

Eugene Water & Electric Board

Bringing together disparate legacy applications into one unified system



PROJECT AT A GLANCE

Project Type

Operational utility solutions

Location

Eugene, Oregon

Number of Customers

More than 86,000

Applications

To maintain its electric, water and fiber networks using one common solution

Solutions Implemented

ArcFM™ Network

ArcFM™ Operations

ArcFM™ Fiber Manager

CUSTOMER BENEFITS

- Graphical, data-rich environment
- Simple, cost effective solution
- More accurate data



Founded in 1911, the Eugene Water & Electric Board (EWEB) is Oregon's largest customer-owned utility — providing electricity to more than 86,000 homes, business, and schools in Eugene, Oregon. EWEB is also chartered to provide water service to more 50,000 customers in the Eugene metro area.

Unique among utilities of its size, EWEB generates close to 12 percent of its own electricity. It also operates an energy trading floor, filters its own water, provides steam heat to the core business district, and operates a fiber telecommunications network.

Challenges

In 2004, EWEB sought an Esri-based mapping solution that would serve both its water and electric Geographic Information System (GIS) needs, and its Outage Management System (OMS) requirements. Due to increased utility costs for licensing, maintenance and use of its two legacy GIS applications, technology convergence became a central goal for the new system. In addition, several

major outages from 2002 to 2004 highlighted the limitations of its legacy OMS — and EWEB's elected board wanted to see improvements. One was for the new OMS to be able to make predictions and use enhanced reporting functionality.

Solution

To meet these goals, EWEB selected Schneider Electric's ArcFM™ Network Solution and Responder OMS in 2005. This allowed EWEB to bring together its disparate legacy applications into one unified system.

A powerful extension of Esri's ArcGIS® platform, ArcFM Network provides a graphical, data-rich environment, displaying the information utilities like EWEB need for maximum reliability and efficiency. Developed as a complete enterprise solution for an entire organization, ArcFM Network offers a map-centric, intuitive way to model, design, maintain and manage facility, and land-based information.

Schneider Electric ArcFM Operations is a simple, cost effective solution, that helps reduce outage times by locating problems faster — and providing critical information for emergency response.

The Bottom Line

EWEB previously used competitive GIS products for managing their electric utility and water facility, and Esri for water source protection and emergency response. The legacy systems were highly customized and an internally developed outage application was built in the Smallworld environment. In addition to the complexities introduced by the highly-customized products and their inability to work together, vertical applications were either non-existent or prohibitively expensive. EWEB required redundant staff support for the various systems.

The implementation began 2005 and was followed by a subsequent conflation of the common land base and all features to Oregon State Plane coordinates by Data Enhancement Services, LLC® (DES).

Today, EWEB uses seven ArcFM editors to maintain its electric, water and fiber networks using one common Esri GIS. Fourteen dispatchers and electric operations coordinators use ArcFM Operations to predict outages and dispatch crews. More than 100 additional users view maps with ArcReader. Responder has also been integrated with EWEB's IVR ArcFM Operations Twenty First Century Communications and Indus Customer Suite (ICS).

In 2008, EWEB added Fiber Manager to its solutions — allowing it to store fiber optic network information in a centralized geodatabase while serving that information out to fiber crews in the field. This data had previously been held in various types of CAD drawings, spreadsheets, word processing documents, and even hand-drawn sketches.

Tracing a single fiber circuit might have required reference to several repositories of data and drawings prior to the implementation — being subject to significant error. Now, fiber engineers can clarify a circuit question in seconds with the application's Fiber Trace tools while leveraging auto-generated schematics of splicing diagrams.

The mobile component of Fiber Manager is particularly advantageous for EWEB. It allows communications and splicing crews visiting splice enclosures to dynamically create reports for the site. Because EWEB's fiber telecommunications system is expanding, understanding how the system is connected and where available infrastructure exists is critical.

EWEB employees are enjoying the benefits of their GIS project, because so many more of them have access to geographic information. The future benefits will be even greater with successful integration of ArcFM Network to other critical business applications, such as automated metering infrastructure (AMI), asset, work, and document management.