

**Broadband Infrastructure Application
Submission to RUS (BIP) and NTIA (BTOP)**

Submitted Date: 8/12/2009 9:02:12 AM	Easygrants ID: 2574
Funding Opportunity: Broadband Initiatives Program and Broadband Technology Opportunities Program	Applicant Organization: Bay Country Communications Inc
Task: Submit Application - Infrastructure Programs	Applicant Name: Mr. Scott Shilling

Additional BTOP Factors Selected By Applicant

- **Conformity with Statutory Purposes**
- **Cost Sharing/Matching**
- **Reasonableness of Project Budget**

The project advances at least one of the statutory purposes for BTOP

Applicant has provided documentation that the project would not have been implemented during the grant period without federal grant assistance.

Applicant has provided a budget that is appropriate to the proposed technical solution and only includes eligible costs.

- **Demonstration the Project Could not be Implemented But For Federal Grant Assistance**
Applicant is providing matching funds of at least 20 percent towards the total eligible project costs?
Yes

7-k. Cost Sharing/Matching Fund Explanation

C. Executive Summary

Executive Summary of Project for BIP and BTOP:

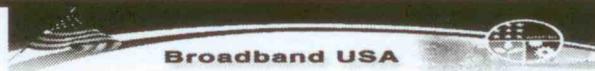
8. Infrastructure Projects Executive Summary

C. Executive Summary

8. Executive Summary of Project for BIP and BTOP

1. Opportunity the proposed system seeks to address

The purpose of South Dorchester Connect is to address statutory purpose as outlined in the NOFA. Pursuant to the Section 6001 of the Recovery Act, South Dorchester Connect will



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further the statutory goal to establish a national broadband service development by funding the opportunity to extend from a termination point, 17 miles of Last Mile broadband access and two terrestrial wireless access points to the remote unserved geographically isolated area of Church Creek in Southern Dorchester County, Maryland. Furthermore, the South Dorchester Connect will preserve and create jobs and promote economic recovery.

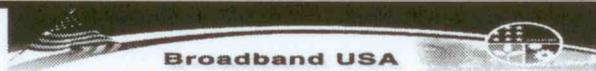
2. A general description of the proposed funded service areas (location, number of communities, etc.)

Dorchester County, Maryland is located on the eastern shore of Maryland and boasts more than 1500 miles of shore line. The county is separated geographically into distinct portions by a wildlife refuge of roughly 26,000 acres of marshland, forests and waterways. Cambridge, the county seat (population 11,752) has broadband but the southern part of the county does not. South Dorchester Connect will install 17 miles of fiber optic lines underground in the Business Technology Park and along existing telephone poles lines to link the Northern part of the County with the Southern community of Church Creek, Maryland 21622. This community has less than 500 people per square mile. Other households along the route are not organized or designated communities, but rather remote groupings of houses. South Dorchester County School is the only school of 13 in the county that is not connected into the existing Board of Education fiber optic network.

3. Number of households and business passed

Six communities with a total number of households 463 and 17 businesses will be passed.

4. Number of community anchor institutions, public safety entities, and critical community organizations passed and/or involved with project (e.g. health care, education, libraries, etc.).



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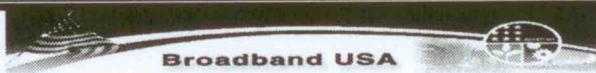
Bay Country Communications Last Mile South Dorchester Connect will link a business-technology park in the north county airport region to geographically isolated unserved south county. A public safety tower, electrical cooperative substations, homes, businesses and a school connect through 17 miles of fiber optic and coaxial cables along existing telephone pole lines and a terrestrial wireless network. This unserved community will be able to connect to essential public services in Northern Dorchester County, i.e., schools, library, hospital, institution of higher education and public safety, areas in which Middle Mile broadband already exists. Anchor institutions passed include the Bucktown Public Safety tower, South Dorchester K-8 School, Blackwater National Wildlife Refuge, Gootees Marine, and several Choptank Electric Cooperative Distribution Substations.

5. Proposed services and applications for the proposed funded service area and users

The services proposed are to provide a dedicated fiber optic link to a Dorchester County Public Safety tower along the fiber route, interconnections for Choptank Electric Cooperative substations, a dedicated fiber optic link for South Dorchester K-8 School, and Cable Modem, Cable TV, and VOIP Phone Service to residential customers and businesses along the route. Customers not reachable via wireline infrastructure but within roughly 5 miles of the South Dorchester K-8 School Tower and Bucktown Public Safety Tower will be reachable via fixed wireless broadband connections with speeds similar to cable modems.

6. Approach to addressing the non-discrimination and interconnection obligations

Bay Country Communications understands and accepts all of the non-discrimination and interconnection obligations as specified in the NOFA. These are elements which are critical to keeping America vibrant and giving its citizens the maximum ability to choose their service and their service provider.



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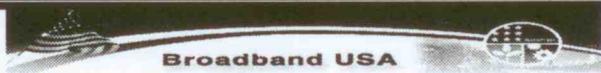
7. Type of broadband system that will be deployed (network type and technology standard)

The network will consist of a [redacted] fiber optic cable. [redacted] fibers will be dedicated for data transport over our [redacted]. These switches allow for virtual dedicated connections among businesses that locate in the planned technology park and the seafood processors and other businesses at the southern end of the connection. Access points using [redacted] will be installed on both the existing Bucktown Public Safety Tower and the existing tower at the South Dorchester K-8 school to reach customers outside of the wireline service area to provide them Internet. Another [redacted] will be dedicated for RF transport of the cable television signals. The RF fiber will converted to a hybrid-fiber coaxial network at various points along the line where customers are connected to Cable TV, Internet, and VOIP phone services. Additional fibers will be available for connecting the public safety tower, the school, and electric substations. The remainder of the fibers are for capacity increases, other dedicated fiber connections that may be necessary for government, schools, health care facilities, businesses. A visual representation of the described network is contained in the proposal attachment.

8. Qualifications of the applicant that demonstrate the ability to implement and operate a broadband infrastructure, and/or be a sustainable broadband services provider

For 20 years, Bay Country Communications has been providing services to the public from their three offices all located in Dorchester County, Maryland which [redacted]. [redacted] the employee offices are located in East New Market and the other in Cambridge. The company began as a cable TV provider and has expanded into web development, business application development, IT services, wireless networking, and advertising services. In the past 5 years, Bay Country Communications has [redacted].

Bay Country Communications owns and operates roughly [redacted] of fiber optic network. As



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one of the few operators that provide direct competition for the incumbent cable provider, the company is a competitive option for costumers. Where incumbent providers are "overbuilding," customer penetration rate is [redacted] where no competition exists customer penetration rate is even higher. Incumbent providers only have a [redacted] penetration rate where there is no existing competition. Bay Country Communications has a very high rate of customer retention, [redacted]. Customers typically leave only when they move to an area where service cannot be provided.

Bay Country Communications provides cable TV services to over [redacted] subscribers, Internet services for over [redacted] municipal, business, and residential subscribers, and internet and fiber optic connectivity to Dorchester County Public Schools. The company builds and maintains fiber optic links for [redacted] in Cambridge and the Chesapeake Bay Advertising Terminals in addition to providing cable TV services to the [redacted] and providing wireless internet connectivity to the [redacted]. During hurricane Isabel in September 2003, the company built a network providing crucial fiber optic links and utilized by the [redacted].

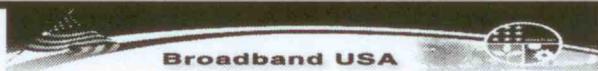
The company is building and maintaining a wireless rural broadband network. The project is shovel ready as the company possess the capacity to perform the work

9. Overall infrastructure of costs of the broadband system

\$955,705

10. Overall expected subscriber projections for the project

The subscriber projection over 5 years is 185 out of a possible 463.



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11. Number of Jobs estimated to be created or saved as a result of this project

South Dorchester Connect understands that the southern portion of the county lifeblood is the seafood industry. Vital to the county's economic viability, growth and strength is seafood processing, watermen and marina services. This industry will not thrive if it is not connected to the new technologies via broadband that keep it vibrant and accessible to the outside communities and processors and distribution centers that could or should utilize its services.

South Dorchester Connect will preserve and create jobs approximately 25 jobs for cable crews, technicians, contractors, suppliers of the raw materials, administrative and accounting support, and promote economic recovery by employing individuals to construct, manage and maintain 17 miles of Last Mile broadband access to the remote unserved geographically isolated area of Church Creek in Southern Dorchester County, Maryland.

*Jobs will be created at the Technology Park as a result of being connected via broadband to southern Dorchester County. Based upon other similar Technology Parks Job estimates, and calculating the anticipated job increases. The park has twelve lots with one company on each lot employing 40 people means 480 direct jobs. We believe there will be an Incubator Lot at the technology Park housing 15 companies with each company employing 7 people which means an additional 105 direct jobs. These estimates came directly from a business plan done for the project. Broadband connection is critical to the preservation of jobs and future economic viability of the county's watermen in the southern region of the county.

Description of BTOP Project Purpose (BTOP Applicants Only Next Three Questions)

9. BTOP Statutory Purpose:



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Provide access to broadband service to consumers residing in "unserved" areas of the United States.
Provide improved access to broadband service to consumers residing in "underserved" areas of the United States.
Provide broadband education, awareness, training, access, equipment, and support to schools, libraries, medical and healthcare providers, community colleges and other institutions of higher education, and other community support organizations by or through these organizations.
Provide broadband education, awareness, training, access, equipment, and support to organizations and agencies that provide outreach, access, equipment and support services to facilitate greater use of broadband service by low-income, unemployed, aged, and otherwise vulnerable populations.
Provide broadband education, awareness, training, access, equipment, and support to job-creating strategic facilities located within a defined economic zone, or community as designated by a State authority, Department of Commerce, HUD or USDA.
Improve access to, and use of, broadband service by public safety agencies.
Stimulate the demand for broadband, economic growth, and job creation.

10. Description of BTOP Project Purpose:

10. Description of the BTOP Project purpose:

- a. Project addresses compelling problem or presents an opportunity consistent with BTOP statutory goals

The purpose of Lower Shore Connect is to address statutory purpose as outlined in the NOFA to establish a national broadband service. Lower Shore Connect will further development of a national broadband service by fulfilling the opportunity to extend broadband from a



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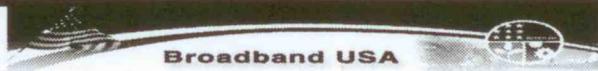
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termination point through seventeen miles of Last Mile to achieve broadband access to the remote geographically isolated area of Church Creek in Southern Dorchester County, Maryland. The purpose of Bay Country Communications' Last Mile project, Lower Shore Connect, is to provide seventeen miles of fiber optic infrastructure along existing telephone lines to homes, businesses and schools in Church Creek, Maryland in Southern Dorchester County. This region is unserved by broadband, depending on dial-up internet alone. Dial-up has upload and download limitations that create impediments to this region's economic growth and stability, access to educational applications, and ability to access up to date health care and public service information to serve the public good. Bay Country Communications' Last Mile project Lower Shore Connect addresses and solves this compelling problem and presents an opportunity consistent with the BTOP statutory goals.

When Lower Shore Connect is completed, this unserved community will be able to connect to essential public services in Northern Dorchester County in which Middle Mile broadband already exists, e.g., schools, library, hospital, and institutions of higher education and public safety. Furthermore, Lower Shore Connect will preserve and create jobs and promote economic recovery.

The economic and social lifeblood of Southern Dorchester County is the seafood industry. This industry will not prosper if it remains unconnected to the rest of the county and wider world via broadband. Thus, broadband connection is critical to the preservation of jobs and future economic viability of the county's watermen in the southern region of the county. Finally, Lower Shore Connect will create jobs and promote economic recovery by employing individuals to construct and maintain 17 miles of Last Mile fiber optic lines to Southern Dorchester County.

- b. Project offers an effective solution to that problem or addresses the opportunity.



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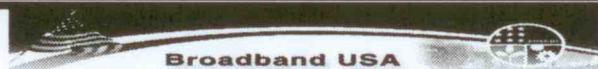
Lower Shore Connect offers an effective solution to the lack of broadband services in Southern Dorchester County. By choosing to use existing right-of-ways and telephone poles for the fiber optics, this project only requires standard permitting and construction methods, which will allow the project to be “shovel ready” and completed well within the two-year timeframe required by the NOFA. Furthermore, using existing right-of-ways allows there to be no additional environmental impact to this beautiful land along the Chesapeake Bay. The broadband speed will be at least 768 kbps downstream and 200 kbps upstream.

c. Proposed solution demonstrates broad significance and includes development that can be replicated to improve future projects

Bay Country Communications has built and maintains more than 40 miles of fiber optic lines. Once this Last Mile project is installed, future projects in this unserved area are possible. We envision a computer lab and wireless services open to the general public as well as tourists and transient boat owners. These will undoubtedly bring fresh business and new approaches to the region. In addition, the methodology can be expanded to other regions of the Eastern Shore of Maryland. Discussions are underway with other surrounding unserved areas such as [redacted], which is just south of Dorchester and has the similar demographic and geographic challenges of Dorchester.

d. Whether the proposed funded service area is in an unserved or underserved area

Bay Country Communications’ Last Mile project Lower Shore Connect, is to provide seventeen miles of fiber optic infrastructure to serve homes, businesses and schools in the remote, unserved, geographically isolated Church Creek, Maryland in Southern Dorchester County. No households have broadband in this area.



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e. The extent to which the project addresses more than one statutory purpose

Bay Country Communications' Last Mile project Lower Shore Connect, fulfills the following statutory purposes:

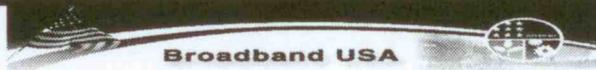
- * To preserve and create jobs and promote economic recovery
- * To invest in transportation environmental protection and other infrastructure that will provide long-term economic benefits

11. BTOP Enhanced Services for Health Care Delivery, Education, and Children:

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The goal of Lower Shore Connect is to provide a broadband access point to a remote Eastern Shore County group of census blocks that would not otherwise have broadband access were it not for this recovery funding. In recent years, broadband service has taken on a growing importance to Americans. Those Americans living in non-urban centers realize that broadband can enhance their quality of life, facilitate access to information, opportunities, and essential services, and provide a necessary link to a community's economic survival. Bay Country Communications believes that these enhanced services as provided for in the Recovery Act are critical to Americans living in remote areas

Providing broadband access at this time to these portions of Dorchester County will enhance the provisioning of health care, education and services to children in the affected area. It will also improve the ability for this population to compete for available jobs in health care and children/family services through increased awareness and use of computer applications necessary for functioning in the modern world. As more and more records are electronic, broadband is essential to provide the security, access to specialized applications and speed.



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If not for Lower Shore Connect, broadband access would be unavailable to this community, as its families lack the resources to pay for the requisite fiber optic cable and related infrastructure. Moreover, there is no county library in this section of Dorchester County. Thus, broadband can connect these households, businesses and public services to the public library and its electronic resources.

Lower Shore Connect would also enhance the educational capacity of South Dorchester School (Grades K-6), which is currently the only school in Dorchester County that is not connected to a high-speed, fiber optic network; thus placing South Dorchester's students at a serious academic disadvantage. In addition to the schools falling short in computer literacy skill sets, access to library resources, teaching supplements and the school is currently unable to administer state-mandated tests and applications that are only available on line.

As contemplated by the Recovery Act this broadening and deepening of broadband would not be possible without the direct fiscal boost to help lift this county from the economic crisis that has affected our lives. There is no funding in the County budget at all for this infrastructure. By funding this project we reach people who have never had access to this service before our children in early stages of their educational development, their families, health care provider's educational resources.

D. Proposed Funded Service Area

12. Proposed Funded Service Area Maps:

12-A. Service Area Map (Reference Number): **E66E-D29B-4BCF-AA72**

12-B. Is the applicant is seeking a waiver for providing less than 100% coverage of a census block. **No**

13. Proposed Funded Service Area (BIP - Last Mile Projects):

Please refer to section M at the end of document.