

Broadband USA Applications Database

Applicant Name: SHO-ME TECHNOLOGIES L.L.C.

Project Title: MoBroadbandNow Middle Mile Network

Project Type: Middle Mile

Executive Summary

An integral part of Governor Jeremiah (Jay) Nixon's vision for the State of Missouri's broadband future, the MoBroadbandNow statewide middle mile project will dramatically increase the prospects for competitive last-mile broadband services throughout rural, underserved and unserved areas of the State. The network operator, Sho-Me Technologies, LLC, is pleased to submit this application for middle-mile infrastructure funding under the RUS BIP and NTIA BTOP programs. This project is a true public-private partnership, cooperatively developed with and fully supported by the State of Missouri and other key stakeholders in the State. We believe the proposed network exemplifies precisely the type of project the Recovery Act apparently intended the respective agencies to support. The vast majority of Missouri is rural, with numerous small, isolated, rural communities whose very existence is threatened by the lack of affordable broadband services. Many of these areas are in steep economic decline. With the explicit cooperation of a variety of public sector and private sector partners, we intend to address this by creating a statewide broadband ecosystem in which broadband competition can flourish, giving previously unserved and underserved communities, businesses, and residents the opportunity to acquire fiber-based and wireless broadband service at affordable prices. The proposed funded service area was developed in consultation with the State of Missouri, Sho-Me Technologies, and MOREnet (the Missouri Research and Education Network). With reference to detailed demographic and other data, these three partners identified a network footprint that promises to reach areas of Missouri most in need of connectivity. The network will reach from the northern border of Missouri to the southern "bootheel," including over 2,500 miles of fiber optic cable reaching the most rural areas of the State, with 93 span segments passing through over 300 rural towns with a total population of over 1.5 million. Nearly 200 fiber-connected towers will be sited in towns with population under 1,000. Areas of Missouri already well-served, including the I-70 corridor between St. Louis and Kansas City, will not be served directly by the proposed network. The MoBroadbandNow middle mile network technical design also is a product of close cooperation among Sho-Me Technologies, the State of Missouri, and MOREnet. The network, operated by Sho-Me Technologies will provide state-of-the-art data transmission services on an aggressively open-access basis, for all last-mile broadband providers (both wireline and, using the proposed broadband towers, wireless). The network will utilize a ring architecture connected via Dense Wave-Division Multiplexing (DWDM), SONET and Ethernet. In addition to the fiber network, approximately 200 fiber-connected towers, each nearly 200' in height, will be placed in 65 percent of towns in the State with fewer than 400 households, many of which qualify as "unserved" communities. The remaining towers will be located in underserved areas with the number of households ranging from 400 to 1,000. All are dominantly rural areas. The broadband towers will be equipped with telecom

shelters and backup generators for reliability, and are designed to allow the rapid deployment of WISP, public safety, and other wireless services. The technical design of the network and the underlying business plan reflect that the intended purpose of the network is not to limit its use to certain favored entities or applications, but instead to be a pure “open access” network, with the facility shared among a theoretically unrestricted set of users. The network operator, Sho-Me Technologies, is an interexchange carrier certified by the Missouri Public Service Commission. Sho-Me Technologies adheres to the principles contained in the FCC’s Internet Policy Statement. The network will not favor any applications and/or content over others, nor will it define the kind of services that can be offered by other providers. The choices of services are determined between the end user and their service provider, not Sho-Me Technologies, and Sho-Me Technologies will not be a party to application-level network management. The technical experience and organizational stability of the partners to this proposal are extraordinary. The network operator, Sho-Me Technologies, LLC, is a subsidiary of Sho-Me Power Cooperative, an electric power generation and transmission cooperative that has served rural Missouri electric service cooperatives for 62 years. Sho-Me Technologies has provided middle-mile communications services in Missouri since 1997, and has a proven track record of success in doing so. Another key partner, the Missouri Research and Education Network (MOREnet), was established in 1991 as one of the first statewide IP education networks serving in the nation. MOREnet currently provides Internet connectivity and support to Missouri’s K-12 schools, colleges, public libraries, health care, and affiliated organizations. Finally, the project has the full support, including financial and organizational backing, of the State of Missouri and its various agencies, and is a key part of Gov. Nixon’s MoBroadbandNow initiative. (See <http://transform.mo.gov/broadband/>). The project will support and complement several other Recovery Act projects, including the DoE Smart Grid initiatives, the Title XIII health information technology initiatives, and the Title VIII education programs, among others. Due to the scale of the network and the short timeframe for the preparation of this application, we cannot at this time specify precisely how many such entities will be passed or connected, but, estimating conservatively, over 500 critical community facilities, public safety, and anchor institutions will be passed by the fiber network, directly served, or connected via a last-mile provider partner. The partners involved in the MoBroadbandNow effort and this proposal include stakeholders from higher education, K-12, state public safety organization, and others, ensuring that these entities will be well-served by the network. The overall infrastructure cost of the planned system is \$175,875,000. With contributed funds from the partners, as described in the application, the total amount requested is \$140,700,000. The number of households in the proposed funded service area is 716,083. We have calculated that the initiative will expand broadband availability to 91.5 percent of the total state population, a significant increase from current statewide projected broadband accessibility of 79.7 percent. Based on a study by the Brookings Institution, this 11.8 percent increase in broadband accessibility may ultimately result in an annual statewide employment increase of 2.4 – 3.0 percent per year. More concretely, we estimate that over 300 jobs will be directly created by the project in the near term (e.g., fiber installation technicians, tower builders, etc.) and, based on a study by Strategic Networks Group, we estimate that approximately 7,000 jobs will be created or saved in the near term as a direct result of greater broadband availability.