

Smart grid and advanced metering infrastructure initiative

Glendale Water & Power



Background

Glendale Water & Power provides water to 33,400 customers in Glendale, California. The city-owned utility also generates, transmits, and distributes electricity to 84,500 residential, commercial, and industrial customers.

Glendale Water & Power (GWP) has undertaken a significant undertaking towards enhancing their customer service by implementing an advanced metering infrastructure and meter data management system (AMI / MDMS). As part of this effort, GWP will be replacing all of its electric meters with smart meters that are enabled with two-way communications, and provisioning their 35,000 water meters with intelligence to communicate over a

secure wireless network. The new smart metering infrastructure and data management system will support home area networks to interact with customer appliances, heating, ventilating and air-conditioning (HVAC) systems, pool pumps and in-home energy displays to enable them to be responsive to the demands of the distribution network. Customers will also have Internet-accessible portals to view their electric and water usage with greater granularity and frequency. With full installation planned for completion in 2011, GWP customers will have access to timely energy and water use information in a user-friendly manner that will help them to better manage their consumption and utility costs.

The new AMI / MDMS system will have the flexibility to integrate enhanced and new advanced grid capabilities as they become available or feasible for integration. In addition to technical modernization and smart grid capabilities, the project will further assist GWP in continuous improvements in customer service, service reliability, and revenue management.

Project description

Through its project management role, KEMA is providing technical assistance and support to the GWP smart grid development team in implementing the AMI / MDMS system in the areas of:

- > Project management and documentation;
- > Administering and reporting any federal or state grant funds received;
- > Disaster recovery planning;
- > Defining and conducting system-level testing;
- > System and integration requirements, analysis and design;
- > Change management;
- > Training and knowledge transfer;
- > Realizing system benefits enterprise-wide; and
- > Customer outreach and education.

KEMA also assisted GWP in its application and successful award of \$20 million in U.S. Department of Energy AMI-smart grid grant funding under the American Recovery and Reinvestment Act (ARRA) that will be used to assist in implementing the AMI / MDMS project and smart grid development.

Objectives

- > Enable HAN functionality so that GWP customers to have timely data in order to manage their energy usage and costs.
- > Ensure AMI / MDMS system has the flexibility to integrate enhanced and new advanced grid capabilities, as they become available and feasible.

Benefits

- > By having timely access to energy and water use information, GWP customers can better manage their consumption and utility costs.
- > An AMI / MDMS system will enable ongoing improvements to customer service, service reliability, and revenue management.

Key results

- > Positive business case analysis that helped GWP gain funding from the city council.
- > Comprehensive technical assessment, development of request for proposal, support in evaluating suppliers and assistance in contract negotiation with the selected provider.
- > Development of detailed as-is and future state conditions to determine key change requirements.
- > Engaged for the next 24 months to support this initiative and to run the program management office.

Client

Glendale Water & Power

KEMA role

Project Coordinator

Project partners

U.S. DOE, ARRA Smart Grid Investment Grant Provider

Project details

Total Cost: \$51,000,000;

Duration: 36 months

For more information, please contact:

KEMA

Tel: +1 510 891 0446

info.consulting@kema.com

www.kema.com