

## Question 8

### Executive Summary – BIP – Middle Mile

The Applicant, Troy Cablevision, Inc. (“Troy Cable”), proposes a project known as, “**Alabama SmartBand—Rural Broadband for Economic Development and Energy Independence**,” referred to henceforth as Alabama SmartBand or SmartBand. The term *SmartBand* represents the union of Broadband and Smart Grid infrastructure. This proposal for Middle Mile Broadband Infrastructure collaborates with the South Alabama Electric Cooperative (“SAEC”) Automated Metering Infrastructure (AMI) project at the U.S. Department of Energy.

#### Southeast Alabama: A Difficult Area to Serve

The commercial market for broadband services in Southeast Alabama is broken. Each of the four counties—Coffee, Crenshaw, Dale, and Pike—in the SmartBand service area meet one or more of the Broadband Initiatives Program (“BIP”) requirements for an underserved rural area. Residents in this region do not have access to broadband because service providers must qualify for financing based on traditional lending covenants that require 25 homes per contiguous cable plant mile for a broadband build out. This has proved too great a hurdle for broadband providers in Southeast Alabama. **SmartBand will serve an area with 5.3 homes per cable plant mile.** Without a Rural Utility Service loan/grant, people in this region are likely to remain technologically isolated. As a result, economic recovery will happen slower in this strikingly poor region of Southeast Alabama.

#### Extreme Poverty

The driving purpose of the ARRA is to preserve and create jobs, and to assist those impacted by recession. Few places in America have the same degree of economic need as the proposed four-county service in Southeast Alabama, which are identified on the list of the 100 poorest counties by median household income in the nation. According to the US Census Bureau, the four-county average rate for individuals living in poverty is 20.8%, which is 7.5% above the national rate of 13.3%. The average rate for families living in poverty, 16.7%, is nearly double the national average of 9.8%. Vulnerable populations in Southeast Alabama are bearing the brunt of the recession. For instance, over half the female head of household families (56.9%), and nearly half (45.5%) of African American Families in Pike County live in poverty. The poverty rate in this four-county area for persons over the age of 65 (17% in poverty), and persons under the age of 18 (33% in poverty) are nearly double the national averages for these age groups. The programmatic purpose of the Broadband Initiatives Program is to facilitate rural economic development. The disproportionate number of families, children, seniors, and minorities living in poverty speak for itself; Southeast Alabama needs stimulus funding for economic recovery.

#### Alabama SmartBand—Rural Broadband for Economic Development and Energy Independence

Troy Cable and SAEC are coordinating efforts to engage ARRA programs simultaneously in an effort to maximize public investment. This proposal will integrate with the SAEC submitted application to the US Department of Energy *Smart Grid Investment Grant Program* (DE-FOA-0000058) for an Automated Metering Infrastructure (AMI). Together, these projects constitute the *Alabama SmartBand* Project.

The exchange of information between the electricity provider and the customer is the foundation of Smart Grid. Smart Grid hopes to give rural energy customers the ability to save money by providing them with the information and tools necessary to be responsive to electricity grid conditions, including price and reliability, and by giving them more choices over how they consume and conserve electrical power. With broadband connectivity to the home, consumers may one day be able to control their electricity consumption remotely, which is achievable only through broadband. Electricity providers seek to use Smart Grid as a means to ensure the efficient use of the electric grid by optimizing current assets while integrating emerging technologies such as renewable and storage devices, to enhance reliability, by protecting the grid from cyber and natural attacks, to increase power quality, and to promote early detection and a self correcting grid.

Poultry production in Southeast Alabama will directly benefit from SmartBand, and could be a national model for agricultural adoption of broadband and Smart Grid. Alabama is the third largest producer of broiler chickens in the nation, and poultry production is responsible for over 55,000 jobs in the state. In the four-county SmartBand service region there are 1,300 known poultry houses, 2 feed mills, and 1 poultry producing facility. The National Poultry Technology Center at Auburn University reports that energy usage and cost is the top issue facing Alabama Poultry Producers. Utility costs have increased 77% since 2002, and in 2006, utilities made up 28% of non-feed costs (source-Alabama Power). Poultry producers use onsite computers to control climate, ventilation, feed, litter, and lighting. However, remote monitoring of poultry houses is impossible because poultry houses do not have access to broadband, or an automated metering infrastructure. The proposed SmartBand project will enable producers to lower electricity and maintenance costs which in return will help to maintain national food prices, and facilitate the stabilization of the hard hit broiler production industry in Alabama.

Alabama SmartBand proposes an integrated communications infrastructure to realize the benefits of a smarter electricity grid and a more informed consumer. In the words of the Assistant to the President for Energy and Climate Change, Carol Browner, "With the Recovery Act, President Obama demonstrated his commitment to developing a bigger, smarter, stronger electric grid that will not only reduce our energy costs but also reduce our energy use."

#### Alabama SmartBand Middle Mile Broadband System

SAEC will capture data from residential, commercial, and industrial accounts and store it at each of its thirteen electricity substations located in rural areas. The Cooperative acknowledges that it must have access to high bandwidth fiber broadband connections to transport this data to its headquarters in Troy, Alabama. Moreover, the Middle Mile project will allow the build out of a Last Mile network to service homes, businesses and critical facilities in this rural area, which previously had no or limited access to broadband. Troy Cable will install a 204 mile dedicated gigabit fiber loop that will connect all thirteen SAEC substations to its headquarters. This Middle Mile network will consist of two redundant links from a central video/data Head-end to Private Network Access Points (PNAP) located near the intersection of 82 Junction and US Highway 231 near Montgomery, Alabama. The backbone is built across a 10 Gigabit Ethernet transport core that utilizes carrier grade electronics for sub 50ms failover.

#### Pricing and Subscribership Projections

Troy Cable Service Offerings will offer service starting at \$200.00 for up to 10 Mbps. Ten Mbps service will be \$650.00 and will be discounted 25% for critical facilities at price of \$487.50. 1 Gbps dedicated service will cost \$2,500.00. Troy Cable projects to attract 8,822 new subscribers over three years, with 4,367 in year one, 2,314 in year two, and 2,141 in year three.

#### Budget

The Applicant requests \$27,255,959 for the Alabama SmartBand Middle Mile Infrastructure project.

#### Homes, Businesses, & Critical Facilities Passed

The number of households passed in the coverage area is approximately 14,462. The number of businesses passed is approximately 363.

The broadband infrastructure funded through this plan will support immediately the **USDA Rural Investment Project: "Joining Hands" Telemedicine Project**. This telemedicine project joins the resources of four (4) rural Alabama Community Mental Health Agencies, comprising seventeen (17) locations, and a child health center to expand and improve health care services available for currently underserved patients in rural Alabama. Moreover, SmartBand will deliver broadband at a 25% reduced rate to anchor institutions within its service area, including twenty-seven (27) K-12 schools operated under the Schools and Libraries Program of the Universal Service Fund, commonly known as "E-Rate, Enterprise Ozark Community College, Head Start, and libraries.

#### Alabama SmartBand: Shovel & Job Ready

Troy Cable will launch immediately upon funding, and will be substantially completed by November, 2011 with full completion scheduled for November, 2012. The technology design represents a focus on performance-to-cost ratios with special emphasis placed on technical feasibility and expandable bandwidth to meet an anticipated growth in information exchange and on-line collaboration.

The number of jobs created directly as a result of implementing this program is estimated to be 113, including full- and part-time positions in accounting, customer service, technicians and installers and construction. This tally includes construction and technical personnel associated with the Middle Mile and Last Mile build, as well as administrative and service support staff.

#### Qualification to Build, Operate and Maintain SmartBand Last Mile System

**Troy Cable** began offering broadband internet services in Troy, Alabama in 1999, making it one of the first broadband service providers in Alabama. Troy Cable has always understood that affordability is the key to successful broadband delivery in Alabama. The company is a privately held, majority woman-owned business with more than a quarter-century of experience in providing and operating communications services including cable television, digital telephone, high speed internet and security services. Currently, Troy Cable services [REDACTED] cable customers, [REDACTED] internet subscribers and [REDACTED] telephone subscribers.

See 45) Supplemental Information 3 for the conclusion to Question 8 – Executive Summary - BIP - Middle Mile

## 45) Supplemental Information 3

### **Additional information provided:**

#### **Question 8**

#### **Executive Summary – BIP – Middle Mile**

**The South Alabama Electric Cooperative** is a not-for-profit electric distribution cooperative power aggregator that was founded in 1937. The Cooperative has approximately 2,580 miles of line and over 16,500 active accounts.

#### **Non-Discrimination and Interconnection Obligations**

Every aspect of the project adheres to principals contained in the Federal Communication Commission's broadband policy statement (FCC 05-151) and meets all federal and state criteria regarding non-discrimination, performance and network interconnection obligations.

Troy Cable holds existing agreements that include interconnection, traffic exchange, resale, master service and internet agreements with entities in the proposed service area, such as the, BellSouth Telecommunications, Inc., Butler Telephone Company, Inc. - CenturyTel of Alabama, LLC; Interstate FiberNet, Inc., BellSouth Business Systems, Inc., Knology Provider Solutions Group, Inc., and the United States Army Aviation Center of Excellence. Troy Cable is a privately held, majority female-owned business with more than a quarter-century of experience in providing and operating communications services including cable television, digital telephone, high speed internet and security services. Currently, Troy Cable services more than [REDACTED] cable customers, more than [REDACTED] internet subscribers and [REDACTED] telephone subscribers.