Silver Spring® NETWORKS

SOLUTION OVERVIEW

METER TEMPERATURE MANAGEMENT

Silver Spring's Operations Optimizer application harnesses powerful data analytics to automatically detect meter problems and potential fires before they occur to protect your assets and customers.

HIGHLIGHTS

» Reduces the cost and risk of fires through early detection

» Enables intelligent management of meter temperature using your existing AMI infrastructure

» Presents actionable insights in a user-friendly interface with easily customized settings

» Improves customer service through proactive management of potential safety issues

» Delivered as a service, requiring no new software or hardware

» Reduces troubleshooting associated with high meter temperatures

Are You Doing Enough to Prevent Meter Fires?

Meter temperature anomalies can lead to brownouts, power quality issues and fires. These result in customer backlash over smart meters, and utilities are being held liable for costly damages to utility and customer property. Although the problem is not necessarily caused by weather, hot temperatures have been exacerbating these incidents in the summer and fall.

Utilities are now under increased pressure to detect rising meter temperatures before they cause fires and damage customer premises. However, the approaches that many utilities take today aren't comprehensive and don't effectively use temperature sensors that are inside the majority of smart meters. Typical methods of reducing fire risk include manual inspections and asking vendors to take photos after installation to ensure work was done correctly, but the most cost-effective and timely solution is to continuously monitor meter temperatures remotely via the smart grid.

The Operations Optimizer AMI Operations module can monitor the temperatures of millions of meters to proactively identify those that are too hot. Easy-to-use tools help your utility optimize use of field crews through remote identification of suspect meters. Configurable dashboards highlight actionable insights to help you focus on critical issues affecting your assets, field crews and customers.

Honed over years of experience working with a variety of utility customers in varied operating environments, the Operations Optimizer Meter Temperature solution has applied proven analytical methods on massive volumes of meter temperature data to prevent numerous fires and equipment failures.

DID YOU KNOW?

The most common cause of meter temperature fires is a problem in the physical connection between the meter and the socket. This can be caused by a faulty socket housing, improper installation, or erosion caused by weather. The result is a gap that allows arcing to occur between the meter and the socket, resulting in heat and the potential for electrical fires.

An Array of Tools in a Single Application

Meter Temperature is just one of the many use cases for AMI Operations, one of several pre-built modules of the Operations Optimizer that are ready for out-of-the-box deployment. Other use cases include detecting and diagnosing meter data collection and delivery irregularities, as well as identifying high bill conditions to proactively address customer concerns. Operations Optimizer is highly configurable, enabling your utility to add customized use cases as new challenges arise. By providing native integration with the SilverLink Data Platform, Operations Optimizer reduces the cost and complexity of implementing new use cases so you can avoid the added workload and expense of integrating multiple single-use applications.

Operations Optimizer includes a dynamic user interface, which allows you to toggle between a variety of list and map views. Reports and charts can be produced quickly, and the interface's dashboard can be customized to fit your particular needs. Position tracking allows map views to be used remotely—from a tablet, a laptop or a truck mount—so utility crews can easily access data in the field.

Harnessing the Power of Data Analytics

Operations Optimizer integrates seamlessly into the SilverLink™ Data Platform, which uses smart grid technology to collect, store, and present real-time and historical data from multiple sources. The Operations Optimizer Meter Temperature solution leverages a variety of utility and third-party data, including GIS location, temperature, voltage, usage and weather. Operations Optimizer combines and cleanses the data to execute a variety of advanced statistical methods to identify failed meters and potential fire hazards.

Operations Optimizer applies a proven, automated process to detect and resolve meter temperature hazards. The process begins with a simple status check on each device to identify potential problem devices. Working in concert with Silver Spring's innovative SensorIQ™ technology, Operations Optimizer leverages distributed intelligence to scan the entire population of meters for high temperature anomalies. When device temperatures exceed 210 °F, for example, the system can automatically generate an email alert. SensorIQ provides additional flexibility by giving operators the ability to fine tune polling frequencies, temperature thresholds and alert settings. With access to a rich backlog of historical data, Operations Optimizer empowers utilities with robust tools for predictive analytics, leveraging proprietary regression tools to proactively identify problems before they occur.

Operations Optimizer's Meter Temperature solution provides utilities with flexible and robust workflow tools to help operators prioritize immediate safety hazards, including an easy-to-use dashboard that summarizes all potential and confirmed high temperature meter records. The system also leverages powerful machine-learning techniques, creating a closed loop system that automatically fine-tunes the predictive capabilities of the analytics for maximum precision. In the field, Operations Optimizer has demonstrated a success rate of more than 80% for identifying meter temperature hazards and loose fittings.

Don't let unsafe meters cause damage to your customer relationships and your distribution infrastructure. Operations Optimizer allows you to harness the power of Big Data to improve AMI operations, while giving you the tools you need to protect your customers and your assets.

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