ARTICLE

ENERGY SOLUTIONS

PREPARING FOR CONTINUOUS SHORT-TERM POWER TRADING

As intra-day trading is developing, traders are seeking more flexible trading products to help dealing with volatility as well as managing exposures and analyzing market data.

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Most deregulated power markets rely on day-ahead trading where trade activity takes place 12 to 36 hours ahead of actual power delivery. However, the rapid and substantial move within Europe to renewables as sources of electric power has created some problems for this approach.

Renewable generation is often intermittent and is difficult to plan and schedule so that generation forecasts are unreliable at best. In fact, forecasting renewable generation actually becomes increasingly accurate the closer it gets to delivery. This can result in significant price and volume volatility, difficulties in balancing and scheduling issues. Despite this, there is now great interest in developing real-time power markets such as, for example, Elbas - the Nordic hour-ahead market.

The decision by the German government in 2011 to phase out its nuclear generation facilities, combined with a general European-wide rush to renewable generation to meet the EU CO2 emission targets, has exacerbated what was already a major shift in European power market dynamics. The boom in everything renewable also seems set to continue inexorably as increasing amounts of, often heavily subsidized, wind, solar, tidal, biomass and other renewable generation comes on stream over the next several years.

Renewables increasingly important

According to the European Environment Agency[1], the deployment of renewable energy sources in the E.U. has increased from an 8.7 percent share in gross final consumption in 2005 to 14.1 percent in 2012 and final renewable energy use has increased at an average annual growth rate of 6.4 percent. However, in Germany the focus of much of the activity, renewables are now a staggering 27.8 percent of the generation mix.

This rapid transition has not been without its associated issues and challenges. The increased share of renewables has meant significantly increased short-term volatility for volumes and prices along with reduced opportunities, profits and margins in the more traditional forward and term markets for power – particularly in Central Europe. Intra-day trading is also developing more and more, and the market participants are seeking more flexible trading products in order to help deal with that volatility as well as the tools they need to actively trade, manage exposures and analyze market data.

Responding to that need, Germany introduced 15-minute intra-day power products that are tradable two hours before delivery only. These have already proven to be popular, are quite liquid and already represent about 10 percent or more of the traded volume in Germany. At the moment, these products are tradable only within Germany but one can expect this to change in the near future. However, possibility to trade both hourly and quarter hourly products in real time give traders increased opportunity of making profits out of short term volume volatility.

[1] EUROPEAN ENVIRONMENT AGENCY, TECHNICAL REPORT 1/2015, FEBRUARY 2015

Challenges with real-time trading

While the day-ahead power markets are increasingly coupled across the E.U. and represent a secure and efficient market for power trading, balancing in a rapidly changing and volatile short-term environment remains a difficult challenge. Market participants increasingly both want and need to trade closer and closer to time of delivery in real-time. While there remains significant work to be done in terms of infrastructure for cross-border transactions and so on, it is inevitable that this infrastructure will emerge over time. Meanwhile, Germany, with its high renewable power component has already pioneered the way forward as EPEX offers both trading instruments and infrastructure for continuous trading there.

Of course, the increasing need to trade intra-day also has its consequences. There is a dramatically increased number of trade transactions and generation facilities to manage with significantly shorter response times in which to manage them. Some level of automation is also needed as well to ease trader bottlenecks. Position management, both physical and financial, has to be timely and accurate, and all kinds of market information from an increased number of sources (for example, multiple wind generators versus a single traditional generator) must be delivered to the trader's desktop promptly. From a technology viewpoint, another challenge is the ability to interface with a variety of other systems both internal and external as well.

Many generators and utilities in Europe now face the need to trade on an intra-day basis and are discovering that their traditional ETRM solutions do not support the emerging requirements associated with real-time trading. These requirements include real-time positioning and market data as well as bi-directional communication with real-time markets. Additionally the system should support trader's specific strategy by providing required analytics. Many have actually been forced to resort to build their own internal solutions.

FIS has the solution

The FIS Aligne software suite is well positioned to offer a solution to Europe's problems with the continuous short-term trading of power. It has all of the basic elements needed already and by the Q4 of 2015 it will have all of the functionality to deliver for most real-time trading needs. The FIS Energy solution will cater for EPEX market order management with automated workflows, bi-directional real-time market communication and intraday TSO nominations. It will allow online optimization of assets and provide other useful and customizable analytics to assist traders in making informed trading decisions and strategies. It will also have the real-time interfacing capabilities to other systems including an ETRM used for forward market trading. Real-time physical and financial position management will also be supported.

The FIS Energy solution will be available stand-alone or as a part of the Aligne product. Experience has shown that traditional ETRM solutions are neither designed nor architected to support the rigors of a real-time environment necessary for intra-day trading activities. Rather, a focused intra-day system is usually required to interface with the ETRM. FIS' solution is readily integrated with Aligne/TRM and in the future, will also work alongside other ETRM solutions if need be.

FIS believes that it is uniquely positioned to serve this emerging but important market niche and can become de facto market leader for real-time power trading solutions in Europe.

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About FIS

FIS is a global leader in financial services technology, with a focus on retail and institutional banking, payments, asset and wealth management, risk and compliance, consulting and outsourcing solutions. Through the depth and breadth of our solutions portfolio, global capabilities and domain expertise, FIS serves more than 20,000 clients in over 130 countries. Headquartered in Jacksonville, Florida, FIS employs more than 55,000 people worldwide and holds leadership positions in payment processing, financial software and banking solutions. Providing software, services and outsourcing of the technology that empowers the financial world, FIS is a Fortune 500 company and is a member of Standard & Poor's 500® Index. For more information about FIS, visit **www.fisglobal.com**


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