



Telvent Smart Grid Solutions Suite

The Brains Behind a Truly Smart Grid

The key to the Smart Grid is creating business intelligence your enterprise can actually use

Utilities everywhere are rapidly planning and deploying networks to transform yesterday's disjointed power distribution grid into an automated, interconnected system for the next generation. This will drive enormous benefit for businesses, governments and consumers worldwide in energy savings, cost reduction and environmental protection.

With unparalleled experience in power engineering and grid operations for both transmission and distribution networks, Telvent has the critical expertise needed to turn the promise of the Smart Grid into reality for your utility. We have developed and deployed advanced information management systems for the energy industry for over almost 50 years. Today, more than 450 utilities worldwide rely on our technology and solutions.

From our point of view, the power grid can become smart only if you have the true ability to harness the flood of information generated by your newly deployed communications networks and intelligent field devices. To harness that information — to turn it into real-time business intelligence that drives smarter decisions across your entire enterprise — you must link the various

applications in your system into a single, unified data repository. You must create a single version of the truth that can be shared and leveraged throughout your business.

Only with that single version of the truth can you effectively reduce your costs, cut energy loss along the grid, improve maintenance, enhance reliability, drive conservation through expanded rate offerings, and support more green energy options.

Success starts with open systems

A system as complex as the Smart Grid requires intensive collaboration and common standards. Open systems architecture is a must — those who choose solutions based on proprietary standards will find it difficult or even impossible to fully integrate with various systems found across the grid.

The Telvent Smart Grid Solutions Suite is built on an open architecture using common standards. It's a plug and play suite of components that can be fully integrated with standard technologies, making deployment simpler and assuring that your investments today will be compatible with the Smart Grid of tomorrow.

Our comprehensive solution is a toolset created to help you efficiently plan, design and reliably operate the grid. Its capabilities include:

- Data collection and monitoring
- Customer/grid interfaces
- Grid analytics

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- Grid design tools
- Real-time operations tools
- Rules-based economic decision making tools
- Integration to traditional business software

With a focus on interoperability and security, the Telvent Smart Grid Solutions Suite includes products for smart operations, smart networks, and smart metering.

Smart Operations

Telvent OASyS DNA Supervisory Control and Data Acquisition (SCADA)

Real-time information is the key to profitability on the Smart Grid and Telvent SCADA software is the hub of a real-time telemetry and control network for the utility grid. Telvent SCADA ensures reliability by managing the distribution network and maintaining its operational integrity. It plays a central role in Smart Grid self-healing network architecture and improves overall grid safety and security. Data collected through Telvent SCADA integrates seamlessly with other utility software applications, such as Telvent DMS and Telvent Outage Management Solutions to enable Smart Grid operations. Our Telvent OASyS DNA product family gives you the ability to easily use real-time data from the field in your current toolset, improving your daily operations and business and planning decisions.

ArcFM Geographic Information System (GIS)

ArcFM GIS is based on ESRI's ArcGIS® technology and is specifically designed for the utility industry, enabling you to model, design and manage your critical infrastructure. By integrating utility data and geographical maps, ArcFM GIS provides a graphical view of your infrastructure that supports cost reduction through simplified planning, analysis and operational response times.



Telvent Outage Management System (OMS)

This component identifies the likely cause of an outage based on input from the call center and AMI system. Telvent OMS speeds outage resolution so power is restored more rapidly and outage costs are contained. It eliminates the cost of manual reporting, analyzes historical outage data to identify needed improvements and avoid future outages, and addresses regulatory and customer demand for quicker responsiveness.

Telvent Distribution Management System (DMS)

Telvent DMS is software that mathematically models your electric distribution network and predicts the impact from outages, transmission, generation, voltage/frequency variation, and more.

This advanced analytics system creates substantial cost reduction opportunities — in the range of 2 to 5 percent of energy costs. It helps reduce capital investment by showing you how to get more out of existing assets, by enabling peak shaving via DR and DSDR, and by improving network reliability. It also facilitates customer choice by helping you identify rate options best suited for each customer and it supports the business case for renewable generation solutions (distributed generation) and for the management of electric vehicles and charging stations.

Smart Networks

Telvent Smart Remote Terminal Units (RTUs)

Telvent Smart RTUs are advanced, application-enabled devices

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installed primarily in substations that process data, and compute and transmit pertinent information to the dispatcher. Telvent Smart RTUs have the ability to collect data from both the distribution network and from the customer's facilities (behind the meter). Telvent Smart RTUs allow you to change the configuration of the network either locally, or on command from the control center, enabling Smart Grid self-healing functionality.

Telvent Smart RTUs contribute to network health and reliability by providing a low-cost enhancement to real-time telemetry, quickly pinpointing network issues, supporting switching of local devices for network health, and enabling islanding when needed.

Smart Metering

Telvent Meter Data Management (MDM)

For utilities planning and deploying significant AMI (Advanced Metering Infrastructure) systems, Telvent MDM becomes the single point of integration for the full range of your meter data. It enables you to leverage that data to automate business processes in real-time, sharing AMI data with key business and operational applications to improve efficiency and support decision making across the enterprise. This is a core business issue: utilities cannot maximize their significant AMI investments without this vital translation of raw data into actionable, enterprise-level business intelligence.

Telvent Titanium System

Automatic meter reading systems were the first step toward lowering the costs of data gathering and increasing operational efficiencies. The Telvent Titanium System takes metering to the next level by enabling real-time data delivery across your enterprise, which drives a variety of operational benefits and cost efficiencies. With real-time meter information you have a much greater ability to remotely disconnect/reconnect customers, control loads, detect and respond to outages, respond to energy theft, and monitor power quality and consumption.

Why Telvent?

It comes down to experience, knowledge and smarter decision making. Each component in the Telvent Smart Grid Solutions Suite can deliver a competitive advantage for your utility. But the full power of the suite is leveraged through integration of all the capabilities. With all the components in the toolset working for your utility, you'll make asset and load management decisions in real time, improve customer service and reliability, and provide a full 360 degree view of the network, delivering high quality information to operations personnel, and leadership for better decision making.

Unlike many newcomers to the Smart Grid arena, we offer proven solutions rather than still-on-the-drawing-board ideas. With hundreds of utilities worldwide relying on us, we've already implemented many of the world's largest Smart Grid deployments.

Most importantly, Telvent understands the business case for Smart Grid Solutions and how investment in Smart Grid technology helps reduce costs, enhance reliability, increase customer choice, and support green energy.

Every day, we're helping utilities transform their outdated grid into one that distributes electricity more efficiently and securely, while meeting the demands of a changing society in a sustainable way.

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Our evolution to Schneider Electric, the global specialist in energy management, re-affirms our commitment to provide you with innovative solutions, best-in-class customer service, and exceptional quality in everything we do. We are proud to be your partner, and we are dedicated to helping you make the most of your energy.

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