



Natural gas utilities leverage active gas networks to enhance safety, reliability and customer service

By Annette Gardiner

Gas utilities have been collecting data across their distribution systems for decades. From meter usage patterns to cathodic protection reads, gas companies have collected and analysed information to make informed operating and investment decisions. As advancements in technology and connectivity are becoming available, the ability to connect infrastructure to safely manage operations and deliver gas to customers is expanding exponentially. Gas utilities are investing in network infrastructure to solve problems in the gas network before they occur with connected devices and real-time analysis. These investments will enable companies to effectively manage aging infrastructure, address leaks and theft, and predict failures.

BUILDING AN ACTIVE NETWORK

Gas utilities are investing in integrating a communications platform on a standards-based network such as Itron's OpenWay® Riva platform, which allows numerous devices from different developers to work together on a system open to all technology.

As the next-generation Internet of Things (IoT) solution, the OpenWay Riva platform delivers high performance communications and innovative distributed applications to solve critical challenges facing gas distribution networks. Using edge intelligence to gather data from numerous devices, utilities are equipped with accurate, real-time data. This unified system is referred to as an active network, which benefits utilities with deeper visibility and control.

The active network features one, open, scalable and multipurpose architecture for electricity, gas and water service. This unified

network infrastructure brings meters, sensors and numerous other smart devices together to create a seamlessly integrated system. Utilities can provide superior gas measurement while enhancing safety and preventing theft to exceed customer expectations by harnessing this unified network.

Of course, creating an active network takes time, requiring incremental updates to existing gas infrastructure to expand its capabilities. For example, Itron's OpenWay Riva Intelis gas meter brings the active network to life. Featuring built-in intelligence, the Intelis meter can automatically implement a safety shut-off or send instant alarms when unsafe levels of gas flow and temperature are detected, creating an active meter that responds in real-time.

ENHANCING SAFETY

The active network makes it possible for utilities to enhance safety by performing data analysis and making decisions at the edge of the network to rapidly solve problems as they occur.

For example, the Intelis gas meter was thoughtfully developed to enhance safety for utility personnel, customers and cities at large. With an integrated temperature sensor and high gas flow detection, the meter flags potentially unsafe conditions and automatically triggers safety shut-off. This system mitigates unsafe conditions by controlling the gas in the event of a fire or an open gas line inside the home.

Imagine a crisis for a gas utility such as a leak or fire due to flooding. First responders arrive and put their lives in danger to address the situation. However, with OpenWay Riva

Intelis, the utility can remotely control gas flow to devices at the problem area, preventing unsafe conditions for first responders and citizens.

CREATING SMARTER CITIES

Active network solutions build cities of the future. According to a report from the United Nations, by the year 2050, cities around the world are projected to add 2.5 billion new residents, which will create substantial challenges in providing safe, reliable access to energy and water. With smart technology like Itron's gas meters and open communications platforms, cities are better prepared for rising populations and increasing strain on energy and water resources.

Demonstrating the usefulness of a unified network, Peoples Natural Gas Pittsburgh (Peoples), the largest gas distribution company in Pennsylvania, is beginning to implement an active network. Paving the way for smart city applications from numerous vendors, Peoples installed Itron's OpenWay Riva platform to leverage a diverse ecosystem of meters, network devices and distributed assets. With this platform, Peoples is building a foundation for smarter gas delivery and propelling Pittsburgh forward as a smart city.

The possibilities are endless when endpoints on the network have built-in intelligence to deliver analysis from every point of the network.

Please visit Itron in booth #2611 at the World Gas Conference to learn more about the power of the active network!

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OVER 70 MILLION REASONS

To connect. To reinvent. To improve.

From increasing populations and demand to aging infrastructure and concerns about safety and the environment, today's gas utilities must harness the power of the Internet of Things to transform the way they do business.

As the #1 vendor for gas connectivity worldwide, Itron has the experience, industry acumen and relationships to help you evolve alongside your customers. We've connected over 70 million gas devices in extremely challenging, complicated environments—and we've been doing it for decades.

By connecting people, devices and technology, we are building more insightful utilities, stronger communities and smarter cities. Come visit Itron in **booth #2611** at the World Gas Conference to learn what's next!