

Executive Summary

The Navajo Tribal Utility Authority (NTUA) is a non-profit enterprise established by the Navajo Nation Council to provide multi-utility services to the Navajo Nation and the Navajo People. Since 1959, NTUA has supplied electricity, water, natural gas, wastewater treatment, and photovoltaic (solar power) services to residents throughout the 26,000 square-mile Navajo Nation, which spreads across northeastern Arizona, northwestern New Mexico, and southeastern Utah.

As NTUA works hard to meet the basic utility needs of the Navajo Nation, the Navajo Nation continues to suffer from a lack of viable telecommunications infrastructure. To alleviate this problem, we are requesting funding from RUS and NTIA to create and promote sustainable economic development and social benefits via the NTUA's broadband infrastructure initiative.

The Navajo Nation is a sparsely-populated, poverty-stricken rural area, whose residents have fallen further and further behind the rest of the country, leaving them on the wrong side of an ever expanding digital divide. The proposed project "The Navajo Nation Middle/Last Mile Project: Quality Broadband for the Navajo People" (hereinafter "the Project"), has an important cultural component as the Project will extend bandwidth to Chapter houses which now have limited extended services from central administration and educational institutions. Chapter houses are community centers where political discussions, elderly care and early childhood education are carried out. Using technologies enabled only by broadband, the Project will allow Navajo communities to capture, record, and share Navajo culture, including language, politics, lifestyle and religion. Navajo culture will be preserved, as the Navajo people are able to remain home while joining the information highway. Without ARRA funding, implementation of the proposed Project would not be possible nor be a sustainable economic endeavor. With ARRA funding, the applicants will be able to see a sensible economic return on their portion of the capital investment [REDACTED].

The proposed funded service area spans over 15,120 square miles on Navajo Lands within Arizona, New Mexico, and Utah, which encompasses some 24,843 census blocks and 15 of the largest census communities (CDP) centers within the tribal boundary.

The project will enable wireless fixed and mobile broadband access to 30,694 households and 1,000 businesses; as well as provide high capacity connectivity on the combined middle-mile backbone to at least 49 community locations, of which 25 communities will have access via microwave and 24 access via fiber.

The project will provide access for a total of 1,039 critical facilities, which by definition includes tribal and federal facilities, including police, detention, and fire response centers; health, social service, and emergency care facilities; public, BIE, and private schools; and 110 tribal Chapter Houses.

The integrated middle and last-mile network design will support point to point data services and large broadband connections for commercial carriers and government and

institutional users alike. Additionally, a last-mile 4G LTE wireless network will provide mobile and fixed broadband access for residents, businesses, and government customers. The wireless network component of the project will enable a variety of vital education broadband services currently inaccessible to many students residing out of reach of any current broadband provider.

The wireless network also offers a highly functional and secure data network solution to support law enforcement, fire protection, and other emergency care providers. This greatly expands the ability of the tribal public safety and communications departments to provide enhanced 911 services.

The proposed system will be an open network and would lease dark fibers or bandwidth to interested parties. NTUA and Commnet Wireless are committed to nondiscrimination, interconnection with other providers, and network openness, with respect to both the middle-mile and last-mile portions of this proposal. For example, NTUA will assure that tower access and space as well as bandwidth capacity is available to other competing broadband and/or wireless providers. Finally, in no event shall interconnection result in a BIP-funded facility being used for ineligible purposes under the ARRA.

The type of broadband system that will be deployed is a combination of fiber optics, mobile wireless (LTE network), and fixed wireless (Fixed Point to Point Licensed Microwave communications standard) with the availability to support other wireless technologies such as WiMAX, WiFi and others. For bandwidth purchase from Tier 1 providers, NTUA will lease █ dark fibers from Public Service of New Mexico (PNM) to gain access to a POP in Albuquerque. In exchange PNM will lease █ fibers from Farmington to Yah-ta-Hey, NM.

This project combines strengths of NTUA as an experienced utility operator and Commnet as a national wireless carrier specializing in rural markets, with the proven commercial experience, as well as 700 MHz spectrum. This partnership is prepared to support a 550 mile fiber backbone and 72% coverage of Wireless Broadband to the Navajo Nation residences, which has a combined project cost of █.

NTUA has the utility infrastructure, construction crews, technical skills and business systems in place to manage and sustain large broadband services for the Navajo Nation.

Commnet Wireless is a major wireless roaming provider in rural America and currently supports both GSM and CDMA wireless data platforms. In addition, Commnet Wireless is affiliated with Choice Communications via its parent company, Atlantic Tele-Network, which is the largest internet provider in the Virgin Islands.

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The five-year forecast for projected broadband subscribers for wireless fixed and mobile services is [REDACTED]. This modest assessment was based on comparing wireless propagation modeled coverage to the most current demographics for an assessment of potential customer locations passed. More detailed annual projections were constructed based on an assessment of the project schedule and network phasing.

The estimated immediate number of full time jobs to be created or saved as a result of this project is estimated at [REDACTED] high paying jobs. This includes an increase in network and microwave technical support within NTUA as well as positions dedicated to the NOC and wireless switching facility. While this might seem to be a small number, the project will open the doors to economic development spurring economic growth on the Navajo Nation in telecom applications and services creating additional jobs.