



Union Power Cooperative Goes Solid-State to Save

New Technologies Offer Quick, Reliable Solution

Background

Union Power Cooperative is an electric distribution cooperative headquartered in Monroe, North Carolina, serving its customers for more than 60 years. The cooperative provides quality, competitively-priced electricity and energy-related services to more than 58,000 members throughout the five Southern Piedmont counties of Union, Stanly, Cabarrus, Mecklenburg, and Rowan. Union Power Cooperative is a service cooperative, owned by those who receive its services. It is one of the largest and fastest growing cooperatives in North Carolina, adding more than 400 new members each month.

In 2000, Union Power Cooperative (UPC) began looking for a more efficient and cost-effective way to read electricity meters.

“We were having difficulties with our meter readers. Some of the major challenges we faced included retaining employees and finding dependable meter readers. We also had numerous customer complaints about readings not being accurate, which required us to do a number of re-reads on our meters and adjust bills accordingly.”

Dalton Black, Manager of Information Systems at Union Power Cooperative during the Itron deployment

Black said there was constant turnover with contract meter readers. Union Power utilized internal resources to train replacement readers and provide adequate personnel for unplanned absences. The utility faced ongoing issues with timely meter reads and the challenge of getting accurate meter data.

Union Power looked at different options over a period of about two years, including power line carrier technology and mobile data collection systems. UPC was already using radio-based handheld devices and meters with radio-equipped endpoints along with Itron MV-RS meter data collection software for walk-by meter reading. Unlike many utilities, the North Carolina cooperative’s goal was not to use their meter reading system for outage detection or disconnects.

“We basically wanted to move away from systems that required a number of meter readers in the field,” said Black. “The major driver for our purchasing decision was cost. We researched on our own by visiting other co-ops that had experience with all the available types of solutions. That research pointed us to Itron’s technology. We aimed for accuracy and the Itron drive-by system was the best choice for our utility.”

» Customer

Union Power Cooperative

» Challenge

Reduce customer billing complaints and improve meter reading efficiency and reliability

» Solution

Deploy new CENTRON® and SENTINEL® solid-state electricity meters for use with Itron’s radio-based Mobile Collection System



Itron Inc.

Itron is a leading technology provider and critical source of knowledge to the global energy and water industries. Nearly 3,000 utilities worldwide rely on Itron technology to deliver the knowledge they require to optimize the delivery and use of energy and water. Itron delivers value to its clients by providing industry-leading solutions for electricity metering; meter data collection; energy information management; demand response; load forecasting, analysis and consulting services; distribution system design and optimization; web-based workforce automation; and enterprise and residential energy management.

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Solution

Union Power originally planned to retrofit all of their existing meters with radio-based endpoints. Although the retrofit process is quick and reliable, UPC decided to do a complete change-out and install all new solid-state electricity meters for use with Itron's radio-based, drive-by Mobile Collection System with GPS mapping functionality.

"We saw this as a good opportunity to ensure all of our meters are up to date with the most reliable technology," Black said. "We replaced every one of our meters using the CENTRON® R300 meter for residential markets and the SENTINEL® meter for our commercial and industrial markets. The industry is going solid-state and we felt like it was time for us to follow suit."

Black said Itron CENTRON and SENTINEL meters offered UPC the flexible and reliable communications they needed to meet the technology standards they set for themselves.

Union Power installed approximately 50,000 electricity meters. The goal was to complete the change-out process in 24 months. The actual implementation only took 18 months. UPC managed the project by using their contract meter readers to install meters on their non-read days. The utility started changing out meters in January 2002 and finished the project in June of 2003.

Benefits

To this day, UPC is still recognizing the benefits of AMR. The utility saw an immediate return on investment in more areas than they expected. UPC was able to reduce the meter reading personnel from 11 to two for an estimated labor cost savings of approximately \$280,000 annually. The benefits of mobile AMR technology reduced costs across the board: labor, transportation, overhead, materials and time.

"The changes significantly exceeded our cost savings expectations," said Black. "We were also quite surprised at the immediate revenue gain from increased accuracy, picking up data that our electromechanical meters were not previously recording. This positive gain helped pay for the cost of changing out all of our meters."

The transition to mobile data collection went smoothly. UPC noticed that typical customer complaints from billing inaccuracies, estimated meter readings, missed readings, driving habits of meter readers, accidents involving pets and workmen's compensation claims were vastly reduced.

Union Power is constantly researching the latest market technologies to improve the meter reading process.

"One thing we like about CENTRON and SENTINEL meters is they are modular and can be custom designed to fit your needs," said Black. "The flexible communications have been great for us. We are happy that we will not have to replace meters as the technology continues to advance. The deployment has been a complete success."

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