Your Trusted Systems Integrator for AMI/Smart Grid Solutions

Project Highlights

Challenge: Install advanced electrical meters that communicate via secure wireless networks to gather data for improved energy management.

Solutions:

* 1000 advanced electrical and mechanical meters

* Integrated a Data Acquisition System (DAS) to track energy trends and assist in forecasting future energy requirements

* Turnkey communications network meeting the Navy's Information Assurance protocols

At Washington's Naval Observatory, the antenna for Trimark's state-of-the art secure wireless network sits atop a building from another century, transmitting energy use data.

ADVANCED METERING INFRASTRUCTURE FOR THE U.S. NAVAL DISTRICT, WASHINGTON

Throughout the Washington, D.C. area, naval facilities are installing advanced energy meters to track energy usage and ultimately reduce consumption. The Navy is replacing its older manual meter reading and tenant billing system with an Advanced Metering Infrastructure (AMI), complemented by a secure communication infrastructure and Data Acquisition System (DAS). This new system will allow the Navy to automate energy consumption tracking and billing as well as better manage the information collected with a high level of data security.

Trimark Associates, Inc. is designing and integrating these systems for the Navy throughout Northern Virginia, Washington D.C., and Maryland. The final product will include 1000 advanced electrical meters, data recorders and mechanical meters over a secure communicating network to a Data Acquisition System (DAS), which will provide to the Navy data to meet ongoing utilities management, energy management and the backbone for future Smart Grid capabilities.

Metering Provides Data to Optimize Energy Use

Smart meters provide consumption and power quality data to a Data Acquisition System (DAS) via secure communication networks. This network will form the foundation of future Smart Grid functionality.

The Data Acquisition System (DAS) tracks energy trends and assists in forecasting future energy requirements. The fully customizable reports and energy dashboards provide powerful tools to manage real-time data and analytical tools to optimize energy use.

Secure Communications Network

Trimark installed a secure communication network utilizing wired infrastructure and wireless mesh network. Trimark, in compliance with DOD FIPS 140-2 requirements, enabled the system to be certified as secure by DOD, which is compliant with the Navy's extensive Information Assurance protocols. The system includes intrusion detection, network monitoring, firewalls and Virtual Private Networks (VPN).

Bringing It All Together

Stakeholders include the Navy Public Works, the central utility group responsible for the infrastructure and the Navy's IT professionals.

Our approach involved developing a test site to evaluate all system components and to ensure that the Navy's information security requirements were satisfied.

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