America's first rural electric co-op launches broadband fiber services at the height of COVID pandemic

ACE Power was looking to establish new fiber service in a crowded marketplace. In August 2020, ACE Power launched ACE Fiber, a high-speed, fiber-optic internet service available to its consumer and business customers.

According to Sean McGrath, Chief Financial Officer for ACE Power and ACE Fiber, the decision to roll out broadband internet services to their customer base was initially based on a number of feasibility studies. "I don't know that our broadband project was specifically driven by consumer demand as much as it was us looking at things economically in Northeast Mississippi and realizing that there was a need for broadband for the future of our economy here in Northeast Mississippi," he explained. "I think realistically that it was driven by us and we wanted to be a driver for economic development within not only our community, but regionally in Mississippi."

Construction on the build-out of the fiber services began in March 2020, but demand for the services were truly realized as ACE Fiber and its broadband service became available in August 2020 during the height of the COVID pandemic. "COVID definitely generated consumer demand for high-speed internet connectivity because all of a sudden they had to work from home or go to school from home and learn remotely," McGrath explained. "There was also a growing requirement for

Established in 1934, AlcoCounty Electric Power (ACE Power) was the first rural electric cooperative in America. The not-for-profit member-owned cooperative currently serves over 19,500 electric meters throughout Alcorn County, Mississippi.

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Sean McGrath
ACE Power/ACE Fiber
Chief Financial Officer

Customer story ACE Power

telemedicine, and I don't think those needs were as in-demand as they became during COVID. I think that extraordinary period really made people realize the importance of a fast, reliable, broadband connection that fiber offers."

McGrath explained that one of the primary challenges of launching their new service was the intense competition among existing service providers, specifically in the city of Corinth. "We have a large cable provider that is a major player on the world stage, and that was our biggest fear," he said. "We were going into this project having to compete with a large multimedia conglomerate that also offered local cable to our subscriber base. We're an electric utility, so that's what we knew how to do. We were not a telecommunications company and didn't know anything about it until we got into the space. Then all of a sudden within about a span of nine months, we had to be experts to know everything about it."

Zyxel WiFi 6 CPE and industry-best engineering support

McGrath explained that he was personally responsible for the selection of the CPE that ACE Fiber would be deploying to the subscribers. "I was the pilot for everything and we installed the ONT in my house," he said. "I've got a 2,500 square foot home with two stories. We went in and installed the gateway in one corner of the house on the first story so that we were able to fully vet out all of our gateways and the vendors that we brought in."

After rigorous testing, ACE Fiber selected EX5510 AX6000 WiFi 6 2.5 Gigabit Ethernet Gateway and EMG6726 AC2400 Wireless Gigabit Ethernet Gateway, along with WX3310 AX5600 WiFi 6 Gigabit Wireless Extender and WAP6804 AC2100 Gigabit Wireless Extender.

"We looked at some of our fellow coops that were in the space. They were all using GPON, but we wanted to be a little different and we wanted to kind of futureproof our system," McGrath explained. "Without a doubt, Zyxel was the best performing residential gateway that we used."

In addition to the performance and ease-of-management of the Zyxel CPE, McGrath explained that the engineering support received from Zyxel throughout the selection and deployment process was critical. "Zyxel assigned us an engineer and we had access to him almost 24/7. In addition, we had a team at Zyxel HQ that could actually dig into my residential gateway to help us identify issues and correct them via firmware. That was instrumental in us actually selecting Zyxel as the right gateway vendor to be able to deploy system-wide to all of our customers."

"Compared to other computing products that I've physically seen with my own eyes, the Zyxel coverage of a home is much better," stated Brandon Curry, Network Engineer at ACE Fiber. "In situations with other vendors where I've had to deploy an extender with the residential gateway, I don't have to do that with Zyxel. Zyxel CPE gives us better coverage and delivers better speeds and throughput, which is critical for delivering a symmetrical service to the homes. Zyxel definitely is way ahead of competing solutions."

Main challenges

ACE Power was looking to break into the telecommunications space with intense competition among existing service providers to meet high demands for fast, reliable broadband due to COVID pandemic.

Zyxel solutions

Zyxel Mesh WiFi Solutions incorporate a series of dual-band wireless gateways and extenders, including:

- EX5510 AX6000 WiFi 6 2.5G Ethernet Gateway
- EMG6726 AC2400 Gigabit Ethernet Gateway
- WX3310 AX5400 WiFi 6 Gigabit Wireless Extender
- WAP6804 AC2100 Gigabit Wireless Extender

Core benefits

- Superior performance and ease-of-management of Zyxel products
- 24/7 engineering supports during selection and deployment process

Reliable, high-speed service leads to happy customers

According to Curry, the rollout of ACE Fiber Internet went smoothly and customers are enjoying best-in-class internet service. "Our customers are a lot happier with the Zyxel gateways because they are getting that symmetrical service that they're paying for."

"The experience has been very good even we've had issues contacting Zyxel support and engineers," Curry continued. "When we've encountered an issue, they've always been quick to find a remedy for us, or when we were doing something wrong they've been great about training us and helping us better use the devices. I definitely recommend Zyxel CPE products and have even recommended them to other co-ops that are not currently using them - and some of those have even switched."

McGrath said, "My biggest thing is having access to Zyxel engineering, because that's huge. We didn't have that with any other vendor and that's pretty big for us again because we're new to the space and having test engineers directly at Zyxel that we can contact and build a relationship with was critical. That's why we do business with Zyxel. It's not as much about the hardware as it is the people that we're going business with and Zyxel has good people."

"Overall, working with Zyxel has been a great experience and I believe our customers are better off because we're using Zyxel products," stated Curry.

Featured products

EX5510
AX6000 WiFi 6 2.5G Ethernet Gateway

- WiFi 6 (11ax) 4x4+4x4 for superior performance and coverage
- Zyxel MPro Mesh™ Solutions (compliant with EasyMesh standards)
- 2.5GbE WAN port for premium fiber-grade service
- Support uplink MU-MIMO for increased network capacity
- Support OFDMA for maximized network efficiency
- Remote management via TR-069
- CAF II performance testing support
- Zyxel-developed OPAL for superior flexibility and faster time to market
- Multiple SSIDs for various service deployment scenarios
- Comprehensive QoS for enhanced triple-play experience

EMG6726
AC2400 Gigabit Ethernet Gateway

- Zyxel Multy Pro managed WiFi system
- 1 GHz dual-core processor with dedicated quad-core routing accelerator
- Remote management via TR-069 and TR-181 i2
- Multiple SSIDs for various service deployment scenarios
- Comprehensive QoS for enhanced triple-play experience
- NAT, firewall with SPI and DoS for better security

WX3310
AX5400 WiFi 6 Gigabit Wireless Extender

- WiFi 6 (11ax) 4x4+2x2 for superior performance and coverage
- Zyxel MPro Mesh™ Solutions (compliant with EasyMesh standards)
- Support uplink MU-MIMO for increased network capacity
- Support OFDMA for maximized network efficiency
- Remote management via TR-069 and TR-181 i2
- Multiple SSIDs for various service deployment scenarios
- Comprehensive QoS for enhanced triple-play experience
- Dual images for reliable system recovery

WAP6804
AC2100 Gigabit Wireless Extender

- Zyxel Multy Pro managed WiFi system
- Remote management via TR-069, TR-098 and TR-181
- Multiple SSIDs for various service deployment scenarios
- Comprehensive QoS for enhanced triple-play experience
- Dual images for reliable system recovery

For more product information, visit us on the web at https://service-provider.zyxel.com

Customer story ACE Power