

Doing More with Less Voltage: How Advanced Metering is Helping One Utility Fine Tune Voltage and Control Load



Like most utilities, Black River Electric Cooperative is always looking for ways to better manage peak demand. So it's no surprise that the South Carolina cooperative was interested in voltage regulation.



After all, numerous studies have confirmed that, by operating in the lower half of the 10% voltage band required by ANSI, utilities can see significant energy savings.

But before Black River could begin regulating voltage, it had to be sure it could maintain service quality.

“The first question that came up was: What impact was that going to have on our customers?” said Charlie Allen, Black River's Vice President of Engineering. “My thinking with that was that we were going to have areas of critical low voltage...where we would need to go out and do some improvement before we could implement this voltage control.”

SOLUTION COMPONENTS:

AMI

- Gridstream® PLC
- E-130 FOCUS® Meters
- PLC LCS Switch
- Command Center

A Real Shock

Black River turned to its Landis+Gyr advanced metering system to gather the voltage information it needed. Using Command Center software to request a coincident peak “snapshot” of its distribution system, Black River retrieved instantaneous voltage, current kW demand, and the daily peak kW demand from 90 percent of its meters. But the results weren’t what the utility expected.

“We were surprised to find situations of high voltage,” Allen said. “Turns out, we were having problems with the high voltage coils beginning to short circuit in some of our transformers. We were able to change those [transformers] out before we experienced a possible damage claim or outage.”

By catching the problem early, Black River likely saved money for itself — and its members. Plus, the utility was able to go on and successfully implement its voltage regulation program.



Being “Future Ready”

Landis+Gyr is the leader in global energy management. We use our proven experience to help utilities realize the full potential of smart grid — with solutions that are tailored for today’s needs, but that also anticipate what’s coming. We call this being “Future Ready.”

