The Village of Frankfort Awarded for Operational Efficiencies Achieved Through The Mi.Net® System and Meter Replacement

Increasing operational efficiencies is among the primary objectives of water and electric service providers across the country. While many are evaluating different methods to achieve this goal, forward-thinking municipalities such as Frankfort Village, NY, are setting the standard for others to follow. With a service area of approximately 20 square miles, The Village of Frankfort's Water and Electric Departments were founded more than 100 years ago and provide water and electric services to more than 1,700 residential and commercial customers. Despite its relatively small size, investing in its electric and water infrastructure is a priority. Since 2001, The Village has bolstered its electric substations to keep up with future local growth, and it has made numerous water system upgrades to ensure that its residents have continued access to safe, clean drinking water with sufficient pressure for fire protection.

situation

Most recently, Frankfort Village officials decided to replace its water and electric meters and implement an advanced metering infrastructure (AMI) network to increase the operational efficiencies of its water and electric infrastructure in ways that would help improve employee safety, water and energy conservation and customer service while also reducing operational costs.

action

To help achieve its efficiency goals, The Village of Frankfort turned to Cleveland, NC-based Mueller Systems, a subsidiary of Mueller Water Products, Inc., and leading provider of innovative water infrastructure products and services and technologically advanced metering systems for water, electric and gas systems. Officials chose to implement the **Mi.Net** Mueller Infrastructure Network for Utilities, a two-way AMI system developed by Mueller Systems that fully automates the meter reading-to-billing process and links meters, distribution sites and control devices in a single data network. The **Mi.Net** System's major components work together to completely automate the process of accurately determining how much water and electricity a customer uses—for any period of time—and allows The Village to accurately bill the customer for that usage.

In addition, The Village also decided to upgrade approximately 1,408 water and 1,700 electric meters in its service area, replacing them with Mueller Systems' Hersey water meters and

results

Landis+Gyr's solid state electric meters. Transceivers (known as Mi.Nodes) that are part of The **Mi.Net** System are located on the metering devices and gather and pass water and electricity usage data on a daily basis via radio frequency to an area data collection module, known as a **Mi.Hub**. This gateway collects and uploads the usage data to **Mi.Host**— The **Mi.Net** System's master data management (MDM) software—where it is then relayed via general packet radio service (GPRS) or other backhaul options to The Village's server.

Metering devices in The **Mi.Net** System are configured to "alert" The Village of outages or potential leaks as they occur, serving as "silent sentinels" that constantly monitor the distribution network to provide near real-time notification of such occurrences. And, should the municipality want to receive an "on-demand" reading from a meter while on the phone with a customer, or a move in/out reading request outside of its normal once a day data transmission, it can send a signal from the office to the meter to prompt such a reading.

As a result of the increased operational efficiencies provided by The **Mi.Net** System implementation and meter replacement project, The Village of Frankfort was recently recognized by the New York State Conference of Mayors and Municipal Officials (NYSCOM) at the conference's 102nd annual meeting. The organization, which represents 590 cities and villages throughout New York, awarded The Village of Frankfort first place in the Public Works Category of the 24th Annual Local Government Achievement Award Program.

Before replacing its meters and implementing The **Mi.Net** System, The Village of Frankfort's Power and Water Department was plagued by unidentified leakages, unauthorized users and meter tampering. And, all of its meter readers had received injuries on the job as a result of the rough terrain and harsh weather conditions they would have to endure during the two weeks each month it took them to manually collect all of the readings. However, once The **Mi.Net** System was installed and the meters were replaced, The Village almost immediately began seeing operational efficiencies increase in ways that helped mitigate these problems.

"The Village of Frankfort is committed to protecting its employees, conserving energy and water and providing its customers with top-notch service," said Ron Vivacqua, superintendent of utilities for The Village of Frankfort's Power and Water Departments. "The **Mi.Net** System gives us the means to help fulfill this commitment; it allows us to collect readings from the safety of our office, it alerts

us of water loss and power outages, and it provides us with a level of timely, detailed usage information that we can pass along to customers in order to help them better understand their bills and consumption behavior."

Because metering devices remotely stored and transmitted usage information through The **Mi.Net** System to the municipality on a daily basis, The Village no longer had to send employees to manually collect readings and risk potential injury. Remote transmission of usage information not only helped improve employee safety, it also enabled The Village to improve customer service and conservation, and quickly identify meter tampering or unlawful water/electricity usage. On-going access to usage data made it possible to notice data anomalies that were indicative of excessive household water/electricity usage; if the utility noticed elevated household water consumption levels, it would alert homeowners of potential water leaks responsible for losing water that they may be unknowingly billed for.

The **Mi.Net** System's real-time leak and outage alerts immediately notified The Village of water leaks or even the smallest power outages. By receiving such alerts, The Village could proactively dispatch field crews to fix problems during normal business hours, before they resulted in after-hours service interruptions. Similar to leak and outage alerts, the municipality was immediately alerted by The **Mi.Net** System whenever it detected that a meter was disconnected or being tampered with.

Impressed with the increased operational efficiencies provided by The **Mi.Net** System, The Village of Frankfort is currently planning additional projects that will allow it to optimize its use of The System; it plans on implementing **Mi.Data™**— Mueller Systems' interactive and easy-to-use web portal that is also part of The **Mi.Net** System. **Mi.Data** graphically presents usage data to consumers in a format that allows consumers to easily monitor their water consumption, compare current usage to previous periods, configure individual alerts, and set budget and water conservation goals. Another planned project that will also involve The **Mi.Net** System is upgrading residential heating and air conditioning thermostats to allow homeowners to adjust their temperature settings over the internet and receive service notices through LCD screens on the devices.

The Village of Frankfort is committed to protecting its employees, conserving water and energy and providing its customers with top-notch service. The **Mi.Net** System gives us the means to help fulfill this commitment; it allows us to collect readings from the safety of our office, it alerts us of water loss and power outages, and it provides us with a level of timely, detailed usage information that we can pass along to customers in order to help them better understand their bills and consumption behavior.

**Ron Vivacqua,
Superintendent of Utilities
for The Village of Frankfort**

Reliable Products & Services for Over 150 Years

Mueller SYSTEMS ®

Mueller Systems is part of *Fortune* **1000 Mueller Water Products, Inc.,** a leading manufacturer and marketer of water infrastructure and flow control products and services for over 150 years. Mueller Water Products is continuously developing systems and components that make collecting information easier and more beneficial to utilities and their customers. From Smart Metering Solutions to the next generation of infrastructure technology, Mueller Water Products is committed to providing you with the most reliable and enduring products and services available.

With Mueller Water Products' long history, broad product portfolio and reputation for quality and service, we aim to play a key role in delivering and protecting our precious natural resources. Our goal is to deliver superior, cost-effective products and services.

Find out more ways in which Mueller Systems can help
you increase efficiencies, reduce costs, conserve water and energy,
and improve customer service by calling us today
at 800-323-8584 or visiting www.muellersystems.com.

Mueller SYSTEMS ®