

Broadband USA Applications Database

Applicant Name: First Step Internet, LLC

Project Title: Central North Idaho Regional Broadband Network Expansion

Project Type: Middle Mile

Executive Summary

The opportunity of the proposed project is to construct a multi-user wide area licensed microwave network to serve un-served and under-served hospitals, schools, businesses, libraries, safety agencies and other critical community institutions in north central Idaho and connect them to the Internet, each other and to the Idaho Regional Optical Network (IRON). In addition, service capacity will be greatly increased for thousands of homes and businesses. One of our key partners in this project is the Idaho Regional Optical Network (IRON). It is their charter "to facilitate advanced networking among institutions in Idaho and the Northern Tier States. Participants include institutions of research, education, health care, state government, and partner organizations that support research, education, and economic development in Idaho and the States of the Northern Tier." According to IRON, "world events are putting the state of Idaho, Idaho National Laboratories, and Idaho universities at the center of a nuclear renaissance. The intellectual contribution that Idaho will be able to make in this "rebirth of nuclear energy" is dependent upon a robust network infrastructure." IRON also observes: "In today's global marketplace, high-speed network access is imperative to economic opportunities in all areas, specifically in information and technology growth. Economic expansion is realized by the increasing number of new commercial endeavors that are created in technology parks where reliable, cost-effective, high-speed network connectivity is critical. Without this infrastructure, Idaho will continue as one of the few remaining states on the wrong side of the "digital divide" and will be at a disadvantage in sustaining existing technology businesses and attracting new high-tech businesses to the region..." So the above information from IRON describes what is happening on a State level, but unfortunately much of the investment and development of network infrastructure and capacity has occurred in southern Idaho where fiber is widely deployed and in the northern part of Idaho near Coeur d'Alene and over into Spokane, WA. With the construction of the proposed high capacity microwave network, the high capacity infrastructure available in Moscow and Lewiston will be extended throughout the entire region and these communities will be able to participate in the developments occurring on the State level. This project is the single most important initiative that will positively impact our region for years to come," says CEDA Director Christine Frei. (CEDA is the planning organization for the US Department of Commerce EDA-designated Clearwater Economic Development District). Another key partner in the project is the Nez Perce Tribe. We have both agreed to an MOU which is included in our letters of support. It is the Tribe's intention to extend the backbone to a few areas within the reservation where First Step does not have service. They also plan to installed wireless Access Points on their towers and First Step towers, particularly in the 4.9ghz frequency, that will bring service to the Tribal Police and other first responders and public safety personnel. First Step and the Tribe will cross connect networks

for redundancy and “open access” sharing. b. The proposed funded service area includes the counties of Latah, Clearwater, Nez Perce, Lewis and Idaho in rural Idaho. This region has been primarily involved in the farming, timber and mining industries. The University of Idaho and Lewis Clark State College are the premier educational institutions in the region. Moscow and Lewiston, where these institutions are located, are classified as served communities. The surrounding areas, however, are classified as under-served. Potlatch, Princeton, Deary, Bovill, Elk River, Troy, Orofino, Weippe, Cottonwood, Ferdinand, Grangeville, Kamiah, Nez Perce, Craigmont, Winchester, Lapwai, Culdesac and Kooskia. c. Households and businesses passed Total Pop. HouseHolds SqMiles Census Blocks Total Serv Area: 46,685 21,383 13,205 8,985 Underserved Area: 46,308 21,228 13,125 8,925 Businesses passed 720 Total Businesses in 5 county area 10,889 If Moscow and Lewiston are excluded (83843, 83501) there are 1367 businesses d. Community anchors Potlatch High. Potlatch Elem, Potlatch Med Clinic, Latah County Library Dist, Troy School Dist, Troy Med Clinic, Deary High, Bovill Elem. Elk River Library, Lewis County Courthouse, Prairie River Library Dist, Nez Perce Highland School, Craigmont Med Clinic, Clearwater County Hosp, Orofino School Dist Timberline, Clearwater Public Library, Clearwater County, Weippe Library, Idaho County, Grangeville High, Grangeville Elementary, Grangeville Centennial Library, Syringa Hospital, LCSC remote ed facility, Cottonwood School, Cottonwood Hosp - St. Mary's, Kamiah School Kamiah Med Clinic e. The proposed services and applications will include high speed Internet access, transport access to the IRON network, IP transport services, video teleconferencing over IP, direct access to both LCSC and the Universtiy of Idaho, Voice over IP through 3rd party VoIP providers, and inter-facility access. f. Non-discrimination and interconnection obligations will be met through the establishment of interconnect points throughout the network. A fiber POP has been established at Moscow City Hall that will enable providers to connect and provide service throughout the entire WAN. At the XO POP in Lewiston a similar set up is available. At various tower sites throughout the microwave network, providers will be able to negotiate collocation arrangements to attach to the network and provide service. Communications standards such as IP transport, MPLS and BGP and PPPOE will be employed so as to provide a consistent service methodology. g. First Step Internet will deploy a broadband system that utilizes high capacity licensed microwave links to form the core of the backbone. There will be a number of redundant loops in the network to present alternate paths for data flow to increase reliability & aggregated capacity. We will be using 11 & 18ghz DragonWave Horizon radios for the core and Redline AN-80i links for spur extensions and anchor institutions. The backbone will utilize existing FS tower infrastructure with the addition of new towers where more antenna capacity is required. The WAN will connect to existing fiber in both Moscow and Lewiston. h. First Step Internet (FS) is a regional Internet Service Provider (originally First Step Research) that has been building networks for 21 years and providing Internet services for over 12 years via dial up, Frame Relay and DSL. In the past 9 years we have utilized microwave technology to begin to bridge the digital divide and extend broadband service to dozens of previously unserved rural communities in the region and now serve 40 communities across 10 counties with 3000+ square miles of coverage and 600+ miles of point to point microwave links. We currently have over 3500 wireless subs, 800 DSL subs, 2300 dial up subs and a dozen direct fiber clients including Gritman Medical Clinic, City of Moscow, Pullman Regional Hospital, Schweitzer Engineering Labs and others. Throughout the region we provide service to a majority of the City and County governments, hospitals, schools and libraries in our service areas. We also provide redundant Internet service to the University of Idaho. FS has also partnered with the RUS for over \$600k in Community

Connect Broadband grant projects and with the State of Idaho for \$27k in broadband grant funds. In addition to the above, FS has forged strategic relationships with key partners such as CEDA, LCSC, University of Idaho, the five regional hospitals, numerous schools, the Nez Perce Tribe and finally, IRON. Given these strategic relationships, we are confident we will be in the position to implement the proposed WAN and extend this service to the proposed partners in the region. With this project, First Step Internet will be deploying most of the three phases of the multi-user WAN schematic and plan developed by CEDA and the NCITC completed in conjunction with the 16 of the rural communities of the region in 2007. A copy of the study has been included. i. \$2.9 million j. Minimum 426 households, 48 businesses and 20+ anchor institutions including hospitals, libraries, schools and public safety agencies. k. Clearwater Valley Hospital and St. Mary's Hospital – 400 jobs preserved Using the Idaho Department of Labor statistical information, CEDA estimates that approximately 1,367 businesses with 7,520 employees in the benefit area will be served by the First Step project. These numbers do NOT include the significant number of self-employed individuals (such as farmers, loggers, etc.) that are in this area. Because the majority of our rural region is either un-served and under-served, it is safe to say that the majority of the existing businesses and self-employed individuals are dependent on high speed internet for business communications and that the FS project will assist in retention of these jobs. In addition, the FS project will directly impact the ability for businesses to expand and new business to be established. We are hopeful that it could directly contribute to 500 new jobs over the next five years.