



CORNING

Bringing fiber to underserved communities within Texas

How GVEC uses FlexNAP™ technology to deliver broadband along with electricity

Delivering a better product—but how?

Founded in 1938, the Guadalupe Valley Electric Cooperative (GVEC) has been lighting up homes and businesses across 3,500 square miles of Southeastern Texas for 85 years. In 1998, recognizing the importance of the internet to people's lives, GVEC started offering fixed wireless

internet to their members. Eventually, the service spread over a 3,800 square mile territory.

GVEC had a problem: fixed wireless can be an unreliable service with limited speeds, so the internet GVEC offered couldn't match the quality and dependability on which they'd built the reputation of their electric cooperative.

Also, while GVEC was interested in exploring fiber, they had no previous experience with creating a fiber network.

In 2012, GVEC launched a fiber pilot project in La Vernia, Texas, a bedroom community for San Antonio. At the time, La Vernia was an underserved community that had access to fixed wireless but no other internet option. The fixed wireless connections would often struggle in the afternoon, when kids came home from school and the bandwidth needs of the community exceeded the wireless network's capabilities. GVEC planned, through its pilot project, to bring fiber to 2,200 homes.

Preparing to construct their first fiber project without familiarity in splicing, GVEC chose Corning's FlexNAP™ technology, a fully pre-connectorized cabling system that offers the flexibility GVEC was looking for as a first-time fiber provider.



Successful solutions with FlexNAP

The planning and engineering for the original La Vernia fiber pilot project took place in 2012, construction began in 2013, and the network was complete by 2014. For the business model in La Vernia to work, GVEC needed a 45% take rate among the town's residents. The take rate there is currently 92%. GVEC Executive Engineer of Communications Technology, Robert Russell, says, simply, "We were only able to grow so fast because FlexNAP technology allowed us to connect easily." GVEC credits preconnectorization for enabling a better speed to market than they could achieve with traditional fiber.

Surprise scenarios — what Russell calls "gotchas" — are easier to fix because of the adaptable nature of the FlexNAP system. GVEC has learned that, by maintaining stock of key components, design changes encountered in the field can be immediately remedied. Giving their team access to the preconnectorized extenders helps technicians feel confident when they face an unexpected issue. By having the right FlexNAP parts on hand, they eliminate multiple truck rolls to accommodate design changes. The preconnectorized system saves the GVEC team time and money.

"Over the years, we've grown in our appreciation of the FlexNAP preconnectorized system to the point that we don't want to get away from it — [after ten years] we still think it's the most cost-effective, reliable method of installing service in a rapid manner."



Making an impact for underserved members through ambitious expansion

The success of the pilot project led GVEC to form GVEC.net, originally a for-profit subsidiary of the electric cooperative. The GVEC team expanded the fiber network to other communities and, in 2017, incorporated internet into the mission of the electric cooperative, allowing for expansion into less dense rural areas. Originally, GVEC's goal was to bring fiber to 80% of their underserved market by 2025, but as of 2023 they've already achieved that goal.

Today, GVEC builds 200-250 miles of distribution fiber using FlexNAP™ cables every year, in addition to 50 miles of middle mile fiber. The GVEC team is now well-versed in the creation of fiber networks. Though bringing fiber to a new area is a roughly 18-month process, most of that time is spent on right-of-way assessments, make-ready work, ordering materials, and hiring contractors. "All the magic happens in the last two months," Russell says. Having overseen GVEC's fiber projects since the pilot, he enjoys the confidence of

knowing that, with the FlexNAP system, he can bring fiber to an 80- to 100-mile section of their network in 60 days from the start of construction. For example, GVEC started construction on a fiber network in Shiner, Texas in July 2019 and had service available to the first 500 homes—representing about a third of the whole town—by August.

GVEC now approaches communities holistically, with the philosophy that anything that needs power may, one day, need internet. As they bring electricity to a new development, the GVEC team provisions FlexNAP cables to deliver internet, too. When a customer orders internet in these areas, GVEC can have their service active within hours. The forethought GVEC puts into their fiber network and the adaptability of the preconnectorized system have put GVEC's fiber network on par with their electric network, maintaining their proud reputation of reliability, hard work, dedication to their members, and changing lives in underserved communities.

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Learn more about **GVEC**

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Learn more about FlexNAP system at [corning.com/flexnap](https://www.corning.com/flexnap)

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