



Mueller SYSTEMS

emPower

Smart Solutions at Work

Sterling Municipal Light Department



The Sterling Municipal Light Department (SMLD) is a public power utility located 10 miles NNE of Worcester, Massachusetts in the town of Sterling.

Presently in its ninety-ninth year of business, the SMLD serves more than 3,800 residential, commercial, municipal and industrial customers. Their power supply consists of more than ten separate power agreements. The SMLD is a member of ISO New England and a wholesale aggregator of power with power purchases from generation throughout New England and New York.

The Sterling Municipal Light Department's mission is to provide smooth, reliable power at a reasonable price while staying abreast of society's technological advances for the benefit of its customers.

challenge

The Sterling Municipal Light Department wanted to take Automatic Meter Reading to the next level by implementing an Advanced Metering Infrastructure (AMI) solution. They desired a modular system that could be initially implemented for the management of energy resources and later adapted to water. In addition, the SMLD wanted to provide resources for its customers to make informed energy choices.

solution

The SMLD selected Mueller Systems' AMI solution to give their community an advantage in attracting and retaining businesses. Mueller Systems' network architecture and platform effectively captures information and enables real-time alerts, quick analysis and rapid response by intuitively presenting actionable information that can be used to conserve energy and water, and reduce costs.

Mueller Systems' Smart Metering / AMI solution utilizes Mi.Net™ which is the "backbone" to a smart grid to monitor energy and water use. In addition to lowering operating costs by peak load reduction, SMLD can also generate revenue through controlling its load thereby controlling its costs.

By also implementing Mueller Systems' optional Outage Management System service, smart meters will autonomously report abnormal events and usage for outage detection so the time to bring power back on can be significantly decreased.

"The SMLD will use Mueller's automated metering infrastructure to expand the use of an automated meter reading system to evolve both the SMLD and its customers into a real-time environment. This means efficient smart grid applications providing our customers with choices."

John Kilgo, Jr., General Manager
Sterling Municipal Light Department

Bringing the Smart Grid to Small Towns

Mueller Systems provides a fully integrated wireless two-way communication system with a fixed network. The robust mesh network configuration results in reduced capital investment costs and reduced annual maintenance costs.

Tomorrow's Solution, Today

By implementing Mueller Systems' innovative AMI solution, SMLD anticipates receiving the following benefits:

- **Territory-wide, Fully Interconnected AMI System**
 - Allows customers choices and the ability to view their energy consumption in real-time, thereby, enabling the SMLD and its customers to work in tandem controlling costs and load growth.
- **Complete Automation of the Meter Reading to Billing Cycle**
 - Enables time-of-use billing, and the future ability of customer access to real-time data which will increase our electric power system's efficiency, speed, reliability, and quality, as well as the ability to offer demand response solutions to customers.
- **Smart Meters**
 - Each meter installed at a customer location acts as a data point where information can be passed between the customer and the company.
- **Monitor and Control of System Operations**
 - System parameters (voltage, real-time usage)
 - Substation / transmission / distribution equipment loading levels
 - The implementation of demand response and energy conservation measures
 - The monitoring and detection of tampering and / or theft.
- **Lower Electricity Costs and Lower Peak Demand**
 - Flatter load curves that result from smart meter applications and changes in consumer behavior in response to tariffs that provide incentive to use less electricity during peak hours. Lower electric system operating costs through capacity and transmission reductions. Cleaner power delivered to consumers during peak periods.
- **Lower Operation & Maintenance Costs**
 - Quicker isolation and resolution of system disturbances.
- **Reduced Charges from Reduction in Carbon Footprint**
 - Lower electricity consumption during peak periods and greater usage of renewables and clean generation during peak periods. Furthermore, overall reduction in greenhouse gas emissions thereby anticipating exceeding federal and state requirements.

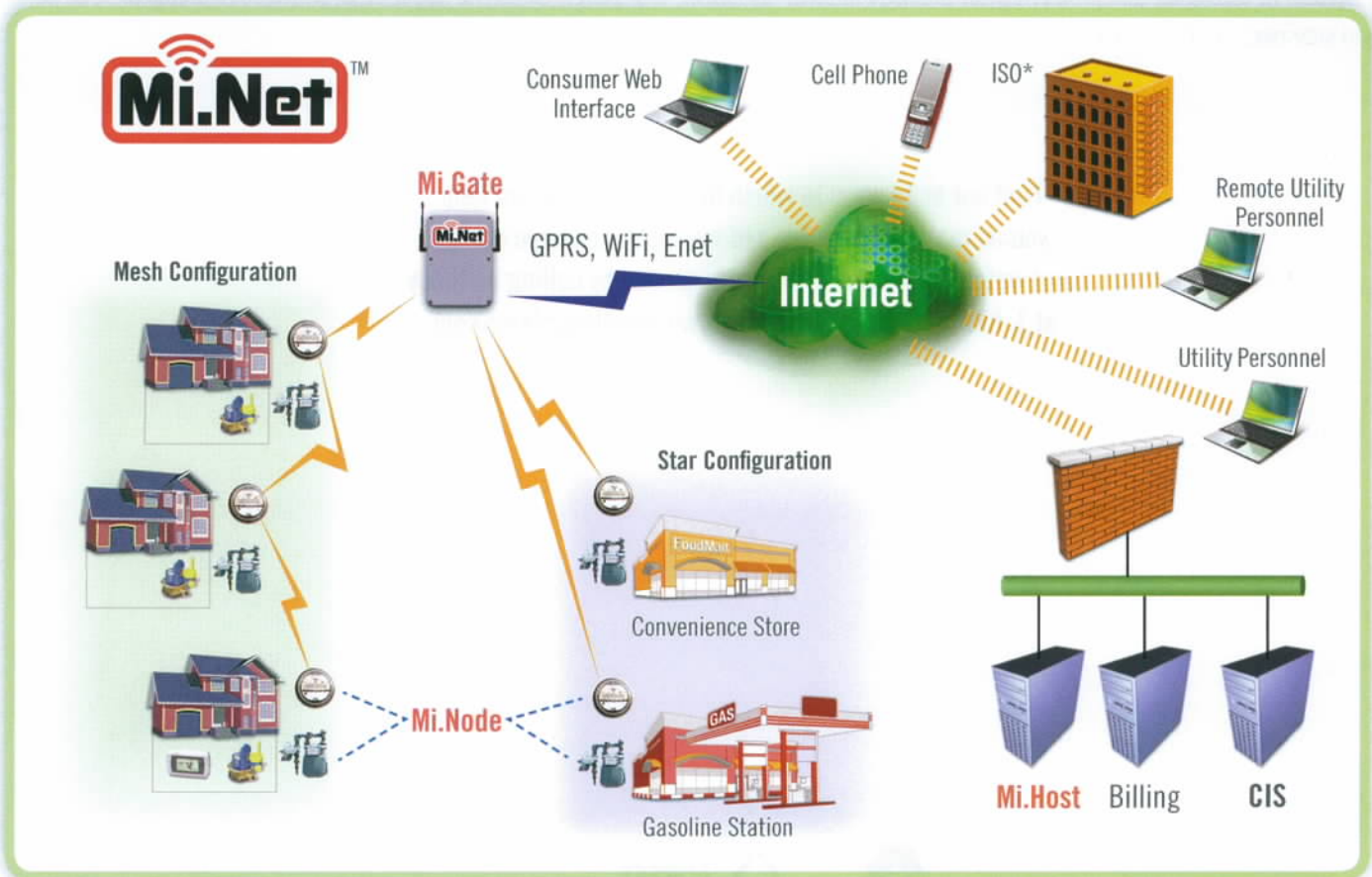
"The Advanced Metering Infrastructure (AMI) currently being deployed throughout the SMLD's distribution system will provide an indispensable resource for the light department to utilize in all facets of its operations."

Greg DeStasi, Lead Engineer
Sterling Municipal Light Department

"I am amazed at the capabilities of an Advanced Metering Infrastructure (AMI) solution for the SMLD! The system is quite technical, yet very simple and dependable too. I am pleased at how quickly our customer service team will now be able to provide customers with information as a result of the AMI solution."

Sandy Pellecchia, Office Administrator
Sterling Municipal Light Department

How It Works



* Certification as an IBCS to RTOs like ISO-NE

- **Mi.Node:** A smart meter or endpoint is located on the consumer's premises. It collects information at regularly scheduled intervals – as frequently as five-minute cycles. Data is transmitted via 900MHz unlicensed RF.
- **Mi.Gate:** Data is received from the Mi.Nodes and then transmitted via available backhaul (ex. GPRS) to the host server as scheduled by the utility.
- **Mi.Host:** The host server transforms data into information enabling improved billing, shorter customer service response time, and monitoring of the overall system conditions.
- Information can be personalized and is easily available on your Internet enabled devices, from cell phones to personal computers, so you can access the information from wherever you are.

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 energy and water, and improve customer service by calling us today at 1-877-886-5945 or visiting www.muellersystems.com.



FSC
FOREST
STEWARDSHIP
COUNCIL

*This brochure has been printed on 10% post-consumer waste paper
and is certified by the Forest Stewardship Council (FSC).*

Mueller SYSTEMS

SMART SOLUTIONS FOR THE SMART GRID

A Subsidiary of Mueller Water Products, Inc.

All trademarks or registered trademarks are the properties of their owners.

© 2009 Mueller Systems. Printed in the USA. 09/09