

Cooperatives and Rural Broadband

Underserved communities can provide broadband for themselves through nonprofit, cooperative entities. Many co-ops that were originally set up to provide phone service and distribute electricity now deliver broadband as well.

By Lisa Gonzalez / *Institute for Local Self-Reliance*

Residents of U.S. cities typically have at least one and often two options for internet access. Though such a limited choice may not qualify as robust competition, it's often better than the options available to those who live in rural areas.

Many national corporate ISPs have stated unequivocally that they will invest in rural regions only with subsidies from federal and/or state sources. In sparsely populated areas, the amount of investment is too high to connect premises, and returns are too low to satisfy shareholders.

People who live and work in rural areas, however, are following the example of farmers who wanted electricity in the 1930s and joined forces to form cooperatives to electrify rural America. This time, they have the benefit of established electric and telephone cooperatives that already deliver services and have infrastructure in place. Rural electric and telephone cooperatives are fiberizing rural America. Following are a few examples of the hundreds of successful cooperative projects.

Taylor Electric Cooperative started building FTTH adjacent to an office it used for network electronics. This allowed it to deliver quickly and at a low cost.

TAYLOR ELECTRIC COOPERATIVE LIGHTS FIBER

Taylor Electric Cooperative, which serves members in the Abilene, Texas, region, commenced an FTTH internet access pilot project in December 2017. It plans to expand the service, called Access Fiber, to reach more members and possibly even premises where it doesn't provide electric service.

The first of the cooperative's four phases brought service to an apartment complex and two residential subdivisions. One residential subdivision is located next to a Taylor EC satellite office, which is also used for network electronics. By beginning at this location, engineers could deploy at a low cost and on a short timeline. The co-op could also quickly discover and resolve issues with the service before moving on to the other phases.

After finishing connections to the first subdivision, engineers focused on the rest of the first phase – aerial connections to the apartment complex and the second neighborhood. Lots in the second neighborhood are smaller, giving Taylor EC the opportunity to learn techniques for connecting a range of densities as it expands the project. Engineers decided to house the fiber for the second half of the first phase in underground conduit to protect it from the area's ice storms and tornadoes.

The co-op is using CrowdFiber, a demand aggregation service, to determine where to deploy next. Members can express their interest



Paul Bunyan Communications hosts an annual GigaZone Gaming Championship to draw attention to its fiber optic network.

on the Access Fiber website, and areas with the most demand will be considered first for expansion. Even though the co-op hasn't aggressively marketed the service, people are signing up faster than predicted.

Like other electric cooperatives, Taylor EC had existing fiber in place to connect substations. Personnel, trucks, and other resources to facilitate the project, including staff with experience in telecommunications, helped reduce implementation costs and speed up the process of getting members online.

Access Fiber offers 100 Mbps for \$39.95 per month, 250 Mbps for \$69.95 per month and 1 gigabit for \$99.95 per month. All speeds are symmetrical with no data caps and no installation fees. Like many other cooperatives, Taylor decided not to offer video services, but it is likely to provide voice services at some time in the near future.

Cooperative board members responded to inquiries from members who wanted the cooperative to offer broadband services. The board noted that other electric cooperatives have successfully ventured into FTTH services in recent years. Taylor EC leadership believes the new venture will also help the organization grow. Lance Maeda, director of information technology, says, "Our position has always been, what can we do to enhance our member services? That's the overarching strategy we have. ... It was a natural fit to go into that line of business."

CAN YOU HEAR PAUL BUNYAN NOW?

For decades, Paul Bunyan Communications has found ways to connect people in northern Minnesota. The cooperative started as a telephone carrier, and over the years, it expanded

coverage and services. It now offers gigabit FTTH to around 30,000 premises within a 5,000-square-mile area that reaches into six counties.

The co-op began as Paul Bunyan Telephone in 1950 and grew by consolidating smaller telephone companies and deploying more physical assets. It first invested in fiber infrastructure in 1988 as a way to prevent the network from being filled to capacity. By 1996, the cooperative began offering internet access, Paul Bunyan Net, and in 2007, it began aggressive expansion, which included upgrading old infrastructure. By 2015, it began offering gigabit connectivity via its FTTH network, rebranding its service as the GigaZone in locations where subscriber members can obtain symmetrical speeds, including gigabit connectivity. The expansion of gigabit-capable infrastructure has steadily

Several electric co-ops partner with telephone co-ops for broadband because of state restrictions on their authority or because the telcos can deliver services more efficiently.

continued, creating a rural network that outshines many urban options.

Paul Bunyan also offers video and voice services to subscribers within its service areas and provides bundles for subscribers who wish to sign up for more than one product.

In addition to serving many small, rural towns in north central Minnesota, Paul Bunyan Communications provides FTTH to the communities of Red Lake, Redby, Little Rock and Ponemah of the Red Lake Nation. Red Lake Nation is home to about 13,000 Ojibwe members and is the only closed reservation (meaning that the land is held in common) in Minnesota. Paul Bunyan Communications also offered to upgrade its service to local schools within GigaZones at no additional charge.

Paul Bunyan Communications and other rural cooperatives are centered in the communities they serve. They don't view delivering internet access to tribal nations or local schools as a burden or an opportunity to extract unreasonable profits from local government. Cooperative boards consist of members of the local community, and they recognize that ensuring connectivity for everyone in the region benefits all sectors.

COOPERATIVES COOPERATE

Rural cooperatives and their members may have the need and ambition to bring high-quality internet to their service areas but lack the ability to follow through. If they lack expertise, or if state law creates significant barriers, the best intentions may amount to nothing. In other situations, cooperative leadership may have the ability to implement a project but see significant potential for growth and

risk reduction through partnering with another like-minded cooperative.

Horry Telephone Cooperative (HTC), which offers service in South Carolina, partners with the Lumbee River Electric Membership Corporation, despite the fact that the headquarters of the two companies are separated by nearly an hour's drive. Both entities strive to serve their communities by improving rural internet access and increasing economic development opportunities. Lumbee River EMC invested in fiber connectivity to southeastern North Carolina with nearly \$20 million in federal funding, but state law restricts electric co-ops that receive USDA funding from providing broadband to members.

Lumbee River needed to find a partner with the expertise to provide internet access. It turned to HTC in 2013 while completing construction of the FTTH network. It contacted three other telephone companies as well but eventually selected HTC. After entering into an indefeasible right of use (IRU, or long-term fiber lease), HTC set to work and signed up the first customer in 2014. The electric co-op now provides electricity to more than 50,000 members, which offers ample opportunity for HTC to expand its subscriber base.

In Missouri, Callaway Electric Cooperative teamed up with a subsidiary of local telephone co-op Kingdom Telephone Company. The subsidiary, Kingdom Technology Solutions, is working with Callaway to operate as Callabyte Technology in central Missouri. The communities east of Columbia, including very rural areas, now have access to symmetrical gigabit internet speeds for \$95 per

month. Residents can also subscribe to 100 Mbps symmetrical service for \$65 per month or 500 Mbps symmetrical service for \$75 per month. Telephone and video services are also available.

Callaway and Kingdom bring different expertise to the partnership. The electric cooperative's strength was building the mainline infrastructure, and Kingdom manages customer connections, such as drops to the home and customer equipment. Kingdom Telephone Company has provided FTTH in its own right since late 2014 and has previous experience providing telephone service to Callaway and Montgomery counties since the mid-1950s. Callaway Electric Cooperative began serving Callaway County in the 1930s and has expanded to serve portions of Montgomery County. The cooperatives share profits from Callabyte Technology based on their investment in the project.

LEGISLATION TO HELP CO-OPS

Although all telephone cooperatives have the authority to provide broadband services, electric co-ops' authority varies from state to state. Rural cooperatives that want to provide high-quality internet access to subscribers in their service areas can be assisted by state and local laws. Indiana's Facilitating Internet Broadband Rural Expansion (FIBRE) Act, or SB 478, already encourages rural cooperatives in that state to invest in fiber network infrastructure. The law reduced the need for electric cooperatives to obtain separate easements for fiber lines if they already possess easements for electric lines.

Other states with significant disparities between urban and rural connectivity could follow suit by eliminating state laws that cooperatives find troublesome in their efforts to deploy fiber for their members and other potential subscribers. For example, in North Carolina, electric cooperatives could more easily provide internet access in many areas that national providers choose not to serve if the state removed restrictions, found in N.C. Gen. Stat. § 117-18.1, on

cooperatives' providing internet service. The law prevents electric cooperatives from obtaining loans or grants from the Rural Utilities Service to provide broadband service. Electric cooperatives must find other sources of capital to develop broadband networks.

Tax code changes in the 2017 Tax Cuts and Jobs Act created a potential new risk for cooperatives that intend to use grants to help deploy broadband networks. Because of ambiguity in the language of the act, it's possible that grant funding could be calculated as income. To maintain their tax-exempt status as nonprofit membership corporations, rural electric and telephone cooperatives must obtain at least 85 percent of income from members.

Federal and state grants have always been excluded from the member income test, based on IRS rulings. By treating government funding as capital rather than income, cooperatives can accept as

much grant money as necessary without losing tax-exempt status.

Last year's tax act revised section 118 of the Internal Revenue Code. Although capital contributions are still generally excluded from a corporation's gross income, "any contribution by any governmental entity or civic group" is no longer excludable. As a result, cooperatives (also considered "corporations" for tax purposes) might be required to include government grants in the calculation for the income test. The change could push cooperatives over the 15 percent limit of allowable non-member income, causing forfeiture of tax exempt status. Without clarification, electric and telephone cooperatives may not pursue funding for broadband deployment. For rural communities that increasingly depend on their cooperatives for high-quality internet access, this change is discouraging.

Sen. Tina Smith, a Democrat from Minnesota, plans to introduce legislation to amend the language of the act and prevent unintended consequences. She has requested that Treasury Secretary Steven Mnuchin and IRS Commissioner Charles Rettig take action to address the problem.

If given the opportunity to deploy fiber in rural areas sans disabling restrictions, electric and telephone cooperatives are some of the best options. Like municipal networks, they provide connectivity to limited local areas, are accountable to and controlled by their subscribers, and work for the public good. ❖

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