

Broadband USA Applications Database

Applicant Name: Kit Carson Electric Cooperative

Project Title: Kit Carson Electric Cooperative Fiber-to-the-Home Project

Project Type: Last Mile Remote

Executive Summary

Kit Carson Electric Cooperative (KCEC), a member-owned, non-profit cooperative, proposes a last mile fiber-to-the-home project to serve 4,930 households, 73 businesses, and 34 community anchor institutions, public safety entities, and critical community organizations and two Native American pueblos, within three proposed funded service areas covering 1,532 contiguous census blocks in Taos, Rio Arriba and Colfax counties in Northern New Mexico. The three proposed funded service areas are each rural and underserved according to NOFA definition. KCEC is also a partner in REDI (Northern New Mexico Regional Economic Development Initiative), which is proposing to deploy a regional open network to support the multiple purposes of economic development, education, health care and sustainable energy development. Compelling Problem: For decades, communities, Native American tribes and local governments in northern New Mexico have struggled to negotiate access to telecommunication services, infrastructure, connectivity, and affordable rates from the small number of incumbent carriers which dominate the market. This is especially true north of Santa Fe, where remote and sparsely populated communities such as those in Taos County make a poor business case for the extension of telecommunication infrastructure. As a result, many areas of the region remain unserved and underserved. Through a regional approach and an open network model, Northern New Mexico now has the unprecedented opportunity to provide broadband that benefits rural and non-rural communities alike and supports multiple purposes as envisioned by BIP and BTOP. Effective Solution/Opportunity: KCEC intends to build a last mile wireline, passive optical fiber network with distributed tap technology and true “game-changing” open access along our electric distribution right-of-way to bring advanced broadband services to unserved residents. This fiber network will also enable “Smart Grid” technologies, including AMI and AMR, revitalize local economic development and create sustainable jobs for our members and communities. The network will cost \$18.4 million to construct. In addition to broadband access we will offer triple-play broadband bundles from multiple Internet, video and voice providers and innovative distance learning, tele-medicine, government and public safety applications. We are submitting a joint BIP/BTOP application seeking a 50%/50% grant/loan combination with favorable loan rates from BIP or up to an 80% grant from BTOP with a 20% applicant match. Kit Carson Electric Cooperative’s infrastructure is one component of a regional open network for northern New Mexico that seeks to address the following opportunities: 1. Regionalism will be used to overcome persistent barriers associated with rural broadband deployment, cost-efficiencies and access to long-haul fiber. 2. Open networking will make broadband more affordable and spur innovation and job creation. 3. Support of economic development efforts currently being implemented by REDI, including job creation through home-based or location-neutral businesses in high paying sectors. 4. Support of multiple uses

and ARRA programs, including economic development, education and distance learning, health care and telemedicine, and the use of smart grid/green grid and distributed generation by electric utilities. The distinguishing feature of our application is that we have been serving these government constituents for years. We have positive, existing relationships with these and other local community agencies. 5. Fiber optics will be a sound investment of federal funds in that it will provide a one-time, long-term solution that immediately supports 21st century needs. Several common themes will be reinforced which sets our application apart and makes it a compelling project to fund. 1. Our proposed solution is full fiber-to-the-home technology, with the capability of delivering 100Mbps symmetrical broadband service while concurrently delivering a host of other applications including full digital HD video and unlimited telephone services. We forecast to serve 2,071 broadband customers in addition to providing full a full triple play offering of video, voice, and data, available to all KCEC members in the service areas. 2. Historically, deploying fiber has not been financially feasible in rural markets. However, the combination of our partner, Pulse Broadband's less costly FTTH design/build, using KCEC pole-grid and right-of-way, coupled with our non-profit financial status makes this project work. 3. Our project is sponsored by the state of New Mexico, REDI, and the University of New Mexico as a last mile demonstration project. When successful, the model can be expanded to other co-ops. BIP/BTOP seed capital for our project will encourage others to enter the market using private financing. 4. KCEC is prepared to start the project immediately and will complete it within thirty six months. We will begin offering broadband access to our first customers within 3-6 months of the start of the project. a. We own our rights-of-way. We won't have any political or financial hold-ups negotiating right-of-way issues to delay the start of construction. b. Pulse Broadband has managed the design, engineering and walk-out for the construction of over 50,000 miles of plant. All key construction, equipment and head-end contractors and vendors are lined up to start the project. c. The fiber-to-the-home solution used by Pulse has been successfully deployed for the last three years. d. The design and construction has already been evaluated and approved by the RUS, and it uses RUS-approved components. e. Both KCEC and Pulse have had direct prior experience with RUS projects. We know what to expect, how to access and account for the money, and how to comply with government audit and oversight regulations. f. The fiber will follow the existing pole grid, with minimal ecological and environmental disruption. Our design is also green, since it does not require excessive power to amplify or repeat signal delivery. 5. We'll create approximately 45-50 new construction, installation, maintenance, and customer service positions to build and operate the fiber network, including 10 additional positions at Kit Carson Telecom. In addition, by installing fiber for broadband alongside electric service, Kit Carson will enable 1) "smart metering" in homes and businesses to achieve greater energy conservation (otherwise known as "demand-side management"), and 2) the software management of "distributed generation" whereby many residents and businesses can be generators of electricity. Kit Carson Electric plans to add 98 new jobs as a result of these expanded conservation and renewable energy functions over the next three years. 6. At the regional level, the potential for job creation and retention will be high in Northern New Mexico because broadband deployment is one component of REDI's integrated regional economic development program. REDI projects the creation of 5,105 jobs throughout northern New Mexico in the next 25 years. This job creation requires high-speed broadband and focuses on the Renewable Energy, Technology and Media sectors; home-based businesses; and support of distance learning and telemedicine. In Taos County, a REDI supported economic development project to create location-neutral jobs in biomedical

transcription is currently underway, with an initial study completed in early 2009. This effort is predicated upon high-speed broadband to the home and is expected to create 50-100 new jobs in a three-year start up phase. High-bandwidth fiber is the best technology available to create and sustain these and other jobs for business, medicine, and education.

7. Open Network: It is in KCEC's financial and fiduciary best interests to offer as many competing providers as we can on this network. Our direct incentive is to open the network as broadly as possible.

a. As a not-for-profit cooperative, our mission is to provide value and service to our member-owners. We have a direct responsibility to our members to offer as many providers as the network will allow, maximizing customer choice and holding prices down through competition. We believe that this open network/open access model is a potential "game changer" to foster customer choice.

b. Our partner, Pulse Broadband, has developed an open access network gateway to let multiple providers "plug into" our network and offer competing broadband, video, and VoIP products.

c. A truly open network will also encourage new start-ups to enter the market, spurring additional job creation.

8. Feasibility and sustainability: KCEC has been providing electric service to this area for over 69 years and intend to do the same with our fiber network. Over the years we have been instrumental in bringing positive change to our community. We have positive relations with our members, which will enhance the acceptance and take rates for any provider entering the market over our fiber network. For example, we already provide free public access computers at our main office have a program to finance up to \$1,000 to help our customers purchase a computer. We are a long-term RUS borrower with an outstanding track record.

Conclusion: Fiber optic technology will allow Northern New Mexicans to meet the opportunities of the 21st century. By providing bandwidth of 100 megabits to the home, fiber optics will provide a one-time, long-term solution that will not require upgrading or replacement and will immediately support advanced applications such as video conferencing and video streaming as well as enabling smart grid/green grid energy efficiency for residents and communities. Fiber optics represents a sound investment of federal funds from which Northern New Mexico will greatly benefit for generations to come.