



North Carolina Electric Co-op Modernizes Grid Infrastructure with Sensus

ENERGYUNITED'S SMART UTILITY NETWORK WILL LOWER COSTS AND ENHANCE MEMBER SERVICE



CHALLENGE

Upgrade metering infrastructure to improve communication

SOLUTION

Deploy a Sensus smart utility network

REACH FARTHER

Leverage Software as a Service (SaaS) to reduce maintenance costs and enhance operations

North Carolina has a proud history of innovation and advancement dating back to the Wright brothers and their historic first flight near Kitty Hawk in 1903.

This culture of innovation also lives in the electric cooperatives that deliver power to North Carolina's rural communities. Electric cooperative [EnergyUnited](#), for example, continues to find new opportunities for innovation in its service to nearly 110,000 members in 19 counties across western and central North Carolina.

"We trace our roots back to the 1930s," said EnergyUnited's Chief Operating Officer John McMurray. "We strive to stay on top of new technology in our never-ending quest to provide exceptional service."

EnergyUnited had invested in a power line carrier (PLC) system to automate their electricity meter reading capabilities. The system delivered benefits for years but began experiencing issues as the technology aged. The co-op wanted to improve communication with meters in the field.



“Now it feels like we can see our grid with X-ray vision.”

JOHN MCMURRAY, *Chief Operating Officer, EnergyUnited*

“PLC worked well for us for a long time, but with the technology advancements offered in RF Advanced Meters Systems, we fell behind. We knew it was time to upgrade to the latest, more advanced technology,” said Chief Information Officer Kathleen Hart.

New beginnings

EnergyUnited knew exactly what they wanted; a communication network to deliver accurate and timely meter data; reliable hardware and software to keep member costs low; and a partner they could trust to maximize their members’ experience.

“We investigated beyond the technology,” said McMurray. “We looked at who was providing that technology and how they could help deliver near real-time sensory information that would enable us to improve member services in the long term. We weren’t just looking for a smart meter solution but rather a smart grid solution.”

After a thorough search, the co-op deployed a [smart utility network](#) from [Sensus](#), a Xylem brand. EnergyUnited also chose the [Software as a Service](#) (SaaS) solution which gave them a private and secure cloud-based environment where software maintenance is managed by Sensus.

“Besides functionality, SaaS was one of the big reasons we chose Sensus,” Hart explained. “Having Sensus manage our software upgrades has drastically reduced the time we typically spend on them. It took us three months to deploy the last upgrade of our PLC system. Working with Sensus, our latest upgrade took less than a month.”

Swift rollout

EnergyUnited rolled out more than 70,000 Sensus [Stratus](#)® electricity meters within the first year of deployment. With the new meters in place and the ability to communicate via the secure, two-way [FlexNet](#)® communication network, EnergyUnited now receives near real-time data and insights.

“Shortly after deploying, we received an alert from one of our new Stratus meters about a potential outage and we dispatched a crew within one minute,” said McMurray. “Seven minutes later, 911 emergency services called us about the problem but we were already addressing it.”

When the co-op had outages or equipment failures in the past, they had to wait for customers to call and report them. “Now it feels like we can see our grid with X-ray vision,” said McMurray.





The remote management capabilities not only save staff time but also lessen the utility's carbon footprint with service calls.

"EnergyUnited recognizes the importance of sustainability measures and has eliminated about 450 truck rolls a month, which represents a 25% decrease over three months," said Hart.

Bright future

EnergyUnited continues to grow with its smart utility network. The remaining 60,000 meters will be deployed by the end of 2020. The modernization effort allows the co-op to provide the best member service possible.

"Our mission is to be the lowest cost provider," said McMurray. "Our new smart utility network makes us more efficient and empowers our members to have more information on their daily and hourly usage—ultimately giving them more choices to become smarter energy consumers."



EnergyUnited AMI Technician Terry Lippard installs a new Sensus Stratus meter as part of the co-op's modernization efforts to enhance member service.