

## The Coming Smart Grid

By John Wilson

If you attended last month's Management World Americas, it was hard not to leave with two words on your mind: smart grid. Everyone from the TM Forum's Chairman, Keith Willetts, on down was buzzing about the coming smart grid revolution and what it could mean for the telecoms industry in general and the OSS/BSS industry specifically. As the industry rushes to embrace this promising new technology, it might be a good idea to stop and ask some fundamental questions: What is the "smart grid"? What can it mean for the OSS/BSS industry? Can there be a downside to something the entire industry is touting as the next big thing? The answers to these questions could be key for OSS/BSS players over the next few years.

**"What is the smart grid? An oversimplified answer would be a data-enabled power grid."**



### Smart Grid 101

The first, and apparently easiest, question may prove the hardest to answer; What is the smart grid? An oversimplified answer would be a data-enabled power grid; that is, an electrical grid delivering power to homes and businesses that incorporates self-aware devices supplying data to the power company over a wired or wireless Internet connection. What this definition blithely ignores is the sheer number of devices and services represented by the "smart grid", a number that is growing every day with each new player that enters the space.

At the heart of the smart grid is the smart meter, a

Not for distribution or reproduction.

**Marki**texture  
*Maximize your marketing.*

data-enabled power meter capable of monitoring energy use, switching between different pay-rates on the fly and much, much more. Speaking with Power and Energy, CIO of Austin Energy, Andres Carvallo, was enthusiastic about the possibilities of the smart grid; “as we continue expanding our smart grid transformation from within our organization out to the home, we can enable cool things like turning meters on and off remotely. And then we can start controlling thermostats and controlling different elements in the home, which enables us to offer time-of-use rates and peak-rate pricing and so on. With this approach, one development leads to the next.” Then there will also be opportunities for customers to sell energy back to the grid using solar or wind generators, usage management to prevent brownouts, as well as new pricing incentives that will reduce usage and lower every one’s electricity bill and carbon footprint at the same time. The smart grid is set to change people’s lives in a lot of ways, and that is doubly true for OSS/BSS players.

#### Power Cos Are the New Telcos

Will Davis is senior vice-president at Cogo Group, which, in partnership with the Wasion Group, has recently won a contract to supply components to smart meters in China. He sees the coming smart grid, not just as a subdivision of traditional telco OSS/

“It is hard to imagine the consequences of a coordinated cyber-attack on a nationally connected smart grid.”

BSS companies, but as something that may come to dominate the industry; with China set to spend nearly \$100 billion on its power infrastructure over the next five years, “ultimately, the thinking is that the spending on energy production and distribution – the grid – will dwarf 3G spending,” he said. But where do OSS/BSS players fit into the picture?

At Austin Energy, which supplies power to one million homes and 41,000 businesses, CIO Andres Carvallo says that one of the biggest projects over the last few years has been “trying to streamline the IT architectures to be more flexible, while at the same time enhancing the customer service experience and increasing revenues by offering new services across the enterprise.” Sound familiar? OSS/BSS players are well situated to capitalize on the smart grid because they have services, software and systems in place to

**DON'T LET YOUR NETWORK...  
END UP HERE.**

**BEFORE you set sail confirm your  
NETWORK INTEGRITY.**

Find out more >> [NakinaSystems.com](http://NakinaSystems.com)

**Nakina  
Systems**  
Network Integrity

handle a wide variety of data management, customer experience management (CEM) and customer relationship management (CRM) problems that power cos will begin experiencing once the smart grid goes live. But with a new industry may come new problems.

### **Hackers No Longer Just Killing the Music Industry**

Over the last 18 months or so, Iran's contentious nuclear program was crippled; not by a tuxedo-wearing James Bond-type secret agent, but by Stuxnet, a computer worm. Stuxnet may just be the most sophisticated computer worm ever designed; a worm that had to infiltrate very specific and heavily guarded computer systems, disrupt delicate nuclear machinery without destroying it (thus raising alarms), hide its existence then destroy itself after it had been discovered. It did all this and more, but here's the kicker, it was targeting nuclear facilities that had no Internet connections.

It is hard to imagine the consequences of a coordinated cyber-attack on a nationally connected smart grid, and it is even harder to imagine a power co or OSS/BSS player that is capable of managing such threats. Currently, the power grid is relatively safe, as most power generation is local and distributed. Any one attack on an individual power station is unlikely to affect the national grid. As the smart grid comes on-line, more and more processes will be consolidated into few locations. In the worst case scenario, one concentrated cyber-attack threatens the entire power grid. All the players in the emerging field must be aware of, and proactively guard against, rapidly evolving cyber-threats. However, there may be one threat that is even harder for the fledgling smart grid to guard against; consumers.

### **Consumer Confidence? What Consumer Confidence?**

In a recent poll by GE, 79 percent of Americans said they were unfamiliar with the term "smart grid". A quick Google search reveals a surprising amount of articles actively advocating against the deployment of the smart grid. Consumer complaints range from increased bills (the new meters are sometimes billed to the customer) to data-related privacy concerns. Companies, such as Texas based CenterPoint, casually mentioning the ability to cut a customer's power in two hours if they do not pay their bill are not exactly helping the consumer confidence index. But there is still time to turn things around.

The benefits of the smart grid are too numerous, and the backing from major power cos and corporations too strong, for the technology to fail. If companies can effectively communicate the benefits to the consumer (lower bills, lower emissions, new technologies and services etc.) there is no limit to the growth potential. OSS/BSS players, with their years of experience with CEM and CRM, may be in a position to lead the way in growing consumer confidence. The only question that remains is; will they be ready?