

Be Smart About Smart Grids

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Smart grid technology, the intelligent utility system that is said to be as interconnected, automated, and interactive as the internet, is all the rage these days. And why not? With power outages costing U.S. business at least \$50 billion a year, we must be smart about managing power. But what is this magic machinery that will help millions of Americans save money? And how do we make it most effective?

Smart grids are networks of smart meters that are installed at homes and business to monitor energy consumption and communicate information between energy suppliers and customers. This information enables consumers and businesses to determine how they can use energy more efficiently; utility companies to figure out how to better manage energy supply and demand; and the government to identify how to better preserve the environment. In short, the entire utility system can be more efficient, more flexible, more dependable...in a word, smarter.

Unfortunately, moving to such a sophisticated new system is much more complicated than just flipping a couple of switches or bolting on some extra functionality. The current electrical grids were fit for times when energy was cheap, there was little concern for the environment, and consumer impact was not even a consideration. The centralized power system, fueled by a small number of large power plants, was hardly designed to manage a dynamic global network of energy supply and demand. In fact, the lack of automation and real-time analysis of energy data results in the loss of enough electricity in the United States to power India, Germany and Canada for an entire year! There's no debating it: our power system's antiquated design simply cannot sustain current and future energy needs.

By and large there is little debate about the need to radically redesign the current utility structure. As a result, more and more companies are introducing new and exciting technology that can help address the issue. For example, the market for metering hardware and software and smart grid networking technologies was \$2.7 billion in 2008 and will grow to \$4.7 billion in 2013. There are dozens of new products and services on the market that have been labeled "smart": software that aggregates and analyzes network data to identify opportunities to reduce costs and lessen carbon footprints; user-friendly meters that show consumers their energy consumption in real time over the internet; two-way delivery of real-time energy usage data over public wireless networks – the list goes on.

While these smart solutions offer benefits such as identifying equipment failures before they happen, measuring and reducing energy consumption and costs, lessening the carbon footprint, as well as creating a new, and desperately needed, job market, companies must think carefully before they walk to the bank to cash in on the millions of dollars pledged to build this new network. Solely implementing the new "it" technology does not yield guaranteed results. In fact, it could have the opposite effect.

Oftentimes, companies are plagued by horror stories of technology implementations gone wrong. More often than not, though, it's not the technology that causes the problem; rather, it's the lack of process that wreaks havoc on a business. All too frequently, companies neglect to bridge the gap between old and new business processes, simply expecting them to magically evolve when a new technology goes live. The result? Months of clean-up efforts, loss of organizational buy-in, and reduced financial benefits.

This same outcome can be expected with the glamorous new smart grid if companies do not start reengineering their business processes to align with the new technologies. They must approach the next evolution of energy and utilities

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with a rigorous focus on process to avoid repeating the mistakes of the past. Otherwise, the Smart Grid will in effect become an expensive, unintelligent, waste of money. And that's anything but smart.