

CRA Competition Memo



Draining liquidity: a novel vertical effect in electricity mergers?

The acquisition of the UK's largest nuclear generator British Energy (BE) by EDF – and the subsequent sale of a stake in the nuclear assets to Centrica – came under close scrutiny from the European and British competition authorities.¹ Because EDF and Centrica both have significant electricity retail operations, the competition analysis in each case considered possible vertical effects.

The fact that the competition authorities looked at non-horizontal effects was not surprising – it is routine in vertical mergers to consider whether the transaction will increase the ability and/or incentive of the parties to engage in foreclosure strategies. What was surprising about the vertical analysis in these cases was the *nature* of the possible vertical effect that concerned the European Commission and the OFT. Neither competition authority was especially concerned about strategic foreclosure (i.e. deliberate actions taken by the merging parties to harm rivals). Instead the main concern was the risk of a reduction in market liquidity – i.e. the prospect that the transactions might result in less electricity being traded on the wholesale market.

The BE cases create a precedent for the assessment of liquidity effects in future mergers in the electricity sector. In addition, because the logic of the concern about liquidity effects is not specific to electricity, one cannot rule out that such effects will be considered in other industries in which a vertical merger might reduce trading on the wholesale (merchant) market. For the reasons outlined in this memo, we do not consider that the addition of liquidity effects to more established foreclosure concerns would be a positive development for merger analysis in Europe.

How could a loss of liquidity reduce competition?

Most major firms in the electricity sector are active in both generation (upstream) and retail supply to final customers (downstream). Firms that have an excess of generation output relative to their sales to final customers can be considered 'long' in generation, whilst firms with the opposite position are 'short'. In order to balance their overall positions, firms which are long in generation sell their excess output in the wholesale market, whilst firms which are short buy from the wholesale market. Trading also takes place for a variety of different reasons, with generators, suppliers and traders using the market to hedge risk, balance short-term imbalances and engage in arbitrage.

Market liquidity measures the overall extent of trading in the wholesale market, i.e. looking only at trades between different market participants and excluding 'captive' sales that take place within vertically integrated groups.

¹ The European Commission cleared the acquisition of BE by EDF in December 2008, subject to remedies. The OFT unconditionally cleared Centrica's acquisition of 20% of BE's nuclear assets in August 2009. CRA advised Centrica throughout the competition process.

A merger between an electricity firm that is long in generation and one that is short may lead to a reduction in trading on the wholesale market if the merged entity opts to internalise transactions which were previously going through the market. Building on this observation – which is a phenomenon in many vertical mergers – the Commission and OFT expressed the concern that a reduction in market liquidity could increase the volatility of wholesale prices in the face of external shocks, thereby reducing the reliability of the wholesale market as a signal for entry and investment decisions. According to this theory of harm, the fall in liquidity could in turn raise barriers to entry in generation and in retail (by e.g. increasing collateral requirements), thereby potentially leading to higher wholesale and retail prices.

Liquidity concerns in the BE transactions

In late 2008, EDF emerged as the victorious bidder for BE, which owned most of the nuclear capacity in Britain and a coal-fired plant. EDF's generation consisted of two large coal plants and some gas-fired capacity. Both parties were active in the supply to large industrial customers.

Alongside the horizontal overlaps in generation and retail, the European Commission analysed the impact of the transaction on market liquidity. In terms of overall generation and downstream supply levels, BE was long in generation absent the merger, while EDF was short. The Commission was therefore concerned that as a result of the transaction BE's sales to the wholesale market and EDF's purchases from it would be "netted off", resulting in a less liquid market.

The reasons why this was seen as problematic appear to have included both relatively standard foreclosure effects (mostly to do with customer foreclosure) and the effects on liquidity sketched above. However, while references to foreclosure are made in the third party concerns reported by the Commission, no standard vertical analysis is presented in the Decision (along the lines put forward in the Commission's Non-Horizontal Merger Guidelines). Given the low combined post-merger market shares of the parties (less than 25% in both the generation and retail markets) it is unlikely that a standard analysis of ability and incentive to foreclose would have shown a realistic prospect of a substantial lessening of competition from the merger. This was particularly so given the fairly demanding remedies accepted by the Commission to address horizontal issues in the generation market (which required the divestment of two price-setting power plants, equivalent to more than half of EDF's pre-merger generation capacity).

EDF also disputed that it would have an incentive to internalise the acquired generation. It argued that it already had sufficient generation to meet its own residential tariff customer requirements, and could readily hedge the risk resulting from its non-residential demand by procuring

energy on the wholesale market at the same time as it signed supply contracts with non-residential customers (i.e. on a 'back-to-back' basis). However, the Commission was still concerned that internalisation would have taken place after the merger. A commitment to trade by the parties was accepted to address this concern. Under this commitment, the merged entity must annually sell to third parties an amount equivalent to approximately 10% of its historical generation, between 2012 and 2015.

Subsequent to EDF's acquisition of BE, EDF agreed to sell a 20% stake in the acquired nuclear assets to Centrica. This transaction was assessed by the OFT. The OFT also investigated the effects of the transaction on market liquidity, drawing on the concerns put forward by the Commission in its review of EDF/BE.

The OFT tested the conditions under which the transaction would result in a loss of liquidity by verifying whether scenarios existed where the sale of output from EDF to Centrica could be characterised as a transfer from a long player to a short one (as in the case of EDF/BE). The OFT considered two main approaches for measuring liquidity effects: one based on the Commission's framework (which looked at total generation and total downstream sales by a firm to measure its net position); and one which considered instead the difference between generation and residential tariff demand as the effective net position of a firm in the wholesale market (on the grounds that non-residential demand is easier to hedge in the market and thus leads to weaker internalisation incentives).

Under the first approach, the OFT found that both Centrica and EDF would be short in generation in the future (partially due to remedies associated with EDF's acquisition of BE). Therefore the transaction would simply increase the short position of EDF while reducing that of Centrica, with no expected impact on the *combined* need for the two parties to procure power in the wholesale market.

Under the second approach (which only considers residential tariff demand, and not total demand), the OFT found that EDF and Centrica would both be long with and without the transaction. This is explained by the fact that residential tariff demand is well below overall demand (coupled with the fact that Centrica is building new generation capacity). Therefore the transaction simply resulted in EDF becoming less long relative to its residential tariff demand, with Centrica obtaining a greater surplus – again with no clear overall effect on the expected levels of market liquidity.

The OFT also went a step further and examined Centrica's arguments that it did not face incentives to internalise all of the acquired generation. In doing so it took into account Centrica's stated rationale for pursuing the transaction – namely to obtain a structural hedge against wholesale gas prices (which are correlated with electricity prices) in order to offset its exposure in the residential gas market. To fully realise this hedge, Centrica faced incentives to trade at least some of the acquired generation. Although it did not need to conclude on this issue, the OFT noted in its assessment that "the size of any impact would be reduced by Centrica's incentives not to internalise all of the volumes from EDF/BE". Therefore no remedies were required to address potential liquidity concerns.

Implications for the electricity sector and beyond

Liquidity concerns were therefore not upheld in the Centrica case, and in the EDF case resulted in relatively modest liquidity-specific remedies (with the parties committing to sell a relatively small fraction of their output for a restricted period and with limited constraints on the terms of such sales). Nonetheless the degree to which these potential concerns were taken seriously by the European and British authorities suggests that liquidity issues may well be raised in future mergers in the electricity sector (and possibly in other markets too).

It is widely accepted that vertical mergers are less likely to have anti-competitive effects than horizontal mergers. There are clear and well understood ways in which vertical mergers can increase efficiency. Moreover the conditions under which a vertical merger can materially increase the ability and/or incentive of the merged firm to foreclose its rivals by increasing their input costs or reducing their revenues are restrictive.

Against this backdrop, one must question whether a mere reduction in market liquidity following a vertical merger can be automatically assumed to foreclose rival firms and lead to substantial anti-competitive effects. The potential foreclosure mechanism at work here is significantly less direct than in standard foreclosure analysis, since it is the volatility rather than the level of wholesale prices which is assumed to change following the merger.

A vertical theory of harm that is centred on a loss of liquidity correspondingly requires a particularly convincing supporting analysis. This should include evidence that the merging parties believe that one of the private benefits of the merger would be protection from competition due to a loss in liquidity, or that a reduction in liquidity would have a significant foreclosing effect on non-integrated firms (thereby leading to higher prices for consumers).

In analysing possible liquidity effects from a vertical transaction it is also important not to simply assume that where merchant markets exist, vertical mergers will result in internalisation. As the OFT's analysis of the Centrica transaction shows, incentives to trade in the merchant market may well still exist post-merger.

Even if some internalisation is expected to result from a vertical transaction, evidence that this will have a significant effect on the level and/or volatility of wholesale prices is needed to make the theory of harm robust. As is generally recognised, a vertical merger can lead to adverse effects on competitors and consumers only if there is substantial market power upstream or downstream. If the wholesale and retail markets are effectively competitive, significant foreclosure effects are unlikely even if market liquidity falls after the merger.

In those situations where the merging parties have significant market power, then the standard framework of foreclosure analysis is better suited to analyse the impact of a vertical merger than a theory of harm that effectively posits that internalisation of market trades and a corresponding reduction in liquidity can be anti-competitive *per se*. We therefore do not see a persuasive argument for adding liquidity effects to the standard list of possible concerns from vertical mergers.

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