

Smart Grid Introduces Big Risks to Meter-to-Cash Processes

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Utilities that have successfully implemented traditional revenue protection methods, focusing on credit and collections, and energy fraud, typically minimize the revenue lost as a result of inherent inefficiencies in these processes to 3 to 4%. The disruptive technologies enabling energy smart grids will introduce new complexities to the meter-to-cash process, just as they have in other industries. Telecommunications is one such industry, which has faced and solved challenges similar to the ones now being introduced to the utilities industry, and provides an excellent source for applicable “lessons-learned”. For example, when market forces compelled telecommunication service providers to introduce new products based on next-generation networks, some of them experienced revenue losses of 15 percent or more. There is no reason for utilities to suffer the same as Smart Grid rolls out; like communications providers, utilities can implement revenue assurance strategies and tools that ensure accurate data collection and billing and identify fraud and loss continuously.

Four Key Risk Areas

There are four main risk areas that Smart Grid’s complex meter-to-cash processes exacerbate which utilities ought to address proactively.

Revenue and Profitability Loss. Smart meter-to-cash complexity creates more potential breakdowns, service calls, and difficulties in correlating delivered and consumed energy with billed and collected revenue. Reporting breakdowns can go unidentified for weeks, compounding revenue loss over time. More complex rating and discounting drives both under- and over-billing errors. Intelligent diagnostic tools are required to ensure that all delivered and consumed energy is monitored and measured completely and that energy usage and consumption correlates accurately with billed and collected revenue.

Increased Customer Complaints. Smart Grid introduces new pricing, services, and equipment. All invoice-driven industries experience spikes in customer inquiries and disputes when introducing new services, rates, and invoice formats. Given the associated costs and the negative impact customer complaints to PUCs have on rate relief initiatives, utilities would be well-advised to address these issues.

Fraud and Theft. Adding technology to power measurement and management creates vulnerabilities for thieves to exploit. For example, the wireless industry suffers new waves of fraud with each network upgrade. [CBS News reported](http://www.cbsnews.com/stories/2009/05/05/tech/cnettechnews/main4991799.shtml)¹ in 2009 that 70 percent of online fraud is perpetrated by organized crime. These groups recognize that fraud, across all industries, is more lucrative and less risky than narcotics trafficking, and Smart Grid creates opportunities for them. Identifying new forms of fraud requires intelligent diagnostic tools that can identify usage behaviors that should be investigated for fraud.

¹ <http://www.cbsnews.com/stories/2009/05/05/tech/cnettechnews/main4991799.shtml>

Day Demand Curve Costs. Smart Grid necessitates predictive analytics that enable utilities to analyze and respond to usage behavior and manage the day demand curve proactively. Data from many systems must be delivered reliably to enable the feedback loop that makes Smart Grid valuable. If the feedback loop is not reliable, the ability to manage demand will break down, which will in turn increase supply-side energy costs. To manage

Smart Grid is technology intensive. Utilities will benefit from expertise, and should leverage the experience and expertise developed across industries that have faced similar technical challenges. Most Smart Grid meter-to-cash risks can be met through the expert application of comprehensive, proactive approaches to revenue assurance that deliver process and data integrity controls, intelligent diagnostics, and predictive analytics.

About Synaptitude Consulting

Synaptitude is an enterprise and IT systems consulting services company. We deliver **transformational solutions** to our clients' most critical business challenges. Today's business is deeply interconnected with the technology that supports it. Yet, many organizations struggle to focus their business and technological concerns on the same goals; sometimes it's as if they are speaking two separate languages.

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