



The answer is not very—at least not yet. To energy traders, the ideal transaction processing system would be a seamless entity capable of passing deal data all the way from the front office to the back with no human intervention. Although the benefits of tight integration and straight-through processing are obvious, many energy trading operations haven't yet decided whether they can be cost-justified



Judging from the sheer number of integration solutions providers targeting the energy industry, one might conclude that all energy companies are—or are at least considering—integrating their information systems.

However, a remark by a speaker at a recent industry conference draws a more accurate picture of how much integration is actually taking place at energy trading firms. It went like

this: “Teenagers and sex: They’re all talking about it, but few are having it—and those that are having it aren’t doing it well.”

Substitute energy traders for teenagers, and integration for sex, and you get the picture: Integration is nowhere near as widespread among energy trading firms as the companies that sell integration services would have you believe. What’s also not as widespread is a capability that integrated systems need to deliver the

productivity benefits they promise. That capability is called straight-through processing (STP).

STP enables energy trading systems to pass transaction data from the front office all the way through to the back office—that is, from the point at which deals are entered to where they are settled and accounted for—with no human intervention. STP should completely eliminate opportunities for introducing human error at various points in the process.

Energy trading technology

To energy traders, the benefits of STP are especially compelling because transaction processing is a multi-step procedure, and a mistake at any point could cost a firm millions of dollars.

Additional proof that neither end-to-end integration nor STP are widespread at energy trading firms can be gleaned by surveying their executives off the record. On the record, many say they are taking a “wait and see” approach. But what’s telling is that few energy traders are willing to discuss—for attribution—their successes or failures at implementing and achieving STP.



One user speaks out

One vice president of a large American energy trading firm was willing to talk. Confirming that her company has an integration project in progress, she said that its main goal is to enable the firm’s trading volume to grow.

This executive also confirmed that when the integration is complete, it will indeed support STP. By investing in STP, she added, the firm hopes to not only cut down on human errors in transaction data processing, but also to get a better handle on its physical and financial positions in increasingly volatile energy markets. Today, she explained, the physical aspects of energy trading are much more complicated than the financial; every transaction requires a lot of administrative work, including manual reconciliation, scheduling, and documentation. Through STP, the firm hopes to reduce the need for reconciling multiple areas of deal entry, and increase upfront deal ownership and accountability as well.

In conclusion, the trading executive said she believes that the success of the integration effort will depend on two things: building integration expertise in-house, and getting user buy-in. To do this, her firm is trying to rely less on the integration expertise of consultants, and more on the business expertise of its trading profession-

als. The users that have volunteered to get involved in the project, she explained, say they view their involvement as a career stepping-stone.



The supply-side view of integration

Naturally, consultants and vendors involved in this industry niche are much more forthcoming about integration and STP. One is Dr. Gary Vasey, president of the Houston-based strategic marketing firm VasMark Group. He explains that energy traders want to integrate their physical and financial systems so they can hedge more effectively and match their different portfolios more efficiently.

“Multiple commodity integration,” he says, “is also important for companies wishing to better determine their total energy position. But,” he adds, “although some vendors offer STP, I don’t think any offers all of these types of integration. In fact, most probably don’t offer even two of them.”

Another take on integration comes from Chuck Hanebuth, managing director of Enform Technology, also based in Houston. Enform provides

customized IT solutions. Hanebuth reports that end-to-end integration appeals to many of his company’s energy-trading clients for the competitive edge it promises to provide. “As the volume of data involved in energy trading skyrockets, our clients are essentially being forced to raise the level of integration of their front-, mid-, and back-office systems not only with each other, but with systems in the outside world as well. Ensuring that the flow of data is consistent, accurate, and timely can add millions of dollars to an energy trading firm’s bottom line.”



Spreadsheets and screens

Aside from process efficiency, integration also promises the kind of ease of use that traders expect from a single interface to multiple systems. Not long ago, energy traders were saying, “We’ve already done everything we can in the front office, including providing better analytics and real-time market information. To make more money, we need to improve efficiencies elsewhere.” In other words, what traders are saying they want is the ideal, integrated trading system: one with the same interface to the front (trading) and back (accounting) ends. Such a system would process and provide access to transactions seamlessly.

The proliferation of on-line exchanges has only accentuated the need for a single interface. Vicki Barit, director of marketing for Houston-based on-line exchange and integrated solutions provider Altra Energy Technologies, says “traders can only have so many screens.” Altra addresses the interface issue with its latest technology, which is built on messaging systems and Java scripting, and delivered over the Internet.

‘Multiple commodity integration is also important for companies wishing to better determine their total energy position’

Tradewell Systems, a provider of integration infrastructure technology also based in Houston, takes a different approach to the problem. It puts information from different on-line exchanges into an Excel spreadsheet, with which traders are quite familiar. With this, traders no longer have to worry about copying and pasting data from different exchanges. Tradewell Systems’ offering—called Excellerator—uses their object-oriented integration infrastructure technology called Enyware. This Java-based technology supports application to application (A2A) and business to business (B2B)

Use of ASP modules for all energy trading functions—including STP—is becoming not just commonplace, but essential

integration on the same platform.

Rather than buying software to interface their transaction systems with one or more on-line exchanges, some energy trading companies are writing their own code. However, this is not a straightforward, one-off project.



Integration requires standards

Besides the multiple-interface problem, another obstacle to integrating trading systems and equipping them to do STP is the dynamism of the IT industry. Integration becomes a never-ending effort when the building blocks of a trading firm's systems—data bases, application modules, and the like—are constantly being upgraded by software suppliers. Incorporating a new release of a product often requires the user to rewrite that building block's interface with the rest of the trading system. For energy traders, one solution to this problem is to outsource the recoding job to an application service provider (ASP).

However, the viability of that solution depends on geography. In the U.S., most energy trading firms took the "best of breed" approach to choosing applications early, and as a consequence, they are now integrating those applications as they consider whether to commit to STP. Their decisions were made prior to the birth of the ASP industry. In Europe, by contrast, such decisions by energy trading firms have come later, giving them more options, including whether to take the best-of-breed or integrated-suite approach to applications, and whether to hire an ASP.

Matt Frye, chief marketing officer for integrated trading software provider TradeCapture, Stamford, Conn., foresees the use of ASP modules for all energy trading functions—including STP—becoming not just commonplace, but essential. But that will require standards.

Frye sees parallels between the development of standards for energy trading and the development of standards for the Internet. "First there was TCP/IP, now there's XML, and soon there will be standards for energy trading as the industry migrates toward Internet-based trading platforms." In this vein, several industry-led efforts, such as Energy Trading Standards Group (ETSG), to develop standards related to energy trading systems integration are under way.



Middleware enabling integration

In the broader world of enterprise computing, IT strategists at companies in information-intensive industries—including the energy industry—have begun to question whether tightly integrating information systems is really such a good thing. Advocates of looser integration say that if systems are too closely coupled, their flexibility will be compromised, and changing anything in one system will necessitate changes in all the systems with which it communicates.

Interfacing systems—for example, through the use of application programming interfaces (APIs)—rather than integrating them, is one example of the "looser" approach. The word integration implies a more "holistic" approach.

Asked to explain the difference between integration and interfacing, Jim Baker, managing director of Houston-based energy risk management systems provider OpenLink Energy, sums

it up in just four words. "Interfacing is much simpler," he says, than integration. Elaborating, he adds that, "Interfacing allows data to be transmitted between two systems that do not normally share the same database tables. Integration requires modifying systems to work together in seamless fashion."

William Rabson, executive vice president of best-of-breed power trading and scheduling software provider PowerTrade, also based in Houston, compares interfacing to cobbling software together. Giving an example, he explained that Lotus Smart Suite doesn't work as well as competitive products designed to run on an integrated system on a single platform, such as Microsoft Office Suite. In addition, Rabson reports that his customers are concerned about whether the end-to-end systems they are considering were originally designed as an integrated system. Many of these so-called "integrated" systems are merely an interfaced collage of separate systems that have a hard time communicating with each other.

A third perspective on the interfacing/integration issue comes from Enform Technology's Hanebuth. He says that he's noticed a strong trend among energy traders away from traditional "interface" programs, and toward more middleware-centric architectures. Such architectures provide a variety of benefits that traditional approaches cannot deliver, including queue technology, guaranteed delivery, rule-based data transformation, and store and forward capabilities.

Middleware refers to the component layer that sits between the client and the server. It covers all distributed software needed to support interactions between clients and servers, serving to "glue" them together. The use of middleware also

Many of these so-called 'integrated' systems are merely an interfaced collage of separate systems that have a hard time communicating with each other

Energy trading technology

provides a consistent and consolidated pooling point for organizational data, allowing the writing of “contracts” between publishers and subscribers of data.

For energy trading firms that decide to integrate rather than interface their systems, the question then becomes: How to go about it? At Complete Solutions, a Houston-based company that specializes in integration projects, Managing Director Addam Alderete and Director of IT Services Emilio Chemali report that many of their clients pursuing integration are building adaptors for Web-enabling their legacy applications, rather than rewriting their functionality. Although this approach permits them to migrate their systems—as opposed to taking the “big bang” approach—the hard part is the planning, which can take anywhere from 12 to 18 months.



TP: Two or three years away

That STP is not a reality at energy trading firms can be deduced from two facts: Firms are still weighing the pros and cons of integration and interfacing, and the current lack of energy trading standards. But STP is already commonplace in other industries, such as finance and currency trading, and many of the cognoscenti say that it's only a matter of time before it becomes just as commonplace in energy trading. One member of that group is John Ashworth, the former CEO of a currency options software vendor and now the chief commercial officer of London-based commodities broker GFInet. He believes that it won't take long for energy trading companies to catch up.

When will STP arrive? Speaking at Adam Smith Institute's energy conference in Berlin this February, Tony Rijkers of Dutch on-line exchange software supplier and integrator Sema predicted that European energy traders will embrace STP in two or three years. Given that all European power exchanges have different interfaces, he said, “if you're trying to keep your

head above water, integration is a luxury to think about now.”

Rijkers added that national differences in transaction processing make moving to STP more difficult. For example, German energy traders continue to insist on manually signing a piece of paper to validate a deal. Equally tedious is the common practice of e-mailing power schedules as spreadsheet attachments to grid operators. Despite the flexibility of spreadsheets, this method of data communications lacks standards, raises issues of security and authenticity, and introduces the possibility of a manual error each time a form is copied or pasted. “If Bill Gates knew that the entire industry is surviving on spreadsheets, he would surely charge more for Excel,” said Rijkers.

To David Hanson, vice president of special projects for Altra Energy Technologies, the factor that will have the greatest impact on when STP becomes common at energy trading firms is cost. He says, “The cost and control benefits of STP are undeniable, but they can't be achieved unless you spend money up front to either buy a new system or modify your existing ones.” However, Hanson thinks that those companies willing to make that up-front investment will make themselves the most efficient energy traders and “rule the world.”

Andrew Bruce, CEO of Tradewell Systems, also views cost as a critical factor in how quickly STP proliferates in energy trading. Agreeing that it's not here yet, he offers a reason why end-to-end integration is still a rarity in the field. “I think many [energy traders] have bitten on the middleware silver bullet, and are now realizing how complex and expensive it is to build a one-off, in-house solution. Companies that we know of have spent tens of millions of dollars just to buy the licenses for tools needed to build the infrastructure required to support STP. Several have licensed middleware, but only use it to publish and disseminate prices within the company. To me, that's incredible overkill.”

Peter Tebbenhoff, general manager for the energy industry at integration technology solutions provider Tibco Software, Palo Alto, Calif., also agrees that implementation of STP in the energy trading industry is two to three years out. He says, “During our market research, traders have said that although they feel today's technology is mature enough to support it, they simply don't see a significant enough return on investment to go ahead with STP projects.”

The last word on STP goes to Chris Edmonds, chief operating officer of the Louisville-based on-line exchange, application software, and integration solutions provider True Quote. At eyeforenergy's energy e-commerce conference in Amsterdam this March, he said that the biggest obstacle standing in the way of STP is getting users—energy traders—to buy in. Among the rhetorical questions he asked were: “How do you sell it to the human element?” and “How can you streamline business processes and yet convince people it works?” ■

—Anne Ku

Visit these sites for more information

Middleware vendors

www.Tibco.com
www.JunotSystems.com
www.SeeBeyond.com
www.Vitria.com

Integrators that provide consultancy and project management

www.Accenture.com
www.Complete-Solutions.com

Integrated solution providers targeting the energy trading market

www.altra.com,
www.TradeCapture.com
www.Sema.com
www.LodestarCorp.com
www.olf.com
www.enform.com
www.truequote.com
www.TradeWellSystems.com

Reports

www.idc.com
www.gartner.com