RE
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BROADBAND

Special Insert

MIDSOUTH ELECTRIC COOPERATIVE
HURRICANES DEMONSTRATE THE NEED FOR CO-OP'S HIGH-SPEED COMMUNICATION NETWORK

COOPERATIVE PROFILE

MidSouth Electric Cooperative delivers reliable power to 36,000 primarily residential meters spread unevenly across its six-county Texas territory, ranging from dense population areas near the city to very sparse rural areas, with suburban communities in between. The extreme weather that's been inundating Texas over the past few years has helped drive demand for high-speed communications from members of MidSouth, which operates outside greater Houston.

PROJECT OVERVIEW

The cooperative and its members have faced recurring outages due to the increasing number of severe hurricanes and other weather events, including Winter Storm Uri in 2021. Beyond the power outages themselves, communication during these events is both critical and lacking.

"When our territory faces a major weather event, especially one that requires evacuation, the cell phone systems get overloaded, which makes it exceedingly difficult for us to communicate effectively to maintain and repair our system so we can continue delivering services to our members. Hurricane Ike in 2008 is a perfect example," says Kerry Kelton, MidSouth's CEO.

In 2017, after Hurricane Harvey devastated the region, including crippling communications, MidSouth began researching the feasibility of building a high-speed communications system to connect its substations and offices so they'd be able to coordinate their emergency efforts when the next weather event hit. This isn't the cooperative's first foray into communications. It offered dial-up service in the late '90s and satellite internet in the early 2000s. But this is its first entry into high-speed broadband, and the initial efforts to connect several offices created a lot of questions from the members.

"Almost as soon as we started building the test phase to connect the first of our facilities, members started calling to ask when they could get connected, especially in our more rural areas," says Kelton. "Our board was hesitant at first, because it's an enormous investment, but once the politicians started asking on behalf of their communities, we were given the green light to investigate offering high-speed broadband as a service beyond our own needs."

BROADBAND BUSINESS CASE

After extensive research, including talking with other electric cooperatives that have taken the plunge into broadband, MidSouth had a strong business case to present to the board. The plan demonstrated the multiple benefits of entering the broadband space, and it showed a positive income stream for the cooperative. In addition to meeting the co-op's communication needs, the high-speed communications network would meet the members' need for telehealth, remote schooling and work from home options.

"We had school districts shifting to online textbooks and testing even before the pandemic, but COVID really exacerbated the lack of connectivity," says Kelton. "For years, we've seen our rural families driving their kids into town just so they can access fast enough internet to do their schoolwork."

The business case was further strengthened by a phased approach that capitalizes on MidSouth's population diversity by building to the higher-density, higher-return areas to get revenue flowing, which then funds and speeds up construction in more rural areas.

LESSONS LEARNED

After exploring multiple cost scenarios and technical approaches, MidSouth decided to build fiber-to-the-home for every member throughout its territory rather than delivering service through wireless hubs situated at their substations.

"Knowing how quickly technology advances, we were concerned with obsolescence," says Brandon Northcut, MidSouth's vice president of technology. "But with the fiber in place, the electronics on either end can easily be upgraded to keep current as technology evolves."

Employing a distributed tap architecture, working with industry leader Conexon and cooperative lender CoBank, MidSouth launched its pilot program in 2018 and connected to its first paying customer in September 2020. With a rapid build approach and project completion in May 2022, return on investment was also accelerated, satisfying board concerns.

MidSouth offers three price points for 100 Mbps, 500 Mbps and 1 Gig speeds, and uptake has been substantial since the beginning, with wait lists full almost as soon as they're opened.

"It can be months between when a member sees the first truck in their area and when we're ready to deliver service," says Andy Dallmeyer, MidSouth's senior vice president of finance and accounting. "Several hundred people sign up as soon as we open up though, and we know other members are waiting for existing contracts to end so they can switch over to our service."

WHY THIS CASE STUDY IS IMPORTANT

While meeting members' and communities' needs is an important cornerstone of MidSouth's fiber build-out, enhancing its electric distribution system remains a primary driver. The cooperative is installing a smart grid and has devices communicating directly across its fiber network.

"With our fiber network in place, we can monitor our operations better, restore power faster and keep our employees safer," says Kelton. "All while also delivering essential communications services to our members and communities and financial returns to our cooperative."

The fiber network will also be in a position to support MidSouth's future smart grid implementation and consumer technology developments like smart houses and home solar installations.

COMPANY DESCRIPTION

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