Current energy market conditions mean utilities are starting to demand new functions from their trading and risk management software. *Jill Feblowitz* of Energy Insights identifies some upcoming trends

Poised for growth

Jill Feblowitz, Energy Insights

★ High energy prices, volatility and the acceptance of electronic trading are continuing to drive the increase in energy trading and, as a result, the investment in information technology to support this activity. The missteps of Amaranth in failing to anticipate the direction of the gas market have not dampened the desire to trade.

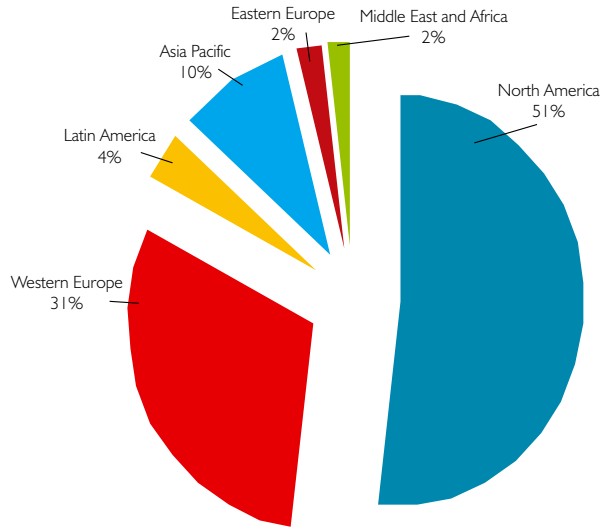
Energy Insights, an IDC company, conducted an extensive examination of the market for energy trading and risk management (ETRM) software for utilities, which included conducting 13,000 end-user surveys. With this research it has made predictions for the growth of the market out to 2010.

It predicts the ETRM software market for utilities to show a 6.1% compound annual growth rate (CAGR) globally between 2005 and 2010, with pronounced regional variations. The total market for external spending on ETRM software in utilities worldwide was $239.5 million in 2005. Western Europe and North America make up 82.5% of the global market for ETRM for utilities (see figure 1). This is not surprising, given that the most active and mature commodity and spot markets are found in these regions.

Growth is expected to be highest in Eastern Europe, the Middle East and Africa, Latin America and Asia/Pacific. Utilities hedging or playing in energy markets will need to focus on the most advanced technology to meet the needs of this fast-paced market.

Energy Insights looked at the influences triggering the increased demand for ETRM software. One of the biggest influences on the market currently is the spread of electronic trading. Electronic exchanges are accessible through the internet, expanding the number of potential traders globally. In addition, electronic exchanges allow for faster trading through matching engines and enable increased transparency in the market, which also serves to drive participation and trading volumes.

This year, open-outcry stalwart the New York Mercantile Exchange (Nymex) ceded that there may be a place for electronic trading and that the open outcry market is not necessarily the superior, or only, form of trading. It closed its open outcry exchange in London and, following the lead of the Intercontinental Exchange (ICE), made a significant commitment to the electronic platform by outsourcing its electronic energy trading and confirmation to the more robust



F1. Regional breakdown of ETRM spending *Source: Energy Insights, IDC, 2007*

Chicago Mercantile Exchange Globex platform. The increase in trading volumes on these platforms is evidence of the health of electronic trading (see figure 2).

In addition to electronic trading, which has enabled more players to reach the market, interest in energy trading has also grown over the past year due to an increased focus on climate change, especially in the US. With oil hovering above $60 a barrel, investment in alternative energies is once more on the radar.

These new market factors – electronic trading, high oil prices and increased interest in green energy – put new demands on utility firms and their ETRM software.

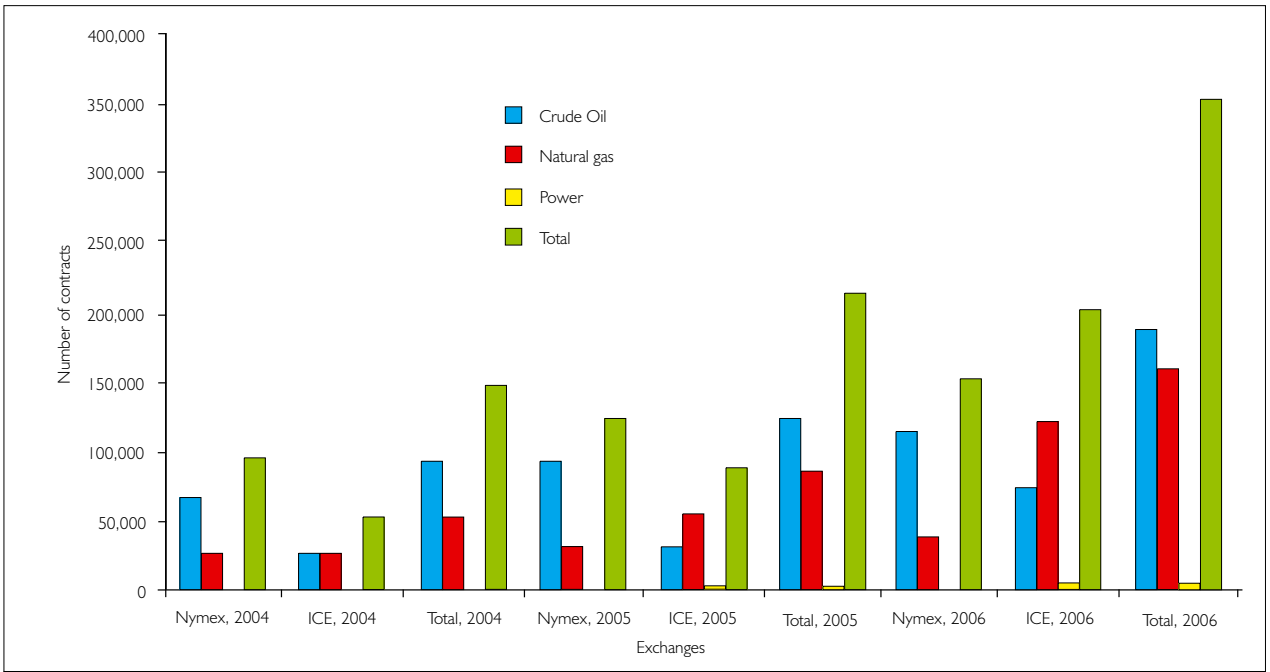
Utilities remain focused on assetbacked trading

The more aggressive traders in the energy market have traditionally been financial institutions and oil and gas companies, while regulated utilities have tended to engage in energy trading for hedging purposes. The concept is to make the right decisions about whether to go short or long on power or feedstock such as natural gas, coal, and to a lesser extent oil. Only recently have regulated utilities been allowed to buy formal hedging products such as collars, which are used as insurance against price fluctuations in power or feedstock.

Utilities have reverted to doing more asset-backed or physical trading after they were burned engaging in financial trading during the Enron era. In other words, the utilities trading power actually own the generators that produce the power that is delivered. Power generators also seek to take advantage of the spark spread.

For example, if the price of natural gas is high and power is low in a certain area, traders may sell the gas, rather than run gas-fired generation, and buy power needed to meet contract commitments on the spot market. This means they will increasingly be looking for more IT functions that support these physical activities.

There is also new attention to the management of fuels for generation. There are several aspects to fuel management, including managing delivery risk for feedstock, as well as managing the logistics of delivery. Several utilities in the North American Midwest were caught short when the wholesale market called for low-cost power that happened to be coal-fired, and these companies did not have enough coal in inventory. At the same time, there was not enough rail capacity to deliver coal in time.



F2. Nymex and ICE electronic trading and clearing, 2004–2006 *Source: 10-K Reports, Nymex, ICE, 2007*

Given these fundamentals, there is likely to be an increased demand for software packages that combine physical logistics and scheduling issues along with trading and risk management applications.

Sizing the software market

For the purpose of Energy Insight's survey, the ETRM market covers applications that are used to support trading in physical and financial energy commodities and futures. The market forecast does not include professional services such as implementation, only license and maintenance revenue. Both transactional and analytic applications are used across the front, middle and back offices of companies engaging in energy trading of oil, natural gas and power.

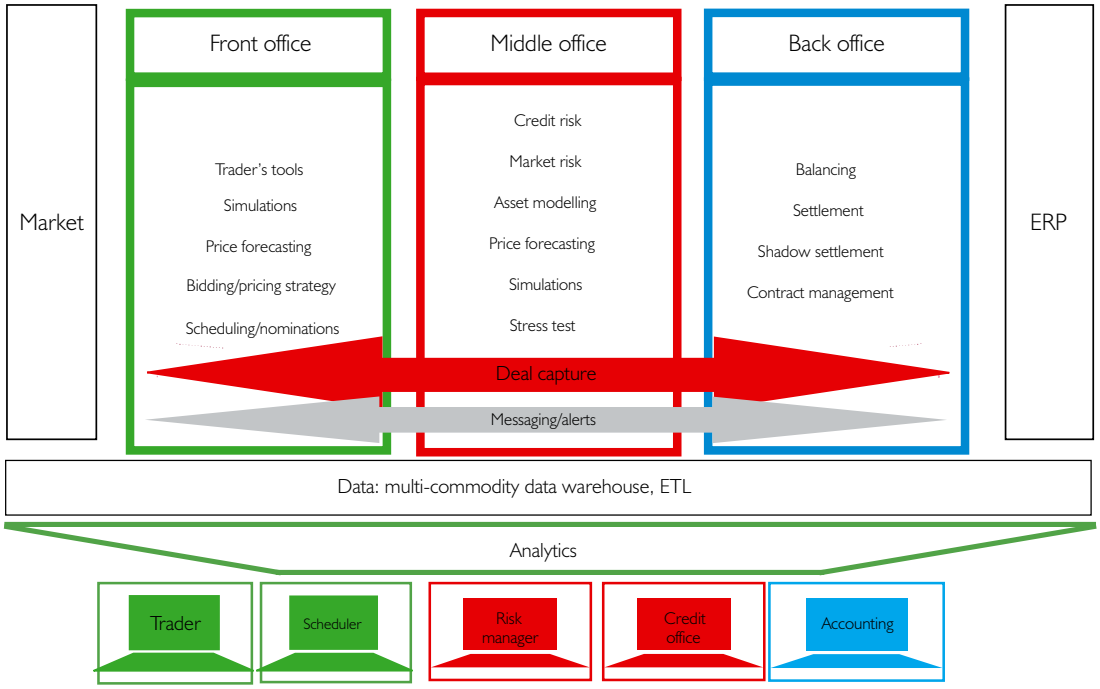
Applications cover the business process from deal capture to settlement and include trader tools, risk management, credit risk management, bidding and pricing strategy, forecasting, scheduling, pipeline nominations and settlement (see figure 3).

A more detailed description of the subcategories can be found in table 1 opposite. Please note that data services, traders' telecommunications, asset modelling, contract management and enterprise resource planning (ERP) systems are not included in the market for ETRM applications.

What to watch

Energy Insights sees the following trends in ETRM as worth noting:

- Fuels management logistics will be integrated with the trading desk to provide an enterprise view of fuel exposure, especially related to rail and liquefied natural gas delivery. Expect there to be more acquisitions by traditional ETRM vendors in this area.
- European and Asia Pacific will invest in ETRM to support carbon trading.
- North America will continue to have regional markets in this area and will not invest in information technology until there is more certainty about a national market for carbon emissions.
- In immature markets, utilities are expected to focus on asset modelling and market simulation analytics before building emissions trading capabilities into their pre-existing ETRM systems.



F3. ETRM applications for front, middle and back office *Source: Energy Insights, 2007*

T1. Definitions of application categories for ETRM *Source: Energy Insights, 2006*

Category	Definition
Traders' tools	Tools that provide traders with analytics applied to real-time market, weather and other data, with the intent of maximising deal revenue, while minimising risk
Bidding and pricing strategy	Bidding and pricing strategy
Deal capture	A transactional application for entry, storage and access to deal data; deal capture systems are typically used by the front and back office
Risk management	An analytical application or set of applications used as decision support for energy commodity trading, typically used by the middle office; risk management addresses market risk
Credit risk management	An application or set of applications used to manage counterparty or credit exposure across trading partners
Scheduling/nominations/settlement	A transactional application or set of applications that allow market participants to schedule energy delivery on power or gas pipelines; settlement applications are used to settle accounts based on actual versus estimated physical delivery; financial settlement systems such as ERP systems are not included in this category
Forecasting	An analytical application that allows market participants to forecast demand or price in the short-term, medium-term or long-term

- As trading volumes continue to increase, utilities seek to build intra-day visibility into their position in order to manage risk.
- Utilities and merchant generators actively trading large volumes in more than one commodity will come to depend on business intelligence-like analytics, applied to data from numerous applications and data sources.

Investing in technology to support energy trading and risk management requires planning. Risk managers, traders, accounting, credit, finance and marketing must work closely with IT to ensure that the investment results in the desired outcomes. This could be more deals per trader, better deals or a reduction in credit or risk events.

Packaged applications can get companies there more quickly and cost-effectively by reducing the number of IT staff it takes to support custom-made applications. For utilities actively involved in trading with substantial trading desks covering multiple commodities, there is still not a single application that can support this activity.

Jill Feblowitz is practice director, business technology at Energy Insights, an IDC company. She is a nationally recognised thought leader in the application of information technology to the business problems faced by the energy industry. She manages the Energy Wholesale Strategies research programme, which covers major application areas including energy trading and risk management, wholesale market operations, generation fleet optimisation, generation work and asset management.
Email: jfeblowitz@energy-insights.com

About the survey

The Energy Insights study covers market sizing and forecasting for ETRM in the energy industry. Regions covered include:

- North America
- Western Europe
- Latin America
- Asia/Pacific
- Eastern Europe
- The Middle East and Africa.

The forecast is based on IDC's Vertical Views research, which involves the joint expertise of IDC's technology and industry analysts to develop research and analysis.

IDC Vertical Views analysts use a combination of more than 11 million firmographic records to develop industry composites, 13,000 end-user surveys conducted in 2006, supplemental surveys of utilities-sector respondents that cover energy-specific application categories, announcements of contract wins, IT vendor revenue by industry, quarterly tracking of industry indicators, IDC Industry Insights intelligence about IT investments (in this case Energy Insights), and data from IDC's Worldwide Vertical Markets programme to quantify historical adoption, current IT budgets and projected spending.

IDC integrates these elements into a spending elasticity model (by technology, vertical sector and company size), which correlates changes in spending (as a percentage of revenue) to changes in revenue and number of employees. Forecasts are based on the number of companies in the industry, forecasted revenue growth rates, change in spending as documented in end-user surveys, and trends in technology adoption.