DATE: Thursday, March 6, 2014

FROM: Janeen Olds – CEO and President
       Sandwich Isles Communications Inc.

TO: Marlene H. Dortch – Secretary
    Federal Communications Commission (FCC)

SUBJECT: Rural Broadband Expression of Interest – WC Docket No. 10-90

Background

Sandwich Isles Communications, Inc. (SIC) is a native Hawaiian owned and operated Rural Local Exchange Carrier (RLEC) certified by the Federal Communications Commission (FCC), the Hawaii Public Utilities Commission (PUC) and the Hawaiian Homes Commission (HHC) to serve all tribal lands in the State of Hawaii. SIC and its affiliates provide wire line and wireless voice and broadband services to Hawaiian Homelands (HHL) on each of the six major islands (Kauai, Oahu, Molokai, Lanai, Maui and Hawaii).

SIC provides these services through an exclusive license granted by the Department of Hawaiian Home Lands (DHHL), the managing state agency of HHL, to provide all telecommunications within HHL. HHL consists of 200,000 plus acres of State managed trust lands with Federal oversight by Congress and the Department of the Interior. In 1995, the HHC granted an exclusive telecommunications license to SIC after years of neglect by the incumbent local exchange carrier.

SIC’s commitment and efforts to deliver a modern telecommunications infrastructure to HHL make it possible for native Hawaiians on HHL to have access to an universal level of communications service resulting in improved health care, education and economic development opportunities. SIC utilized fiber, copper, and wireless signals to deliver services to those tribal lands which were unserved and/or underserved at the time SIC was granted its license.

At the time SIC began building the facilities necessary to offer telecommunications service, the industry was changing from circuit to IP/SIP switching and copper to fiber. SIC currently utilizes both circuit switched services over copper as well as IP/SIP switched services over fiber and wireless. Updated IP/SIP based broadband services will allow more than just entertainment and convenience benefits. More importantly, such service will improve quality of life by (i) providing access to health care via telemedicine; (ii) providing access to advanced educational sources via distance learning, and (iii) promoting opportunities for economic development within native Hawaiian communities where the unemployment rate exceeds 14%.

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The IP/SIP switching equipment SIC currently operates has the capacity to bridge the technology gap when copper is upgraded to fiber in the areas SIC is currently serving (3,000 lines) and circuit switched copper is upgraded to wireless LTE in the adjacent HHL areas (10,000+ lines) leaving all of tribal lands in Hawaii with the level of communications infrastructure necessary to fully participate in today’s society.

**Geographic Territory**

SIC proposes to provide distribution upgrades from existing copper to fiber optic cable and wireless LTE on tribal lands known as HHL as two independent projects. Phase I would be copper to fiber in existing service areas and phase II would be wireless LTE in the adjacent areas. These HHL are made up of over 70 non-contiguous parcels totaling over 200,000 acres that were set aside for native Hawaiians by Congress in the Hawaiian Homes Commission Act of 1921. Many of the HHL communities are located in remote rural areas with limited access to the health care, educational resources or economic opportunities available in the urban areas. For example, physician care on Molokai is provided once or twice a week by visiting physicians from Oahu. Traveling to medical care facilities from HHL areas such as Kula or Kahikinui (Maui) takes in excess of one hour.

The geographic areas targeted are HHL communities on five of the six main islands. Majority of the targeted communities are built on the slopes of mountains resulting in higher infrastructure installation costs because of accessibility challenges. For example, Kahikinui, on the island of Maui does not have a paved roadway for equipment and supplies to be received. Accordingly, four-wheel drive vehicles are required to scale the pathway up the mountain to HHL houses as well as SIC’s facility. With the completion of both phase I and II SIC would be able to serve over 20,000 native Hawaiian beneficiaries. The following is a list of HHL communities we will target by island and their census tract numbers.

**Maui:**
- Kula (HI009030301)

**Oahu:**
- Kalawahine (HI003004300)
- Kapolei (HI003011500)
- Waianae (HI003009701)
- Paheehee Ridge (HI003009701)
- Kalaeloa (HI003008502)

**Hawaii:**
- Laiopua (HI001021504)
- Kaumana (HI100102801)
- Piihonua (HI001020802)
- Keaukaha/Waiakea (HI001020600)

**Molokai:**
- Kalamaula (HI0090317004)
- Hoolehua (HI005031900)

**Kauai:**
- Hanapepe (HI007040800)

**List of Anchor Institutes**

Along with numerous residential and commercial customers, SIC’s anchor institutes are the following:
Government Agencies:
- DHHL – Oahu (Kapolei), Maui (Paukukalo), Molokai (Hoolehua), Hawaii (Hilo)
- University of Hawaii College of Tropical Agriculture and Human Resources (CTAHR) – Molokai (Hoolehua)
- Office of Hawaiian Affairs – Molokai (Hoolehua), Hawaii (Hilo)

Schools:
- Kamehameha Schools Preschools – Oahu (Nanakuli), Maui (Paukukalo), Molokai (Hoolehua), Hawaii (Waimea and Hilo)
- Kanu o Ka Aina New Century Public Charter School – Hawaii (Waimea)
- Kanuikapono Public Charter School – Kauai (Anahola)
- Kumu and Teen Academy – Kauai (Anahola)
- HCAP Head Start – Oahu (Nanakuli)
- Family Programs Hawaii – Oahu (Nanakuli)
- Ka Waihona o Ka Naauao Public Charter School – Oahu (Nanakuli)
- Parent Child Development Center – Oahu (Nanakuli)
- Aha Punana Leo – Oahu (Nanakuli)
- American Renaissance Academy – Oahu (Kalaeloa)
- Ke Kula o Samuel M Kamakau Lab Public Charter School – Oahu (Haiku)

Medical:
- Diagnostic Lab Services – Molokai (Hoolehua)
- Waianae Coast Comprehensive Health Center – Oahu (Waianae)

Proposed Technology

SIC plans to offer fiber to the home (FTTH) and IP/SIP wireless services in two phases as independent projects. Phase one: In its current service area, SIC has existing conduit with copper cable in it. SIC would remove the copper cable and replace it with fiber through the existing conduit. Phase two: In the adjacent areas served by aerial copper, SIC’s offerings would include voice and broadband services provided by IP/SIP wireless services to replace the aerial copper. Wireless equipment would be installed before customers cut over leaving no interruption in service. Our initial offerings for both phases would be:

- 2 phone lines and 15M download/3M upload DSL $25.95
- 2 phone lines and 50M download/5M upload DSL $49.95

SIC’s Soft Switches (Metaswitches) have ample capacity to serve its current customers as well as those adjacent. With the upgrade of copper to fiber in phase one, SIC will be able to utilize its Metaswitches to a higher capacity and decommission its legacy Lucent 5 ESS Switches (ES). No new switches will need to be purchased. In phase two installation of wireless equipment will allow for adjacent areas to be served as well. This migration would allow SIC to provide Voice over Internet Protocol (VoIP) services via SIC’s private IP network to its current subscribers as well as Voice over LTE (VoLTE) to customers in adjacent areas. The switch migration would also allow SIC to save on operational costs related to legacy equipment support and Central Office power. SIC is currently offering VoIP to several HHL communities.
State and/or Local Support

SIC was granted its exclusive license by the HHC. DHHL is a State agency whose mission is to manage the HHL Trust effectively, to develop and deliver land to native Hawaiians and to assist native Hawaiians in the areas of education, healthcare, and economic development. SIC works closely with DHHL on all projects and build-outs. DHHL supports SIC with build outs and upgrades throughout the HHL.

Existing Providers

SIC was founded in response to a request from DHHL to provide HHL with affordable telecommunications service. Prior to SIC, the monopoly incumbent local exchange carrier, Hawaiian Telcom (and its predecessors), required DHHL or the individual HHL beneficiary to pay for the installation of the communications infrastructure. Hawaiian Telcom would then take over the already paid for infrastructure and in many instances provide an inferior level service to HHL beneficiaries. Thus the older areas of HHL have legacy (copper) infrastructure. Unfortunately, there is no viable business case for Hawaiian Telcom to upgrade infrastructure within HHL, and accordingly, there are limited broadband capabilities for native Hawaiians served by Hawaiian Telcom on the tribal lands (HHL).

Project Timeline

SIC estimates completion of Phase I of the project to take 24 months. There would be five steps involved in completing Phase I: (i) the initial copper to fiber migration; SIC has existing underground conduit allowing for pulling of fiber to require little construction and interruption, (ii) GPON cards will need to be purchased and installed into SIC central offices, (iii) ONT and gateways would be installed at the customer’s premises, (iv) SIC would then migrate traffic from existing legacy 5E switches to its existing Metaswitch, and (v) routing and switching equipment will be installed.

Phase II, which is installation of wireless towers and wireless equipment, would take 24 months to complete. There would be four steps involved to complete phase II: (i) installation of wireless towers (includes power and fiber install at base), (ii) installation of wireless radio and base stations, (iii) CPU mounting, gateways, and ATA installation at customer premises and (iv) cutover of VoLTE and DSL to SIC’s existing Voice Processing equipment.

Both Phase I and Phase II could be accomplished simultaneously. SIC plans to begin technology transition on the island of Oahu where all SIC’s resources are. From there the projects would continue on to Hawaii next to Kauai and Maui ending with Molokai. As one island is under construction contractors for the next island will be lined up to keep the projects moving.

Total project cost (one time cost):

| Phase I – copper to fiber/ES to Metaswitch migration | $7.1 million |
| Phase II – wireless LTE service | $10 million |