

Is IT a Disaster Waiting to Happen?

By Fereidoon P. Sioshansi*

There is an old adage that says when disaster hits, those who refuse to panic are those who don't know what's happened. And this may be the case for the "official" calm that currently prevails while people on both sides of the Atlantic prepare for the arrival of 1998 and the logistical implementation of retail access in a number of jurisdictions.

What disaster? Many within and outside the industry are convinced that the policymakers who have restructured the electric power industry to allow customers to switch retailers (or suppliers, as they are called in the UK) don't have a clue about the enormity and the complexities of operating in the new environment. Among the things that the technical "nerds" in the industry worry about are the following:

- **Independent System Operator (ISO) and the Power Exchange (PX)** – Will it work? Will it be fully functional? Will it be tested and reliable? Some skeptics are not so sure. Enormous effort and money is being spent on system development (e.g., California PUC has approved \$250 million for the development of the ISO/PX), but no one is sure the work will be done on time, or that it will work.
- **Settlements & Reconciliation** – Utilities currently buy and sell at wholesale level. But all customers in a given service area buy from the same (monopoly) retailer. In the competitive arena, both the volume and complexity of these transactions will balloon. Each competing retailer has to figure out – quickly – how much its customers used in aggregate hourly and pay the generators for the delivered energy. Would the various players be able to figure out who bought what from whom, got what he bought, and paid for it? This is not as trivial an issue as it may sound because most customers' meters will not be read for weeks or months after the fact. But the parties need to settle based on estimates, and then reconcile for any errors or deviations. Easier said than done.
- **Metering & Billing** – Moving from an environment where most customers buy a highly bundled product and get extremely simple bills (total kWh consumption for the month multiplied by a fixed \$/kWh price) to a far more complex environment gives every information technology (IT) expert and computer billing nerd a chill and many a sleepless night. Further complications arise because customers may be able to switch suppliers at will, and retailers are allowed to charge customers whatever they please. Moreover, there are currently no established protocol or standards for meter accuracy, data transfer among utilities, bill collection, and data processing. None of this, of course, is rocket science, but given the large numbers of potential transactions, and potentials for introducing errors, it begins to look like rocket science.

The upshot is nervousness among the IT and billing system "techies" in the industry – many of whom are skeptical that all this will be sorted out by the time retail access is to be rolled out in California and a few other states

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on the East coast in January 1998. The same may be said of the UK, where theoretically the remaining 22 million customers are to go shopping for competitive suppliers over a six-month period starting in April 1998.

Among those singing the IT blues is a commentary by Anthony Hilton of UK's *Evening Standard* (11 March 1997). Hilton is not pro- or anti-competition. "Competition in the supply of electricity may or may not be a good thing but the way it is being introduced is potentially suicidal. Whether it succeeds or fails will depend on the computer systems of the electricity companies being able to track their changing customer base, to know who is connected to whom, and so on. But with just a year to go before testing is due to start, the specification for the computer build has not yet been finalized because the regulatory and other goalposts have not been fixed. Starting to build when the specification has not been fixed is the most disastrous thing you can do with a computer project. Launching without someone in overall charge is the second most stupid thing. Allowing inadequate time for testing before going live is the third. Doing any of this without a budget is the fourth. And guess what: this one misses on all four."

What worries Mr. Hilton goes beyond the technical issues. "We are talking serious money here. The chief executive of one small electricity retailer told me that in his company, competition will require the total rebuilding of between 50 and 60 percent of all his internal computer systems at a cost of some £50 million (approximately US \$75 million). Multiply that by 14 electricity companies and you are looking at a conservative \$700 million (approximately US \$1,050 million) of IT spending."

The matters don't look better on this side of the Atlantic – and the costs of system upgrades in billing, metering, and customer information systems (CIS) are expected to run into hundreds of millions of dollars-per-company – certainly for the top 100 or so. Multiply that across the whole industry over the next several years and you begin to get a sense of the scale of the problem. For software gurus and system techies, this spending spree looks like a real gold rush. For the utilities that don't get it right the first time, there will be many follow-ups and more money down the IT drain.

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