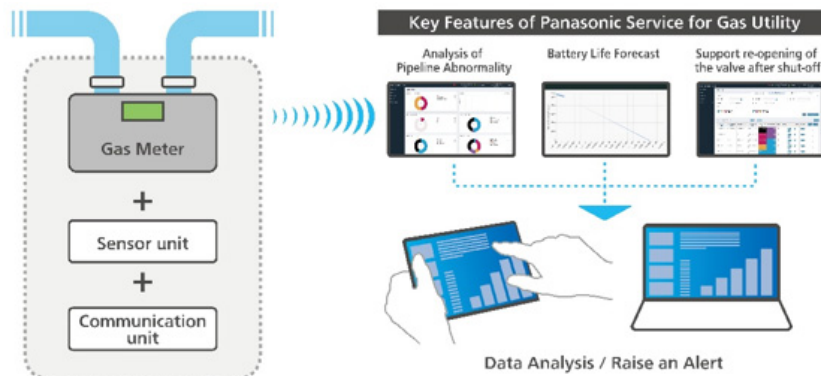


Jul 21, 2021

## Panasonic Expands Utility Services Using Smart Gas Meters in Europe

- Providing a one-stop solution from devices to data analysis



**Osaka, Japan** – Panasonic Corporation announced today that it will start providing gas utility services in the autumn of 2021 in Europe, where the adoption of smart gas meters is growing, by leveraging its gas meter device technology refined in Japan.

With increasing global demand for natural gas, the market for smart gas meters is expected to grow significantly from the perspective of their benefits for reducing environmental impact through the stable supply and improved efficiency of energy. In Europe in particular, member states of the European Union have been promoting the deployment of smart gas meters based on European directives issued following the introduction of the "20-20-20 targets (triple 20)" in 2008.

Smart gas meters are required to concurrently have low power consumption performance and high reliability that enable them to run only on batteries for an extended period of time. Accordingly, in recent years, the adoption of power-saving-friendly communication networks has been accelerated mainly based on Narrow Band IoT (NB-IoT\*) that uses base stations operated by communication carriers. Gas companies can expect benefits from improved business efficiency based on the use of smart meters and opportunities to provide new services through the effective use of measurement data. On the other hand, some issues have surfaced for running smart meter-based businesses, such as increased complexity and workload due to labor, including the handling of contracts with multiple communication carriers to cover every meter.

In order to address these issues, Panasonic will launch gas utility services as a one-stop solution that includes NB-IoT connectivity services, data monitoring and analyzing and utilizing of collected data, as well as devices for smart gas meters. The company plans to begin the introduction of these services in Italy in the autumn of 2021 and expand them throughout Europe.

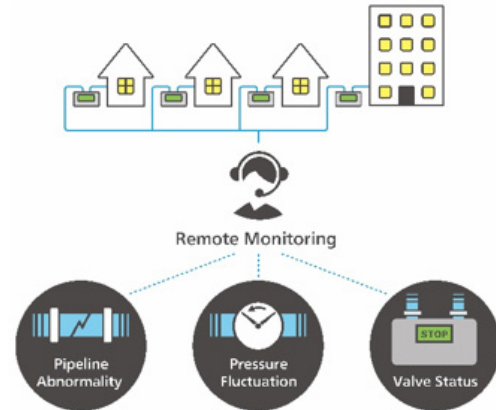
The company has been contributing to the safety and security of the gas infrastructure by refining sensor technologies to detect earthquakes and gas leaks as well as safety technologies, including valve mechanisms to shut off gas, which can only be created by a manufacturer in an earthquake-prone country. Furthermore, the company was one of the first Japanese manufacturers to participate in demonstration experiments for introducing smart meters performed by local gas companies in France, Italy, etc. by making effective use of its gas meter device technologies refined in Japan. In addition, it has been expanding the gas meter device business tailored to the needs and trends of the European market, which started to adopt smart gas meters through efforts such as penetrating the gas meter device business in Italy in 2014.

In the years ahead, Panasonic will contribute to the reduction of greenhouse gases through the efficient use of energy resources by making efforts to evolve its gas meter devices with a focus on safety technologies as well as developing and providing unique services that effectively leverage its strengths.

## [Main features of gas utility services]

### 1. Advanced Gas Service

Panasonic provides a variety of services as a one-stop solution, including controllers with integrated 169-MHz band and NB-IoT communication functions, its original gas meter devices (valves, pressure sensors, seismoscopes), and services that analyze and utilize log data transmitted by smart meters.



#### •RF Monitoring

The monitoring of the communication status of each meter enables the identification of the root causes of a communication failure and the immediate recovery to normal operation. Moreover, each meter can be controlled to allow communication with an optimum radio field intensity, thereby achieving longer battery life.

#### •Battery Status Monitoring

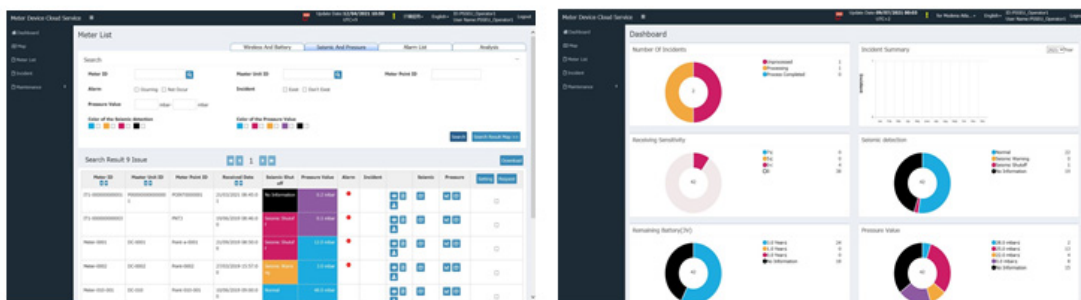
The state of deterioration of batteries embedded in controllers can be diagnosed by monitoring the voltage, current, and temperature of the batteries. Battery life expectancy forecasts allow utilities to replace batteries in a carefully planned manner and also to more easily grasp regional characteristics and issues related to the deterioration state by displaying the residual battery level on a map.

#### •Pipeline and Meter Pressure Continuous Monitoring

Each utility can identify the status of its entire regional gas infrastructure through the combined analysis of gas meter measurement data and gas pipeline information. The point where gas supply pressure decreases can be spotted when there are fluctuations in the gas supply pressure data. This allows utilities to immediately detect gas pipeline anomalies, including gas leaks.

#### •Valve Re-opening after Shut-off

When an earthquake occurs, this service visualizes the status of the gas infrastructure on a map indicating the status of gas meters as "normal," "shut off," or "alerted" based on the gas supply pressure data transmitted by gas meters. This will support safe and efficient recovery work after an earthquake.



Service screen

### 2. Connectivity Service

An embedded SIM (eSIM) system is adopted to provide NB-IoT connectivity services as a one-stop solution that selects the optimum communication carrier network. Gas companies are not required to have individual contracts with communication carriers, and can use smart gas meters in broad and stable communication environments and concentrate on the operational management and service provision of their gas infrastructures.

### 3. NB-IoT AMR Cloud Service

Remote meter reading becomes possible simply by combining an existing gas meter with an external NB-IoT unit. By specifying an individual ID and data extraction period for a gas meter, the target meter's reading data and anomaly detection data will be output from a centrally managed database in the cloud.

#### Note:

\*Narrow Band IoT: Uses a very narrow band width of 180 kHz with 62-kbps upload and 26-kbps download communication speeds, enabling batteries to drive meters for a long time due to low power consumption resulting from narrow band and low speed communication.

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#### About Panasonic

Panasonic Corporation is a global leader developing innovative technologies and solutions for wide-ranging applications in the consumer electronics, housing, automotive, and B2B sectors. The company, which celebrated its 100th anniversary in 2018, operates 522 subsidiaries and 69 associated companies worldwide and reported consolidated net sales of 6,698.8 billion yen for the year ended March 31, 2021. Committed to pursuing new value through collaborative innovation, the company uses its technologies to create a better life and a better world for customers. Learn more about Panasonic: <https://www.panasonic.com/global>.

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