Reversing the Decline in UK Power Market Liquidity

The UK's bilaterally-traded wholesale market for power, which sets it apart from other major European markets, has recently experienced a decline in liquidity. By concentrating liquidity on a day-ahead auction, an actively traded and transparent spot pricing benchmark could be established, supporting the further development of wholesale power and derivatives trading. Paul Beynon, Chairman of the FOA's Power Trading Forum and Vice President of UK Power Trading at RWE Trading, outlines a proposal for the UK to establish a central, auctions-based market.

The proposed solution

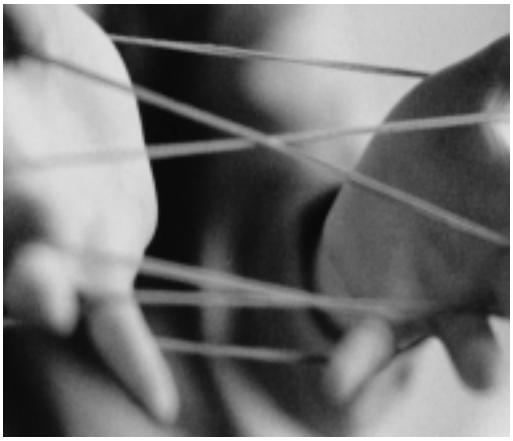
In initial discussions with a view to reversing the decline in liquidity in the UK power market, there seems to be a great deal of support for the development of a liquid and transparent energy exchange, which would help to attract financial players and foster credit risk-mitigating solutions. Progress in these two areas would help to counteract two of the primary reasons for the drop in liquidity being experienced in the UK wholesale market for power. The basis of such a new contract will not, however, happen overnight.

Current, physically delivered, solutions are regarded as cumbersome and difficult for new participants to enter the market so there is a need to develop a cash settled market that is based on a physically derived (and trusted) benchmark price. The Futures and Options Association (FOA)'s Power Trading Committee believes that an auction system will provide the trusted benchmark price on which such a cash settled futures contract could be based and is proposing this solution to the UK Power market.

This solution should address the current situation where there is no agreement on a single benchmark, with wholesale traders using a variety of indices and cash market terms to trade forward. This has had the effect of fragmenting the liquidity that does exist in the market even further with traders, as a consequence, being unable to equate the numerous different basis prices that are available.

By employing an auction, market attention and market activity can be drawn to a single marketplace and product at a specific point in time. This creates a focal point for the concentration of liquidity. The auction also facilitates the anonymous execution of large orders at a price that accurately reflects market conditions at the time of execution.

In contrast to standard products, hourly auctions significantly facilitate



pre-balancing and optimisation activities by physical players dealing in load shape, thus fostering their actual participation in the market.

Pricing transparency

The efficient price discovery mechanism of the auction-based model enables market participants to refer to the price level established in the auction as a reference spot price for the value of physical contracts. Since this resulting market 'index price' is effectively transactable without basis risk against the physical market, it lends itself particularly well to becoming the underlying instrument for cash settled products such as futures contracts.

Such an auction will, however, require market participants to commit to supporting it in order for liquidity to be concentrated and for it to become the focus for pricing. The likely format for an auction will be as follows:

- At a specific time day-ahead, all participants submit their bid and offer volumes with prices for hours or groups of hours.
- The volumes can either be fixed by the participants (i.e. 25 MW) or capped (i.e. up to 25 MW). The prices can either be capped (i.e. I buy at no more that £15/MWh for hour 5) or be a market order (i.e. I buy hour 5 at the clearing price).
- The number of bids and offers must be high enough to allow for flexible bidding by participants. The exchange then creates aggregated bid and offer curves for each hour through linear interpolation. The intersection of the bid and offer curves is the clearing price for each hour.

In order to achieve greater participation, the design must reflect the preferences of the suppliers and/or bidders. It must therefore aim to offer the following:

- Low participation costs.
- Clear rules
- No distortion of pricing by eliminating TSO participation in the auction

Developing derivatives trade

A properly supported, liquid, transparent and trusted spot price provides a benchmark for launching a platform for new derivative products and, therefore, ever increasing degrees of liquidity.

A futures contract with financial settlement (cash settlement through central clearing) can be developed from the resulting prices – as well as contracts that are physically delivered through the spot exchange. Buyers and sellers who agree to cash settle the difference between the price agreed and the future market price upon the conclusion of the transaction would have no basis risk against the new index.

While the physical futures market could follow the Electricity Forward Agreement (EFA) association contract, using 4,4,5 ▶

week cycles, the new financial contract could be based upon a calendar month – thus matching load to the National Balancing Point (NBP) 1997 contract for gas. If a similar market design was followed on gas, a spark spread swap contract could then be developed. Given recent moves in the US and in the UK it seems likely that spark swaps and swaptions should attract liquidity from asset owners, funds and from gas and power traders.

With this approach, a direct link also opens to other European exchanges, and the UK exchange could even list other exchanges as a delivery point. This will become more interesting as physical interconnection and market coupling increases.

For this market model to be successful clearing must be a key ingredient. The market-supporting clearing structure thus consists of a central contracting party or clearing house and of several banks, which are active as licensed clearing members of the clearing house in question.

Within this structure the trading participants are able to settle their transactions with a Clearing Member of their choice, whereas the Clearing Members themselves settle these transactions direct with the energy exchange (in the case of exchange-based trades). With regard to the commitments they have entered into, the trading participants have to deposit margins with their Clearing Member and the Clearing Members in turn have to deposit the same at the clearing house/exchange serving as the central contracting party. As a result of this structure the settlement of all transactions is ensured and problems with the credit-worthiness of individual counterparts are eliminated.

Once these market mechanisms are in place, OTC cleared markets can be developed that offer margin offsets against the cash settled futures contract. This centralisation of the credit pool is essential if all companies with commercial interests in the UK power market are to access the market on an equal footing.

FOA's Power Trading Committee is initiating discussions on the solution to falling liquidity in the UK and will be engaging market participants in order to assess the interest in developing the market model outlined in this paper. Any readers interested in participating in this development should contact Paul Beynon (paul.beynon@rwe.com) or Clive Furness (furnessc@foa.co.uk)

This article is an edited version of a paper presented to the Power Trading Forum round table on 24 November 2005 and is reproduced with the kind permission of RWE Trading and the FOA. ■