



Committed to the future of rural communities.

USDA Rural Development: Telecommunications Program;

Telecommunications Infrastructure Loan Program and Broadband Initiatives Program (BIP)—North Dakota

Dakota Central Telecommunications Cooperative (Daktel)

Need:

The whole state of North Dakota is very rural and has extremely low population density. Within Dakota Central Telecommunication's service area there is an average of only one home for every mile of fiber they lay. This is why bringing fiber to the region was all the more important. Previously, fiber-to-the-home connections were virtually non-existent in the state. Now, within a 4,000 square mile region of Dakota Central Telecommunications' service area, 100% of the homes have a fiber-to-the-home broadband connection.

How Rural Development Helped:

Since 2000, Dakota Central Communications Cooperative (Daktel) has received three loans through the Telecommunications Infrastructure Loan Program. These loans total over \$26 million, with the most recent being for \$11.9 million in 2009. These loans were used to bring fiber-to-the-home connections to almost every person in Daktel's service area.

Additionally, Daktel received a \$2,252,250 grant under the Broadband Initiatives Program (BIP) in 2010. This grant was used to bring Fiber-to-the-Premises (FTTP) broadband service to residents and businesses of remote, rural, and unserved portions of their service territories in Gackle and Streeter, North Dakota. This network connects over 400 extremely rural subscribers in North Dakota, as well as several businesses and anchor institutions.

Results:

Thanks in part to this funding, Daktel (along with Dickey Rural Networks, another North Dakota telephone cooperative) has constructed what is believed to be the largest 100% fiber-to-the-home network in the United States. It covers 10,000 square miles and reaches roughly 18,000 homes, mostly in



Workers drag fiber to be laid as part of Daktel's 100% Fiber-to-the-Home network, the largest in the United States

rural North Dakota. Daktel has been planning fiber-to-the-home projects for North Dakota since 2002. This fiber network benefits several hospitals and schools in the area, allowing them to provide distance learning, remote consultations, and to send high resolution images such as x-rays remotely.

The staff at the Arrowwood National Wildlife Refuge in east central North Dakota also use Daktel's fiber network to track species, report data, and preserve natural resources.

Sam Brownell, IT Director of the Anne Carlsen Center in Jamestown, ND explained that fiber is helping them serve their patients. The Anne Carlsen Center is a residential campus and outpatient facility serving children with disabilities. From speech therapy to physical rehabilitation, many of their programs are now offered virtually over a fiber connection, expanding their reach and fulfilling their mission of improving the quality-of-life for hundreds of special

kids in the region and even internationally. Video conferencing also gives parents, who entrust the care of their children to the Center, a way to be “together” whenever they want.

Many individual residents of this region of North Dakota have benefitted directly from Daktel’s network as well. For example, several residents in Daktel’s service area are now able to telecommute, working in jobs far from their rural towns, as a result of their fiber connection. Diane Rasmussen even works from home in rural North Dakota for a Fortune 500 company. The company allowed her to do this as a direct result of the availability of fiber. This allowed her to move away from the big city and return to her home town.

Finally, North Dakota’s economy has benefitted directly from the wide availability of fiber, which has

allowed several small, local businesses to expand and compete globally. J&M Printing in Fargo, ND has grown over the years to three locations with 40 employees. As it has to send high resolution photos back and forth—which take up a lot of bandwidth—it could not have done this without high speed internet. Express Tech is a computer sales and repair business in Jamestown, ND that uses fiber to run multiple diagnostic reports on several computers at once, a task that would be impossible without high speed internet. Because of this they are able to compete as a local computer store with large box chains around the country. Even Bobcat Company in Gwinner, ND, North Dakota’s largest manufacturer, with the most extensive compact equipment distribution network in the world, uses Daktel’s fiber network to link to other company locations around the world.