Nebraska Broadband Bridge Program

Business Plan narrative on behalf of Joint Applicant

Diller Telephone / Diode Cable Co

Jefferson County Rural Project

Diode Cable Co (dba Diode Communications) will be marketing our Diode Fiber Edge service in the proposed project areas south and west of Plymouth, NE to areas south and east of Jansen, NE. Areas being served east of Plymouth are adjacent to areas recently completed under phase one of the Nebraska Broadband Bridge Program. Area’s west of Diller and Harbine are adjacent to the Diller Telephone exchanges that have been served with fiber broadband for many years.

The project area today is classified as unserved, as verified by RVW engineers. Broadband service that is available is primarily served by Diode’s fixed wireless product with a maximum capability of 25/3 speeds (most homes receive 12/2). Homes not subscribing to Diode wireless are served by Windstream DSL capable of 10/1. While some 477 data may suggest slightly higher speeds, upon information and belief, service at such speeds is not being provided in the project area. The Diode Fiber Edge service will be a dramatic improvement for the approximately 102 rural residents/farms in the project area. Speed packages of 50/50 Mbps, 100/100 Mbps, 500/500 Mbps, and 1 Gig/100 Mbps will be available and are being advertised on our website. 46 miles of buried fiber optic facilities will be placed (see Attachments A and B).

The cost of the Jefferson County Rural project is estimated to be $1,468,400. DTC/Diode and Jefferson County intends to pursue a public/private partnership that would enable a 45% match towards the project total. Therefore, we propose a NBBP grant of $807,620 with a match of DTC/Diode $330,390 and Jefferson County ARPA $330,390 respectively.

The expected useful life of electronics used in our fiber network range between 5-15 years and the optical fiber is between 20-25 years. We currently utilize GPON in our fiber deployments.  We have a 10GIG ring Diode utilizes for their middle mile.  We utilize Cisco’s ASR platform to deliver this around the service territories. This equipment is scalable to grow with network needs. Last mile connectivity at each edge network connects through the backhaul to the core over the fiber network.  In our central office we use Adtran’s TA5000. It is the most widely deployed multi-service platform in North America. 10G PON, 100G/slot backplane, and 100G uplinks give it the capacity and performance to meet needs through this decade and beyond.

Diode Communications anticipates no issues with zoning, rights of way or county construction permits. We have a long-standing positive relationship with Jefferson County officials. In fact, we have been encouraged by them to continue our fiber builds in these and other areas of Jefferson County.

Diode will utilize its seasoned managerial, technical and customer service staff as well as established billing processes to operate the Diode Fiber Edge services in the project areas. Diode will achieve profitability through realizing efficiencies of shared resources, economies of scale and user subscription fees. Financial forecasts result in a return on our investment in 5 years (see Attachment G\_2) and sustainable positive cash flow the next 20 years providing the means to support and maintain the network, resulting in a financially viable and sustainable project that will serve the educational, healthcare and business needs of the community.