

Broadband USA Applications Database

Applicant Name: XIT Rural Telephone Cooperative, Inc.

Project Title: XIT Rural Telephone Cooperative – FTTP & VDSL2 Combination Application

Project Type: Last Mile Non-Remote

Executive Summary

Project Description: The project proposed by XIT Rural Telephone Cooperative is a last mile access system intended to provide broadband services to households and businesses in two separate PFSAs located in the Northwest Texas Panhandle. Each PFSA will utilize a combination of Fiber-to-the-premise (FTTP) technology and copper based VDSL2 technology to provide broadband, voice, and video services. This project also includes video related equipment necessary to provide standards based IPTV services to customers in both PFSAs. This equipment includes set top boxes and IPTV middleware/encryption systems. XIT is also submitting another last mile application to provide broadband services to four PFSAs which are classified as remote, rural, and unserved. These applications are independent of one another with regards to implementation and operation. Additionally, XIT has equity allocated for both projects.

Opportunities: This project will fill the need for present and future bandwidth requirements by placing fiber to rural subscribers. This project will replace old and deteriorating copper telephone plant that is nearing or has reached the end of its useful life. Placing fiber to these rural subscribers is a long term future proof investment. With an expected life of 30 years, this fiber will provide a solid framework for providing the bandwidth needs of the future. In the communities of Dalhart and Stratford VDSL2 service will deliver FTTP type speeds over copper loops that are less than 4,000 feet in length. XIT's current ADSL offering is over very long copper loops and utilizes early generation ATM DSLAMs. By placing fiber to rural households and businesses and by utilizing standards based GPON technology, XIT will be able to provide 100 Mbps to each subscriber meeting bandwidth needs for the next 5-6 years without any upgrades to the proposed FTTP equipment. This project will extend full fiber capabilities to the most rural establishments and give them bandwidth comparable with any urban establishment.

Service Areas: This project will serve subscribers located in Dallam, Sherman, and Hartley counties in the state of Texas. This project consists of two distinct Proposed Funded Service Areas (PFSAs). The Dalhart PFSA is composed of 671 census blocks located in and around the community of Dalhart, Texas. The Stratford PFSA is composed of 245 census blocks located in and around the community of Stratford, Texas.

Households and Businesses: This project will pass a total of 4,195 households and 396 businesses.

Community Institutions: The total number of community institutions, public safety entities, and critical community organizations passed with this project is approximately 36.

Proposed Services: The project will offer 3 service level offerings for broadband service. Level one will offer 1.5Mbps downstream and 1.5Mbps upstream. Level 2 will give 3.0Mbps downstream and 2Mbps upstream. Level 3 will offer 20Mbps downstream and 2Mbps upstream. In addition to the broadband services, subscribers will be offered telephone service over the same facilities. The proposed project will also offer a MPEG2 IPTV video service to customers with several tier options (basic, expanded basic, and premium channels).

Non-discrimination and Interconnection Obligations Approach: The proposed project will be consistent with the NOFA's non-discrimination and network interconnection obligations as described in section 22 Description of Network Openness. Broadband Technology: The broadband system to be deployed under this application will be based on two technologies. A FTTP network design is proposed to bring fiber directly to households and businesses in the underserved areas of both PFSAs. This project will use single mode fiber optic cable and high speed lightwave equipment to transmit signals from the central office or electronics cabinet site to the customer premises. The FTTP technology is standards based GPON (ITU G.984) which gives the most economical design for low density rural applications. GPON equipment provides 2.4 Gbps downstream and 1.2 Gbps upstream shared among no more than 32 subscribers and can easily provide 100 Mbps to each subscriber. As mentioned earlier, 100 Mbps is expected to meet the bandwidth needs of a majority of customers for the next several years without any equipment upgrades. This technology is well proven and has a good track record of reliability and dependability. The second broadband technology proposed is standards based copper VDSL2 (ITU-T G.993.2). This equipment will be deployed within the communities of Dalhart and Stratford and will utilize existing fiber and copper infrastructure. Equipment will be placed in locations that will ensure all households and businesses passed are within 4,000 feet of an electronics site, ensuring that aggregate broadband speeds in excess of 30 Mbps can be provided to all customers within these communities.

Qualifications of the Applicant: The applicant has been providing telecommunication services to the residents of Dallam, Hartley, and Sherman counties of the Northwest Texas Panhandle since 1951. XIT has been a RUS borrower and has proven leadership that has shown financial stability over the long haul. The applicant currently has an organization in place that is operating a high speed Internet system. All operational elements and systems are in place to ensure that sales, operational service and maintenance, network management, customer support, and billing functions will be available to handle this project. XIT is already in the process of deploying Calix GPON FTTP equipment in other service areas that are separate from the PFSAs included in this application and will be able to utilize their experience and skill sets from this ongoing implementation with the proposed project. The management and staff of XIT Rural Telephone Cooperative, Inc. are committed to have all necessary training and skills in place to handle this project, including all preparation and implementation work for construction rights-of-way, cable and equipment installations, the cutover sequence, and maintenance, in support of the system. XIT Rural Telephone Cooperative, Inc. also has professional engineering services available from N-Com, Inc. to assist in the implementation of this project.

Infrastructure Cost: The total infrastructure cost of this project is \$6,256,000. This includes \$1,565,000 in fiber optic plant, \$4,115,000 in electronics, and \$576,000 in professional services. The electronics cost includes \$1,406,000 in electronics placed at the subscriber locations.

Subscriber Projections: Broadband subscribers are projected to increase from 2,470 present subscribers to 3,144 subscribers at the end of the 5 year period.

Jobs Created or Saved: The primary jobs area will be in the construction field for the actual placement of the fiber cable and electronics. It is estimated that 10 people will be employed at the job site during construction of this project. The applicant intends to utilize existing staff to handle expanded growth as it occurs in the system to maintain the highest level of customer satisfaction. This project would have a minor impact on manufacturing jobs in the fiber optic cable manufacture and telecommunications electronics manufacture. No estimate of this impact is included. Although difficult to quantify or predict, XIT fully expects that the proposed project will provide direct benefits to businesses in the PFSAs by assisting in

retaining existing business and gaining new business. This, in turn, will help save existing jobs and create new jobs for years to come.