

POWERING THE FUTURE: CASE STUDY

Big Gains Over Line Loss: How AMI data is helping one co-op optimize distribution



For any distribution utility, line loss is an unavoidable and potentially expensive problem. Because Western Indiana Energy (WIN) REMC, an electric cooperative, purchases its energy from a power supplier, it loses money on any electricity that it can't turn around and sell to members. Yet, monitoring and controlling line loss is no easy task.

"Most of us have always done an aggregate system line loss," said Greg Wolven, Director of Engineering at WIN. "We haven't had the tools to delve down into the substation-based line loss, or it was so difficult and manpower-intensive that nobody worked on it to a large extent."

But Wolven and his team were determined to optimize distribution and improve efficiency.

Smart gets smarter

WIN's engineers found their solution in a surprising place: the cooperative's existing AMI system.

WIN had over 16,000 Landis+Gyr smart meters that were continually delivering data via a Gridstream™ PLC system. This data included information on energy demand at points throughout the system — information that could then be compared

to its power supply. By creatively analyzing AMI data from each meter alongside substation loading information, WIN now had a way to identify where losses were occurring and make smarter infrastructure decisions.

Reading the signals

But the benefits didn't stop there. Because the PLC system provided information on signal strength, the cooperative began overlaying this data on geographic areas flagged by its outage management system.

"Lo and behold, we saw great signal strength leaving the substation...but all of a sudden it dropped big time," said Wolven. "We sent some linemen and found out we had vines on the line."

And that meant the utility was able to proactively correct a problem before it became more serious and more costly.

By tackling line loss challenges, WIN found it had the tools to do much more. Its efforts have helped improve overall efficiency and lower operating costs — a benefit to employees and members.

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*."



Want to learn how you can be "Future Ready"?

Contact one of our specialists today to discuss your smart grid challenge: futureready@landisgyr.com