

Insights on Utilities: July 2008

Energy Executive Council
Energy Wholesale Strategies
Customer Operations Strategies
Intelligent Grid Strategies
Worldwide Utility Industry IT Spending Guide

UPDATE #EI213500

Karen Blackmore H. Christine Richards
Jill Feblowitz

IN THIS UPDATE

This Energy Insights update takes a look at the entrance of telecommunications vendors into the smart metering arena with the recent announcement by Alcatel-Lucent of a smart metering offering to help consumers and utilities control and manage energy consumption. The offering and implications are discussed in "Do Smart (Grid or Metering) Utilities Care Where a Solution Comes From?" We also review Consolidated Edison's announcement of capital investment in transmission and distribution infrastructure, as well as the IT implications of the new Commodity Futures Trading Commission (CFTC) reauthorization act embedded in the Food, Conservation, and Energy Act of 2008.

Do Smart (Grid or Metering) Utilities Care Where a Solution Comes From?

By Karen Blackmore

Alcatel-Lucent recently announced its online service offering that consumers and utilities can use to help control and manage energy usage. Energy usage online systems are not new to the utility market. A number of players, such as Mincom, Apogee, and Aclara have offered online usage systems to help consumers monitor and manage their energy usage, as well as demand response players such as Comverge and APX. However, this is the first entry by a company normally considered a telecommunications vendor.

Online energy management systems typically support consumers by giving them information about their energy usage. Data such as last day usage, trends in hourly usage, daily and monthly snapshots, and pricing are common features of energy management systems. Customers can track what they are using and make conscientious

decisions on how they may alter their consumption. Some utilities also offer prealerts to time-of-use rates such as critical peak pricing or incentive-based pricing to help consumers better manage their usage for an event. The best online systems connect with the meter data management (MDM) and customer information systems (CIS) to provide near-real-time information.

Other online energy management systems benefit the utility by supplying information on the distribution network to provide alerts on outages or consumption of water, gas, and electricity. Some also offer specific usage at the submetering level. These energy management systems may also provide demand response alerts to consumers and even controls of energy usage through load shedding.

With new regulations mandating energy efficiency reductions in lieu of power plant construction, utilities must find a way to help their customers reduce or curtail energy usage. Getting consumers to participate in energy curtailment programs is not always simple, which means appropriate pricing measures will be needed. Pricing alerts, delivered via the Web or to a cellular device, can help entice the majority of consumers to comply with reducing their energy consumption. This makes online energy management systems increasingly important for utilities to have in their arsenal of energy efficiency tools.

What is particularly interesting about Alcatel-Lucent's Open Service Platform (OSP) offering is that it combines options for the utility and the consumer. The OSP was originally offered in 1997 for telecom and has been used by telecom operators for monitoring telephone call data in the hundreds of millions range. The same scalability used to help the telecom offering works for the utility industry because of the number of interval reads that smart metering supplies. The solution is intended for any utility offering smart metering anywhere in the world. A utility can choose its communications networks, such as WiMAX, General Packet Radio Service (GPRS), or Power Line Carrier (PLC). It has to have the Advanced Meter Infrastructure (AMI) headend system and the platform setup for the OSP interfaces to work with, such as outage management or distribution demand response systems as well as Web portals for consumers.

Alcatel-Lucent currently has both proof-of-concept and field pilots with utility clients in Europe and the United States. These range in size up to 100,000 electricity meters. Although none of the current endeavors are with gas utilities, the technology hop to get the gas data from the meter to a communications network is available. This means the OSP can be used for gas meters as well.

Our View

Smart metering, used to provide information that utilities, regulators, and consumers can use to change energy consumption, is a first step. More importantly, both utilities and consumers will need to be given management and control options to make energy efficiency viable long term. Utilities should pay attention to vendors that can provide their customers with one solution that works in both reducing consumption and reshaping their load profile. The Alcatel-Lucent solution is new to the utility industry and has yet to be proven in a big way. However, many of the other energy management vendors are still evolving their products and proving out the solutions in pilot situations. In particular, electric/gas or gas utilities may want to move beyond looking in the showroom window or kicking tires to take a serious test drive on this or similar products and learn what they can gain in energy efficiency.

In the News

As Intelligent Grid Buzz Grows, Traditional T&D Investments Still Needed

Consolidated Edison Company of New York Inc. (Con Edison) is investing more than \$1.7 billion in 2008 to upgrade and improve its transmission and distribution network. This is the largest investment Con Edison has ever made in a single year to deal with peak summer demand. The bulk of the investment will go toward more traditional T&D infrastructure — including 10 million feet of cable, 1,700 new transformers, and 2 new substations. In terms of information technology, Con Edison is using \$177 million of the investment to upgrade its transmission system's reliability, computer hardware, and software. Con Edison expects to spend another \$5.2 billion over the next three years to continue upgrading and expanding its T&D network.

Our View

Even with all of the intelligent grid buzz, Con Edison reminds us that utilities still have to make some old-fashioned T&D investments — including cable, transformers, substations — to deal with aging infrastructure and increasing demand. When making such investments, however, utilities still need to consider the intelligence of these traditional T&D assets. This intelligence includes installing assets with technologies that provide them with the capability — even if it is not used today — of communicating with utility and the rest of the T&D network.

Increased CFTC Regulation Passes with the Farm Bill

With the Food, Conservation, and Energy Act of 2008 now the law of the land (after a bit of a back and forth), section XIII of the bill — the Commodity Futures Trading Commission (CFTC) Reauthorization Act

of 2008 has become law as well. The section includes provisions for regulation of electronic trading and places limits on the size of traders' positions. The bill also requires traders to maintain audit trails by supplying reports on any large trades to the CFTC, imposes record-keeping requirements, and forces electronic exchanges to monitor trading behavior and prevent manipulation.

Even without legislation, there is increased scrutiny, motivated largely by the high price of crude. At the end of May 2008, the CFTC announced three new measures, according to *Energy Risk*, CFTC Seeks Greater Energy Market Transparency, May 29, 2008:

- Expansion of surveillance of overseas trading of crude oil contracts with U.S. delivery points
- Increasing scrutiny of index products
- Launch of a nationwide crude oil investigation into practices surrounding the purchase, transportation, storage, and trading of crude oil and related derivative contracts in December 2007

Our View

The new requirements will affect both the exchanges and the traders. On the exchanges front, the CFTC is seeking greater transparency of large trader positions on U.K. WTI crude and position exceedances. For the traders, CFTC will require traders to submit more detailed and frequent monthly reports on index trading, as well as substantiation of futures and swaps trading practices. CFTC is also intending to provide data formatting standards for reporting. Utilities active in energy trading, especially for oil commodity will need to pay attention to developments as the legislation moves to the regulation stage.

LEARN MORE

Related Research

- *Energy Trading and Risk Management for the Utility Industry — Going Steady* (Energy Insights #EI212680, June 2008)
- *Meter Data Management and CIS: A Numbers Issue* (Energy Insights #EI211795, April 2008)
- *AMI-Enabled Utility Programs — Customer Response to Real-Time Pricing* (Energy Insights #EI212027, April 2008)
- *In-Home Display Units: An Evolving Market, Part 1* (Energy Insights #EI211079, March 2008)

- *In-Home Display Units: An Evolving Market, Part 2* (Energy Insights #EI211426, March 2008)
- *Spatially Enabling the Intelligent Grid, the Next Hollywood Blockbuster?* (Energy Insights #EI211129, March 2008)

Copyright Notice

Copyright 2008 Energy Insights, an IDC company. Reproduction without written permission is completely forbidden. External Publication of Energy Insights Information and Data: Any Energy Insights information that is to be used in advertising, press releases, or promotional materials requires prior written approval from the appropriate Energy Insights Vice President. A draft of the proposed document should accompany any such request. Energy Insights reserves the right to deny approval of external usage for any reason.