, Table 1.05 (2007) *available at* http://hawaii.gov/dbedt/info/economic/databook/db2007/.

[5] *Id*., Table 1.11.

the universal service support available to rural carriers, such as High Cost Loop Support, Local Switching Support, safety net, and safety valve support. Further, HTI has not been able to take advantage of financing from the Rural Utilities Service, and commercial financing is not economically feasible because of the low density of the areas in which HTI wants to invest to improve service. The financial viability of such projects is even more difficult to justify when the substantial costs associated with providing service to in a place with the unique conditions of Hawaii are considered.

II. EXISTING UNIVERSAL SERVICE POLICIES UNDERMINE THE PROVISION OF BASIC SERVICES AND BROADBAND TO UNSERVED AND UNDERSERVED RURAL COMMUNITIES.

As the majority of comments in this proceeding make clear, averaging costs over a large area fails to provide the necessary support to carriers that serve both urban and rural areas.[6] Hawaii is a perfect example of why the current non-rural mechanism is failing rural consumers. Because of the large population in Honolulu, the entire state of Hawaii does not qualify for non-rural support. However, as explained above, most of Hawaii's geographic area has low population density and the costs of providing service are high compared to other areas in the United States. The current USF rules average costs for price-cap carriers over the entire study area. Therefore, Honolulu's population deprives the remainder of the Hawaiian Islands from receiving the high-cost support that is needed.

To remedy this problem, the Commission should revise its non-rural mechanism to target support to smaller areas, such as wire centers. This approach would have the

[6] Comments of Qwest Communications International, Inc., WC Docket No. 05-337, at 5 (filed May 8, 2009); Comments of Embarq on the Notice of Inquiry Regarding the Tenth Circuit Remand, WC Docket No. 05-337, at 9 (filed May 8, 2009).

immediate benefit of ensuring that support goes to those areas most in need. Moreover, it would diminish the strong incentives faced by price-cap carriers to serve only urban areas and sell off rural exchanges. If High Cost Loop Support is provided on a wire center basis, consumers in rural areas would not be deprived of support simply because they live in a study area which also has urban exchanges.

The Commission has asked how it can make its revised non-rural mechanism consistent with the development of a national broadband plan.[7] Targeting support on a wire center or similar basis would advance the provision of broadband service to rural Americans, who are most likely to be unserved or underserved. In Hawaii, several rural areas do not have access to broadband service from any carrier. In those areas where it is available from a carrier other than HTI, such service is generally provided via wireless technology, is only available to certain customers, and is slower than the broadband offerings HTI would like to deploy. Ensuring that carriers such as HTI have access to USF support for areas such as these would promote broadband penetration by allowing HTI to invest in facilities for these areas that would provide basic services and aid in the deployment of broadband. Indeed, it is customers in remote areas that are most in need of high-speed services to connect them both socially and economically with the rest of the United States.

III. CONCLUSION

Hawaii faces unique circumstances that make the costs of providing service exceedingly expensive. However, the problems caused by the current non-rural USF mechanism are common to all carriers serving study areas with both urban and rural

[7] NOI, ¶ 28.

areas. Targeting universal service on a wire center or similar basis will allow the Commission to focus resources on those areas that need support and avoid denying needed support to rural customers simply because they happen to be served by a carrier that also provides service in urban areas.

Respectfully submitted,

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