Norlight Telecommunications, Inc. (Norlight) is filing with application in partnership with Missouri Research and Education Network (MOREnet) to build a 2,749 mile fiber-optic network that, when completed, will be capable of serving more than 2,365 educational institutions, including 34 community colleges, 5591 health care, 257 library, 1801 public safety anchor institutions predominantly located in underserved and economically disadvantaged areas of Missouri. Norlight brings 26 years of fiber construction, operations and private network management experience to this project. MOREnet brings 20 years of research and education (R&E) network experience in public procurement of sophisticated telecommunications systems and public network management, and has existing relationships with nearly all the higher education, K-12, public library, healthcare and state agency anchor institutions in Missouri. The combined experience of Norlight and MOREnet will ensure:

- On-time, on-budget delivery of 2,749 miles of fiber through 59 Missouri counties
- Initial direct fiber connections to more than 700 anchor institutions at speeds up to 10 Gbs with highly competitive pricing. All anchor institutions will be ready to meet the FCC's National Broadband Plan goal of 1 Gb to each anchor institution
- Basic infrastructure to support large portions of the PSAPs, next generation 911 and the nationwide interoperable public safety wireless broadband network in Missouri
- Basic infrastructure to provide low cost Ethernet services to more than 11,000 anchor institutions
- Bandwidth offerings to service providers, enterprise customers and other non-profit institutions to provide access to commercial and residential users at rates leveraged by the BTOP funding
- Public procurement of bandwidth to eligible institutions to preserve E-Rate funding
- Sustainable support model to maintain and expand the network
- ‘Future-proof’ support model for anchor institutions that starts with lit capacity but allows access to dark fiber for ultra-high capacity, cutting-edge technologies and other services which are not commercially available to meet the needs of the research and educational communities

Norlight and MOREnet propose the deployment of affordable high-speed broadband technology to anchor institutions that support rural and economically disadvantaged communities through the construction of 2,749 mile fiber optic network delivering affordable high-speed Ethernet services. The proposed serving area is 26% rural, 72.7% underserved, with average broadband penetration of 39.1%. Of the 59 proposed counties, 71.2% of the population earns below the state's median annual income of $46,847; and 15.37% of the population is at poverty level. Of the 16 Missouri counties considered in persistent poverty, 6 of them (38%) are included in this application. Twenty-three of the included counties are rural while the average household density per square mile in 53 of the 59 counties is 23.5, well below the national average of 29.8 for rural areas and 118.8 for urban areas. The proposed services will include turn-key Ethernet connectivity from 10Mb to 10Gb on either a point-to-point or Wide Area Network
basis, as well as Internet access, and intra-area and inter-area VLAN routing. The purpose of this initiative is to provide a high-speed broadband infrastructure to a predominantly rural area (85.9%) that can facilitate economic development, expedite the deployment of high-bandwidth educational and healthcare application technology, and secure access for public safety and government entities to better inter-network their data and video communications. Norlight is an integrated full-service provider of telecommunications services that serves school districts, higher education institutions, libraries, the healthcare industry, and government entities. We offer services in an extensive central and southern U.S. regional footprint. We are a facilities-based company with access to a fiber network that spans more than 26 states, covering nearly 30,000 miles. Norlight is not a fiber-optic construction company; we engineer and construct fiber networks to enable community anchor institutions to access broadband capacity and related services. Our services are highly reliable and are supported 24x7x365 by redundant Network Operations Centers located in Evansville, Indiana and Brookfield, Wisconsin. Through the establishment of this network, it will be possible to connect more than 11,000 anchor institutions to affordable state-of-the-art telecommunications technology. These anchor institutions support a population of 4,693,630 based on the 2000 U.S. Census. The proposed network will put 1,844,357 households and 110,406 businesses within reach of broadband services. We have identified more than 700 anchor institutions for initial connection, comprised of 29 community colleges, 51 other higher education institutions, 91 public safety entities, 39 other government facilities, 43 community development entities, 115 healthcare locations, 249 K-12 locations, and 109 libraries. To recover our costs and profit expectations, Norlight expects to sell about 850 customers access to the proposed high-speed Ethernet Network, including 50% of the K-12 school sites within the proposed service area. The estimated customer mix is heavily weighted toward anchor institutions. Because of our conservative nature, in the event this application is approved, we will not draw down on approved BIP/BTOP funds until sufficient Service Agreement customer commitments are received to reach necessary penetration levels. As penetration levels are reached, carrier access to the network will be made available on a non-discriminatory basis at competitive prices, for backhaul transport and special access transport services, to further stimulate economic development in this heavily rural area. Norlight is particularly interested in attracting wireless providers for backhaul transport, as they serve the residential and small business markets with affordable Internet access. We believe that our proposed network coupled with various wireless provider assets is an excellent technology model for this large rural area. Wireless companies are better suited to pursue sub-10Mb customer needs, while Norlight’s proposed Ethernet infrastructure is poised to handle all of the high-bandwidth needs of the area. Our Ethernet services are priced to include required termination equipment at the main hub and at each of the remote sites (turn-key). Norlight offers native Ethernet services from 10Mb to 10Gb speeds. Our solution is faster, more flexible, and less costly than other high speed WANs, advantages that directly benefit subscriber businesses and institutions. The following are a few of the key advantages: 1) The network is non-blocking. Each site gets its full respective subscribed throughput over an unshared circuit. 2) Customers have an option for direct control of their aspect of the network. VLAN routing, administration and QoS control can be directly established across the network by customer IT personnel. 3) The network is maintained by Norlight’s technicians at our network management center in Evansville, Indiana, where technicians are available 24x7x365. Norlight has route technicians responsible for the fiber and terminating equipment located at each site, who are ready to respond rapidly to problems. 4) Traffic will
not wait in queues if the network is busy. The network design enables the dedication of subscribed bandwidth between communication locations, resulting in low latency and a faster network than most rural customers will have previously experienced. 5) Fiber drops will be terminated within each building at a demarcation point (demarc) as defined by the customer. Norlight will establish the demarc within each building at a location of the customer's choice, where a fiber distribution panel will be installed to terminate the fiber in each of the buildings and then patched over to our optical equipment. Norlight's capital budget for this project is expected to be $109,561,118, of which we will provide a 20% equity investment. Job creation will be driven from two sources. The initial employment catalyst will be tied directly to the two year construction and business development phase. This will temporarily account for some 15 fiber optic-related technician positions and nine other positions needed for ongoing support. Once the network has been on-line and integrated into the local communications infrastructure, the resulting economic development will contribute to incremental and sustainable long term employment in the service area. Given the rural and impoverished nature of the counties to be served by this application, the high-speed broadband communications infrastructure contemplated by this application would not be possible without BTOP funds.