

## **8. Executive Summary of Project for BIP and BTOP: *Panhandle Regional Fiber-optic Infrastructure (PRFI)***

Panhandle Area Council is an Economic Development District Designated by the Department of Commerce. It's chartered to assist local organizations in the five-county Northern Idaho, Panhandle area with economic development issues and initiatives. In this capacity, the Panhandle Area Council has helped to structure and/or provide the financing for a broad range of community infrastructure projects.

The two northern counties in the Panhandle area, Bonner and Boundary, have long struggled to build a diverse economic base beyond the lumber industry. Broadband availability and speed has become an ever increasing requirement in retaining jobs as well as in efforts to grow and diversify the economic base and create new sources of employment. Only a few of the larger communities in the proposed PRFI serving area have access to wire-line based broadband services, and service in these areas are slow, spotty and generally unreliable, with the PRFI serving area collectively qualifying as significantly underserved, including many parts of the territory, including most smaller cities being totally unserved. Several key businesses have threatened to leave the area unless the infrastructure problem is solved.

To address these issues, the Panhandle Area Council has created the PRFI initiative. The project has been structured in cooperation with both counties' economic development corporation/councils and has received the full support of virtually every local governmental entity, anchor institution and critical facility in the two-county service area, as well as the Kootenai Indian Tribe. The project has the full support of Idaho's Governor, Dept of Commerce, Dept. of Labor and all state legislators representing the two counties. The project also has the support of both of Idaho's U.S. Senators (Crapo and Risch) as well as Congressman Minnick. Letters of support from all of the above are included in this application.

PRFI will implement a Fiber-To-The-Premise (FTTP) core infrastructure and high-speed wireless (WiMax) overlay, which will provide service to the largest number of subscribers possible in the service area with the highest amount of bandwidth feasible. The business model will utilize a portion of project revenues each year to drive higher bandwidth services deeper in remote rural areas. The PRFI project will implement an "open access" business model that will allow all qualified private sector service providers and entities to have competitively neutral, non-discriminatory access to the infrastructure.

The project has been carefully designed to provide significant benefits to the local economy, schools, healthcare, libraries, public safety and local governments. All community anchor institutions and critical facilities will have free and unencumbered access to the infrastructure to create local or regional gigabit networks, which will improve their operational efficiencies and serve the needs of the two county's rural populations, including serving vulnerable populations with connectivity-based programs. The revenues that the project generates after the "authorized end date" will be used to provide a sustainable source of funding to support and further the public benefit programs that have been incorporated into the PRFI plan, and are targeted to address virtually all of the NOFA and ARRA statutory purposes. Any remaining funds after operations and maintenance, debt service, if any, upgrades and expansion and sustainable support for public benefit programs will be distributed to local public agencies for use on additional public benefits infrastructure and economic development programs. The project's

financial models show that the project will generate over \$140m (\$3.30 for every \$1 in grant funds) in distributable revenues and will provide an additional \$48m for further expansion and upgrades, which will allow for further expansion of fiber-optic broadband into remote areas.

a) Opportunity the proposed system seeks to address:

- a. High Unemployment and Poverty Levels: Transition from lumber to green jobs. Job retention and growth (*unemployment is as high as 20% in some communities*)
- b. Unserved and Underserved Area: Low bandwidth - No bandwidth for businesses and residents. High cost and limited connectivity for schools/libraries - Rural education costs
- c. Rural Healthcare Delivery – FTTP can lower cost increase efficiency
- d. Smart Grid (power) Demonstration Area: FTTP and WiMax will provide key enabler
- e. Homeland Security & Public Safety: Needs of Customs and Border Patrol – Regional fiber and wireless infrastructure for public safety
- f. Sustainable source of funding for public benefit programs – sustainable broadband adoption

b) A general description of the proposed funded service areas: The PRFI project is comprised of one (1) Proposed Funded Service Area, consisting of contiguous census blocks within: Bonner County Idaho; including the census designated communities of: Sandpoint, Ponderay, Kootenai, Dover, Clark Fork, Hope, East Hope and Priest River and other; Boundary County Idaho; including the communities of: Bonners Ferry, Naples and Moyie Springs and other.

c) Number of households and businesses passed:

- a. Bonner County: 11,699 (Subscriber Premises)
- b. Boundary County: 4,218 (Subscriber Premises)

**Total Subscribers Passed: 15,917**

d) Number of community anchor institutions, public safety entities, and critical community organizations passed and/or involved with project: See attached detailed list

TOTAL = 65	EDUCATION K-12	LIBRARIES	PUBLIC SAFETY	HEALTHCARE	EDUCATION – HIGHER ED
By Category	25	4	27	5	4

e) Proposed services and applications for the proposed funded service areas and users: On network connectivity will be available to all anchor institutions and critical organizations. Internet, Phone and TV will be made available to all subscribers on the PRFI at competitive prices from private sector service providers.

f) Approach to addressing the nondiscrimination and interconnection obligations: Open access, competitively neutral, non-discriminatory access for all broadband service providers and entities.

- g) Type of broadband system that will be deployed (network type and technology standard):  
 The proposed technology for the PRFI project is a hybrid system using primarily a GPON Fiber to the Premise (FTTP) network designed using industry standard specifications and closely following the FTTP architecture used by Verizon in the territories where they have chosen to deploy FTTP. Along with a wireless component designed to reach subscribers in locations that cannot reasonably be reached by the FTTP network. The FTTP portion of the network will be designed as a passive optical network (PON) from the central office to the end user and will employ the latest in GPON technology and equipment. These network elements include current generation fiber distribution frames (FDF) in the central office linked by fiber optic cable to current generation fiber distribution hubs (FDH) using the most current splitters, tied by fiber optic cable to fiber distribution terminals (FDT), and finally linked by fiber optic drop to the optical network terminal (ONT) at the subscribers location. The additional wireless portion of the system will be connected using the same fiber optic cable placed for the FTTP network. This network design allows for the maximum number of subscribers to be reached with the highest amount of bandwidth for a minimum reasonable cost.
- h) Qualifications of the applicant that demonstrate the ability to implement and operate a broadband infrastructure, and/or be a sustainable broadband services provider: Panhandle Area Council has partnered with some of the top firms in the industry in engineering and construction management for FTTP networks, wireless networks, FTTP Project and Program Management and telecom and broadband legal services. The Council will contract with qualified service providers for operations and maintenance services once the project is completed and operational.
- i) Overall infrastructure cost of the broadband system: **\$54,569,400**
- j) Overall expected subscriber projections for the project:  
**Premises Total:** 15,917 **Households (HH) Total:** 14,448 **Businesses Total:** 1,469  
**Percent Covered:** 100% **HH Fiber:** 12,715 **HH WiMAX:** 1,733  
**Market Penetration Year 5:** 7,945 Total **Fiber:** 7,022 **WiMAX:** 923
- k) Number of jobs estimated to be created or saved as result of this project:

**Jobs Saved Estimates: 250 to 350** first 3 years (see letter, Quest Aircraft)

**Jobs Created Estimates (Project): 1,680** over three years

Project Direct: Initial Construction and service provider: **1,280**

Local Project Direct (retraining) **504** (number included in the 1,280)

Project Indirect and Induced: **420**

**Jobs Created Through Economic Growth Due to FTTP: 250 to 375** over 5 -10 years

**Jobs Created from Project Revenues Remaining in Community: 2,520** direct jobs over 20 years, additional jobs can be expected from revenue circulation and economic churn.