

Broadband USA Applications Database

Applicant Name: Advanced Regional Communication Cooperative Inc

Project Title: Advanced Regional Communications Network

Project Type: Last Mile Remote

Executive Summary

Brief description of the proposed project This project is a “last mile” project serving a remote area within the Commonwealth of Pennsylvania that has aging in place critical infrastructure that needs replacement with advanced communications equipment. This project will serve the public service sector and will provide much needed and reliable high speed internet access for residential and businesses. The reason why the system is needed Currently, there are many miles of broadband infrastructure that crosses through the region, but it is not accessible for distributed aggregation. Much of the existing infrastructure consists of “wet copper” wire installed by the original telephone companies decades ago. When this copper wire gets wet is loses connectivity and is unreliable. Also, cable companies oversubscribe their systems and this reduces network reliability. There is insufficient population for an incumbent provider to invest in the market. Therefore a Point of Presence will not be developed to tap into the long haul delivery lines running through the region. The project was developed to use a wireless approach to deliver service to 90% of the population and 82% of the geography with connection to existing Points of Presence within the region. Without this approach, the residents and businesses in the region will not be served and their needs will be written off by the market providers and governmental officials as “Un-Servable”. Most people rely on the Department of Community and Economic Development for the most current provider/coverage map which is available at: <http://www.newpa.com/strengthen-your-community/broadband-initiatives/search-for-broadband/index.aspx> While this map presents some relevant information, it cannot possibly report the quality of service to the Clarion-Forest County region. Poor and outdated equipment, wet copper, oversubscribed cable systems, too far from DSL switches, system interruptions cannot be measured from the map. Public Safety - First-responders and other Emergency Response personnel require dependable and secure communications to provide the level of community wide public safety expected by its citizens including “Last Mile” coverage’s. Qualifications of the Applicant that demonstrate the ability to construct and operate a broadband system Through a combination of business leadership and top quality technical management, the Advance Regional Communications Cooperative will have the knowledge, skills, and abilities to manage both the corporate operations and through a management agreement the network system. Opportunities the proposed system seeks to address Our design focuses on being able to layer multiple different “edge” applications on a carrier grade infrastructure that is designed to meet the Region’s needs today and also well into the future. These edge applications are vendor neutral, as well as spectrum neutral, meaning you can run a variety of IP-based applications or equipment and deploy any manufacturer’s wireless equipment of any licensed or unlicensed spectrum onto the network. The core backbone is built with carrier grade, telco quality equipment and can be

easily scaled as the need or the budget will allow, as well as when new wireless applications are developed and introduced. By combining the communication needs of the entire community, the CONXX architecture creates a multi-service network that allows Public Safety, education, government, local IPS and business to operate as secured, private networks on an advanced consolidated core backbone. A general description of the proposed funded service areas (location, number of communities, etc.) The Advanced Regional Communications Cooperative initial starting locations include 46 communities (14 boroughs and 34 townships) in Clarion and Forest Counties. The network will also provide service to adjacent townships in Armstrong, Elk, Jefferson, Butler and Venango Counties. The wireless network will not pass any households or businesses. Any households or businesses within the radio frequency coverage area will have the choice of purchasing access to the network. Number of community anchor institutions, public safety entities, and critical community organizations passed and/or involved with project (e.g., health care, education, libraries, etc.) The Clarion Hospital and the Clarion Commissioners are the two main anchors in this startup organization. Other community anchor organizations will migrate to this system when their current obligations expire to get better service, more speed and more bandwidth. Proposed services and applications for the proposed funded service areas and users Tier 1 through Tier 5 Members –Video arraignment, Courts – Video arraignment, In-home detention, Jails – video surveillance, Emergency communication services, Decreased costs for communication services that enable or would improve delivery of services, Data, VOIP, Enable governments to use technology (SCADA) to effectively and affordably monitor and manage water, sewer, flood control and transportation systems, Secure communication services (voice, video and data) for emergency secure providers, HIPA compliant communication services for patients, hospitals and healthcare providers. Public safety, Police mobile video and data services, Public utilities, Monitor public utility assets, SCADA to monitor and control water and sewer flow, SCADA for automated meter reading, Video surveillance, Planning, Mobile data services improving delivery of services related to land use, zoning and building codes. Emergency Service Providers not affiliated with the government - Mobile data, Mobile video, Video surveillance, Improved voice communication among various types of providers (municipal police, state police, ambulance, fire) at a reduced cost. Access to lower cost advanced communication services, Improved ability to deliver services to individuals and organizations across the community, Healthcare - Hospitals – improved access to lower cost advanced communication services supporting electronic medical records, transmission of high resolution images and accessing remote medical services, Clinics – improved access to lower cost advanced communication services supporting electronic medical records, transmission of high resolution images and accessing remote medical services, Increased access to advanced communication services for doctors and other healthcare providers offices and homes. Provide a platform for economic development – ISPs and other private service providers access the network to provide advanced communication services to private sector companies and consumers. Approach to addressing the non-discrimination and interconnection obligations Advanced Regional Communications Cooperative, Inc. (ARCC) Nondiscrimination and Interconnection Full Policy Statement can be found in item 22 in the application - (ARCC) commits to the Nondiscrimination and Interconnection Obligations. Type of broadband system that will be deployed (network type and technology standard) We envision this broadband network design to be a scalable foundation for a Multi-Service Region-wide network that will afford the community a variety of wireless solutions supporting any combination of last-mile frequencies to support current future needs. This

design allows legacy and future systems to be integrated on the same infrastructure. Qualifications of the applicant that demonstrate the ability to implement and operate a broadband infrastructure, and/or be a sustainable broadband services provider With the cooperative members having business backgrounds and with a management contract to operate the network, the ARCC has sufficient knowledge, skills and abilities to successfully own and operate the planned network. Overall infrastructure cost of the broadband system Total System and Related Costs \$7,900,000 Overall expected subscriber projections for the project Total expected subscribers - 1,000 customers currently using dial up services Number of jobs estimated to be created or saved as a result of this project Looking at a cross section of the business and industry in the regional area, we conservatively projected at least 100 jobs to be created over the next four years after the deployment of the network. The Clarion County Economic Development Corporation then conducted telephone and online surveys of the businesses in the region and established 108 jobs that expect to be created just in Clarion County if the network was to be deployed. Using the job creation methodology established by ARRA, a project using the amount of grant funds that we are requesting would need to create 62 jobs to qualify.