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The Power Market Story: Are You Ready for Resurgence?

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The power industry's deregulation and restructuring over recent years have brought nothing if not constant and dramatic change to its competitive, regulatory and technological landscape. Following the power calamity in California, energy trading scandals, several bankruptcies of major power companies, and the blackout of 2003, today's power industry is still reeling from unpredictable challenges.

This scenario is further complicated by the now aging assets of power utilities, which some insist need to be replaced with newer equipment and technology – and soon. But recently, a bit of stability has developed in the wholesale and retail space, as a host of familiar names – as well as a few new ones – have re-engaged in marketing power to a growing pitch. Change is still a constant, but companies are learning to deal with the dynamics in better ways.

According to energy industry analysts Accenture and CERA, (Cambridge Energy Research Association – a wholly owned subsidiary of IHS Energy) "Electric power industry trends are changing each link of the industry value chain – fuel, generation, trading, transmission, distribution, and retail – across several critical dimensions, including risk profiles, growth prospects, risk-adjusted returns, and viable business models." Power businesses are re-strategising and, even more notably, redefining valuations. The power value chain touched more than US$500 billion in assets by 2003 metrics, and remains one of the most capital-intensive industries in the US economy.

The Old Story

By early 2000, the power trading market was flying high and viewed as the new frontier by commodity traders. The majority of trading activities saw a run-up of bids on generation facilities, while the traditional, vertically integrated electric utility companies dissected their generation, distribution, and trading functions as part of deregulation.

New energy trading players jumped at the opportunity to take advantage of the prospective windfall profits generated by the newly deregulated markets. Financial or 'paper' trades soared against real physical trades, as the latter posed certain physical barriers in the form of assets or contractual rights. Managing and distributing electric power is a capital-intensive business, as noted above, requiring significant facilities and/or investments that only a limited pool of players possessed.

Almost overnight, large energy trading firms and financial institutions stepped in as the new market makers in the wholesale trading space. Traditional players, including Investor-Owned Utilities (IOUs) and the various municipal distribution companies, had been providing these services in a regulated environment for more than 100 years, but took a back seat to the high-flying marketing companies as deregulation took hold. The new market makers began filling long established roles for the utilities, taking over asset management, fuel procurement, and risk management. The market appeared to be more competitive, and the stakes were high.

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By late 2001, the boom turned into a bust, as Enron collapsed. The entire marketplace for power trading was facing huge credit risk issues and possible breakdown. Liquidity dropped to nil. To fuel the fire, a significant number of utilities had assets, obligations, or voids falling back on their plates, which previously had been taken over by the marketing companies.

The Emerging Story

Over the past year, the credit picture has stabilised, and the roles in the wholesale physical marketplace are being redefined. This is helping the power business find its legs again. There is a renewed interest in investment in system solutions and technical infrastructure, especially among electric power distribution companies needing upgraded applications to handle their newly defined requirements – such as those of the landmark Sarbanes-Oxley regulations. Although their needs relate primarily to physical power trading more than to financial/paper trades (of which there continues to be a significant liquidity void), there is clearly a redefined need for applications that help manage power marketing processes from start to finish. This renewed interest in systems management stems from a shift in business strategy and portends resurgence in power trading, at least among the asset-based players.

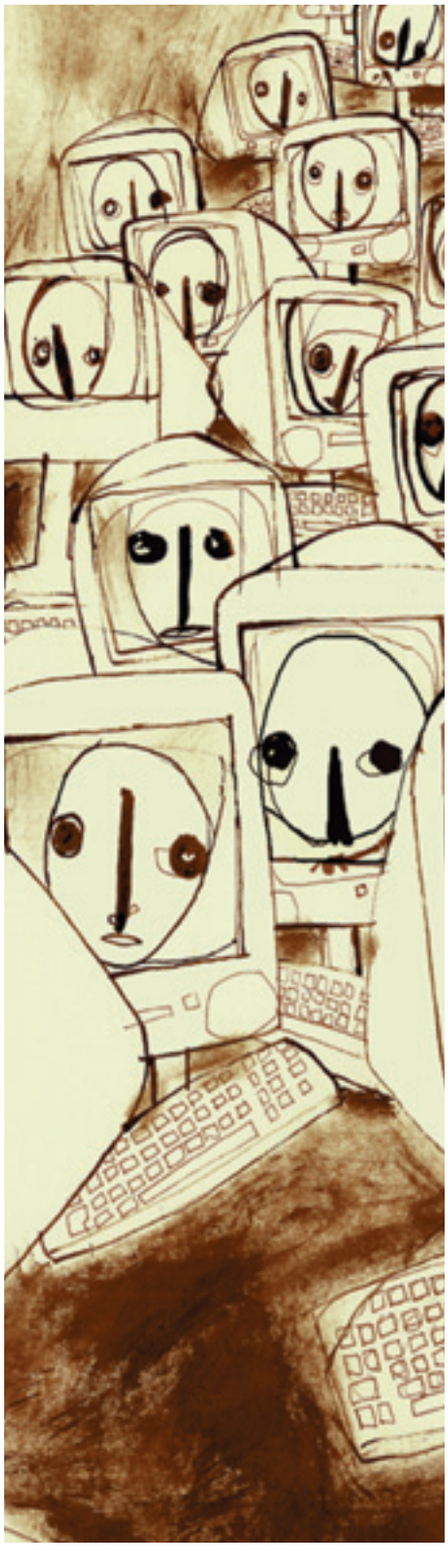
At the same time, many major banks are either expanding their existing energy trading activities or entering the energy markets as new, green-field operations. Some of these banks are so committed to the energy markets that they are prepared to get involved in the physical markets – even trading and scheduling physical power transactions. Several banks, such as Merrill Lynch, have made significant investments by buying entire trading operations from energy firms, including physical assets. Obviously, these new banking activities play, and will continue to play, a key role in providing better liquidity in the power market.

Although the banks' increased activities are helping to increase the liquidity and provide other benefits to the market, many established energy players are concerned that some of these banks may have only a fleeting interest that may, in turn, cause another bubble to burst in the energy markets. Finally, the banks' increased trading activities will also translate into a more competitive environment for energy trading. That means the margins across a range of energy products, especially the paper trades, may be squeezed over time.

The IT Story

As the Managing Director of a major software vendor for the energy markets, I can confirm 'The Emerging Story' based on first-hand experience working with many power distribution companies as well as banks. In fact, there is a distinctly more matter-of-fact style of system procurement compared to the flashy, big-bang buying excesses of the bubble period.

For utilities, perhaps the biggest IT challenges come in the form of inadequate, ageing technical infrastructures. Traditionally, these IT infrastructures have been built based on a logistic-centric business model. However, logistics requirements have changed over the course of power deregulation. Many utilities invested heavily in modifying or building their own internal



scheduling systems to support new and changing functions in a dynamic marketplace. As a result, some of these early efforts evolved into a range of independent scheduling software systems that make it difficult to integrate within an enterprise resource management system, much less in a straight-through-processing (STP) environment. With such a wide range of power trading tools deployed, a hodge podge of solutions has resulted in frustration for power firms working in today's fast paced trading environment – where growth, highly defined requirements, and newly evolving concepts are more the norm than the exception.

The energy trading business is subtly changing, as described in the Emerging Story. In most cases, for example, there are still no adequate, sufficiently automated facilities to keep pace with the new and evolving trading requirements in this 'born-again' marketplace. At this stage, most market players have outdated system infrastructures. Yet, a few pioneers have been proactive in making needed technology and

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software changes or upgrades, largely to address the existing inadequate infrastructures, the challenging trading environment, the changing roles, and/or the uncertain future of the deregulating power marketplace.

It is important to take a closer look at why a few energy firms have been taking such a proactive role during this difficult period. On the surface, the primary focus of this 'pioneer' group is to increase the effectiveness of their IT systems. But their main objective is to implement adaptive, flexible, and scalable IT system architectures that support an 'open link' through an entire trading or asset management business process. With an integrated framework that can interconnect all of a firm's trading or asset management activities – from daily positions to risk management and analysis, to scheduling of physical delivery, through managing all the required accounting, reporting, and regulatory procedures – companies can better meet the current and future demands of this dynamic marketplace.

This ideal environment of STP will be the next-generation solution powering the commodity trading industry. And it will provide a unified, flexible IT system to enhance the management of every business activity from A to Z. Under a single roof, STP systems provide an open view of each stage of the trading cycle, from an initial transaction through its risk assessment, logistics, and financial accountability, to settlement and beyond.

The OpenLink Story

Although power industry players have many choices for IT and software vendors in today's energy trading and risk management (ETRM) market, the number of viable solutions is limited because of industry consolidations that have occurred in the past few years. Among the small group of 'thriving' vendors, OpenLink stands out with a number of unique achievements.

First of all, OpenLink has a proven track record as an industry recognised leader among software vendors, supporting a highly diverse set of global energy firms as well as top-tier international banks active in both financial and physical energy markets. We have reached this unusual milestone because of our industry unique, risk based approach to an STP environment.

Starting with a robust risk based STP architecture, we have completed the development of Endur, our energy commodity solution, with integrated components such as *pMotion* (power scheduling), *gMotion* (natural gas scheduling), Accounting Manager, Tax Module, and more. By contrast, the rest of the energy software vendors developed their STP offerings based on a logistic framework – with the risk functionality as a bolt-on facility, almost as an afterthought.

There is, of course, nothing wrong with a logistic-centric approach. After all, logistics played a huge part in the energy business prior to deregulation, and it is still important today. However, logistics-based systems are less robust and less flexible to accommodate market changes

derived from trading and/or risk related activities, which are common today and will be in the future.

Secondly, Endur's openness and flexibility offer our customers unmatched degrees of configuration and customisation. The benefits of a highly configurable system are best highlighted through use-cases of competitive systems with limited configuration capabilities. Using such limited systems, energy firms must adapt their trading activities, risk management policies, and operations processes to these inflexible solutions. In other words, proprietary trading, risk, and operations intellectual properties (IP) must be 'dumbed-down' to common levels supported by these systems. As a result, energy firms using these systems are unlikely to be able to maintain their proprietary edge and, at worst, may also expose themselves to common workarounds known for specific systems that could potentially be taken advantage of by other trading companies.

For instance, certain competitive systems are well known to have limited pricing and structuring capabilities for complex deals. As a result, many

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energy firms using such systems must deploy Excel workarounds for their traders and risk managers, while their scheduling and operations people deal with 'proxy' transactions!

Alternatively, vendors with such limited systems end up customising their solutions at the source code level for their clients. Consequently, they do not maintain one source code tree for their products as OpenLink does. OpenLink maintains a single source code tree for both Endur and Findur, our flagship product for capital markets.

At first, many energy firms may prefer a customised arrangement, mistakenly thinking they can exert a tighter influence on product development and drive future enhancements. In reality, no software company can manage such relations with more than one or two clients.

How do you upgrade from multiple branches of the customised software? What about proprietary IPs embedded in each branch? How do you separate the customised enhancements from the general ones? As you can see, a number of other sticky issues and questions arise. Essentially, these software firms have become consulting companies, changing from a product-based to a service-based business model. Teaming up with consulting-based software firms is not

Endur and *pMotion*

Endur, OpenLink's flagship product for energy markets, includes comprehensive coverage for a variety of commodities in which you trade. Endur supports hundreds of standard and complex deal types. And new deal types can be created easily. For companies in the power market, which manage physical assets, our software suite not only supports logistics but also provides decision-making tools for decision makers to optimise generation assets.

OpenLink's power logistics solution, *pMotion*, is the industry's first power logistics solution that forms part of a robust, risk-oriented STP environment. *pMotion*'s intrinsically integrated approach is the optimal way to help eliminate inefficiencies (e.g., convoluted interfaces between trading and scheduling systems), increase productivity, and remove unnecessarily complicated patchworks of interfaces and workarounds caused by previous integration efforts with inadequate, last-generation systems. An intrinsic approach lowers the total cost of energy transaction management, and allows users to eliminate convoluted, stitched-together software solutions that have been prevalent in power operations for years.

The *pMotion* product is a complement to Endur, empowering the energy STP solution with scheduling and related capabilities. *pMotion* is specifically designed to support utility companies, asset-based marketers, financial institutions, local distribution companies (LDCs), and wholesalers engaged in physical power trading. It provides a powerful addition to an innovative and complete STP solution.

The time of convoluted webs of workarounds and patch solutions to try to address the functional gaps is over. Unique to OpenLink is the fact that it is not encumbered by legacy or isolated design views. It is the first ETRM vendor to offer a robust, risk-oriented STP architecture that streamlines processes, eliminates inefficiencies, and gives you the system foundation you need to adapt to the ever-changing future.

OpenLink's Endur STP solution also seamlessly links to an enterprise resource management system, such as SAP or Oracle Financial, and is the only solution in today's ETRM market that is operating system-agnostic. That means you can deploy Endur or *pMotion* across existing Windows, Linux, or Sun Solaris operating platforms.

At OpenLink, our vision and expansive offering mirror what today's power industry demands: Straight-Through-Processing systems that link all facets of the transaction lifecycle, from front- to mid- through back-office functions. Access to business-critical information at any stage of the process, through a scalable, flexible IT infrastructure, helps energy firms meet today's challenges with confidence, and gives peace of mind that tomorrow's changes can be met. OpenLink gives energy firms plenty of room to grow, with options that adjust to fast-evolving business goals for capitalising on growth and cross-commodity opportunities.

With OpenLink, every group in your enterprise can view the same consistent set of intelligent data. Traders need to track open positions, schedulers need to track net unscheduled counterparty exposures, and back-office personnel need to manage the payment process. When any one person commits to a deal action, everyone involved is notified automatically in real time. No more waiting for batch updates, manual procedures to come through, or time delays that slow down your risk analysis or settlement processes.

OpenLink delivers world-class technology solutions to help you attain and maintain operational excellence. *pMotion*, the intrinsic scheduling component of Endur, can be used as either a standalone or an integrated logistics function of your STP framework. In today's challenging power environment, with unpredictability the name of the game, one of the better solutions to complement your IT and business strategy may just lie with OpenLink.

necessarily a bad idea; energy firms willing to do so just need to understand the pros and cons of such relationships. For example, the total costs of maintaining such customised versions are higher than that of true product-based solutions like Endur.

Some competing software firms argue that it takes longer to implement OpenLink's Endur and that it is more difficult to maintain. There may be some truth to this assertion, but yet not specific to Endur. For example: when project teams are ill-organised, operating without proper resources and/or expertise; when they are undisciplined about project management responsibilities and priorities; or when they have unreasonable timing expectations given their available resources. A host of other project management issues can arise, but each of these scenarios would adversely affect the efficient implementation of any system, Endur or any other.

Nevertheless, OpenLink has taken concrete steps to address clients' implementation needs by building a number of standard implementation models (e.g., North American Power Model, German Power Model, Nordic Power Model, Emissions Trading Model, etc.) to fast-track implementations. These serve a range of interests – from a proprietary trading model for our hedge fund clients and front-through-back financial model for banks, to a multi-commodity model for mid-sized utilities and an enterprise-wide integration model for global energy firms. At this point, even though most of our projects encompass significantly wider scopes because of OpenLink's greater functionality and utility compared to other vendors', our implementation projects are very similar to others in terms of budgets and schedules.

Is Endur more expensive to maintain compared to systems of lesser functionality? The answer is both yes and no. If a client wants to take advantage of Endur's advanced functionalities (for example implementing our Potential Future Exposure [PFE] analysis with customised credit risk management), the client may need to roll them out in multiple phases depending on their internal priorities. The bottom line is that Endur is no more difficult or expensive to maintain than competing products – specifically as it relates to equivalent levels of functional complexity.

Alternatively, you also can spend less and get more with OpenLink. For example, while other companies may charge their clients' extra licensing fees for their 'new' Emission Trading Module, Endur clients can simply 'configure' their own Emission Trading Models by themselves or get the job done faster with OpenLink's assistance. That's the beauty of Endur's unparalleled configurability.

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With a risk-based STP solution, the simple fact is that the more internal risk expertise you have, the more you can take advantage of the system. We all know that good energy risk resources are not easy to come by – they are, in fact, hot commodities. In this regard, it is sometimes more expensive to keep good risk management expertise in house.

Finally, OpenLink truly stands out in the ways in which we manage our resources (both human and capital), invest in our technology, cultivate client relationships, uphold high standards and ethics, and get the job done, on time and on budget, for our customers. During recent years, while many software vendors were struggling to survive (some didn't), OpenLink generated sufficient cash organically from operations to repurchase a 20% equity holding from Shell Trading. Now, our company is completely independent, enjoying one of the highest employee-owned ratios. We have no venture capital or private equity fund to 'help' us manage our business. Names such as TransEnergy, Altra and the like are only a distant memory now.

No More Stories – Just the Facts!

The simple facts are:

1) The power market has turned the corner.

2) A few proactive, asset-based energy companies have started re-investing in trading and risk management businesses by upgrading their IT infrastructures.

3) Major banks are making similar, significant investments in energy trading, covering both financial and physical products.

4) IT infrastructures at most firms continue to be a limiting factor for energy trading and risk management activities.

5) Price volatility across all energy markets will remain high for the foreseeable future.

6) Americans, along with the fast-emerging economic powers of China and India – will continue to consume the most energy.

7) Emission credit trading is taking off in Europe and in many other parts of the world.

Are you ready for a resurgence in the power market today, or do you prefer to wait? Either way, try to select your IT partner wisely! ■

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OpenLink was founded in 1992 and is now a leading provider of trading, risk management, and operations software solutions. OpenLink's global client base includes American Electric Power, Banco de Mexico, Bank of America, Bank for International Settlements, Bank of Canada, Bank of Scotland Treasury PLC, Barclays Capital Markets, Bridgeline Holdings, Deutsche Bank, Edison International, Enbridge, Mirant, Nexen, Shell, and Vattenfall Europe Trading.
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