

Broadband USA Applications Database

Applicant Name: St. Louis Broadband, LLC

Project Title: ShowMe Broadband

Project Type: Last Mile Remote

Executive Summary

EXECUTIVE SUMMARY St. Louis Broadband has been supplying fixed wireless to previously unserved St. Louis businesses for over six years. The ShowMe Broadband Project of St. Louis Broadband is a unique plan designed to bring high speed Internet to rural Missouri. We have been developing our proposal for over a year and a half, which has given us the opportunity to consider the needs of our targeted end users and how we could best serve them. We have applied the science of spectrum testing, GPS coordination, product review and knocking on doors. In November of last year we were in a pre-marketing phase so that we could understand what services were available to areas we wanted to expand. We initially started with a five county network, which quickly grew (by request) into thirteen counties. We have approached this project with what we feel is a Holistic approach, rather than a Capitalistic approach, with priorities of community safety, economic growth, health and education. The area we propose serving covers thirteen counties in rural Southeast Missouri encompassing seventy-eight communities. Our data shows our service would be available to: • 112,572 Households • 9,975 Businesses • 19 Community Anchor Institutions • 14 Hospitals • 95 Fire Departments • 27 Police Stations • 128 Schools • 27 Libraries We propose serving these areas with 98 towers equipped with sustainable and environmentally friendly wind turbines and solar technology to insure back-up power and decrease utility dependence. The priority of this network is to deliver high speed and reliable service to rural areas. However, our research has disclosed another critical part fixed wireless could play in determining the future of these communities. The coverage area for ShowMe Broadband is in one of the richest mineral areas of Missouri. In our coverage area there are 467 abandoned and working mines. Entire communities are built on these mines. The area lays in the New Madrid Fault zone, with the highest earthquake risk in the United States outside the West Coast. Many of our counties are latent in deploying 911 services, our coverage would include two counties not equipped with 911 emergency service. Potential for Future Earthquakes In a report filed in November 2008, The U.S. Federal Emergency Management Agency warned that a serious earthquake in the New Madrid Seismic Zone could result in "the highest economic losses due to a natural disaster in the United States," further predicting "widespread and catastrophic" damage across Alabama, Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri and particularly Tennessee, where a 7.7 magnitude quake or greater would cause damage to tens of thousands of structures affecting water distribution, transportation systems, and other vital infrastructure

http://en.wikipedia.org/wiki/New_Madrid_Seismic_Zone#Potential_for_Future_Earthquakes There is another potential Katrina being ignored in this region. ShowMe Broadband intends to address this problem by installing a FREE Public Safety network within their network coverage. This network will

proactively address a potential disaster of catastrophic nature. ShowMe Broadband will also offer reduced rate services to anchor institutes, hospitals, schools and libraries. St. Louis Broadband is a "Small Disadvantaged Business" and because of this we are asking for the 20% matching funds waiver. However, because of the network potential, we will be offering, over a five year term, 30% matching funds which will be directly applied to communities within our coverage area for technology enrichment opportunities. We will upgrade schools and library technologies and offer reduced Internet access rates to economically disadvantaged families, and provide access to critical anchor institutes. Fixed wireless is a technology that is far superior to DSL, with has distance limits requiring new copper plants to be installed and costly deployment in rural areas. Cable comes with its own set of issues, including the fact that fiber and coax have to be installed to extend the cable footprint. Satellite is about the only option one in a rural environment may have, but technologies that require a "fast network" (low latency) for IP based applications will not work properly and satellite is a costly option. While 3G and Advanced Wireless Spectrum networks are still in their infancy, their equipment is new and costly and the advertised connection speeds of 3.1 Mbps are seldom realized. The terrain in our proposed counties varies by elevations of as much as 1400', which makes this environment unfavorable for a mesh network. The only feasible and cost effective network that would actually service this area is fixed wireless. When dealing with heavy tree canopy and challenging terrains, fixed wireless is the only option to actually deliver speeds starting at 3.3Mbps download and 3.3Mbps upload rates and as much as 10Mbps download and 10Mbps upload rates. These rates are proven and reliable. It is quickly deployed and economically constructed. Fixed wireless networks are inherently fast with latency as low as 10 ms, it is the perfect environment for applications such as VoIP, Remote Desktop, VPN and other IP based applications. In many of the NTIA Public meetings, fixed wireless was called the "more bang for the buck" technology. Our network is decidedly open; our towers are engineered for collocation to accommodate Cellular providers as well as AWS licensed spectrum holders. We use unlicensed frequencies that enable WISPS to freely collocate with us without owning spectrum license. We have calculated the overall infrastructure cost of our broadband system at \$37,222,917. At a modest subscriber take rate of 15%, we project 36,702 subscribers (including strategic and anchor institutes) by fourth quarter of the third year. We estimate that a minimum of 163 jobs will be directly created within our project. It would be impractical to calculate the number of employment opportunities and benefits created indirectly with the implementation of our program. High speed Internet is crucial for the endless self-employment opportunities the Net offers. Telecommuting would become an option, and with our static IP address, the rural Missouri farmer vacationing in Europe will be able to view his fields from his laptop computer. We at ShowMe Broadband feel we have created a responsible, practicable and vital plan that will sustain our broadband initiative and support citizens in our community.