# Benton Public Utility District

## Reducing labor costs while improving data and efficiencies

### PROJECT AT A GLANCE

**Project Type**
Operational utility solutions

**Location**
Kennewick, WA

**Number of Customers**
47,000

**Area Served**
900 square miles

**Applications**
Provide a graphical view of a utility's infrastructure and tools that support cost reduction through simplified planning, analysis and operational response times

**Solutions Implemented**
ArcFM™ Network
ArcFM™ Design

### CUSTOMER BENEFITS

- Eliminates the need to print thousands of maps, design packets and work order forms
- Saves on labor costs
- Integrates each work order type and the necessary workflow into Workflow Manager

Benton Public Utility District (PUD), a municipal corporation of the State of Washington headquartered in Kennewick, Washington, was established in 1946. Today, Benton PUD supports transmission and distribution of electric energy to more than 47,000 customers covering more than 900 square miles of service territory. Benton PUD manages 37 substations, approximately 90 miles of 115kV transmission lines, 1,582 miles of distribution lines, and nearly 130 miles of fiber optic cables.

## Challenges

Benton PUD had been using AutoCAD since the 1980s to create designs for its construction and maintenance projects, but later incorporated CAD-based GIS technology to more accurately map and manage the utility's assets. As its service area grew, the utility began to recognize its repetitive and inefficient processes for data entry and management.

For example, the utility was forced to access multiple Excel spreadsheets for project costs, print pages of physical maps for engineers and redraw project designs two or three times in order to complete day-to-day construction and maintenance projects.

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> Chris Folta, manager of GIS at Benton PUD

"Our previous design process was very labor-intensive. Work order and design information were manually entered and required too much duplication, which left a lot of room for error," explained Chris Folta, manager of GIS at Benton PUD. "Even with a robust AutoCAD system, we needed standardized processes, a single, multi-user enterprise database, as opposed to having multiple single-user databases and spreadsheets."

In addition to inefficiencies in the design process, Benton PUD also lacked an enterprise work management software system. As a result, the utility struggled to accurately track its various projects in progress and efficiently recognize and account for project delays. The inability to effectively track and organize work order forms also made it difficult to enforce standardized business processes to properly complete each task included in the workflow.

In order to plan for utility growth, Benton PUD needed a flexible system that could more efficiently integrate GIS and design processes to eliminate redundancies, reduce human error, and provide enterprise access to operational information. The utility also needed a solution to help organize and track its multiple work order types and enforce the proper business standards for completing each work order.

## Solution

In 2007, Schneider Electric partnered with Benton PUD to smoothly and efficiently integrate the ArcFM™ Network and ArcFM Design solutions.

ArcFM Network is based on Esri's ArcGIS® technology and is specifically designed for the utility industry, enabling energy companies to model, design and manage critical infrastructure. By integrating utility data and advanced geographical maps, ArcFM Network provides a graphical view of a utility's infrastructure and tools that support cost reduction through simplified planning, analysis and operational response times.

Schneider Electric worked with Benton PUD to consolidate and convert its AutoCAD data into the ArcFM Network system and integrate ArcFM Design, which is an extension of the ArcFM platform and streamlines the entire design, estimating and construction process.

The ArcFM Design solution provides utilities the tools to create, control and manage multiple designs, design versions, work orders, cost estimates and input from multiple staff members involved in any project. Within the GIS database, users may view, query and edit designs without the need to copy files around the network. This feature eliminated the need for Benton PUD to manage multiple databases, print physical maps or redraw the same designs in multiple systems.

Benton PUD also took advantage of ArcFM Design's flexible workflow process tool called Workflow Manager, which can operate in a standalone mode or as the integration point to an enterprise work management system.

"Schneider Electric helped to convert our AutoCAD data and ensure its format integrated properly with our other utility programs," said Folta. "At the same time, Schneider Electric assisted in customizing Workflow Manager to track and organize all of our work order types — not just the design projects." Benton has seven different work order types it uses for various operational projects, and each work order type has a different workflow to complete the project. Schneider Electric helped integrate each work order type and the necessary workflow into Workflow Manager, to act as Benton's enterprise work management system.

## The Bottom Line

Since integrating ArcFM Network, ArcFM Design and its customized Workflow Manager, Benton has been able to increase both quality and efficiency in its data

management, design processes and overall work management. As a result of the increased efficiencies, the utility has been able to save on labor costs by handling a larger workload without the need for additional engineering staff.

"In our design process alone, we are completing the work order lifecycle 40 percent faster by utilizing Schneider Electric's solutions," noted Folta. "So for Benton PUD, we are able to realize significant labor savings by efficiently producing more accurate work with existing staff and thereby eliminating the need to hire additional resources as the utility grows. Without the need for additional engineering resources, we save at least $120,000 annually."

Folta also estimates that by using Arc FM Design and Workflow Manager on a district-wide basis, coupled with ArcFM Viewer in the field, they have eliminated the need to print thousands of maps, design packets and work order forms, saving the utility approximately $50,000 each year on paper, printing materials, and associated labor.

"Schneider Electric was able to walk us through the entire process at a pace that we felt was comfortable and provided consulting as our requirements changed," said Folta. "We now have a rock-solid system that meets all of our business requirements, is stable and delivers high value for our utility, and Schneider Electric provided the experienced partnership we needed to achieve these goals."

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