Executive Summary

Johnson City Power Board (JCPB) is a community-owned, non-profit electric utility with a forward-thinking approach to serving its customers in East Tennessee. Since 1945, JCPB has served all of Washington County as well as portions of Carter, Greene, and Sullivan counties. Specific communities include Gray, Colonial Heights, Johnson City, the Town of Jonesborough, Fall Branch, Piney Flats and Kingsport. Overall, the JCPB service area encompasses approximately 350 square miles of land, and over 74,000 metered customers. JCPB submits this application to the Broadband Technology Opportunities Program (BTOP) for consideration as a worthy Critical Community Infrastructure (CCI) project. The proposed JCPB broadband project will address two opportunities. Currently, the Proposed Funded Service Area (PFSA) lacks access to sufficient levels of bandwidth from available broadband services required to meet the 21st century needs of our community anchor institutions (CAIs). Second, access to the services more commonly available are prohibitively expensive given the paltry level of bandwidth made available through them. Third, the lack of robust and affordable access to next generation fiber-based broadband infrastructure has frustrated JCPB's ability to deploy a regional smart grid backbone network, which on its own merit, does not justify an independent investment in said infrastructure. As a result, JCPB's BTOP CCI project proposes to build a fiber optic middle mile network throughout the PFSA that will address the shortcomings of our broadband market, and provide a fiber-based broadband infrastructure JCPB can utilize to deliver energy efficiency benefits to the community through smart grid deployment. The network will provide robust bandwidth for anchor institutions, and provide it at much more affordable costs compared to existing services. Currently, incumbent broadband providers in the PFSA provide low bandwidth services such as DSL, cable modem or third generation (3G) wireless services. Speeds for these services typically range from a low of 600K to a high of 2.5 Mbps in most areas of the PFSA, with limited areas receiving download speeds as high as 20 Mbps. While 20 Mbps download speed is attractive, it is not available to much of our service territory. Higher speed T1 and fiber-based services are purportedly available in areas of the PFSA, but at prohibitively expensive prices. With a focus on our Community Anchor Institutions (CAI), JCPB proposes to provide a direct connection to each CAI the network passes. In all, this will include 262 CAIs. Specifically, the network will provide broadband services to 33 K-12 schools, four police protection locations, four libraries, 114 medical and healthcare providers, 34 public safety offices, two public housing units, four institutions of higher education, 23 community support organizations, and 48 government facilities. JCPB proposes to offer up to 1 Gbps service to community anchor institutions for a reasonable rate as well as tiers of other symmetrical and asymmetrical speeds and rate structures. One of the greatest assets to our proposed infrastructure is that it will allow for CAIs within the network access to 1 Gbps service within the network for no
additional cost. For example, Mountain States Health Alliance (MSHA), which has seven hospitals and its corporate office within the PFSA, would be able to transmit and receive medical records at a rate of 1 Gbps to its affiliates and hospitals within our network. Our public safety entities, schools, local government agencies, libraries, and health care providers will have the opportunity to operate a secure next-generation Virtual Private Network service in addition to faster access to the public Internet at a lower cost compared to the incumbent broadband providers. As chronicled in this application, the network will provide substantially more bandwidth to CAIs than what is presently available, and at a more affordable rate. Our proposed broadband network will operate over a 288 count fiber backbone which will be an overlay of our existing electric system infrastructure. We will use a Gigabit Passive Optical Network (GPON) system that will exceed the current needs of our communities while being scalable for future requirements. JCPB is uniquely and ultimately qualified to successfully implement a fiber optic network. The physical requirements for the proposed network virtually mirror the same for electrical service. Poles, right of way, land, and equipment necessary to install and maintain cable are all elements of JCPB's daily operations and are equally necessary for fiber optic networks. Further, JCPB has a successful history of maintaining a functional and affordable complex power network. Delivering a broadband infrastructure is a natural extension of that ability in that the physical equipment used to install and maintain fiber optics is virtually identical to much of the equipment used to deliver power. However, technical considerations such as cable splicing, data routing, equipment installations, and maintenance techniques would require training existing personnel or possibly hiring personnel with the required skills set. Still, JCPB has a demonstrated history of adapting new techniques and technology as required and should be considered more than capable of meeting the challenges of such an implementation. As an existing utility provider offering service to the PFSA for over 50 years, this project is particularly shovel-ready, as it will leverage existing JCPB infrastructure and rights-of-way to commence construction immediately, and conclude that construction within two (2) years. The overall cost of the proposed infrastructure will be $11,897,197 and JCPB will offer a 30% cash match to the project. With our contribution of 2,745,507, our grant request will be for $9,151,690. The majority of this project will be completed within eighteen months and total completion within two years. Our business survey that was conducted in September 2009 projected conservatively that by year three JCPB will have acquired 300 customers, and by year seven a total of 684 customers. As a guidepost for the federal American Recovery and Reinvestment Act (ARRA) initiatives, the Executive Office of the President, Council of Economic Advisers, issued a memorandum in May 2009 titled 'Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009.' Table 5 of the memo provides a simple rule for estimating job-years created by government spending, which is that $92,000 of government spending creates one job-year. Accordingly, JCPB's application would result in the creation of 129 job years. Pursuant to the NOFA, and in order to maximize network benefits for the entire PFSA, JCPB will employ an open interconnection policy designed to encourage competition and the deployment of services by third parties, including commercial middle and last mile service providers. As detailed in our interconnection policy, JCPB will negotiate interconnection agreements with said third parties on reasonable terms and conditions. Furthermore, JCPB will fully comply with the FCC's Internet Policy Statement, not discriminate between lawful content and applications accessed by our customers via the public Internet, and we will post our network management policy to our customer website.