

Broadband USA Applications Database

Applicant Name: Mid-Atlantic Broadband Cooperative

Project Title: Middle Mile Expansion for Southern Virginia

Project Type: Middle Mile

Executive Summary

The Mid-Atlantic Broadband Cooperative (MBC) is honored to submit this joint BTOP/BIP grant application for consideration. As you will see in this application, MBC was formed in early 2004 as a non-profit cooperative to build, operate and manage a 800+ mile advanced, wholesale, open-access fiber optic backbone network in rural Virginia to promote economic development, private investment and job creation. MBC completed the network build in September of 2006, and became an operational entity. Since that time, MBC has grown our revenues from \$0 to \$3.2 million per year, and have kept our costs in line with growth. MBC has received over \$52 million in grant funding to complete this project, including \$6 million from the US Department of Commerce, Economic Development Administration and \$48 million from the Virginia Tobacco Indemnification and Community Revitalization Commission. MBC is a unique success story in that we are cash flow positive, are growing the revenue base and adding employees in a very difficult economic environment. We have helped expand the availability of broadband services to residential and business customers in the region by operating this open-access middle-mile network. The reason we are proposing this project is that there are many K-12 schools in our region that do not have fiber optic connectivity as of yet. In order to make those connections happen, over \$20 million in capital must be expended to complete those builds, and unfortunately there are no additional resources or grant funds available to do so, without the assistance of the critical BTOP/BIP broadband stimulus program. Of the 207 schools in our region, only 86 schools (42,000 students) have a fiber connection today. This project will result in 121 schools (58,000 students) having access to a minimum fiber connection of 10Mbps, with the goal of 100Mbps (depending on each school's unique telecom/IT bandwidth needs and budgets). MBC has successfully extended the fiber network to other school systems in our region, but now that we have exhausted grant funds for these projects, if we rely on our internal revenue and budgets to build these fiber connections, it would take over 30 years to complete the funding of all schools. By leveraging what grant funds we have left with the Federal Broadband Stimulus funding available, we will be able to complete connectivity to these schools in a little less than 2 years, and ensure that over 100,000 students in our proposed service area have access to the critical telecom and broadband network connections to enable their success. As a wholesale, open-access provider, MBC does not discriminate with any carrier, and encourages interconnection with any and all carriers who desire a connection to the MBC network. To date, over 55 telecom providers have joined our cooperative and are using the network in various forms. Some are buying 10Mbps Ethernet transport to their wireless broadband system on a water tower to serve residential customers, while others are buying 2.5Gbps and 10Gbps wavelengths to connect their data centers in our service area to key Internet peering points in Northern Virginia and the Southeastern

United States. MBC proposes to build over 465 route miles of new fiber optic cabling, which will finalize the connection of all K-12 schools in our region. This will expand MBC's existing 800 route mile network by almost 50%. The strategic reasoning that is behind our application for matching Federal grant dollars is that MBC is a proven entity, with a focus on underserved and unserved areas of Virginia, has a business model for how to do open-access networks that has been embraced by other communities from California to Massachusetts. Internationally, MBC is a model of open-access network in unserved markets by the International Telecommunications Union (ITU), where we spoke to their conferences in Africa last year regarding the business case for building open-access networks. We have identified approximately \$20 million dollars in capital costs related to this expansion of fiber optic middle-mile resources. MBC has over \$4 million in available cash matching funds for this project (20%) and is ready and able to begin construction immediately (within 24 hours of grant agreement approval and signing) on several middle-mile routes we have previously engineered, designed and permitted. We plan to expand the use of our carrier-class SONET/TDM backbone network to allow additional network capacity to be provided to the K-12 school systems. MBC provides Ethernet services over SONET network. From a technical basis, we do this because we offer dedicated bandwidth services ONLY. We do not offer shared connections or routed connections that could result in oversubscription of bandwidth. Our Layer 1 optical transport network is highly beneficial to telecom service providers that utilize our network in that the bandwidth is dedicated and not shared with others. This type of connectivity sets MBC apart from other middle-mile providers and allows us to deploy flexible Ethernet services (that do not exist from the existing incumbent telephone providers), while maintaining a carrier class system. MBC has what few if any other middle-mile providers in rural areas have, which is direct connectivity to Tier 1 Internet peering points in Northern Virginia. MBC has on-net access to Equinix in Ashburn, Virginia where over 190 different carriers interconnect to exchange traffic and IP Transit services. This type of connection is beneficial to the region, in that we can provide direct connectivity from our ISP and last mile providers in the region to their peering partners, thus improving network performance, reducing costs, and providing a better experience for the residential and business customers that purchase broadband services from MBC telecom service provider members. The other positive attribute of MBC's proposal is that since we have an existing operational network in place which is up and running today, we can turn up services and start immediately providing middle-mile access to broadband communities once the various fiber segments are completed and tested. We do not need to wait 2 years or more to complete the build, install electronics, and hope to make revenue to make the system viable. MBC will leverage our existing network base, which is quite substantial (over 200Gbps of active network backbone capacity, and multiple OC-192 and OC-48 rings providing many middle mile transport circuits). We conservatively estimate 75 jobs will be created as a result of this project, which will be made up of administrative, clerical, project management, engineering, construction and inspection jobs. In summary, MBC's grant application presents a substantial value proposition for the return on dollars invested in the form of new connections, jobs created and infrastructure built. MBC is a strong partner for the grant programs, and many of our political supporters and key stakeholders take comfort in the fact that Federal and State grant dollars have been invested in MBC which is a stable, viable, operationally successful open-access middle-mile provider