eMeter Smart Grid Appliance powered by IBM

Faster, simpler smart grid solutions

Highlights

- Provide best-of-class meter data management solution, with bundled hardware, software and services
- Reduce risks of smart grid implementations
- Accelerate deployments and time-to-value
- Build customer satisfaction by engaging them directly in energy efficiency and self-service programs
- Equip your team with technologies offering real-time controls designed to increase system performance and productivity
- Protect past, current and future investments with a technological platform based on open standards

Many utilities launching smart grid initiatives begin by replacing traditional meters with "smart meters"—sophisticated devices that collect and communicate energy-usage data in far more detail and frequency than conventional meters. The business benefits of smart grid initiatives are many, and include reduced operational costs, higher staff productivity, greater customer satisfaction and more. These benefits are made possible when utilities and consumers have access to energy usage data in ways that allows them to make better-informed decisions. However, small and large utilities alike can find their smart grid projects stalled as they struggle to answer fundamental questions such as:

- "How can we reduce risk while maximizing investment returns?"
- "How can we cut the time it takes to address the integration issues, bid out the required parts—and then get something that won't be obsolete as our needs and opportunities grow?"
- "Where do we find the experience and expertise to quickly get our smart grid up and running?"

To enable utilities to get past these questions and begin profiting from the many advantages of smart grid technology, eMeter has teamed with IBM to offer the Smart Grid Appliance: a pre-integrated, readily scalable, bundled solution of all the server hardware, software and services needed to put smart metering initiatives on the right track from day one. This first-of-its-kind[i] offering can help utilities cut smart grid implementation and test cycle time from a year or more to as little as six months, and reduce implementation costs as much as 60 percent.[ii] It also provides a platform for driving more real-time operations and integrating more end-to-end processes, all within today's dynamic technological and regulatory environments.

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Fast, flexible, vendor-neutral implementations

Two well-known leaders in the smart-grid field are behind the eMeter Smart Grid Appliance: eMeter, the company with the most large-scale deployments[v] of smart meter management software and a reputation for unparalleled expertise, and IBM with its long and deep involvement in dozens of smart grid solutions around the world. The breadth of their combined expertise is evident in the quality, scope and interoperability of the Smart Grid Appliance components.

This solution uses advanced eMeter and IBM technologies proven in numerous utility installations, including smart grid test environments encompassing millions of meters. Based on open standards, Smart Grid Appliance will save you from getting locked into proprietary technologies and blocked from leveraging legacy enterprise systems. Furthermore, it'll keep you free to take advantage of new applications and meter technology as they become available. The Smart Grid Appliance also complies with the Solution Architecture for Energy and Utilities Framework, a powerful software platform for managing and integrating a utility's assets and information to help drive intelligent network transformation.

A platform built for vendor-neutral integration and performance

At the heart of the offering is eMeter EnergyIP, the top integration platform for smart-grid data management—and the only scalable platform.[vi] Proven worldwide.[vii] EnergyIP helps speed integration with its service-oriented architecture and web services, including those for smart metering, data collection and back office systems. As with all Smart Grid Appliance components, it's based on open standards to keep your options open and protect your current and future investments. In fact, EnergyIP was specifically built to future-proof utilities by bringing flexibility to today's increasingly dynamic utility environments, including proven processing scalability to more than 20 million meters daily.[viii]

Easy-to-use consumer portal helps customers save

Smart grid success is often determined by the value customers see in it, and how quickly and deeply they can tap into the information it can provide. With eMeter Energy Engage, you'll have a browser-based portal that gives customers tools to track their energy usage and respond to demand incentives and prompts, helping you reduce peak loads. Worldwide experience shows that by involving customers in efficiency improvements utilities can ease peak demand as much as 20 percent.[ix]

Automating the meter-to-cash process

Through its integrated eMeter Interval and Register Billing applications, the Smart Grid Appliance solution can give you more flexibility to create new pricing plans, while limiting the impact on your existing billing system. Interval and Register Billing drives processing services needed to support time-of-use and other rate and tariff structures designed to encourage efficient energy usage. The applications automate data collection, validation, billing determinant preparation and exception handling. Designed for high-volume, mass-market use, it can simultaneously handle both interval and register reading environments, and requires no costly changes to existing back-office customer information systems.

Transaction processing you can rely upon

The smart grid is anything but a static environment, challenging users to keep myriad data streams and diverse functions operating and up-to-date. That's why the Smart Grid Appliance solution incorporates the latest version of the IBM WebSphere® Application Server, the leading application server in the industry.[x] Built for mission-critical computing in tightly knit, smoothly functioning networks, it's ready to enhance the scalability, security, fault tolerance and performance of smart grid initiatives across your enterprise, while eliminating the organizational silos and vendor lock-ins that can limit success.

Monitoring and maintaining system health

Understanding how much is at stake in your smart grid implementation, the Smart Grid Appliance incorporates IBM Tivoli® Application Monitoring to reduce the risk of disruptions throughout your suite of services and applications. Tivoli Application Monitoring constantly tracks key metrics such as your transaction system's availability and responsiveness, not only alerting you to problems as they begin to develop but remediating them as well. It's an invaluable aid in keeping the smart grid's widely distributed arrays of meters, sensing devices, adapters and other technologies performing to spec without requiring advanced programming or undue loads on finite resources.

Serving up power, reliability and efficiency

To help you manage demanding smart grid applications—even those incorporating data collected from tens of millions of smart meters—the Appliance is equipped with an IBM Power Systems™ rack-mount server that delivers industry-leading transaction processing and analysis in an Energy Star-qualified package. Incorporating the performance, capacity, energy efficiency and virtualization capabilities of the POWER7® processor, the Power System servers offer outstanding configuration flexibility to handle the needs of your implementation today as well as the all-but-certain growth in the volume and diversity of data it's called upon to handle. What's more, applications run faster with the POWER7 processor.[xi] which can lower per core software licensing costs and further accelerate the time-to-value of your smart grid systems.

Expertise to speed deployment even more

The Smart Grid Appliance is much more than highly advanced hardware and software. With eMeter's SmartStart program, you will benefit from the years of knowledge gathered by the team of eMeter expert trainers, solution architects and licensed system integration partners. Using best practices and an implementation blueprint proven in smart grid installations worldwide, they'll help you link the data flowing to and from your smart meters with your application infrastructure.

In the process, your people can gain the knowledge and insights they need to help you get the most from your Smart Grid Appliance and its many capabilities. If new questions come up, you'll have access to eMeter's Knowledge Library and the wealth of implementation information it contains. And, as you wish to expand your smart grid's capabilities, we offer similarly compressed deployment cycles for other smart grid applications which can support demand response initiatives, regulatory changes and other likely requirements.

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eMeter

About eMeter

With offices in the U.S., U.K., Spain and Germany, eMeter is a global provider of software essential to help electric and other utilities realize the full benefits of the smart grid. Leading utilities worldwide depend on eMeter smart grid management software to reduce operational costs, improve customer service, and drive energy efficiency. With the most large-scale deployments in the industry, strategic partnerships with other industry leaders such as IBM, and its groundbreaking joint offering with IBM, the Smart Grid Appliance, eMeter is sustaining its reputation for unparalleled expertise that ensures customer success.

Your options and opportunities continue

Though the human and facility resource requirements of the Smart Grid Appliance are well within the capabilities of many utilities, some may prefer keeping those resources focused on current systems. That's why eMeter and IBM also offer a variety of low-risk outsourcing arrangements. Both companies have teams ready to apply years of experience to the day-to-day responsibilities of keeping your smart grid up and running.

And if you'd rather not run the Smart Grid Appliance out of your own data center, IBM can install the solution in one of its own data centers, where it could be remotely managed by your staff or operated for you by IBM. Through IBM Global Services, your company can gain from consulting and integration expertise, service delivery and customer satisfaction support across the entire utility value chain. As with so much else about the Smart Grid Appliance, the choices will be up to you—not only now, but also long into the future as you power more best-of-breed applications with it and gain even more operational and business benefits from the proven technologies it brings to you.

For more information

To learn more about how the eMeter Smart Grid Appliance solution powered by IBM can help you minimize risks and accelerate time to market, contact your IBM or eMeter representative.

Visit us at: **ibm.com**/energy

IBM Corporation
1 New Orchard Road
Armonk, NY 10504
U.S.A.

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[i] http://www.emeter.com/2010/emeter-announces-new-smart-grid-appliance-bundle-to-help-utilities-jump-start-grid-initiatives/

[ii] *ibid.*

[iii] *ibid.*

[iv] *ibid.*

[v] www.emeter.com/company

[vi] www.emeter.com/products/energyip/

[vii] *Ibid.*

[viii] http://www.emeter.com/2009/emeter-demonstrates-industry%E2%80%99s-most-scalable-smart-grid-management-capability/

[ix] http://www.emeter.com/products/consumer-engagement/

[x] http://www.ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5386788

[xi] http://www-03.ibm.com/systems/power/hardware/750/

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