

Reaching for the stars

Abacus has launched an integrated ETRM system, SATURN, a next-generation software, which already has users in Europe and in the US

As asset values plummet, commodity values are soaring, creating a paradigm shift in the energy industry and a massive infusion of equity capital from non-traditional participants. Meanwhile, energy companies are drowning in data – a situation that hinders clear analysis and good decision-making. Market observers say data management challenges are escalating as data acquisition costs decrease and business data needs increase.

Energy Risk talks to Salim Jabbour, CEO of Abacus Solutions, about their flagship software product, SATURN, and explains how it helps customers deal with these lingering challenges.

What can you tell us about your new product SATURN?

SATURN is a business management integration framework that facilitates key corporate processes including deal capture, transaction management, data mining, data analysis, decision support, asset management, risk management, financial management and compliance with governance and regulatory requirements.

Why did you enter what is already a crowded market?

Four reasons motivated me to develop SATURN. The first is the need for improved data quality. Experts estimate that 10–30% of the data flowing through corporate systems is inaccurate. The cost of bad data can be as much as 15–20% of operating revenue; according to the Data Warehousing Institute, it is approaching \$1 trillion per year in the US alone. That is a staggering annual cost of \$5,000 per employee.

The second reason is the need for integration. Much has been written about it, yet little has been achieved. Energy companies are struggling with too many poorly integrated systems. The continued reliance on spreadsheets creates additional challenges to compliance with governance requirements.

Third is the need for insights. With recent advances in computer hardware and software, the amount of corporate data is increasing exponentially. An ERM analysis can easily generate over 20GB of data. According to the University of California at Berkeley, one person can only read and process approximately 4GB of information in a lifetime. Managers are inundated with too much data and lack meaningful, actionable, business intelligence.

Fourth, there is market pull. According to published surveys, energy risk management systems have experienced a historic replacement rate that has exceeded 60% in the last 10 years, with over half of surveyed companies onto their second, third or even fourth system. This is concrete evidence that legacy systems are failing to meet customer needs and emerging requirements.

How is SATURN different from legacy systems?

A combination of five features differentiates SATURN from the crowded field of legacy energy trading and risk management (ETRM) systems: integration framework, rigorous analytics, modern architecture, intuitive interface and easy deployment. The system's 64-bit, multi-threaded, multi-core architecture enables the use of advanced quantitative solutions across a broad footprint. An elegant and intuitive interface enables a wide range of analysts, managers and executives to be direct users. A standardised building-block approach streamlines system deployment, one of the most difficult and agonising software challenges.

How does SATURN overlap with legacy applications?

It offers capabilities typically provided by several systems including ETRM, business intelligence (BI), data mining, visualisation, price simulation, generation management, risk management, financial analysis and reporting.

How broad is SATURN's integration footprint?

SATURN integrates data capturing, data mining, data analysis and data presentation across the four fundamental areas in the energy industry: markets, plants, trades and loads. It has a wide footprint that includes price simulation, generation optimisation, trade capture, retail load, credit analysis, risk management, financial analysis, data mining, reporting and dashboards.

Figure 1. SATURN broad footprint and enterprise-wide applications



That is a very broad footprint. Did you have to sacrifice depth?

No. In fact, the system offers rigorous analytical methods including best-of-breed capabilities. For example, SATURN optimises generation operations using unit commitment/economic dispatch in multi-commodity markets (energy and ancillary services) subject to unit, plant and/or portfolio limits including operating hours, on/off cycles, emissions, fuel use and other. The solution algorithm is very efficient and accurate according to benchmarking tests versus two leading software products. Other examples include the stochastic multivariate forward and spot price simulators, parameterisation process and data mining tools.

What commodities does the system include?

All commodities are covered in great detail, including power (energy, capacity, ancillary services, REC), fuels (oil, gas, coal, nuclear, biomass and other), emission allowances (NO_x, SO₂, CO₂, Hg, PM, VOC), weather, interest rates, foreign exchange, load (electric and gas), electric transmission, gas transportation, gas storage, credit and insurance products.

What about system performance?

Our users report that SATURN is more than 10 times faster than competing systems. This is attributed to a modern multi-processing, multi-threaded and scalable architecture with a load-balancing capability that handles automatic hardware configuration, spawns threads, and allocates RAM for each process based on case/run memory needs and available hardware.

What other capabilities do you offer?

SATURN offers several other capabilities, including dynamic news feeds, usage records, e-mail notifications, full audit trail, data validation, warning and error messages, detailed diagnostics, newsletters, document sharing and links with other systems.

How and where is the system deployed?

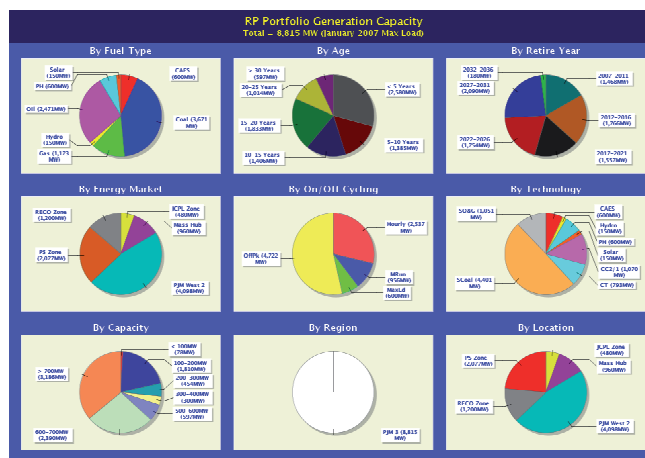
As a web-enabled system that uses the latest web technologies, SATURN can be deployed on an internal network behind the corporate firewall or on leased hardware from Abacus or from a third-party provider. Access and data transfers are secured through several layers of verification and customised read/write user set-up.

What are the system's key benefits?

SATURN transforms data into actionable business intelligence and offers tangible benefits. It saves time and costs, reduces risks and mistakes, streamlines data mining and improves decisions. This is achieved by integrating applications, facilitating reporting and presentations, improving enterprise-wide consistency and reducing redundancies.

Users can easily generate statistics about historic prices, load-weather relationships and generation, and transfer results to PowerPoint and/or other tools – all within 2–3 minutes. Price simulation parameters can be automatically developed from recent data and market quotes. Managers and executives can review performance updates through customised dashboards.

Figure 2. SATURN offers a customisable graphical user interface



Traders can quickly review updated market information and hedge positions as trades are entered into the system.

Where are you in terms of system roll-out?

We launched the software last year in the US and Europe. It was very well received on both sides of the Atlantic. We will start announcing next month our early adopters who are innovative critical users with high standards and challenging requirements.

Who can benefit the most from using SATURN?

All energy market players are potential users. Smaller entities with limited focus and limited IT capabilities can use SATURN as a service; larger companies with a broad footprint can benefit from the system integration and best-of-breed capabilities.

How do you face the challenge of being a small company?

We have found that being small is an advantage. Our customer satisfaction is very high because we provide same-day customer support (often within 2–4 hours). Users have direct access to our product support team and avoid typical multi-layer processes.

What is your vision for the next five years in the ETRM space?

Users are becoming more sophisticated, increasingly critical and more aware of integration needs. We expect software scrutiny and replacement rates to increase. Legacy systems are ageing and quickly becoming outdated. Software patches are stopgap measures with limited value and very short useful lives. With the internet becoming readily available everywhere and any time, the increasing use of hand-held devices makes web-enabled tools the systems of choice.



For more information contact:

Salim Jabbour, CEO and Founder

T: +1 650 941 1728

E: info@abacussolutionsinc.com

www.abacussolutionsinc.com