Q&A With Jeremiah Sloan, Craighead Electric Cooperative Corporation

Arkansas Co-op Builds Fiber Fast

Using a digital network construction solution helped CECC deploy a fiber network 55 percent faster than expected and 12 percent under budget.

By Sam Pratt / *Render Networks*

Craighead Electric Cooperative Corporation (CECC), founded in 1937, distributes electric power to eight counties in rural northeastern Arkansas. Its mission is to responsibly deliver reliable, high-quality services to 30,000 members at the lowest possible price. In 2017, CECC initiated a $110 million project to modernize its grid with a communications network that will be leased to CECC's wholly owned subsidiary, em**power**, to provide desperately needed high-speed broadband services across the community. The project, delivered in partnership with Irby Utilities, the Mississippi-based distributor and project delivery lead, will roll out close to 5,000 miles of fiber optic cable across rural Arkansas.

Render Networks sat down with Jeremiah Sloan, CECC's fiber assets manager, to talk through the project and understand how Render is helping the company achieve a 55 percent reduction in production timelines and significantly reduce construction costs.

RENDER NETWORKS: *Thanks for chatting with us, Jeremiah. When you were going through the broadband feasibility study, what were some of the drivers for this project?*

JEREMIAH SLOAN: Obviously, there is an economic and commercial impact that a true broadband connection can bring to a community. However, on a more personal level, the opportunities for education, medical care and entertainment for our members are the "why" behind this project.

We heard stories of families having to drive their children 30 miles to access free Wi-Fi to complete homework or having to delay bedtime because they couldn't have more than one child on the internet at a time. Members needed us to create a new broadband service offering that would deliver folks who live in our service areas the same opportunities afforded to those who live in the city.

We completed a study that lasted close to a year, meeting with vendors, industry consultants and utility construction firms to identify what was really important to the project. Our goals were to deliver a network as efficiently as possible at a minimum cost while maintaining the integrity of our existing system.

RN: *What steps did you take to bring the project forward? Talk us through the design, planning and implementation stages.*

JS: Our first priority was to identify a network design that covered our entire deployment plan up front. We initially thought that we would deploy a traditional project management model in terms of building the infrastructure – hire more people, spend more man-hours, basically just brute force the construction. That's traditionally what you do, right?

We had a large design that needed to be deployed and a distributed workforce that needed to make informed decisions in the field based on what they encountered. When we learned about Render's capabilities [translating network design into a project plan], we realized it could provide an environment that delivered the network design into manageable tasks – but more important, gave us the ability to make informed decisions on the infrastructure and deployment while continuing to construct.

RN: *How was the transition from network design to construction?*

JS: We were introduced to Render in the design process by our network design partner, Biarri Networks, and I think that that's the right time to be talking about project deployment.

We intentionally spent a few months establishing our design and project management, time well spent given the importance of accurate field data during the construction process. As far as importing a design into Render and setting up the roles around how we maintain the integrity of the data – that took us a week or two. We were able to take the network design and flow it seamlessly through to project and task level management.

Once the construction started, the rich design and field data enabled us to construct really quickly. It just makes the design very constructible. It's intuitive and literally places the construction crew in or on the data. [Their reaction is,] "I know exactly what I need to do with this pole. I don't have to flip through hundreds of pages of design data."

I've managed a similar process before and stumbled during the transition from what our engineers designed to capturing as-built records centrally without needing to manually reconcile the data. You have a lot of very smart people touching the data and trying

Craighead Electric Cooperative delivers fiber to underserved communities in Arkansas.

to maintain it by interpreting what they're seeing on pieces of paper when really, working off a centralized data source, as we do in Render, makes it so much more seamless.

RN: *What were some of your core milestones or metrics?*

JS: Our goal in the first three years was to cover 50 percent of our membership and to deploy the system in a manner that would touch as many members as possible. At this rate, we're going to realize that goal in less than 18 months (reducing the projected three years by 55 percent), a testament to how efficient the network deployment has been. Outside plant is being deployed 84 percent faster than planned.

When we initially began the project, we were prepared to have four full-time construction management personnel; however, with Render, we realized we needed only one. We're exceeding our

project expectations on 25 percent of the forecast resource spend.

Our final true north was being able to successfully deliver on a project of this scale. The project and resource management has surprisingly been the easiest component of the rollout to meet and exceed.

RN: *Have you been able to deliver greater progress visibility to stakeholders?*

JS: Absolutely. It's a huge investment, and we need to prove to our stakeholders that we're spending resources in a way that is efficient and effective and ultimately benefits members. Traditionally, we spent a lot of time preparing status updates and tracking progress. We no longer need to devote resources to this because every stakeholder can access real-time geospatial progress views. This enables smart, data-driven decisions on the deployment, which really builds confidence in the project.

Custom dashboards display as-built completions, enabling project managers to easily track adherence to schedules.

We have developed custom dashboards to track and display as-built completions, enabling project leads or managers at any point in time to say, "Hey, we've completed *x* amount of the project; that puts us ahead of or behind schedule."

RN: *You have shared some impressive project metrics. What are some of the other wins?*
JS: From a project management standpoint, we couldn't be more pleased. Render's inherent features have been revolutionary – live metric tracking, working off live data, instant as-built records, even invoicing has become seamless as a result.

Outside of the software capabilities, the broader tangible benefit has been the project support we have received. Because we are able to talk with the Render team and access your experience in this type of construction and perspective on the project itself, the general buy-in has far exceeded our expectations. That is where we see real value.

RN: *What's on the horizon for CECC?*
JS: Being an electric utility and distribution cooperative means we expect growth and change. The topics you see in the news are real considerations for us: smart grid, distribution, automation, renewable energies and distributed generation. These emerging technologies help us to deliver a future that our members want and need – whether it be solar power or electric vehicle charging stations. All these utilities hinge upon a high-speed broadband or data connection, so that's the focus and future for us. If we can sustain this progress, I believe the future is closer than we think. ❖

Sam Pratt is CEO of Render Networks, which offers a digital network design and construction solution. Learn more at www.rendernetworks.com/ digitalnetworkconstruction or contact sam.pratt@rendernetworks.com.

Did you like this article? **Subscribe here!**