



Your Touchstone Energy® Cooperative 

## Working in the Community, Texas Co-op Launching Hybrid Broadband Network

There was high demand from the community over a sustained period. United Cooperative Services (UCS) in Texas wanted to respond and, in fact, had responded with attempts to start up broadband services over the years. But the technology never quite lived up to expectations. The calls still came.

"This is the members' co-op," says UCS CEO Cameron Smallwood. "We've always done a good job of engaging our members, but we always seek to do more and search for ways we can achieve that."

Member requests for broadband go back nearly two decades, and UCS's search for the right approach has gone on just as long. In addition to kicking the tires on broadband over power line (BPL), UCS turned up a small wireless internet service in 2001, serving about 135 customers before ending that business in 2005 when competing DSL service arrived.

Over the years, members reacted to articles in publications like Texas Co-op Power about other co-ops finding success with fiber-to-the-home (FTTH). "Our members started asking why we were not one of those co-ops," Smallwood says.

In 2018, UCS asked NRTC to conduct a FTTH feasibility study. However, the \$300 million price tag was out of reach, so they sat down with NRTC and looked at areas where fixed wireless would make more sense. Ultimately, they earmarked 10,000 of their 62,000 member locations for fixed wireless at speeds up to 100 mbps.

The hybrid FTTH and fixed-wireless network will be deployed over the next five years, and the approach enables UCS to meet member needs and make the

business model work – shaving almost \$100 million from the original cost estimate.

Long-term, UCS envisions converting all locations to FTTH – reinvesting margins from the broadband business to extend fiber infrastructure.

The wireline side will deliver FTTH to a large majority of those members, built on an ADTRAN 10-Gigabit Symmetrical (XGS-PON) network. NRTC, who's managing the project for UCS, is building wireless links from the fiber backbone to the remaining hard-to-reach locations using RADWIN unlicensed radios.

Most fiber providers today use Gigabit Passive Optical Network (GPON) technology. GPON delivers shared capacity of 2.5 Gbps downstream and 1.25 Gbps upstream. UCS chose ADTRAN's technology delivering shared broadband service at 10 Gbps in both directions to create a flexible and highly scalable fiber access network.

"We asked, 'Do we want to use today's technology, or do we want to invest a little more in the project to provide our members with a better overall experience than our competitors using tomorrow's technology?'" Smallwood says. "It increased the cost of the equipment by 11 percent, but it was the right long-term decision to make for the members."

Based on their past experience, UCS was still hesitant about wireless until it witnessed a demonstration of the technology at Butler RECA's hybrid network in Kansas. "The technology is significantly different today," Smallwood said. "We learned that their members are really happy with the service."



PHOTOS: UNITED COOPERATIVE SERVICES

UCS was comfortable with their technology and deployment plan. But what would the membership say, especially considering the \$200 million cost of the project?

UCS had used a member advisory committee for feedback before with another initiative, and it went well. The broadband project was a perfect opportunity to try it again.

"We got a really diverse group of people representing all seven of our director districts. Some had internet service, some didn't, and some didn't care if they had service," Smallwood said. "We tried to get a cross-section of people who would be affected by the project in different ways."

The advisory committee even included an AT&T Fiber customer, who came to the meetings saying he had no problem with his service. "He got to hear what all the other people were dealing with in terms of poor or zero internet options, and said, 'Wow, I had no clue. I would have voted no on this, but now that I see the issue, I'm all for it so that those co-op members who want broadband can have it. It's the right thing to do.'"

The committee was unanimous in encouraging the UCS board of directors to take it to a member vote. UCS leveraged all of its communications platforms, including member meetings, to inform members about the potential initiative, including a thorough four-page document laying out all details as part of a June 2019 vote.

The members were clear in their desires. The vote attracted response from a third of the members with 91 percent in favor of the plan.

"Our members are more eager than ever for us to get them high-speed internet service," Smallwood says. "To be able to fulfill our members' needs like this is truly in the cooperative spirit of being there for the membership."

## Do You Want High-Speed Broadband Internet Service?

ENCLOSED IS A BALLOT THAT ALLOWS YOU TO STATE YOUR PREFERENCE ON A PROPOSITION TO HAVE YOUR COOPERATIVE OFFER HIGH-SPEED BROADBAND INTERNET SERVICE AS AN ADDED BENEFIT TO ITS MEMBERSHIP

### YOUR COOPERATIVE SEEKS YOUR VOTE

YOUR INPUT IS IMPORTANT!

**SUBMITTING A COMPLETED BALLOT ENTERS YOU IN A DRAWING FOR CASH PRIZES!**

**HIGH-SPEED BROADBAND INTERNET SERVICE PROPOSITION**  
United Electric Cooperative Services, Inc.

Mark your preference by marking your response with an "X".

YES

I SHOULD RECEIVE UNITED HIGH-SPEED BROADBAND INTERNET SERVICE AS AN ADDED BENEFIT TO MY MEMBERSHIP.

NO

I SHOULD PREFER UNITED NOT OFFER THE PRESENT SERVICES TO INCLUDE HIGH-SPEED BROADBAND INTERNET.

SIGN HERE → MEMBER SIGNATURE (Ballot must be signed by member to be valid)

DETACH HERE AND MAIL SIGNED BALLOT IN THE ENCLOSED POSTAGE PAID RETURN ENVELOPE

### What could United high-speed broadband internet service provide to members?

- ★ Targeted fiber optic download speeds of 100 Mbps or greater. Preliminary study has shown a few pockets within United's service territory could be limited to lower speeds.
- ★ Fiber optic-to-home service could be provided to as many residences as possible, with a few remote areas being served by the latest high-speed wireless technology.

- ★ Having a voice in how your cooperative operates is one of the many benefits of your membership, and your input on this issue IS IMPORTANT in assisting your board of directors in determining which course of action to take regarding this potential opportunity for cooperative members.
- ★ Straightforward, competitively priced service plans without sales gimmicks, offered in tandem with United's superior brand of reliability and service value.

More details may be obtained at [www.united-cs.com/broadband](http://www.united-cs.com/broadband)

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