Nothing's out of reach.

The role of smart gas

sensus

a **xylem** brand

A smart gas system expands your capabilities.

Pressure measurements

Pipe corrosion protection

Remote disconnection for leaks and nonpayment

Improved customer service

Quicker response times

Real-time intelligence from data

The use of natural gas within homes and throughout commercial industries is growing at a rapid pace all over the world. Affordability, stable pricing and reliability make natural gas an ideal choice, especially within North America. As natural gas continues to improve the quality of life for residents and businesses alike, the industry is also becoming part of the technological connectedness that is the norm today.

The rise of smart gas

Smart communication network systems used increasingly within water and electricity are also being applied by gas utilities, primarily to implement automated meter reading. The impacts are positive and include improved employee safety, more efficient operations and fewer truck rolls. However, a smart network system for natural gas has the potential to exceed these important features. A smart gas system enables expanded capabilities within gas distribution, including pressure measurements, pipe corrosion protection and remote disconnection in response to leaks and nonpayment.

The benefits of a smart gas system for utilities are many, going well beyond the foundational impact to cost of doing business. According to Chris Wykle, senior director of global gas marketing for Sensus, "Smart gas enables improved customer service and quicker response times, with some devices taking decisive, necessary action before the customer—or utility— even identifies that there is a problem. Currently, cutting-edge technology is taking safety to levels we've never been able to establish."

Utilities can also gain real-time intelligence from data within the network. That data, in turn, allows utilities to evaluate performance and elevate the customer experience.

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CHRIS WYKLE
Senior director of global gas marketing
Sensus

The best smart gas solutions should have networks that:

are upgradeable for new technologies

allow for growth in meter usage

are private for safety and security

The foundation for a smart network

For utilities or municipalities to maximize the potential of smart gas, they need to see beyond the gas meter to the entire solution. "A secure and private communication network must serve as the foundation of any smart utility, including gas," Wykle says.

Once the communication network is in place, devices and sensors enable utilities and municipalities to gather data—even from existing residential and commercial meters—that helps them better serve customers by understanding usage patterns and improving operational efficiencies. Currently available sensors can also monitor pressure and temperature levels, as well as transmit alarms to the utility or customer, enabling rapid issue resolution.

"An exciting aspect of smart gas is the ability to monitor corrosion around the clock," says Wykle. The federal mandate is to test lines for corrosion once per year, and this is typically done at various points along the line. It's a very time-consuming and manpower-intensive process. Plus, a lot can happen throughout a single month, let alone a single year. "With real-time corrosion monitoring, utilities get daily readings," continues Wykle, "so they can prepare instead of react, which has always been the traditional approach." In addition to time and cost savings is the benefit of allowing for highly skilled corrosion specialists to focus on maintenance, not data collection. "A crew can perform a day's worth of work in less than five minutes," says Wykle.

Making the most of smart solutions

Clearly, the benefits of a smart gas solution are worth the investment made by a utility or municipality. But before a choice is made from among the available smart offerings, what factors should be considered to ensure the best investment?

According to Wykle, "Utilities must invest in a network that is upgradeable and allows for growth in meter usage. Additional applications will continue to be developed, and you don't want new technology to outdate—or outgrow—your established network."

A vital aspect that weighs heavily on the minds of decision-makers is information privacy. For consumer safety and municipality security, the utility communication network should be private. Even when a communication network is private but is being shared among utility "neighbors," it's imperative that security firewalls are impenetrable and the system is able to handle ever-growing use.
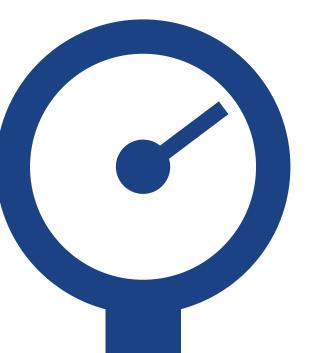
Implementation of a smart gas solution gives utilities the ability to access more data more often, ultimately optimizing service, operational efficiency and system safety.

Smart gas in the smart city

Because cities and municipalities don't typically own gas, smart gas is very much out on the edge of the smart city movement. But this shouldn't be the case. Smart cities that start with a smart infrastructure to deliver clean water, dependable power and outdoor lighting can then leverage this network to "share" with gas. In fact, this sharing is an opportunity to recoup investment through usage fees paid by the gas utility. Any fears of customer data being intentionally or unintentionally "shared" can be alleviated by ensuring that the network is both private and sufficiently firewalled.

The immense benefits of smart city infrastructure have only recently been recognized in North America, whereas our global neighbors are already realizing the impacts. Implementation not only is good for the utility producers and deliverers but also significantly enhances the quality of life for residents, attracts more businesses to boost local economies and improves the city's bottom line.

Data and analytics continue to evolve the way business is conducted in today's technology-driven environment. Implementation of a smart gas solution gives utilities the ability to access more data more often, ultimately optimizing service, operational efficiency and system safety. There is no doubt that, sooner rather than later, smart will be the new norm.

About Sensus

Sensus, a Xylem brand, helps a wide range of public service providers—from utilities to cities to industrial complexes and campuses—do more with their infrastructure to improve quality of life in their communities. We enable our customers to reach farther through the application of technology and data-driven insights that deliver efficiency and responsiveness. We partner with them to anticipate and respond to evolving business needs with innovation in sensing and communications technologies, data analytics and services. Learn more at sensus.com and follow us on Facebook, LinkedIn and Twitter through @sensusglobal.

Sensus by the numbers

175+
Years Serving Utilities

14K
Customers

3,200
Colleagues

45M
SmartPoints
795M Messages/Day

88M
Meters

986
SaaS Customers

Meters
4% Lighting
36% Water
10% Gas
50% Electric

654
Patents Granted

290
Patents Pending

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