

## 8. Executive Summary

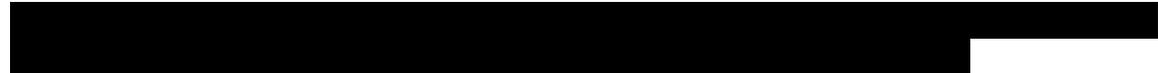
a) Thacker-Grigsby Telephone Company (TG) is a regulated telephone company in eastern Kentucky. TG currently operates six telephone exchanges in Knott County and provides voice and digital subscriber line (DSL) services to its customers. TVS Cable (TVS), a subsidiary of TG, provides cable television services to TG's ILEC territory in Knott County as well as portions of six other counties in the area. In addition to video service, TVS offers broadband data services to most of its customers. However, customers in Breathitt County do not currently have access to broadband service. TG is seeking ARRA grant funding through the RUS Broadband Initiatives Program (BIP) to build a network capable of providing broadband service to some of the unserved areas in Breathitt County.

The majority of Breathitt County does not have sufficient access to broadband service. Broadband service is currently only available in the city of Jackson and is provided by AT&T via DSL. Breathitt County is a very rural area with rough, mountainous terrain making utility infrastructure projects extremely expensive to build. Grant funding through ARRA will allow TG to construct a broadband capable network in these areas while maintaining a sustainable business plan.

Two main goals of the ARRA will be accomplished through this project. The first goal is job creation and retention. It is estimated that over 25 construction and engineering jobs will be retained. These personnel will be employed during construction and will live and work in Breathitt County. This, in turn, will produce additional employment opportunities in providing food and living quarters for the construction and engineering personnel. The second ARRA goal is to invest in infrastructure that will provide long-term economic benefits. The proposed project will construct a fiber-optic based telecommunications infrastructure with a projected life of 30 years.

b) The proposed funded service area is located in the central regions of Breathitt County, Kentucky. Breathitt County is considered "distressed" by the Appalachian Regional Commission. According to census data, the income and education levels in Breathitt County are well below the state averages. The area is challenged by mountainous terrain and limited highway and rail infrastructure. The difficulty of transportation in and out of the area is the main cause for the lack of industry and manufacturing. This drives the need for a 21<sup>st</sup> century communications network. It is the goal of TG that this project will afford the residents of these areas the facilities and technology necessary to compete in a global market.

TG's initial plan was to overbuild the existing Vancleve cable television system in the northern part of Breathitt County and connect it to the main cable television network in Perry County via fiber-optic facilities. This fiber-optic connecting route passes through unserved portions of the county. In addition to covering the existing Vancleve serving area, TG selected several areas along the connecting route to include in this project. These areas are near the town of Haddix in the southern part of Breathitt County. The connecting route also passes through the city of Jackson, which currently has access to broadband service. TG does not intend to overbuild these already served areas in Jackson. [REDACTED]



c/d) The proposed funded service area will pass approximately 1308 premises. This includes 1214 households, 60 businesses, and 34 community anchor institutions. Technology statistics from Connect Kentucky show that only 13% of residents in Breathitt County have broadband service at home, which is 20% lower than the state average. Outside of Jackson, the only internet service available is through dial-up. This greatly limits opportunities and productivity in education and business. Providing broadband service at affordable rates will have a significant impact on the economy and education opportunities for residents and their employers.

e) Proposed services and applications for the area include high-speed broadband and video services. The network will be capable of providing broadband speeds that facilitate all current Internet applications and will provide a strong infrastructure for future applications. The main goals are to allow online training and research and allow small businesses to develop their markets. In addition to broadband, broadcast video services will be available. Some of the advanced video applications include high-definition (HD) channels, digital video recorder (DVR).

f) TG is willing to negotiate in good faith with any bona fide request for interconnection agreements in the proposed funded service area. TG will also adhere to any non-discrimination obligations set forth in the NOFA or by the FCC.

g) TG plans to construct and operate a fiber-to-the-home (FTTH) network throughout the funded service area. The outside plant design utilizes a home-run architecture in which all fibers run point-to-point from the customer premise to one of five centralized electronics locations. This architecture provides extreme flexibility allowing for multiple electronics options. It also provides a future-proof infrastructure that will last 30 years.

h) TG will provide services to the area via similar technologies used in their existing cable television network. An RF video headend as well as operations and billing systems are already in place. RF video signals are modulated and broadcast downstream to the customer premise. The system uses DOCSIS (Data Over Cable Service Interface Specification) to provide high-speed data communication upstream and downstream. The preliminary design is based on RF over Glass (RFOG) electronics. These electronics will allow the existing cable television services to operate over the proposed FTTH network, as opposed to the traditional HFC (hybrid fiber-coaxial) network currently deployed in TG's service area.

TG has been a telephone corporation since 1956 and has strived to provide service to even the most remote areas at the lowest possible cost to its customers. They have consistently maintained a profitable, well operated company. TG has been an Internet Service Provider since 1995 and has considerable experience providing broadband services via both DSL and cable television technologies. Their past track record and management experience is a strong indicator of their ability to operate this new network.

In August 2008, TG began construction of FTTH facilities in their regulated service area. This construction is currently underway and proceeding well. TG is in the process of cutting over customers from the copper plant onto the new FTTH facilities. Upon project completion TG will have over 200 miles and 1700 customers on their new FTTH facilities.

i/j) The overall infrastructure cost of the broadband system is \$7,463,374. The system will pass over 1300 premises. Subscriber projections are based on TG's current take rates and historical growth in recent years. Overall projections are 421 broadband subscribers and 523 video subscribers by the end of the five year projection period.

k) The proposed project will create or save a number of construction and engineering jobs. Once the project begins, four engineers will be required to perform the necessary field work as well as two engineers to prepare designs and contracts. Once construction begins, several aerial construction crews will be required. In addition, several operating personnel must be retained to operate and maintain the network. At least 25 jobs will be created or saved as a result of this project. Ancillary employment opportunities will be in the hospitality industry providing housing and food for the construction and engineering personnel. Out of area employment in the material production and delivery sectors will also be enhanced by the project.