



Customer Care
PowerHitters Interviews
2005

Gary Michor
President and CEO
The SPi Group Inc.





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www.thespigroup.com

Gary Michor is President and CEO of The SPi Group Inc., a leading provider of software solutions and services to the Ontario energy industry. Gary is a visionary with diverse knowledge of the IT and regulatory challenges facing market participants in deregulated energy markets. He writes for numerous industry journals, and has presented at The Federal Energy Regulatory Commission and other agencies on standard market design.

Please describe the products and services your company provides, and the needs of the utility market that they address.

The SPi Group Inc. (SPi) is a leader in secure and standardized information technology for competitive energy markets. We partner with clients to provide innovative results—from entire market systems to turnkey solutions designed to maximize efficiency, reliability and cost-effectiveness.

The SPi Group's communications infrastructure is at the heart of the retail energy market in Ontario, handling the delivery of electronic business transactions (EBTs) among market participants. Since market opening, our robust and scalable infrastructure has been proven to work under the most demanding market conditions, supporting over 72 distributor and retailer clients.

We provide the connections for customer, billing, settlement and meter information between retailers, utilities and other communication providers. Although other vendors provide similar services at a basic level, SPi is the only provider that has built systems including data warehouses and Web-based applications which operate across the entire market.

Our expertise includes custom software development, integration, open standards development and maintenance, managed services and market operations. Our billing and settlement expertise spans retailers and utilities in the Ontario electricity market, as well as the U.S. natural gas market. SPi's impressive client base, which includes some of the largest utilities in North America, is a testament to our market knowledge and success in helping clients achieve their goals.

What do you see as your company's key differentiator relative to your competitors?

We are in a unique position in the province of Ontario. The SPi Group developed and operates the primary communications infrastructure serving the Ontario retail market. In a competitive services market with multiple solution providers, we capture and process 100% of the market transactions. In essence, we provide a mission-critical service. If our system were to fail, the billing and settlement side of the retail electricity market would cease to function, and electricity customers across the province would either be billed improperly or not at all. Because our communications infrastructure works transparently to support the retail market with a high degree of reliability, The SPi Group is one of the energy market's best kept secrets. One of our challenges is getting the word out that we are one of the industry's strongest success stories.

There is no other provider that can come close to our system throughput and scalability, and no other open XML-based solution with the same capability to support the massive data and transaction volumes required for important new initiatives such as smart metering and demand management. In fact, our communications infrastructure is currently running at only about 3% of its total capacity and has been proven to scale to billions of transactions a year.

By virtue of our expertise within the regulatory framework, we have built and now manage complex billing and settlement solutions to help our clients conduct business through the EBT network. We now provide the most widely-used billing and settlement solution for retailers in the province.

What is the utility's primary priority today in North America?

The reliability of energy supply and the dependability of the transmission grid are major priorities. The blackout of 2003 was a wakeup call for utilities to increase their investment in the power grid and build a more resilient infrastructure. But with the real possibility of a worldwide energy shortage on the horizon, and with pressure from other drivers such as the Kyoto Accord, energy conservation is the single greatest challenge facing all markets. Utilities must do their part to find alternative energy sources to meet demand, while at the same time focusing on conservation and demand management. For demand management to be successful, utilities must help their customers understand the true costs associated with energy use and the time of its use. In Ontario, the government is addressing this issue by rolling out smart meters and establishing a province-wide solution whereby consumers can monitor their electricity usage with the expectation of reducing their consumption and costs.

The Ontario energy market has undergone significant changes. How do you see the Ontario market evolving over the next few years?

With the province-wide rollout of its smart meter initiative, Ontario is poised to be a world leader in demand management and conservation. The government's plan calls for 800,000 consumers to have smart meters installed by December 31, 2007, with meters

for the remaining consumers to be installed by December 31, 2010. These are ambitious goals, but they are feasible, given the knowledge and infrastructures that can quickly be put in place.

Smart meters measure energy consumption over precise blocks of time, enabling utilities to bill consumers not only on the amount of energy consumption, but also when the energy was consumed. When end-use customers are charged for electricity based on time of use (TOU) rates, they have an incentive to shift or reduce their load from peak periods when electricity costs are higher. A key objective of the smart meter initiative is to inform consumers of their energy consumption patterns through the Internet or other communication mechanisms. The rationale is that if consumers know when energy costs are higher, they will alter their consumption behavior in order to control their costs.

Will mergers and acquisitions among North American utilities increase, decrease, or stay the same in 2005?

Mergers and acquisitions will continue to increase as North American utilities attempt to achieve greater efficiencies. In Ontario, this trend is already happening with the mergers of several smaller utilities. Granted the Ontario electricity market is unique in that there are approximately 90 utilities—among the most in the world per capita. Still, economies of scale dictate that market consolidation will continue both here in Ontario and across North America.

Evolving market changes such as smart metering and demand management will also drive consolidation. These initiatives will require significant and costly changes to the utility's internal infrastructure. Some smaller utilities will lack the resources and capital required to modify or replace their existing systems. As a result, they will be seeking other alternatives to serve their customers—either through mergers with other utilities or through managed services on their behalf.

Will CIS vendor/service provider consolidation increase, decrease, or stay the same in 2005?

CIS vendor/service provider consolidation will increase. With many energy markets in flux, utilities are not investing in new systems and technologies. They are essentially in maintenance mode with their existing CIS and legacy systems. Consequently, service providers and vendors are deriving a significant portion of their revenue through maintenance contracts with existing clients, as opposed to the sale of new systems. This creates an environment in which it is advantageous for larger vendors to acquire smaller ones in order to expand their customer base and maximize their maintenance revenue streams.

What role do market standards play in the utility's successful operations?

Utilities continually face the same issue—regulations are constantly changing and there is a high degree of uncertainty. For example, utilities in Ontario face unknown risks, increased costs and aggressive implementation timelines for new initiatives and market changes. The adoption of standards can help mitigate these risks.

Utilities already use a variety of standards—technical, procurement, process, etc.—to run their day-to-day operations. What happens if you apply the same standards to the utility's IT infrastructure? Now you have a collaborative and well-defined approach to implement equipment, services and processes that comply with changing regulations. The more you embrace standards across your IT systems, the easier it is to enhance, replace or implement new systems, which provides a greater degree of flexibility.

For new initiatives such as smart metering, data standards help you come together as a group and determine a common implementation strategy with the goal of reducing costs and time to market. In Ontario, SPi initiated a smart meter data standards working group to work with utilities, meter vendors, service providers and regulatory bodies to define the data representation and workflow standards required for smart metering. Without a clearly-defined set of data standards, any interactions between the smart meter initiative's participants would be ad-hoc at best and chaotic at worst.

Standards also establish a clear set of testing and certification guidelines, further reducing implementation timelines, costs and risks. Standards bring more service providers to the table, which allows utilities to select vendors that offer the best value and avoid single vendor lock-in. The working group approach to standards development promotes open communications between market players and encourages a level playing field for vendors and service providers.

Do strong data standards exist in Ontario today?

They do. The Ontario Energy Board's EBT standards, originally designed to handle the utility-to-retailer relationship, are well suited to handle the data and communication standards for broader initiatives in any jurisdiction. For over four years now, over 20 participants have met weekly to maintain and enhance the market standards. These participants are to be commended for their efforts to make the market run more effectively.

These reliable standards have proven capable of handling business rules and flows that are required for data processing in the market. In fact, strong data standards become even more critical with smart metering, as much more data will need to be managed than ever before. Utilities cannot afford to lose meter readings. They need strongly defined processes to guarantee data is properly passed from the meter all the way through to the consumer. Data standards and testing procedures that specify how a utility transmits and processes the high volumes of interval data are fundamental to the success of a utility's smart meter implementation.

What are the main technical challenges associated with smart metering in Ontario?

Today, meter data is transported from utilities to retailers via the Ontario retail market EBT infrastructure. Meters are read monthly or bi-monthly for typical consumption meters, and monthly or weekly for interval meters. The smart meter initiative requires interval or time of use data to be collected on a daily basis. This meter data must be made available to the customer either via Web presentment, automatic voice response or traditional call center telephony. The same data must also be transported daily to retailers for their enrolled customers through the retail EBT system.

Smart metering will require the storage of vast amounts of interval meter data and the movement of this data between many different systems, including billing, settlement, and consumer presentment. The high data volumes associated with smart meters sending interval data could potentially overwhelm a utility's existing systems.

The successful rollout of the smart meter initiative in Ontario will demand a robust communications infrastructure, complex system integration, and the development or redevelopment of sophisticated meter, billing and settlement solutions. Significant technical expertise will be required to guide market participants and vendors through the implementation and testing phases.

If Ontario builds on the existing EBT communications infrastructure to support smart metering, utilities will be able to leverage their existing technology investment. The infrastructures for delivering consumption and interval data are already largely complete, and can readily be extended to meet expanded smart meter processing demands. SPi is playing a lead role in providing reliable solutions, expertise and tools to support smart metering in Ontario. We are working with the government, utilities and retailers to ease the burden of smart metering on all market participants, and to help ensure the long-term stability of the Ontario energy market.