



TRANSFORM

*to create advantage in the
utilities industry*

**HP solutions propel transformation
in an Instant-On world**

Brochure



Power and water are the lifeblood of modern society—essential to our health, safety, and prosperity. We live in an increasingly connected, interactive, immediate, and fluid world; more dependent on power and water than ever before. As such, societal attention to the usage and supply of energy and water is on the rise.

Scrutiny from governments and the public has broadened from focusing primarily on supply availability and pricing to include environmental mandates, alternative energy legislation, security requirements, and deregulation. Deregulated markets give customers flexibility of choice and heighten competitive pressures. Alternative energy sources offer more self-sufficiency options. Social pressures and individual environmentalism are driving conservation. These pressures—combined with growing demand, volatile economies, limited supplies, and aging infrastructures—are increasing unpredictability.

The opportunity: more engaged commercial, industrial, and residential customers who are eager to participate in, or at least share their opinions about, energy sourcing and conservation decisions.

The challenge: lower consumption can negatively impact revenues across the utilities value chain, including generation, transmission, distribution, and retail.

In response to these extreme market conditions, utilities are moving beyond *optimizing* operations to *transforming* them. Managers are re-evaluating business models and how technology can help them transform into more service- and customer-centric companies. Success across the value chain is contingent on the ability to ensure security of supply, grow customer satisfaction and loyalty, and enable environmental sustainability. Building competitive or service advantage requires that technology be at the forefront of innovation and growth initiatives. Tomorrow's market leaders will leverage technology to capitalize on, rather than simply adapt to, changing customer expectations.

HP embeds technology to deliver innovation at every point in your operations that matters, from Smart Grids and intelligent networks to customer management and environmental sustainability. We can automate operations and integrate technology across your enterprise and value chain. And, by doing that we unleash the power of your people with the information and applications you need to accelerate transformation.





Create advantage

Whether in a regulated or de-regulated market, connecting with customers, partners, and employees to improve service delivery requires four critical enterprise transformation imperatives:

- **Innovation:** To streamline operations and meet ever-increasing customer demands, utilities are enhancing efficiencies and creating new services through the innovative application of technology—from cost-saving Smart Grid automation to better safety and security management, electric vehicle support, and personalized customer communications.
- **Agility:** In an age of immediate or instant expectations, utilities are becoming more responsive by improving outage management, field infrastructure automation, and Web-based usage information for end-users.
- **Optimization:** Utilities are optimizing, modernizing, and making strategic investments to improve the efficiency and productivity of their operations—from operational data analytics to customer segmentation and profiling and business applications for better customer management.
- **Risk:** Utilities can't eliminate risk, but they are managing it to their advantage—particularly risks associated with supply limitations, physical and cyber security threats, regulations, and identity and data privacy.

Top utilities are embracing these new dynamics. The industry is buzzing with new initiatives: real-time usage and demand management, micro and local generation, controlled distribution, environmentally

conscious and customer-focused services, the electric car, and multiple supply options to reduce shortages. The path to the future is not always clear. Separating hype from the reality of what can actually be accomplished now, while planning realistically for the future, is tough.

So how are leading utilities meeting these requirements? In a word: technology. Not the technology of the past 40 years, but by re-inventing *how* they use technology. The world demands instant power and water, and utilities that deliver are likely to rise to the top.

HP has a vision for these leaders. It is the Instant-On Utility. The Instant-On Utility serves customers, employees, and partners whatever they want and need, instantly, at any point in time. It uses technology to integrate and automate the value chain. It adapts easily and innovates rapidly. It manages risk and environmental responsibilities.

Our relentless commitment to innovation is driving the evolution of the Instant-On Utility. Our vision supports your goal of establishing cost-effective, service-oriented operations provided over intelligent networks and grids. We help you cut through the hype by providing proven solutions, while continuing to invest in important research and development. Powered by HP people and technology, the Instant-On Utility is less bound by rigid business processes and is freer to respond and innovate in real time. It reinvents the use of technology by embedding it in efforts to secure supply, improve customer satisfaction, and better manage environmental impact.

Our solution portfolio creates transformational advantages for utilities by addressing three specific industry pressures:

1. **Facilitate security of supply** by providing demand-side management, preventing and managing both cyber and physical security threats, improving reliability and robustness, and embracing alternative energy sources.
2. **Improve customer satisfaction and loyalty** by using the wealth of information generated by intelligent networks to create new services, conduct demand response programs, provide better service, and deploy a cost-effective, multi-channel communications approach.
3. **Practice and enable environmental sustainability** by reducing carbon footprints, providing clean water, disposing of waste more ecologically, and helping end-users reduce their energy consumption.

Innovative solutions from HP advance the Instant-On world

Our innovative yet realistic approach and solutions portfolio help electricity, gas, water, and waste management utilities achieve Instant-On capabilities, improve operational efficiencies and, as a result, become more service-oriented. We offer solutions designed specifically for utilities, as well as market-leading IT infrastructure services and products that provide a reliable and powerful business and technology foundation. Our broad solution portfolio provides business process, application, and IT infrastructure transformation and modernization capabilities. Our efforts and investments help you become more competitive by addressing key industry pressures—ensuring security of supply, growing customer satisfaction and loyalty, and enabling environmental sustainability.

Automate and manage Smart Grids and intelligent networks

Efforts to improve operational efficiencies—especially security of supply, service levels, and cost controls—are driving the demand for grid and network technologies. We use automation to help align business and IT and enhance flexibility, security, and insight—each of which is central to the creation of an Instant-On Utility. Our experts help you design, automate, and manage Smart Grids, Advanced Meter Infrastructures (AMI), and intelligent networks. Finally, we combine industry-specific offerings with the underlying IT infrastructure to increase the reliability of networks and grids, and reduce their security vulnerabilities.

- **Assessment and strategy services** help you deploy, enhance, and secure AMI and other Smart Grid infrastructures. HP planning services identify the appropriate people, processes, governance, and

technology architecture and solutions needed to deliver solid returns. We conduct Smart Grid security quality assessments to identify potential physical and cyber security weaknesses and plan accordingly. For our North American clients, we can assess NERC and FERC compliance, plan improvements, and implement processes and technologies that enable auditable cyber security and compliance.

- **Implementation and management services** include design, implementation, integration, and management services. HP Enterprise Services provides proven methodologies to automate new and existing processes, reduce operating costs, and improve data quality. HP Hybrid Delivery (build-to-order, outsource, and/or cloud) helps you build, manage, and deliver a service portfolio that is sourced for, and tailored to, your business model.
- **Automation and management software** was originally developed to help the telecommunications industry manage large networks of mobile phones. Customized for the utilities industry, this application provides a unique combination of event and alarm, meter data, service activation and deactivation, pay-as-you-go process, and security management (including fraud and theft) for intelligent networks and grids. This software runs on an HP Converged Infrastructure so we can help you drive down costs and provide the foundation for agile service delivery.
- **Operational data analytics software and services** transform information into actionable insights so you can increase the operational efficiency of networks and grids, optimize energy pricing, and reduce trading risks. To protect your analysis and information, HP Enterprise Security not only provides data and identity privacy, it also improves the security of your entire IT infrastructure by addressing all aspects of security—people, processes, technology, and content.



Improve customer management

Every instant, smart meters and Smart Grids generate an unprecedented amount of data. Critical data also originates from a variety of other sources within your operations, including billing systems and multiple end-user touch points, such as customer service interactions and the Web. Your competitiveness, especially in deregulated markets, depends on your ability to use information to intimately understand customer behaviors and preferences. Automating the capture and dissemination of this instant data improves cross-enterprise insight, flexibility, and speed—helping you become more customer-centric and competitive.

- **Customer information optimization solutions** combine our data warehousing and enterprise security capabilities with business intelligence consulting, integration, and managed services. Together they help you generate comprehensive and secure insights into demand, supply, and risk management across a Smart Grid or network. Gathering and structuring this information provides an array of direct benefits, including a better understanding customer behavior and trends, the ability to create new customer-focused services, more accurate usage forecasts, and more effective pricing and demand response programs.

- **Customer management services and software** help you develop multi-channel selling and service platforms, better respond to sales and service inquiries, capture customer intelligence, and enhance end-user service. We also offer software that provides a single platform for creating a breadth of personalized customer communications, from fully customized high-volume residential bills and complex commercial statements to on-demand marketing and self-service Web applications for new account activation.
- **Customer application transformation services** and solutions help you update legacy application environments to accommodate business process changes required by intelligent network and grid implementations. Our application transformation assistance boosts the performance of SAP, Oracle, customer information systems, and billing systems. When combined with our automated and virtualized Converged Infrastructure, we provide the foundation for agile service delivery which helps shorten the time needed to provision infrastructure for new and existing application initiatives. Additionally, we help you select the method of service delivery that best fits your needs: traditional, private cloud, and public cloud.



Boost energy efficiency and environmental sustainability for you and your customers

Governments and the public are holding utilities to increasingly higher standards regarding their carbon footprints. As role models, utilities are expected to set an example regarding environmental consciousness. Environmental diligence requires insight about usage and the impact of changes, the flexibility to effect change, and, typically, automation to sustain change. As a recognized leader in environmental sustainability¹, we offer proven solutions to help you and your customers reduce energy consumption.

- **Compliance tracking and reporting capabilities** enable you to aggregate environmental and resource utilization information from relevant data sources, giving you a complete view of consumption, emissions, and environmental impacts. HP Information Optimization solutions, combined with our content and document management capabilities, provide a comprehensive approach for gathering, storing, accessing, and reporting timely and accurate compliance data.

- **Energy sustainability management solutions** provide your IT department with a clear roadmap for better managing data center energy consumption and efficiency. We can also work with you to offer this assessment service to your commercial and industrial customers as part of an energy conservation program. Finally, we offer solutions to help you measure and manage carbon emissions generated by IT activities, comply with regulations, and monetize carbon credits.
- **Ecological collaboration and content solutions** include telepresence and video conferencing, managed print, document processing, and content management services that improve business efficiencies while significantly lowering travel, ink, and paper costs—and their associated pollution and carbon footprint. Whether you operate a high-volume, on-demand, or interactive environment, HP software customizes and streamlines customer communications and billing processes—which even further reduces ink and paper usage. Additionally, our advanced telepresence and video conferencing solutions allow your teams to collaborate across vast distances—decreasing travel requirements and corresponding carbon emissions.

HP: Innovating with a purpose

HP has hundreds of dedicated researchers in labs around the world focused on tackling some of the world's toughest problems, creating new opportunities, and putting innovation into the hands of millions of people. Our goal: Innovation with a purpose. For the utilities industry, we leverage intellectual property (IP) from work completed for other industries and new IP from HP Labs to focus on:

- **Predictive analytics (Live BI):** These tools enhance real-time capture and reporting of analytics generated from Smart Grid and intelligent network data. The goal: Move from a reactive to proactive to predictive operational management.
- **Sensing solutions:** As one of the largest manufacturers of digital sensors, HP is investigating several uses of sensor and accelerometer technology such as the detection of unexpected vibrations that may be caused by equipment malfunction, theft, or tampering. The goal: Provide more sensitized data to further improve analytics.
- **Home energy management:** This technology isolates consumption at a more granular level within the home and presents these details in a manner to enable and encourage behavior change. The goal: To make home energy usage reduction easy.
- **Electric vehicles:** The advent of electric cars creates the need to provide roaming billing as drivers recharge their vehicles. HP is exploring how to leverage roaming billing software for mobile phones and apply it to the electric vehicle challenge. The goal: Simplify electric vehicle usage and ownership.

Innovate and transform. Become Instant-On.

It takes a special kind of utility to compete in this world. It requires innovation to seize opportunity in a heartbeat and discipline to marshal its resources with efficiency and resolve. It takes an agile utility that learns swiftly and continuously to close the expectation gap between what customers expect and what you can deliver. It requires moving beyond optimization to transformation. It takes a utility that is Instant-On.

Our innovative yet pragmatic approach helps you become Instant-On and more service-oriented. Only HP can provide the solution breadth and depth

needed to help you achieve this vision. We can embed technology to deliver innovation at every point that matters in your enterprise, from mobile and grid devices to event management, CIS application transformation, and global data centers. Drawing on years of experience in the utilities industry and a culture of innovation, our integrated solutions can help you ensure security of supply, grow customer satisfaction and loyalty, and operate with greater environmental responsibility.

¹ HP is a leader in Newsweek's 2010 Green Rankings which recognizes accomplishments in actual environmental performance, policies, and reputation. <http://greenrankings.newsweek.com/>

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