



accenture

High performance. Delivered.

Enabling high performance with Accenture's intelligent network solutions

• Consulting • Technology • Outsourcing

Accenture's breadth and depth of capabilities, experience and assets are helping utilities realize the benefits from the next generation of power grid management. Our innovative, comprehensive intelligent network solutions are helping utilities everywhere accelerate toward high performance by helping to achieve a state of increased network awareness and the resulting ability to respond in real time to operational, environmental, consumer and regulatory demands.

Electric utilities are moving into a new era. Regulatory mandates, volatile energy costs, surging power demands and growing global environmental concerns are driving the need for a radically different power grid landscape. These and other drivers are forcing companies to evolve to a new reality: operating with traditional grid structures will no longer suffice. To keep pace in a changing world, utilities everywhere will need to transform their network systems into "smart grids" capable of meeting 21st century mandates.

Accenture's ongoing research into the characteristics of high-performance businesses suggests that top companies continually refine their market focus by developing distinctive capabilities, including those related to information technology (IT). High performers not only regard IT as a source of operational excellence, but also as a strategic asset that improves productivity and, ultimately, the

customer experience. They proactively adopt new technologies as a way to gain competitive advantage.

While there is no question that today's intelligent network capabilities can help utilities progress on the path to high performance, there is also no question that the journey to a smarter grid presents many complex challenges. Accenture can help.



Paving the path to a smarter energy future

Accenture provides the industry experience and skills, global resources, proven methodologies and industry-leading technology assets utilities need to realize their vision of a more intelligent grid. A continuous investment in innovation, coupled with numerous client engagements and research-based knowledge, help ensure that the intelligent network solutions we plan and deploy are always on the leading edge.

In-depth, global industry expertise

Three decades of experience from dedicated transmission and distribution and IT practitioners translates into a team that brings extensive industry knowledge to the world's smart grid transformation challenges, along with a broad skill base ranging from executive strategic consulting, to specialized engineering, to in-depth systems integration. Our more than 7,500 utility industry professionals include many of the industry's leading smart grid, advanced

metering, sustainability and systems operations specialists, who have worked with more than 300 clients in 43 countries to tackle the unprecedented changes facing today's utility companies.

Proven methodologies and technology assets

Innovative methodologies and assets developed by Accenture over the course of more than a dozen smart metering and intelligent network projects over the past two years alone help ensure utilities gain the edge they need to navigate the maze of business and technology decisions that must be made to frame the vision of a more intelligent grid and achieve its many benefits.

We have helped some of the world's most forward-thinking utilities to build business cases and strategies that balance the need to move quickly with the need to maintain a reliable and compatible infrastructure. We have helped them to evaluate the

pros and cons of wholesale replacement of technology versus strategic upgrades, keeping in mind the needs of an increasingly complex group of stakeholders. We are also relied upon by utilities to develop the road maps needed to implement the right capabilities and technologies at the right time, given each utility's operational needs, business and financial goals, and regulatory requirements.

For utilities deploying smart grid solutions, our assets help speed delivery and accelerate benefits, maximize the strategic potential of today's technologies, minimize potential risks and provide more predictable outcomes. These assets include not only our patent-pending smart grid data enterprise architecture, but also a technology workbench designed to streamline system deployment, hosted AMI solutions, project blueprints and systems operations tools.

Meeting your unique enterprise needs



Our experience shows that the path to an intelligent network will differ for every utility. For some, it may begin with implementation of advanced metering infrastructure; for others, it may start with substation or distribution automation. For all, an integrated approach to system operations is needed so that utilities can take full advantage of today's digital intelligent networks and the vast amounts of data to be captured, managed and analyzed.

Regardless of the path chosen, the Accenture approach to smart grid enablement is holistic, transformational and designed to accommodate a logical, smoothly timed, incremental evolution from today's "as-is" operating environment to each utility's "to-be" desired system. Accenture delivers tailored approaches for identifying the most appropriate new systems, upgrading and leveraging existing systems, and integrating the various technology touch points involved in the journey to a smarter grid—both legacy and new.

Advanced metering infrastructure (AMI)

Known for participating in the first large-scale AMI system in North America, Accenture offers AMI solutions that take into account the entire value chain of smart metering across the regulated and deregulated utility landscape. From "front-end" strategic planning to integration and operation of AMI systems with other enterprise systems, Accenture has a long and successful track record of teaming with utilities to define and deploy advanced metering infrastructure solutions and to help manage the associated financial and operational risks.

Demand response

Accenture is helping utilities across the globe to plan and implement demand response programs that effectively encourage consumers to modify their energy consumption based on market price signals and

anticipated peak demand. We have worked with many industry-leading clients to assess and implement demand response programs and technologies such as:

- Critical-peak pricing, peak-time rebate and real-time pricing, as well as time-of-use and interruptible rates.
- End-point load management devices.
- In-home displays of pricing and usage.
- Smart air conditioning and other cycling controls.
- Smart thermostats.

Looking beyond demand response, we can help ensure that your utility takes advantage of the joint business benefits and increasing synergies between these programs and AMI and smart grid initiatives.

Accenture Advanced Metering Operations Services: A hosted approach to meter data management

To give utility companies a more strategic way to address data management issues associated with advanced metering infrastructure, Accenture offers its Advanced Metering Operations Services—a hosted meter data management solution. The solution combines Accenture's deep industry knowledge, meter data management and automation specialization, business process experience and unique delivery capabilities to provide a proven, secure, cost-effective meter data management system. It's a system that our energy utility clients can use immediately without capital expenditures or phased services costs. Accenture Advanced Metering Operations Services has been in operation for more than two years and currently loads in-usage data from more than 135,000 hourly interval meters each day. The solution adheres to strict service level agreements in delivering data on time and providing operational coverage, 24 hours a day, seven days a week.

System operations

To help utilities take full advantage of digitally intelligent networks, Accenture provides the business and technology leadership needed to transform system operations from an isolated function to an integrated hub of real-time operational information that enables more efficient operation of the transmission and distribution system. This, in turn, drives better strategic and operational decisions across the enterprise and the evolution from reactive servicing to proactive management and stewardship.

Network automation

Automating the ability of the transmission and distribution system to sense and control itself is a key component of an intelligent network. To be most effective, automation must be accompanied by effective analytics and visualization—analytics

to convert sensed data into information that enables the right controls to be applied at the right place on the right device and visualization to present this information in a way that improves strategic and tactical decision making. Accenture helps utilities implement the full cycle of automation, from identifying sensor/control location to implementing the analytics and displaying them for optimal decision support.

Distributed generation

Distributed generation typically includes renewable sources like wind and solar power, which share one common characteristic—intermittency. In addition, when connected at the tail end of the distribution system, renewable sources introduce two-way power flows that today's distribution systems were probably not designed to accommodate. Accenture's methodology can help utilities understand these impacts and develop tools to manage two-way power flows as well as new

and sophisticated forecasting mechanisms that can allow for a better understanding of when power is going to flow into the network. Our automation methodology combined with our knowledge of storage mechanisms and their evolution can help utilities better manage distributed generation and its integration into the grid.

Accenture provides ready assets to accelerate intelligent network solution delivery

Accenture's intelligent network solutions leverage a comprehensive set of integrated assets to help design and develop a company's specific intelligent network needs. These assets include:

Intelligent network data enterprise smart grid reference architecture

Accenture's patent-pending intelligent network data enterprise smart grid reference architecture is a master template for the new systems a utility needs to provide end-to-end management of grid data and analytics and integration of these inputs into utility systems and processes. The architecture incorporates reusable elements related to end-to-end grid data management, such as data acquisition, data transport, integrated data models and architecture. It also supports real-time and transactional analytics. In fact, the architecture currently includes more than 200 technical analytics for smart grids.

Intelligent network strategic planning workbench

The workbench is a flexible, financial model that allows decision making around the high-level elements of a utility's intelligent network strategy and provides inputs into the business cases. The workbench also serves as a strategic planning tool.

Intelligent network blueprint methodology

The blueprint methodology provides a detailed, systematic approach to the definition, specification, design and development of intelligent network solutions. The multistage process incorporates extensive smart grid experience and knowledge at each stage, with practical tools such as the smart grid technical analytics catalog and the sensor network architecture configuration process.

Accenture's intelligent network data services

Accenture's intelligent network data services enable a utility to outsource the management of smart grid data and analytics applications so that capital investment in new intelligent network infrastructure can be reduced.



Contact us

For more information on how we can help you achieve high performance contact:

North America

David Rouls
Global foundation offering lead
Transmission and Distribution,
Accenture Utilities
+1 313 887 2011
david.m.rouls@accenture.com

Europe, Africa & Latin America

Kausar Qazilbash
Europe, Africa & Latin America lead
Transmission and Distribution,
Accenture Utilities
+44 20 7844 3292
kausar.qazilbash@accenture.com

Australia

Ann Burns
Australia lead
Transmission and Distribution,
Accenture Utilities
+61 3 9838 8925
ann.v.burns@accenture.com

China

Michael Ding
Greater China lead
Transmission and Distribution,
Accenture Utilities
+86 21 23053828
michael.m.ding@accenture.com

For access to various Accenture Utilities research and publications, please visit us at www.accenture.com/utilities5.

Copyright © 2008 Accenture
All rights reserved.

Accenture, its logo, and
High Performance Delivered
are trademarks of Accenture.

About Accenture's Utilities industry group

Accenture's Utilities industry group works with electric, gas, water and wastewater utilities building bridges to meet rapid marketplace change. Our extensive utility knowledge—combined with an integrated suite of methods, people and assets—provides executives and their teams with the necessary strategies and tools to position their organizations for high performance in the new market realities. In an industry where change and reinvention have become the norm, experience is a critical asset.

- Accenture's Utilities industry group brings more than 30 years experience in the industry.
- Our more than 7,500 utility industry personnel work with over 300 clients in 43 countries to meet the unprecedented changes facing today's utility companies.
- Accenture serves 83 percent of the Fortune Global 500 utility companies.

About Accenture

Accenture is a global management consulting, technology services and outsourcing company. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. With more than 186,000 people serving clients in over 120 countries, the company generated net revenues of US\$23.39 billion for the fiscal year ended Aug. 31, 2008. Its home page is www.accenture.com.