

The Smart Energy Alliance™ Brings Comprehensive, Coordinated Expertise To Key Utility Challenges

Result: Technology Solutions That Deliver Transforming Value While Mitigating Risk and Problems

Today's utilities face significant challenges—growing demand, regulatory issues, increasing customer expectations, environmental concerns and heightened security needs. As utilities seek to meet these external challenges, they find another set of challenges waiting internally: visibility into customer behavior and the distribution grid is limited, making it difficult to predict usage and plan for capacity demand; the pressure to lower costs is relentless; and limited capital requires maximizing returns on investments. In addition, emerging governmental mandates for distributed generation and demand management add further to the complexity.

Within this demanding environment, a multitude of innovative technologies are emerging and promising to deliver better distribution operations: tools such as distribution SCADA and smart grids, worker mobility, smart transformers, substation automation, smart metering, GPS and Geographic Information Systems (GIS), wireless services, real-time pricing and adaptive forecasting. But the very breadth of these new tools also adds to the complexity and challenge.

The good news is that these technologies, properly integrated and deployed, are transformative, fundamentally improving distribution systems, field operations and the consumer's experience. The real challenge lies in determining how to adopt these technologies; specifically, how to:

- Create a transformation strategy that selects the most appropriate technologies;
- Determine the business cases that will allow regulators to support the changes for the benefit all stakeholders;

- Update grid design standards and develop the communications infrastructure that will allow deployment of the technologies in a safe and economic fashion;
- Map new equipment and technologies into legacy systems and prevent the expensive (if not impossible) “rip and replace” of existing infrastructure;
- Select technology providers with the necessary expertise to build true value-add capability and deploy it smoothly;
- Comprehend and manage risk.

It's within this over arching challenge that the *Smart Energy Alliance* delivers its remarkable value.

A Plan For Your Business Transformation: Solutions From Proven Leaders In Innovation

The Smart Energy Alliance is a collaboration of technology leaders — Capgemini, HP and Intel, joined by GE, Cisco, and Oracle — who have combined forces to revolutionize the creation and deployment of game-changing solutions for power distribution operations.

Each of these companies brings world-leading expertise, proven innovations and specific utility experience to your challenges. (See table, Powerful Contributions, Remarkable Value.) By combining and coordinating their efforts, the Smart Energy Alliance brings solutions with unmatched levels of functionality, performance, interoperability and ease-of-deployment.

The *Smart Energy Alliance* works from a roadmap developed in conjunction with some of the largest and most progressive utilities and institutions in the world. This roadmap focuses on an architecture that is modular, flexible and comprehensive — reducing complexity as it integrates various pieces gradually. The resulting solutions:

- **Are modular and flexible**

Because they're based on industry-standard equipment, hardware and software components, these solutions are easy to extend; they also adapt easily to changing business needs. This keeps initial deployment costs low and enables intelligent growth going forward.

- **Are built with combined expertise**

Each Alliance member company is a market leader in their field, with extensive utility and cross-industry experience.

- **Use equipment, hardware and software components as “services”**

Components are available to multiple operations rather than dedicated to one task, maximizing their utilization and lowering cost.

- **A common communications infrastructure**

This reduces the cost of overall deployment, takes advantage of existing systems and allows for partial roll-outs in critical areas.

- **Reduce isolated “silos” of information**

Because these solutions consists of services that can “talk” to each other, they replace functional silos — systems that can't communicate with other systems — with networks of services that share information and data across your company. The result is a fabric that integrates all of the distribution equipment with customer information systems, SCADA, field operations, subcontractors, shop floors, compliance systems and back-end billing systems.

- **Deliver a real-time view of your business**

Because information becomes widely available across your company, it can be harnessed to provide true visibility into your operations, enabling faster response to problems, closer collaboration with suppliers and subcontractors, better load balancing and improved demand forecasting.

- **Enable faster time-to-solution**

Because the pieces of the solution work together and many parts are pre-integrated by the Alliance companies, integrating them with your existing systems is accelerated.

Expertise That Transforms Utilities

By combining their utilities expertise within a flexible and modular framework, the *Smart Energy Alliance* builds solutions that orchestrate and leverage the innovative technologies that can transform utility operations. The full utilization of SCADA, advanced meter reading, always-connected field operations, real-time data acquisition and management, and closer collaboration with contractors all become feasible. And these enhanced capabilities in turn help you meet the business, regulatory and customer-service challenges you face.

Talk to the companies of the *Smart Energy Alliance* today to take advantage of this expertise and to explore the transformative solutions that can meet your challenges and build business advantage.

For more information please contact a representative of the Smart Energy Alliance member companies listed below:

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Visit us online: <http://www.smart-energy-alliance.com>

Powerful Contributions, Remarkable Value

The *Smart Energy Alliance* has the unique expertise to transform your business and lower your risk

Smart Energy Alliance Company	Value Proposition	Key Solution Components
<p>Capgemini Utility strategy, business process expertise, integration and deployment</p>	<p>With over 10,000 employees working daily in the utility industry and operating over 4 million meters, Capgemini understands the challenges that utilities face. Capgemini is implementing the Smart Energy Alliance solutions today for its customers and for its own use. Capgemini authored the Distribution Utility Roadmap.</p>	<ul style="list-style-type: none"> • Roadmap to Reality Architecture • Bottom Up and Top Down Forecasting • Integrated Contractors Methodology • Smart Grid And Metering Architecture
<p>HP Systems architecture, planning, design and implementation. IT infrastructure products and services expertise</p>	<p>With over 50% of the world's power controlled by systems from HP and its partners, HP is the leading provider of IT infrastructure products and services supporting real-time energy operations. HP's servers, NERC compliant control system security solutions and OpenView-based meter-to-cash solutions form the basis for next-generation utility solutions that improve grid reliability and energy conservation.</p>	<ul style="list-style-type: none"> • Integrity Servers for next generation utilities solutions • OpenView for end to end management of business processes including Meter-to-Cash • Trusted Compliance Solution for Energy (TCS/E) • Utility Information Hub Infrastructure planning, design and implementation services
<p>Intel Adaptive computing building blocks, data center design and solution expertise</p>	<p>Intel® architecture-based servers, mobile computers, desktop computers and handheld devices provide the flexible foundation for adaptive computing solutions, and Intel's experience in data center design brings cross-industry expertise to utility challenges. Intel also brings real-world experience with sensor-based networks and mobile networks based on WiFi, WiMAX and cellular connectivity.</p>	<ul style="list-style-type: none"> • Optimization of software applications for Intel architecture. • Investments in key initiatives that accelerate the development of new technologies and usage models. • Intel® Xeon® and Intel Itanium® 2 processors • Intel® Centrino® mobile technology • Intel XScale® technology
<p>GE Transmission and distribution products and services, financing</p>	<p>GE's comprehensive set of transmission and distribution decision support tools enable utilities to leverage assets and grid knowledge for improved overall operational efficiency. GE solution components support an end-to-end integration of technologies including substation management, advanced distribution and metering, and asset management.</p>	<ul style="list-style-type: none"> • Commercial & residential meters • Advanced Distribution Infrastructure • Distribution transformers • Digital protection & control • Remote monitoring & control • Substation automation • Advanced software applications
<p>Cisco Intelligent network architecture and connectivity, Internet Protocol (IP) technology and communications</p>	<p>Cisco, a leader in IP technologies, provides the network communication capabilities that support real-time meter reading, field knowledge management, asset management, substation automation, outage management, and collaboration with partners and agencies. Cisco delivers highly reliable and secure services based on the Cisco Service-Oriented Network Architecture (SONA) to help utility companies raise customer service and operational efficiency to new levels.</p>	<ul style="list-style-type: none"> • Integrated services platforms • Self-defending network products (firewall, VPN and security services) • Wireless and mobile routers • Wireless mesh products • Customer contact solutions (Call Manager, Call Manager Express, and Unity Messaging Services). • IP phones
<p>Oracle Enterprise applications, databases and middleware</p>	<p>Oracle applications, databases and middleware manage, analyze and present the information needed to drive better visibility, increased automation and improved decision-making. Oracle products integrate disparate software and data into composite utilities applications via executive and operational dashboards and business process workflows — all focused on providing the right data to the right person at the right time.</p>	<ul style="list-style-type: none"> • Fusion Middleware • Business Process Modeling • Business Activity Modeling • Oracle Spatial Map Viewer • Oracle Sensor Data Model • SPL Billing Solution • Oracle Portal

The Power of Six

Revolutionizing the Creation and Deployment of Solutions for Power Distribution Utilities



The Smart Energy Alliance from Capgemini, HP, Intel Corporation, GE, Cisco Systems, and Oracle.

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