# MCA

## **SCADA Powers Smart Grid Technology**



# **Automating Power Distribution with SCADA Systems from MCA**

#### **Increasing Service and Decreasing Outages**

Beginning early last year, a major utility decided to deploy a new wireless network for 400 connected sites with their traditional SCADA system. SCADA systems are critical to nearly every utility, regardless of their specialization, for various IoT applications.

When dealing with smart grids for electric utilities, managing critical infrastructure is more efficient when SCADA systems are leveraged for the control of Remote Terminal Units (*RTUs*), Programmable Logic Controllers (*PLCs*), Intelligent Electronic Devices (*IEDs*), automatic breaker reclosers, and various other hardware applications.

This utility aforementioned, added hundreds of the devices and hardware listed above with a goal of gaining real-time connectivity and data from among their vast network of power substations to improve end-user the experience, better manage outages, and increase the overall efficiency of their power distribution operations.

#### **Solution Profile**

#### Industry:

- Electric and Power Utilities
- Renewable Power Utilities

#### Key Benefits:

- Quicker fault detection
- Precise fault isolation
  Automated restoration of service
- Better SAIDI performance
- More efficient personnel
- Increased customer satisfaction

#### Products:

Motorola ACE3600 Remote Terminal Units

#### **Challenges Facing Power Utilities**

For many electric and power utilities, implementing full smart grid technology has been a learning curve. Applying cost-effective, high-performance wireless networking solutions to increase automation capabilities and effectively monitor data has challenged many utilities, forcing them to consider how to best leverage IoT hardware such as RTUs for their SCADA systems.

One issue our utility client faced was how their new hardware would fit with their legacy 900 MHz and VHF wireless systems. They needed a solution that would work with their current system, while also future-proofing for coming smart grid applications and deployments.

The solution they would ultimately implement would need to seamlessly accommodate data communications from a variety of IEDs from a number of manufacturers with different data protocols.

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# **SCADA Solutions from MCA**

#### **Solutions Deployed**

The utility deployed an approximately 2,000-site network equipped with Motorola MC-Edge Gateways and Motorola ACE3600 RTUs from the SCADA solutions team at MCA.

MC-Edge<sup>™</sup> Gateways provide seamless IoT connections for P25, LTE, and LoRaWAN<sup>®</sup> networks while Motorola ACE3600 RTUs support communication with a greater number of IEDs at sites with a larger number of devices per frequency.

Their smart grid distribution system was now capable of reaching millions of analog and digital points through a combination of 900 MHz links and VHF frequencies.



### **Results Observed**

This solution increased power availability for over a million residential and business customers who relied on this utility over a service area of 2,500 square miles.

Automating many of their previously manual functions and operations has given the utility the ability to monitor and control nearly their entire system. They have become better able to identify and isolate faults in their lines and quickly respond to outages.

Additionally, by adding Motorola MC-EDGE Gateways and ACE3600 RTUs to their SCADA system, they have been better equipped to deploy field technicians for repair and restoration. Their SCADA solution has given them better information on power usage that has led to greater efficiency, cost-effectiveness, and more satisfied customers.

#### **About MCA**

We are the trusted advisor for a safe, secure, and efficient workplace. MCA offers a carefully researched portfolio of voice, data, and security solutions. As your trusted advisor, we reduce the time and effort needed to research, install, and maintain the right solutions to make your workplace better. The MCA advantage is our extensive service portfolio and certified professionals that support the solution life-cycle from start to finish.

### Why Partner with MCA?

- Over 30 Years Experience in Communications
- Quality Devices from Top Manufacturing Partners
- Rapid Deployment of Connectivity Solutions
- Fast, Secure, and Reliable Network Performance
- Vastly Improved Utility Worker Safety and Security



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