

Broadband USA Applications Database

Applicant Name: FiberLight

Project Title: FiberLight South Florida Network Expansion

Project Type: Middle Mile

Executive Summary

FiberLight South Florida Executive Overview FiberLight is seeking an NTIA grant to expand and “light” its existing terrestrial-based, middle mile network located in the Florida Counties of Miami-Dade, Broward and Palm Beach (the South Florida Network). FiberLight will extend the existing backbone network 195 miles south and west from Miami-Dade County and pass through the community of Homestead; span the full 159-mile length of the Florida Keys; and terminate in Key West, FL. In addition, FiberLight will extend the existing backbone network 35 miles west from Palm Beach County and terminate in Belle Glade, FL. The combined network expansions would include initial interconnection points in the communities of Doral, Lauderdale Lakes, Boyton Beach, Margate, Big Coppitt, Big Pine, Cudjoe Key, Duck Key (Conch), Florida City, Homestead, Islamorada, Key Largo, Key West, Layton, Marathon (Crawl), Stock Island, Sugarloaf, Tavernier, and Belle Glade. Furthermore, the network expansions will directly pass through an additional 49 rural communities that could quickly and easily be accessed in the future. FiberLight would leverage its existing South Florida Network to deploy and operate the proposed network expansions. FiberLight’s South Florida Network expansion is being endorsed by the Monroe County Government (County) and FiberLight will provide at no cost, upon network completion, two backbone fibers to the County for the purpose of connecting schools, airports, hospitals, police stations, fire stations, and local government administrative buildings throughout the Florida Keys. The County currently leases a dark fiber network provided by the incumbent service provider to connect the County’s anchor institutions; however, the current provider has formally notified the County that the dark fibers will no longer be available after December 2010, essentially leaving the County’s anchor institutions stranded without broadband access. FiberLight’s proposed middle mile project will ensure that the County has sufficient broadband access. In the addition to the County’s locations, FiberLight will also establish open interconnection points in Belle Glade, Key Largo, Big Coppitt Key, Sugarloaf Key, Cudjoe Key, Big Pine Key, Marathon Key, Crawl Key, Conch Key, Layton, Islamorada, Tavernier and Key West. All of these communities are considered to be rural, with the exception of Key West. Belle Glade, Layton, Big Pine Key, and Tavernier are considered to be underserved areas. In addition to the Florida Keys, the Southern Expansion will also provide open interconnection points in the communities of Homestead and Florida City. Homestead is a community located in southern Miami-Dade County with a population of 47,509 and 13,880 households, 35% with income below poverty level. Florida City is located in Miami-Dade County and is an underserved community with a population of 7,843, 43% with income below poverty level. Belle Glade is a rural underserved community located in Palm Beach County with a population of 14,900, 33% with income below poverty level. The existing FiberLight South Florida Network is primarily a dark fiber middle mile network that provides lit services on an individual,

customer specific basis. Therefore, it is essential that FiberLight purchase and install the requisite electronics to “light” the South Florida Network to provide the broadband users in the expansion communities a network path to the various Internet and broadband service interconnection points. FiberLight would use NTIA grant dollars to purchase the electronics required to light the existing network and would contribute backbone fibers from its existing network to connect the expansion areas. The total number of households and businesses that will be passed by FiberLight’s South Florida Network expansions are 66,518 households and 8,740 businesses. The Florida Keys account for a combined 44,346 households and 5,260 businesses passed; Homestead accounts for 13,880 households and 2,582 businesses passed; Florida City accounts for 3,438 households and 277 businesses passed; Belle Glade accounts for 4,854 households and 621 businesses passed. The total number of all households and businesses passed including communities that are served by FiberLight’s existing network that is being contributed to the overall project are 79,104 total households and 14,433 total businesses passed. The collective number of community anchor institutions located in the service areas of Homestead, Belle Glade, and Florida City is fifty-six (56). The combined total of community anchor institutions in the various Florida Keys serving areas is fifty-one (51). The grand total of community institutions that are directly connected or passed by the proposed South Florida Network expansion are one hundred and seven (107). FiberLight will provide for this project both high capacity lit fiber and dark fiber solutions on a wholesale and retail basis delivered over the proposed South Florida Network. These solutions will be available to any service provider, commercial enterprise, web services firm, and federal and state government agency. FiberLight also will provide engineering, design, construction and installation services for its customers in support of its metro optical transport products. In addition to offering dark fiber strands, FiberLight will provide managed services over the proposed network on both a wholesale and commercial basis, to include Wavelengths, Optical Carrier Bandwidth, Metro Ethernet and IP Transit on a private fiber backbone. FiberLight’s Metro Ethernet product provides native Ethernet connectivity while the Managed Wavelength and SONET services provide OC-N; 2.5 Gigabyte, and 10 Gigabyte connectivity respectively. FiberLight deploys open, general-purpose networks capable of providing crucial basic infrastructure with unrestricted access to service providers. FiberLight is committed to providing networks that are technology and platform neutral, affordable, and accessible. FiberLight networks are open to Federal and State government agencies, commercial entities, and the full range of existing service providers, regardless of use -- wireline, wireless, or satellite services. FiberLight also adheres to the principles contained in the Federal Communication Commission’s Internet Policy Statement (FCC 05-151, adopted August 5, 2005), and does not favor any lawful Internet applications or content over others. The backbone network serving the Florida Keys will span a total of 159 miles from end-to-end and consist of one (1) 432-strand single mode fiber optic cable, originating from FiberLight’s existing network interconnection point in Miami-Dade County and terminating at an interconnection point in Homestead. From Homestead, the backbone will be reduced to one (1) 144-strand fiber optic cable, spanning the entire length of the Keys, and terminating in Key West. The backbone network serving Belle Glade will span a total of forty-five (45) miles, originating from FiberLight’s existing network in Palm Beach County, and will consist of one (1) 144-strand single mode fiber optic cable. FiberLight will utilize Fujitsu 9500 Packet Optical Networking integrated ROADMs to function as the core interconnection devices for enabling broadband Internet and transport. In addition to the core, two aggregation devices will be interconnected to the Fujitsu 9500 at each node location.

The first will be the Fujitsu 4500 which is the SONET ADM capable of delivering DS1 to OC-192 circuits. The second device interconnected to the Fujitsu 9500 will be the Brocade CES, which is capable of delivering Layer 2 and Layer 3 connectivity via Ethernet interfaces. Design, engineering, construction, and the operation of high-capacity facility-based networks, combined with broad adaptability and openness to innovation, have been hallmarks of FiberLight since its inception in 1993. FiberLight has designed, engineered, and installed over 500,000 duct and fiber miles that include more than 5,300 access points. Moreover, FiberLight has designed and constructed hundreds of laterals extending from the backbone networks to access various customers and points of interconnection. As a provider of network infrastructure solutions and strategic network design services, FiberLight owns, operates, and maintains extensive networks in the metro areas of Atlanta, GA; Baltimore, MD; Dallas, TX; Houston, TX; San Antonio, TX; Miami, Florida; Tampa, FL; and Washington, D.C. The total cost of the proposed South Florida Network expansion is \$25,274,664. FiberLight will provide a 20% matching cash contribution of \$5,054,932. Moreover, FiberLight will contribute ninety-six (96) fibers from its existing 432-fiber-strand, 270 route mile South Florida Network, which has a conservative fair market value after depreciation of \$700 per fiber mile for a total in-kind payment of \$18,144,000. FiberLight's combined cash and in-kind payment would total \$23,198,932 for a total matching contribution of 92% of the total project. FiberLight has existing customer relationships with Qwest, XO, Level 3, Global Crossing, NTT, Orange, Telefonica, Cogent, Verizon Business, Paetec, Nuvox, TW Telecom, Deltacom, Host.Net, 1Vault, WBS Connect, and Mzima. FiberLight fully expects these companies to utilize the proposed South Florida network. FiberLight will add ten (10) incremental employees to its current South Florida staff in support of its expanded network presence. In addition, FiberLight's primary contractor has forecast that nineteen (19) jobs will be retained as well as ten (10) incremental jobs created. Intuitively, the service providers that offer services in the expanded FiberLight service areas will also be ramping up their respective staffs.