Broadband USA Applications Database

Applicant Name: ARCTIC CABLE COMPANY, LLC
Project Title: Broadband for the American Arctic (BFAA)
Project Type: Comprehensive Community Infrastructure

_______________________ Executive Summary _______________________

A. THE OPPORTUNITY: Empowering the last region of the US that lacks a fiber optic backbone ("FOC") (see NEC report "Recovery Act Investment in Broadband: Leveraging Federal Dollars to Create Jobs and Connect America", Dec 2009, maps at p 5). This application was loaded into the NTIA system from Anchorage, AK, but only because FOC connections exist from Anchorage to the Lower 48. This proposal COULD NOT be filed from any of the five proposed service areas because no regional FOCs exist. All community anchor institutions (CAI), homes, business and wireless users in the proposed areas are hostage to high latency, oversubscribed and expensive satellite service, which is the critical chokepoint for all services in western Alaska. Bringing a FOC backbone would improve overall quality of life in western Alaska.

B. PROPOSED FUNDED SERVICE AREA: Most villages in western Alaska have chronic jobless rates up to 70% and poverty rates of 65%. Rugged terrain, harsh weather and the lack of roads isolate the communities. Each of the five areas in this proposal are the regional hubs for other outlying communities. The hubs served represent 48% of the population of the region (16,243 residents). Bringing FOC service to them now provides the catalyst for reaching the remaining residents scattered across the 65 additional outlying communities in the future.

C. HOMES/BUSINESS PASSED: The project won't just pass, but will allow the partner LECs to bring direct broadband connectivity to 4,448 homes, 16,243 people and 686 businesses in the five areas. In the future as more service is pushed out from the hubs to outlying communities an additional 4,698 homes, 557 business and 18,343 residents will benefit.

D. COMMUNITY ANCHOR INSTITUTIONS SERVED: 176 CAIs will be served directly from the upgraded services with new Middle Mile terrestrial FOC from LEC offices to their premises, as follows: 6 community colleges and 1 other institution of higher learning (5 AK Native Serving Institutions, 2 Tribal Colleges), 4 libraries, 15 schools (K-12), 16 medical facilities, 27 public safety entities, 3 public housing entities, 45 other community support organizations and 59 other government facilities. All CAIs will have immediate access to 1 Gig service at commercial rates, with fiber based backhaul to central POPs for access to the Internet. This meets the FCC’s goal of 1 Gig service to CAIs at the same price as a single satellite T1 today.

E. PROPOSED SERVICES/APPLICATIONS: Services offerings to CAIs, homes, businesses and residents in the five service areas will exceed recent FCC National Broadband Plan goals. Current high-latency, expensive satellite traffic will shift to the fiber based solutions being offered. The partner LECs will offer all Last Mile services, and with new fiber backhaul and new fiber Middle Mile trunk lines through the communities, all CAIs will have immediate access to 1 Gig service. All homes and businesses will have access to minimum service speeds of 4 Mbps, with many having immediate access to 30 Mbps to 100+ Mbps. These speeds are unfathomable in rural Alaska now given the failings of satellite and microwave. A full suite of services will be offered by LECs, including dedicated point-to-point services,
resident and business plans, distance medicine and distance education services, DLS, copper, coax and high speed 3G wireless offerings. Service and options in the areas will rival the Lower 48. F. NONDISCRIMINATION/INTERCONNECTION: ACC will operate its Northern Fiber Optic Link (NFOL) backbone and its project facilities as a "carrier"s carrier" on a carrier-neutral basis. ACC and the LECs will adopt the FCC"s Internet Policy Statement and the network openness principles set forth in the NOFA. ACC will contract with carriers in good faith for the purchase of capacity on NFOL. This encourages growth of a competitive market among Last-Mile providers in the service areas. ACC and the LECs will negotiate non-discriminatory, commercially reasonable terms and conditions for interconnection to the funded system, both for the exchange of traffic and to access the public Internet. ACC and the LECs will abide by the arbitration guidelines in the NOFA. They also agree to binding arbitration of disputes concerning the interconnection obligations pursuant to the NOFA. G. TYPE OF NETWORK: The NFOL submarine cable build upon KKCC"s existing fiber network. It will have a direct landing in Unalaska, and construct branching units (BUs) on its backbone to land fiber segments in King Cove, Nome, Kotzebue and Barrow. ACC"s construction at each of these landing points will end at a terminal station ("TS"). The NFOL is a 5703 km submarine fiber optic system providing data transport from a terminus point at Kodiak Island, across the Aleutians and north through the Bering, Beaufort and Chukchi Seas to a landing at Prudhoe Bay on the North Slope of Alaska. Lighting one fiber pair with multiple 10 Gbps wavelengths in a 1+1 collapsed ring configuration, the NFOL will interconnect to existing networks in Prudhoe Bay and Narrow Cape, Kodiak Island. The second portion of the project will be the terrestrial build-out of Middle Mile fiber optic branches to provide broadband capacity from the TS to the UA campus as well as to all other CAIs in each service area. Local providers will use their existing systems to deliver a variety of services. These include new fiber, copper, coax, DSL and wireless connectivity. H. QUALIFICATIONS: Kodiak-Kenai Cable Company, LLC ("KKCC") and KhanNet, LLC ("KNET") formed ACC; and together they bring superior infrastructure and development expertise to the project. KKCC successfully constructed and now operates a 600-mile subsea FOC system from Anchorage to the Kenai Peninsula and Kodiak Island in Alaska. The system has operated without interruption since its completion in 2006. KNET is a member of Khanjee USA ("Khanjee"), a U.S. based large-scale infrastructure developer experienced in developing global infrastructure projects. The management team includes pioneers of non-recourse project financing and members experienced in large telecom related projects in the U.S. and internationally. Khanjee has the financial resources to improve long term planning and viability. ACC’s LEC partners have each operated, managed, upgraded and maintained their wireline and wireless voice and data networks for decades. ACC will contract with the LECs for ongoing maintenance of the ACC portion of the system in their region and also with a NOC in Anchorage. The proposed system will be installed by world leading subsea FOC installer Tyco Subcom. Project management is covered by experts with histories of designing, permitting and installing large and complex submarine fiber systems for a variety of clients, including the US DoD. Evidenced of this ability is the fact that ACC spent 1 year engaged in the NEPA process with local, state and federal agencies. As a result ACC now has ALL STATE AND FEDERAL PERMITS IN HAND to build the system. I. OVERALL PROJECT COST: The total grant request is $98.884 million and the total project cost is $215.198 million. Funds will be used to install fiber to all CIAs and to interconnect with existing Last Mile infrastructure to serve all homes, businesses and mobile users. Funds also support ongoing capacity needs of carriers to fulfill the new FCC National Broadband Plan. ACC is providing $116.314 million as a cash match, comprised of equity and borrowed funds,
yielding a private cash match of 54%, a significant private match that allows NTIA to leverage BTOP funds further. J. OVERALL SUBSCRIBER PROJECTIONS: As the subsea Internet backbone comes online, all traffic will shift to the new broadband service. Consistent with KKCC’s experience in Kodiak on, all CAIs, homes, business and wireless traffic is likely to use the subsea backbone for transport. For service at the LEC level 100% of their customers will use both the new terrestrial FOC and the submarine backbone infrastructure. Where a competitive carrier offers services, in order to be competitive that carrier will use the subsea FOC to transport customer traffic. K. JOBS DATA: Using guidance issued by the Executive Office of the President, this project will create 239 fulltime jobs (153 direct jobs, 86 induced jobs) during construction. Additionally, sales, operations and maintenance jobs will be created on an ongoing basis. Additionally, this project is tied to a larger project that is being financed by the private sector. The two efforts combined will create/support approximately 5,500 jobs across 23 states (see suppliers letters and jobs map in Supplemental Information.