

## FY09 Technology - Pending Applications

#	Organization Name	Project Title	Request Amount	REVISED Staff Recommendation
1770	The Town of Abingdon, Virginia	The Electronic Village of Abingdon (EVA) Wireless Mesh Project - Phases 2 & 3	\$365,000	\$0
1769	Bristol Virginia Utilities	Installation of Fiber-Optic Infrastructure in Washington and Smyth Counties	1,250,000	1,250,000
1768	Bristol Virginia Utilities	Fiber-Optic Infrastructure Installation in the Cumberland Plateau Planning District	1,250,000	1,250,000
1764	Citizens Telephone Cooperative	Tobacco Region Access Connection (TRAC)	2,132,000	1,862,000
1767	Cumberland Plateau Company	Southwest Virginia Fiber-Optic Backbone Phase IV Funding Match	645,000	645,000
1765	Lenowisco Inc.	LENOWISCO Fiber Backbone Geodesic Mesh© - Phase V(6) - Last Mile	1,250,000	1,250,000
1766	Lenowisco Inc.	LENOWISCO Fiber Backbone Geodesic Mesh© - Phase V(6) - Backbone	1,250,000	0
1739	Mid-Atlantic Broadband Cooperative, Inc.	VCCI Operational Loan Agreement Buyback	1,922,894	1,922,894
1762	Mid-Atlantic Broadband Cooperative, Inc.	Phase 4: Southside Regional Backbone Initiative Expansion	6,000,000	6,000,000
1761	Scott County Telephone Cooperative	FTTP - East Gate City	\$1,250,000	1,250,000
1763	The Wired Road Authority	The Wired Road Expansion Project	1,024,238	951,297
Total - 11 Requests			<b>\$18,339,132</b>	<b>\$16,381,191</b>
Balance Available			\$12,928,474	(\$3,452,717)

# FY09 Technology Staff Summaries and REVISED Recommendations January 2009

*The Commission received eleven proposals for FY09 Technology Committee funding by the announced deadline of December 3, 2008. The Committee has a current available balance of \$12,928,474. Recommendations are subject to an anticipated transfer of additional funds to the Committee in order to assist these projects.*

## **Town of Abingdon, Virginia**

### ***The Electronic Village of Abingdon (EVA) Wireless Mesh Project - Phases 2 & 3 (#1770)***

**\$365,000**

Funds are requested to assist with the completion of infrastructure which will provide free broadband wireless service to the Town of Abingdon. Funds would be used to extend 2.6 miles of 12-strand backbone service to tower sites and construct/equip up to three additional towers to expand a system that was initiated in 1996. Within one year of completion the project will provide free internet access a 10.7 square mile area that includes up to 11,050 residential premises, 1,470 new and existing businesses and institutions (schools, hospitals, etc.) and up to 50 new telecommunications sites offering telehealth, distance learning, governmental and/or business applications. Job creation/retention of 550 is cited, and use of the network by public safety responders is anticipated.

Total project cost is \$525,000. Other funding: \$80,000 Appalachian Regional Commission for EVA Wireless Mesh Project – Phase 3 (pending - application submitted 9/24/08); \$80,000 Town of Abingdon for EVA Wireless Mesh Project-Phases 2 & 3 (available upon funding of VARC & TICRC proposals).

**Staff comments & recommendation:** TICR has funded nearly \$3.8 million of BVU backbone within the Town in previous years (in addition to other grants serving Washington County), and it appears this project could duplicate service to users along that backbone. Using TICR funds to provide free local wireless service is contrary to the Commission's priority to fund wholesale providers and thereby enable private competition for provision of retail service, and could set a precedent for funding free wireless services in communities across the tobacco region. No data on current system use – including upload/downloads speeds, numbers of users or existing competitors - is provided. Job creation appears to be primarily retained positions, and any new job creation would be difficult to attribute solely to wireless service. **Staff recommends no award.**

## **Bristol Virginia Utilities**

### ***Installation of Fiber-Optic Infrastructure in Washington and Smyth Counties (#1769)***

**\$1,250,000**

Funds are requested to build 31.3 miles of 12-96 strand distribution fiber (\$987,896 of request) and last mile installations (\$262,104 of request) to provide increased service opportunities in Washington and Smyth Counties. This expansion along the I-81/Rt. 11 corridor will provide broadband and other telecommunications services to customers that can be served directly from the existing fiber backbone

with the instillation of additional distribution fiber extensions (“laterals”) along the backbone route in both Washington and Smyth counties. Potential customers include commercial, industrial, medical (Smyth Co. Medical Center and the new Johnston Memorial Hospital which is currently under construction), governmental and residential customers. This project will pass 46 commercial and industrial customers—(applicant expects to achieve 50% penetration resulting in \$5,520 in additional revenue per month). The project will also pass 910 residential customers (applicant projects 40% penetration with monthly revenues of \$29,120).

Total project cost is \$1,250,000. Other funding: \$125,000 BVU to complete last-mile installations (to be funded from fiscal year capital budgets).

**Staff comments & recommendation:** Commission has funded nearly \$17.6 million of BVU fiber in these two counties to date. Ten percent match is in-kind, and a ten percent contingency amount is included in the request. Last-mile costs for customer premise drops and equipment are requested. **Staff recommends award of \$1,250,000.**

## **Bristol Virginia Utilities**

### ***Fiber-Optic Infrastructure Installation in the Cumberland Plateau Planning District (#1768)***

**\$1,250,000**

Funds are requested to build 38.7 miles of 12-96 strand distribution fiber (\$913,789 of request) and last mile installations (\$336,211 of request) to provide increased service opportunities to customers in the Cumberland Plateau PDC. This expansion along routes 19, 460, 83 and 58 will provide broadband and other telecommunications services to customers that can be served directly from the existing fiber backbone with the instillation of additional distribution fiber extensions along the backbone route in Dickenson, Buchanan, Russell, and Tazewell Counties. Potential customers include commercial, industrial, medical (Grundy Hospital and the Richlands Hospital), governmental and residential customers. This project will pass 476 commercial and industrial customers (applicant expects to achieve 40% penetration resulting in \$20,160 in additional revenue per month). The project will also pass 1,191 residential customers (applicant projects 40% penetration with monthly revenues of \$38,080).

Total project cost is \$1,250,000. Other funding: \$125,000 BVU to complete last-mile installations (to be funded from fiscal year capital budgets)

**Staff comments & recommendation:** Commission has granted more than \$3.2 million for BVU fiber in the planning district to date (in addition to awards to the Planning District Commission). Last-mile costs for customer premise drops and equipment are requested. Pro forma anticipates the project breaking even in Year Three with only modest net incomes of \$10,000-\$20,000 annually in out years (assuming very high penetration rates). As such, the project makes a reasonable case for the need for grant funding. **Staff recommends award of \$1,250,000.**

## **Citizens Telephone Cooperative**

### ***Tobacco Region Access Connection (TRAC) (#1764)***

**\$2,132,000**

Funds are requested by this 501(C)(12) cooperative to construct an alternate connection between the applicant’s network and the Bristol Virginia Utilities network to allow for diversity and to ensure the

stability of the overall Tobacco Commission network. This route will connect existing facilities at Independence to BVU facilities in Marion and west along the Route 11 corridor via a new 24-mile backbone build (strand count was not listed). In 2010 BVU will apply for funding (2010) for the section of the link in Smyth and Washington counties. These two projects will create a ring that will reinforce the existing fiber route between BVU, Citizens, and MBC by establishing a new, diverse route between the networks. The Citizen's route will provide access to approximately 200 homes and 20 businesses. In addition, a second alternate/diverse route is needed that will provide additional diversity to the overall network. Citizens is exploring two options to accomplish this. The first will require 39.1 miles of fiber construction in Patrick and Carroll Counties and the City of Galax at a cost of around \$3 million. The second route is from Christiansburg to Wytheville utilizing fiber that the applicant and subsidiaries already have access to. This option will cost approximately \$290,000 for equipment. The equipment will be placed in either Christiansburg (Montgomery County) or Fairlawn (Pulaski County) however the applicant prefers the Christiansburg option. Citizen's is negotiating a POP location in Christiansburg near the Virginia Tech MSAP (Multimedia Services Access Point) and has partnered with VT to interconnect their two MSAP's (on VT's campus and in Christiansburg).

Total project cost is \$2,132,000. Other funding: none provided.

**Staff comments & recommendation:** Citizens has successfully implemented one Technology grant of \$3.7 million to date, and participates in the traffic and revenue-sharing agreement with other TICR broadband grantees. Equipment placed outside tobacco region should serve as required match to the critical redundancy route within the region that has been agreed upon by all TICR broadband grantees. **Staff recommends award of \$1,862,000 (excluding equipment to be placed outside the tobacco region).**

## **Cumberland Plateau Company**

### ***Southwest Virginia Fiber-Optic Backbone Phase IV Funding Match (#1767)*** **\$645,000**

Funds are requested by 501(C) arm of the regional planning district commission for 40 miles of 72-strand backbone fiber build to provide redundancy and diversity to the CPC/BVU network and other carriers needing access to Dickenson, Russell, and Tazewell Counties. There are two new commercial or industrial customers and two existing commercial or industrial customers served by this expansion. The expansion will also provide broadband and other telecommunications services to customers along State Route 63 between St. Paul and Fremont (26 miles) as well as, State Route 67 between Honaker and Raven (14 miles). The areas of Sun, Dante, Trammel, McClure, Fremont, Honaker and Raven will be passed on these routes allowing access to 67 commercial, mining, natural gas, industrial, governmental, educational, and healthcare customers including the school systems of Russell, Tazewell, and Dickenson Counties; as well as several health clinics and doctor's offices. The applicant projects a 50% penetration rate resulting in \$8,260 in monthly revenues. No information is provided for residential customers.

Total project cost is \$2,150,000. Other funding: \$1,500,000 U.S. Economic Development Administration to complete Phase IV Fiber Optic Backbone Initiative.

**Staff comments & recommendation:** The project is the best-leveraged in this grant round with a proposed 70% federal EDA match (federal announcement is expected in the next 30-60 days). A five percent contingency is included in construction request. **Staff recommends award of \$645,000.**

## LENOWISCO, LLC

### ***LENOWISCO Fiber Backbone Geodesic Mesh© - Phase V(6) - Last Mile (#1765)*** **\$1,250,000**

This is first and preferred of two alternative proposals submitted by the limited liability corporation created by Lenowisco Planning District Commission to hold fiber assets (the applicant expects the Commission to select only *one* of the two pending proposals). Funds are requested to construct just under 13 miles of backbone fiber (\$387,900), install 210 last mile user connections with an as-yet undetermined amount of last-mile fiber (\$419,000), purchase network electronics (\$200,000) and lease 2-4 strands of BVU/Cumberland Plateau fiber from Pound to Wytheville (\$243,000). Applicant has subsequently requested that up to \$50,000 of requested equipment be allowed for last mile demonstration in St. Charles and Monarch VA.

Total project cost is \$4,409,600. Other funding: \$759,600 U.S. Rural Utilities Service for last mile connectivity in Blackwater, VA (awarded); \$1,000,000 Virginia Economic Coalfield Development Authority for last mile connections (awarded); \$1,400,0000 Sunset Digital Communications, Inc. service revenue generated to pay operational costs (projected revenue over twelve months starting 2/1/09).

**Staff comments & recommendation:** The applicant has confirmed that this is their preferred proposal, as opposed to #1766 below. Customer premise drops and equipment of \$419,100 are requested. Lease of BVC/CP fiber (\$243,000) that was built with TICR grant funds should not be approved. **Staff recommends award of \$1,250,000 (excluding lease payment, which should be redirected to backbone construction and wireless demonstration costs).**

## LENOWISCO, LLC

### ***LENOWISCO Fiber Backbone Geodesic Mesh© - Phase V(6)– Backbone (#1766)*** **\$1,250,000**

This is the second of two alternative proposals submitted by the limited liability corporation created by Lenowisco Planning District Commission to hold fiber assets (the applicant expects the Commission to select only *one* of the two pending proposals). Funds are requested to construct 25.6 miles of backbone fiber (\$807,000), purchase network electronics (\$200,000), and lease 2-4 strands of BVU/Cumberland Plateau fiber from Pound to Wytheville (\$243,000). Applicant has subsequently requested that up to \$50,000 of requested equipment be allowed for last mile demonstration in St. Charles and Monarch VA.

Total project cost is \$4,409,600. Other funding: \$759,600-Rural Utilities Service for last mile connectivity in Blackwater, VA (awarded); \$1,000,000-Virginia Economic Coalfield Development Authority for last mile connections (awarded); \$1,400,0000-Sunset Digital Communications, Inc. service revenue generated to pay operational costs (projected revenue over twelve months starting 2/1/09)

**Staff comments & recommendation:** Requested backbone construction in this proposal provides a greater increase in the size of the Lenowisco network (by 8.7%) than the alternative proposal above, but this alternative excludes the applicant's preferred request for last mile costs. Lease of BVC/CP fiber (\$243,000) that was built with TICR grant funds should not be approved. **Staff recommends no award.**

**Mid-Atlantic Broadband Cooperative**  
***VCCI Operational Loan Agreement (#1739)***  
**\$1,922,893.86**

Funds are requested by the nonprofit cooperative to payoff the existing operating loan from Virginia Community Capital, Inc. (the loan was capitalized by a \$2 million TICR grant to VCCI for operational support to MBC during the start-up phase of the Southside fiber optic network). The loan was structured to include interest-only payments for two years, and MBC has now begun monthly principal and interest payments of \$22,562 per month for eight years.

Total project cost is \$1,922,893.86. Other funding: none provided.

**Staff comments & recommendation:** The request was submitted by the applicant at the invitation of the Commission. MBC appears to be fully capable of making the payments so any award should be predicated on the “opportunity cost” of freeing the organization from this debt. This would reduce MBC’s overall debt burden, allowing MBC to borrow funds from other sources and to leverage other TICR funding for expansion of the backbone network, last-mile services, and supporting members in reaching underserved communities. **Staff recommends award of \$1,922,894.**

**Mid-Atlantic Broadband Cooperative**  
***Phase 4: Southside Regional Backbone Initiative Expansion (#1762)***  
**\$6,000,000**

Funds are requested to support 49 miles of new backbone fiber and 21 miles of new distribution with specific costs including: backbone fiber projects (\$1.7 million), distribution fiber projects (\$700K), electronics (\$600K), ten new towers for wireless service (\$1 million) and last mile matching funds (\$2 million). The backbone fiber will provide a Charlotte County extension to Phenix, a Brunswick County extension to Lawrenceville, and Emporia to Dinwiddie to close fiber backbone ring. Distribution fiber construction will be for member and tower fiber laterals. Grant funds will be used for up to 10 towers for Member collocation use for broadband expansion service. The last mile matching funds will provide MBC Members who participate in the State Broadband Roundtable Mapping efforts with matching funds to enable deployment of last-mile broadband systems in unserved areas of Southside Virginia. MBC will use a tracking system for the last-mile broadband projects to track dollars invested by TC and MBC member, number of residential and businesses customers with access to the services, and number of customers.

Total project cost is \$8,000,000. Other funding: \$2,000,000 MBC Member investments for last-mile broadband equipment to leverage the \$2 million in grant dollars from TICR (would be allocated by Member upon approval of their project).

**Staff comments & recommendation:** MBC has received TICR funding of \$40 million to date (balances of \$2.2 million remain available, primarily from an FY08 grant). This request is the only current proposal that would directly leverage private capital investment (\$2 million through the matching grants to private retail providers for last mile equipment). Staff has requested aggregated data indicating results of the previous last mile demonstration projects funded as a cost-share with private providers. **Staff recommends award of \$6,000,000.**

**Scott County Telephone Cooperative**  
***FTTP – East Gate City (#1761)***  
**\$1,250,000**

Funds are requested by the 501(C)(3) nonprofit cooperative to construct eight miles of backbone, 19 miles of distribution lines and five last-miles to enable fiber-to-the-premise (FTTP) from East Gate City to Big Moccasin and from US Hwy 23 at Yuma Road, where it will meet the applicant's present RUS project in the Yuma community. Customer premise drops and equipment are also requested, totaling \$336,727. This will allow Scott County Telephone to build an additional fiber optic gigabyte ring to serve 930 residents and 70 businesses from East Gate City to Big Moccasin and Rt. 23 to Yuma Road locations. This project will also provide connection between the applicant's two networks resulting in increased redundancy.

Total project cost is \$1,350,000. Other funds: \$100,000 SCTC working capital to pay on-going expenses and inside wiring for customers (in-hand): \$2,072,841.98 SCTC in-kind contribution of digital head-end for digital broadband services.

**Staff comments & recommendation:** SCTC has successfully implemented \$4.2 million of FY06 and FY08 Technology grants (small balances remain as the projects approach completion). Pro forma anticipates break-even in Year Four and modest net income (after operating expenses) thereafter. The pro forma uses a projected penetration rate of 30%. As such, the project makes a reasonable case for the need for grant funding. Seven percent match is limited to in-kind costs of customer installations, but SCTC has also successfully secured a \$1 million USDA-RUS grant for additional construction in their service area. **Staff recommends award of \$1,250,000.**

**The Wired Road Authority**  
***The Wired Road Expansion Project (#1763)***  
**\$1,024,237.83**

Funds are requested by this public broadband authority serving Galax/Grayson/Carroll to complete a one-year project that will expand the Wired Road network both wirelessly and through 72-144 strand fiber connections to areas of the region that are underserved or have no broadband service at all. The project consists of eight components: 1. Glendale Industrial Park to the Twin County Regional Hospital and Crossroads Institute; 2. Hillsville to Interstate 77 Business Park; 3. Independence/ Prison Extension; 4. Galax Schools; 5. Troutdale/ Grant Wireless; 6. Whitetop Wireless; 7. Baywood Wireless; and 8. Bridal Creek Wireless. The Phase 1 backbone will be extended by 3.4 miles, and 4.1 miles of distribution fiber and 3.3 miles of last mile fiber are requested. Customer premise drops and equipment of \$83,835 are also requested. The project will result in 345 new fiber connections and 318 new wireless connections (wireless service area is 50 square miles). Of the 663 total new connections, 435 would be to residences, 185 to businesses and industries (including several farms and agri-business), and 43 would be to institutions or public facilities. These numbers represent a 15% penetration rate for commercial and industrial customers and a 2% penetration rate for residential customers.

Total project cost is \$1,024,237.83. Other funds: none provided.

**Staff comments & recommendation:** The applicant's only previous Technology request was tabled in FY08, and has been revised and reduced to the current proposal. The Authority's first phase includes service to local schools that began a year ago. A network operator and maintenance team are on board and planning to begin roll out of services to commercial/residential customers in January. No match is listed for the current phase of the project, however, \$1,480,500 (\$725,000 DHCD, \$755,000 local

funding) has been spent to design and construct Phase I of the Wired Road. Contingency costs of approximately four percent are included in construction requests. Project management fees of \$72,941 are requested, which is contrary to the Commission's General Funding Policies. **Staff recommends award of \$951,297 (excluding project management fees). ■**