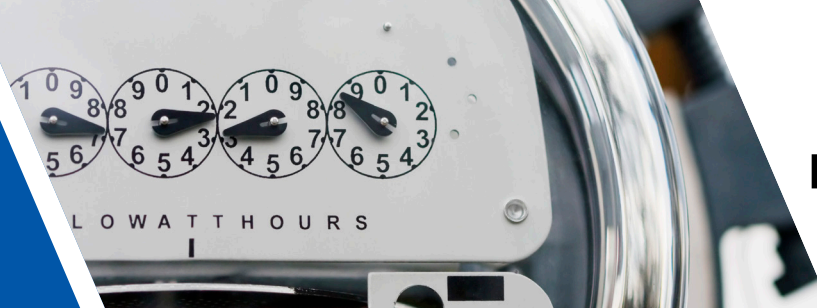


Case Study

Power: Advanced Metering Infrastructure



Customer

Black Hills Power
www.blackhillspower.com

Partner

TESSCO Technologies Inc.
www.tessco.com

Location

United States

Challenges

- > Deploy effective AMI solution
- > Secure network communications
- > Access and manage remote devices
- > Address customer requirements

Products

Industrial Networking
Sixnet IndustrialPro® cellular router
SixView Manager™ software

Results

- > Monitor smart meters in real time
- > Ensure secure wireless connectivity
- > Enable remote device configuration
- > Proactively manage electricity usage

“Sixnet cellular modems are fully configurable to maintain secure tunnels per IT security policies.”

- Rick Dobbe, Black Hills Power

Project Scope

Serving customers using 1,654,805 kilowatt hours (kWh) of power annually in twenty communities located in western South Dakota, northern Wyoming and southeastern Montana, Black Hills Power was looking for a secure Advanced Metering Infrastructure (AMI) backhaul solution that utilized Verizon's cellular network. The AMI backhaul solution needed to be able to securely and reliably communicate between Elster gateway collector units in the field and the Metering Automation Server (MAS) located at the central data center.

Solution

TESSCO Technologies worked with Black Hills to implement an effective AMI backhaul solution that provides secure, real-time remote monitoring of smart meters. By integrating Red Lion's Sixnet IndustrialPro cellular routers with Elster collector units, TESSCO developed an optimal solution that cost-effectively addresses customer requirements. The secure performance and reliability of Red Lion's rugged industrial cellular modems enables Black Hills to remotely monitor energy consumption, outage/restoration notification and alarms over the Verizon network while maintaining secure tunnels that meet IT policies. In addition, Black Hills was able to use SixView Manager remote monitoring and control software to remotely access, configure and manage thousands of critical devices from a central data center.

Benefits

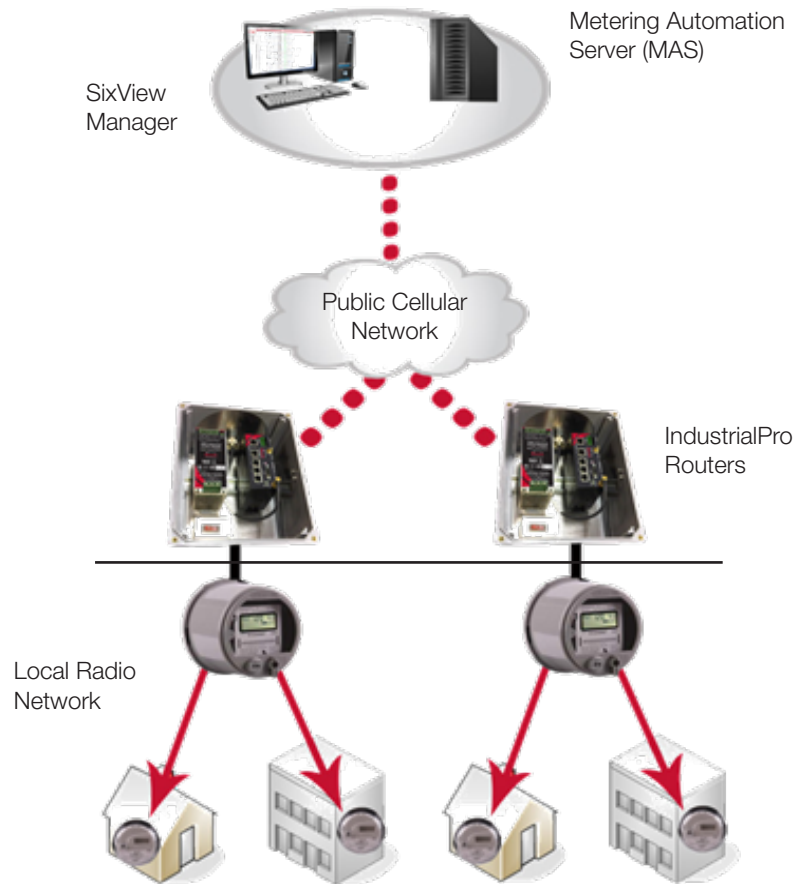
Red Lion's Sixnet IndustrialPro routers offer high-speed, secure wireless TCP/IP connectivity to remote devices. Working with Elster collector units in the field, the compact routers provide real-time access to data, which enables Black Hills to proactively manage and monitor electricity usage. The end result:

- > Simplifies deployment with web-based monitoring and management
- > Provides ease of use through remote configuration
- > Offers reliability with fast additional AMI backhaul
- > Delivers infrastructure security via built-in firewall

Products

Model	Description
SN-6621	Sixnet IndustrialPro cellular router
SN-SVM	Sixnet SixView Manager remote monitoring and control software
ST-PS-024-05	AC to 24 VDC, 5A, 120W power supply

Network Diagram



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As the global experts in communication, monitoring and control for industrial automation and networking, Red Lion has been delivering innovative solutions for over forty years. Our award-winning technology enables companies worldwide to gain real-time data visibility that drives productivity. Product brands include Red Lion, N-Tron and Sixnet. With headquarters in York, Pennsylvania, the company has offices across the Americas, Asia-Pacific and Europe. For more information, please visit www.redlion.net. Red Lion is a Spectris company.