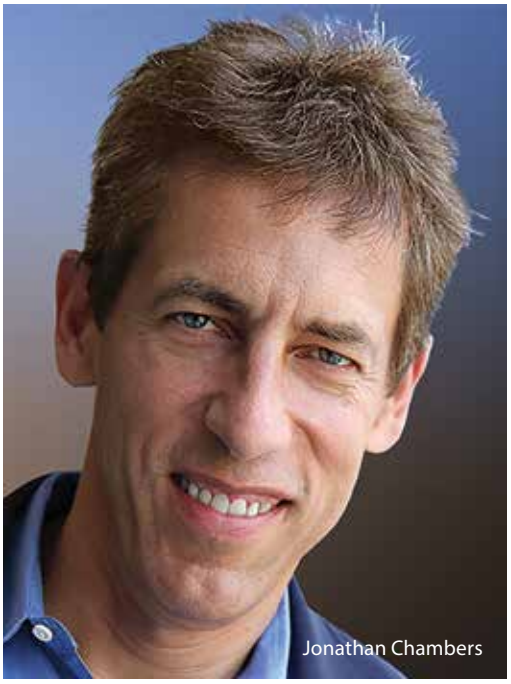
Q&A with Jonathan Chambers of Conexon

Electric Cooperatives' Covenant With Members Will Fill Rural Broadband Gap Large Incumbents Leave

Conexon is guiding electric cooperatives on building out FTTH networks to rural communities large ISPs have ignored.

Rural electric cooperatives are providing new hope for bridging the rural broadband divide. Formed during the 1930s to get electricity into the hands of rural residents and businesses, such co-ops are building out fiber-based broadband across several U.S. communities. One company driving that movement is Conexon. In February, Conexon and members of its Rural Electric Cooperative Consortium (RECC) were awarded more than $1.1 billion through the FCC's Rural Digital Opportunity Fund (RDOF) Phase I auction to provide gigabit broadband services. Consortium members will use the money to launch and operate fiber-to-the-home (FTTH) networks in more than 600,000 rural areas across 22 states. One champion of the electric co-op movement is Jonathan Chambers, a partner at Conexon. **Broadband Communities** caught up with Chambers to talk about the role of electric co-ops in expanding rural broadband.


Jonathan Chambers

BROADBAND COMMUNITIES: *Conexon led an electric cooperative bidding consortium that secured $1.1 billion in the RDOF auction. Do you see that as validation of the role electric cooperatives play in bridging the broadband divide?*

JONATHAN CHAMBERS: Yes. It confirms what [Conexon founding partner] Randy Klindt and I have believed for at least the last eight years. There has been a sea change that most people in the industry and policymakers have not recognized yet. For example, in Mississippi, the dominant provider of telecom services has been what is now called AT&T.

Mississippi is largely rural, and 2 million of the people who live there take electric service from electric co-ops. As recently as these past five years, AT&T received $450 million from the FCC to subsidize its provision of telecommunications and broadband services.

Here's the sea change: AT&T, which was the main provider of telecom services and broadband, is no longer the recipient of any future funding. Over the next decade, it won't be the recipient of federal funding, which means other companies will be the dominant service providers in rural Mississippi. Today, those other companies are predominantly electric cooperatives.

When Mississippi used federal Coronavirus Aid, Relief, and Economic Security (CARES) Act funding for broadband last year, the state legislature adopted a $75 million matching program. Out of that public money, $74 million went to rural electric cooperatives in Mississippi to build fiber networks. It was part of an ongoing effort by electric cooperatives to get into the broadband business, which they were permitted to do only in January 2019.

In the blink of an eye between 2019 and 2020, when the CARES Act funding became available, electric co-ops were able to apply for and receive $74 million. Then, most of the co-ops in Mississippi participated in the RDOF auction and won nearly all the RDOF funding.

Looking out over the next decade in rural Mississippi, the landscape will be filled with co-ops building fiber networks to provide service to their members. In a few years, AT&T in rural Mississippi will be known only as a mobile provider. AT&T has been walking away from rural America since 2012, and that exit is nearly complete. Rural electric co-ops, which were the single largest recipient of federal funds, will translate into the single largest providers of rural broadband.

> One reason electric co-ops get into the broadband business is the future management and control of electricity, which can help prevent blackouts during storms.

BBC: *When an electric cooperative considers developing an FTTH plan, what are its key initial concerns and challenges?*

JC: When we're talking to a cooperative, it's because it heard from its members that it needs to fill the gap and provide a service that the cable and telephone companies won't provide. Co-ops have done extraordinary things to serve their members: provide electricity as well as maintain and sustain their communities. Even though there's now a new need, electric co-ops are conservative institutions that have been successful in maintaining operations and providing electricity for a long time. Upsetting that in any way initially is a scary thing.

In our view, broadband is the same type of business. As I like to say, electricity is a poles-and-wires business. If anyone writes the history of the electric co-op movement into broadband, there's one person responsible: Randy Klindt. What we [at Conexon] have done is demystify the internet industry for the co-ops. They get told how complicated broadband is. Most of the people who tell them that are trying to scare them. We try to lay out the data from the experience of other co-ops that got into the business. We also give them an alternative to any aspect of the business they are concerned about. If they want to own the network and have someone else operate the network, we operate it. If they are concerned about marketing, customer support, NOC or maintenance, we provide services in a way that they can pick and choose to make it possible to get into the business.

BBC: *How can fiber deployment impact an electric cooperative's smart-grid efforts?*

JC: The other reason electric co-ops get into the broadband business, which is largely misunderstood by other industries, is the future management and control of electricity. An ice storm this spring caused a lot of damage in Louisiana and exposed the susceptibility of the electric grid to weather events. One of the co-ops in Louisiana told us it was building a fiber network. I said, "What if you had the control to manage real-time devices within the home, would that have changed anything?" The co-op rep said, "If I could have controlled water heaters, we would not have had rolling blackouts."

Controlling water heaters is nothing new. If you can control water heaters by cycling on and off, you control the peak demand. If you can control other appliances in the home, you begin to address another side of the equation that all people who want to do something about climate change seem to be ignoring, which is how to run a more efficient electric network. Without fiber to the meter that enables control of devices in the home, you are missing one part of the equation.

The other reason we build fiber networks is to have them integrated into electric networks so the management of electric networks can assist in the future. Because of the way we build networks, you get a fiber network built to every home and business in a rural area. Are electric co-ops part of the answer? They cover 60 to 70 percent of the geography in America, so yes, they are the answer.

Fiber is a better long-term investment. It's less expensive over the period if you look at the asset life. It is only when people developing the program don't value the life of the assets that you end up with a disagreement about fiber and wireless.

BBC: *Some electric cooperatives are building their own FTTH networks; others are entering into partnerships with telcos. Do you see more of these partnerships taking place, and are they valuable?*

JC: It's funny: The telcos failed to build and operate telecom networks when they were paid hundreds of billions of dollars to do so – and those are the folks you turn to as a partner? Partnerships between telephone companies and electric co-ops culturally are not a great fit. The reasons are cultural and economic. A partnership is a fancy word for a contract. In a contract, each party gives something, and each party gets something. Co-ops do something different. Co-ops don't have a contract but have a covenant with their members. That covenant goes back to the 1930s. A contract seeks the best deal; a covenant binds people together and lifts them all up. A covenant is a cultural phenomenon that exists within electric co-ops. Contractual arrangements don't work because co-ops were formed on a covenant. To partner with a co-op, you need to have that same sense and believe in service to others, not in an economic way but in that your mission is to serve others who can't do it for themselves.

BBC: *Speaking of RDOF, providers and industry organizations have raised concerns about broadband wireless and low-Earth-orbit satellite companies competing against fiber-focused providers for funds. Is fiber the more sustainable medium for rural broadband?*

JC: Sustainable is the right word. Fiber is the long-term technology. The main problem with the way people discuss the technologies is that the discussion often is focused on speed. The one part that never creeps into these discussions is what drives investors, which is time.

I invest money in fiber networks. Why? It's a better long-term investment. It is less expensive over the period if you look at the asset life. It is only when people developing the program don't value the life of the assets that you end up with a disagreement about fiber and wireless. The FCC's Connect America Fund I, CAF-II, RDOF and A-CAM decisions are short-term decisions. The way the FCC must collect and spend money is different from spending appropriated money, which Congress has sole authority over.

If using appropriated money from Congress, spend it only on infrastructure that has an asset life of 30-plus years. You are investing in things that will last. If you invest in things that last, you have a better chance of properly spending the public's money. You also avoid basing the decision on speed. The FCC spends $10 billion over five years on 10/1 Mbps and gives the money to AT&T, CenturyLink and Frontier. Then it holds an RDOF auction to spend the money again in the same places. The FCC waited two or three years while it was still giving money to companies to upgrade their DSL networks. If you can't lift your head up and look a little bit toward the horizon and at least have a time frame of 30 years, you should not be spending the public's money.

I don't care how Elon Musk or fixed wireless companies spend money. Do I believe fixed wireless can provide gigabit service in rural America over whole areas? I do not. Do I think it could do that in some area at some point? Sure. That's not the issue. The issue is investing that requires you to spend more of the public's money when standards have changed. Someone asked me during a panel if the FCC's 25/3 Mbps broadband definition should change. My answer was the FCC has multiple broadband standards. The FCC still funds 4/1, 10/1 and 25/3, 25/5 Mbps, gigabit and other things I forgot about.

We're at a moment in time when the country is seized with an idea that seems hard to believe: that it makes sense to invest in rural infrastructure. One way to do that smartly is look at infrastructure that has a life span of more than 30 years. We should also have funding for consumer-driven services. If a consumer chooses my service over another service in a high-cost area, the funding should go to me. If a consumer chooses Starlink, the funding should go to Starlink. Instead of having the FCC make funding decisions, let the consumer decide. If you allow consumers to make decisions for the recipient of a chosen service, you introduce an element of competition in the way that federal funds are spent.

BBC: *There seems to be a movement in which more people are moving out of larger cities and into rural America. Are you seeing broadband as being the new attraction to retain and attract residents and more remote businesses?*

JC: I think it's necessary not so much to attract businesses or even people who can work from home but rather that people won't move to an area where they can't get high-speed internet. It's a repellent if a community doesn't have adequate internet access. That's why communities across the country have gotten involved.

No one on the federal or state funding side has figured out how to

account for community decisions. It goes back to my point about cooperatives, which are an expression of a community. They don't treat a person who lives farther down the line differently from a person who lives closer to the substation or to an urban area. That's what largely happens with federal and state funding decisions. By and large, funding using any map should be directed at areas economically challenging to serve, also taking into account other issues, such as terrain.

BBC: *You mentioned mapping. What needs to be done to create a better mapping mechanism that provides a better picture of what areas have broadband?*

JC: I am puzzled about people's notion that better maps mean we'll somehow produce the wisdom we need to invest in rural areas. We have enough information to know where we want to invest. The people who say we want to wait another year to get another iteration of yet another map should pay attention to when the first set of maps was created 10 years ago. The issue of maps is related to unserved and underserved. The next level of served or unserved is census block. In a rural area, a census block has one, two, six or eight homes. The FCC says a whole census block is considered served if just one part of it is served.

The argument is about what percentage an unserved area should count so the whole census block could be considered. It isn't about whether the map is better. I care if the individual home is served. If the copper carrying the signal has degraded so much that it does not reach my home so I don't get DSL service, what do I care what my neighbor has? The right map is the home. You will never get to that detail because it's the funding decision that's driving the maps.

The FCC already has the data to make the maps, but the agency doesn't use the data to make the maps. Most of the variability of the maps is due to use of copper-based service and spectrum-based services in the maps. Those are the two types of services because of the transmission media that have variability within a census block that change in their speeds from one house to the next house. If you eliminate copper and spectrum-based services for broadband, you come up with the same map the FCC will produce in a year's time. ❖