A) Pennsylvania's Armstrong and Indiana counties are located in southwestern portion of the state. Unfortunately, this area is part of the rural/urban digital divide where broadband penetration has not been uniformly deployed either geographically or demographically. The region lacks the communication infrastructure needed to provide affordable broadband access to its residents and businesses. Some areas of the region is unserved because private companies have found them to be economically unfeasible from a business perspective, while other areas have limited broadband choices which makes service unaffordable for many. B) The service area covers 2 counties (1483 sq miles), 400 anchor institutions, and over 160,000 people. C) The RBA network will cover 63,128 households and 4,486 businesses. D) The proposed funded service area encompasses more than 75 boroughs and townships in two counties, excluding the most densely populated areas surrounding the boroughs of Kittanning, Ford City, and Freeport in Armstrong County and the boroughs of Indiana, Marion Center, and Blairsville in Indiana County. It represents approximately 4,486 businesses, 63,128 households, 47 educational buildings, 41 critical community facilities, 33 anchor institutions, and 100 public safety agencies across the two-county region. This area is currently experiencing job losses, closing of businesses, and rising unemployment rates. In order to stimulate their local economies offer their residents and communities an opportunity for future growth, access to affordable broadband service is essential. E) To address the problem, Armstrong and Indiana counties have joined together to provide a municipally-owned, multi-service carrier-grade communications network - Regional Broadband Alliance (RBA). With funding from BTOP and cash matching funds from Armstrong and Indiana counties, RBA will deploy broadband infrastructure in unserved and underserved areas of the two-county region and provide affordable and reliable broadband access to residents, businesses, community anchor institutions, agencies serving the unemployed, aged, low-income and public safety agencies. RBA will provide a breadth of specific applications within the service area, including Broadband/Internet access, public safety land mobile radio backhaul, private data connections, secure mobile data for public safety, Smart Grid/Automated Meter Reading (AMR), video surveillance for public safety and schools, Wi-Fi hot spots for consumer broadband, economic development and social inclusion, SCADA for utilities/water/sewer systems. F) RBA is designed for multiple operators and will allow residential and commercial customers, government, public safety, education and medical facilities to acquire broadband services from a wide variety of service providers. It is specifically designed to seamlessly interface with all major communication carriers in North America and worldwide. Existing deployments of the proposed network carry critical medical records, backhaul cellular carriers, provide wholesale long distance connections as well as direct connections to the peering points to the robust broadband pipes of the
Tier 1 Internet carriers. G) The system deployed will be a two-county, region-wide 622 Mbps backbone using a multi-ring configuration to create multiple points of access. It will connect into the national communication framework and will enable service providers to provide last-mile services to end users in currently under-served and unserved areas of the region; deliver wireless fixed and mobile broadband solutions for public safety applications, such as high-speed data in police and fire apparatus, video surveillance applications and connections to police and volunteer fire departments; and provide high-speed connectivity to schools, local and county government buildings and other important community locations. It will also have the capability to provide high-speed, secure connections between hospitals, clinics, doctors and ambulances. The network includes robust, proven equipment and carrier-grade architecture, as well as a comprehensive and effective management platform to simplify and improve network operation and a business model to ensure sustainability. The proposed award-winning architecture has been operating as AllCoNet ( Allegany County, MD) since 2003 and as Cambria Connected (Cambria County, PA) since 2008. This will be a fiber/wireless hybrid system using MPLS, Gigabit Ethernet, Fast Ethernet, ANSI, OFDM, OC3, DS3, and T1 at each middle mile connection point. The network security capabilities meet the stringent security standards required for Health Insurance Portability and Accountability Act (HIPAA) and National Crime Information Center (NCIC) standards with Layer 2 data separation for diverse customers and service providers. It includes carrier-grade telecommunications infrastructure for high availability, high reliability and redundancy. It also provides availability of complete communication services, including IP, TDM and data packet services. It offers support for Legacy applications such as public safety trunked radio and voice T-1s and an experienced network engineering team for design and network construction oversight. The quality network support personnel and carrier-class network management framework to ensure efficient network operation and support with an open-access platform that will enable Armstrong and Indiana counties to solve digital and economic divide issues with capabilities to invite competition. H) RBA is based on more than 14 years of community network builds that date back to 1994. The architecture is currently in operation in more than 80 communities and provides critical network connections to tens of thousands of users. The system partner is one of the few integrators with both the knowledge and experience to build sophisticated networks of the size and scope required. Their networks have received numerous awards including the PA Governors Award in 2009 and the 2009 Association of Public-Safety Communication Officials 911 Center of the year. They have been recognized as a Smart Practice community by DHS/FEMA and selected as the Best Practice network by major consulting groups. The sustainability of the proposed network is proven by successful operational installations in Cambria County, PA (www.cambriaconnected.net) and Allegany County, MD (www.allconet.org). I) Overall infrastructure cost of the broadband system: The estimated cost to bring RBA online is $26,383,542 J) RBA has the support of Local Internet Service Providers who will provide services to their customers with last-mile wireless broadband Internet services using the proposed middle-mile backbone. At the end of the first year of operations, it is estimated that 440 households, 48 businesses, 12 commercial businesses and 144 community anchor institutions will adopt dedicated broadband access. In addition, it is estimated that 100 public safety locations will utilize the network. A conservative estimate projects that after 5 years of operation (year 6) the middle mile network will provide services to 2374 households, 536 small or commercial businesses, and 282 community anchor institutions. K) It is conservatively estimated that more than 94 jobs will be created or saved by RBA including network technicians, installers, marketing
personnel, management, public safety specialists, and application design and development. The RBA anticipates accelerating the construction and installation in year 1, to further enhance the impact of these jobs. In addition, more jobs will be created by the high quality, high speed broadband connections to homes in the community as the network allows citizens to become remote contact center agents, programmers and developers as well as web-based entrepreneurs. In conclusion, with the BTOP and matching funds, Armstrong and Indiana counties will deploy RBA, a municipally-owned, multi-service carrier-grade communications network that will bring affordable broadband access, and all the benefits associated with it, to the unserved and underserved in the area.