The E.ON electricity cases: an antitrust decision with structural remedies

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Introduction

On 26 November 2008 the Commission adopted a commitment decision addressed to E.ON AG for suspected infringements of EU competition law involving the German electricity markets. For the first time in the Commission’s decision-making practice, the decision requires the company concerned to dispose of very significant assets: E.ON will have to divest 5 000 MW of generation capacity as well as its high-voltage transmission grid (2) including system operation business in Germany.

The two asset divestiture remedies were voluntarily offered by E.ON in order to settle two different cases the Commission had launched against the undertaking with inspections in December 2006.

The first case relates to the German electricity wholesale market and the concern that E.ON may have carried out a strategy of short-term capacity withdrawal and deterrence of investments in electricity generation by third parties. The concerns in this case are removed by E.ON’s generation capacity divestiture proposal. The second case relates to the German electricity balancing market and the concern that E.ON may have carried out a strategy as a TSO to favour its own supply affiliate, thereby raising costs for the final consumer. The concerns in this case are removed by E.ON’s proposal to divest its German electricity transmission system.

The “wholesale” case

The Commission’s competition case concerning E.ON’s suspected abuse of a dominant position on the German wholesale market has its roots in the reports on the Commission’s electricity sector inquiry (3) and the electricity study (4). Both reports identified the issue of capacity withholding as being the lowering of production capacity offered on the short-term market by an infra-marginal generator with a view to raising prices above competitive levels. As a consequence of such withholding, recourse is made to more expensive generation capacity along the merit curve in order to meet demand. In the final report on the sector inquiry, the Commission had indicated that some plants in the German markets were apparently not used as much as other similar plants between 2003 and 2005 (5). The electricity study report further refined the analysis through a market simulation and found that some plants produced less than they would have had done in a theoretically perfectly competitive market.

The electricity sector in general is characterised by a homogeneous, non-storable commodity-type product, with low elasticity of demand: this deprives consumers of the usual tools for adjusting to variations in price and supply. Secondly, the supply side is characterised by significant discrepancies between the costs of the various production technologies available (6): the so-called merit curve (ranking of the short-term variable costs of generation units) is relatively steep on the right-hand side. Thirdly, in many markets like in Germany, an auction price mechanism based on supply and demand curves delivers a single price for electricity sold in short-term markets. Therefore, any removal or reduction of capacity which is economic to run causes the supply curve to become steeper and intersect the demand curve at a higher price. This mechanism is illustrated in Figure 1 below: The direct effect of capacity withdrawal for any operator undertaking such action is a reduction in profits equal to those that the plant withdrawn would have reaped. The loss of profit can nonetheless be compensated by the indirect effect of capacity withdrawal, which is an increase in profits for the remaining operating plants of this operator (as well as those of other operators) due to the increased market price. In practice, capacity withdrawal requires a portfolio including (i) plants

(1) The content of this article does not necessarily reflect the official position of the European Commission. Responsibility for the information and views expressed lies entirely with the authors.

(2) Approx. 10 000 kilometres of power lines at voltage levels 380 and 220 kV.


(4) See paragraphs 437-448 of the report.

(5) Unlike in many other sectors, there is in most electricity markets a scarcity of access to the cheapest technologies as well as other physical and political constraints: it is thus not possible for more expensive technologies to be systematically replaced by investment in cheaper ones. The issue is further compounded by significant variations of demand, requiring flexible plants, which are usually the more expensive ones on a per MW basis.
In Germany the electricity exchange EEX determines a single delivery price for every hour of the day. This price is set by the most expensive bid required to meet demand. Correspondingly, all generators selling in the exchange will sell their production at this price even though their bids may have been at lower levels. Given E.ON’s significant nuclear, hydro and coal portfolio in Germany, it is one of those companies that by the nature of its production assets may be able to profitably withdraw generation capacity with a view to raising prices.

The withdrawal of generation capacity on the electricity market by a dominant operator is considered an abuse of a dominant position and therefore contrary to Article 82 EC. Such action causes serious harm to all groups of consumers by increasing the prevailing price on the spot market. Electricity consumed by end-users is procured by retail suppliers partly through the spot market (8) and partly through forward/futures products (9). The price of electricity procured through the spot market is directly affected by withdrawals of capacity. The price of electricity procured through forward products is indirectly affected by withdrawals of capacity (10). As explained above, consumers in electricity markets have limited capacity to react to price signals. Further, new investments into generation capacity require long leading times (11). This combination of sector-specific factors makes capacity withdrawals severely detrimental to consumers and is therefore contrary to Article 82 EC.

The investigation was initiated in the form of inspections on the premises of E.ON and other German electricity companies in December 2006. The Commission further requested very extensive data from the undertakings concerned to establish whether some capacity had effectively not been offered on the short-term market. In order to do so, the Commission investigated for the period 2003-2007 the company’s hourly dispatch of its generation units forecasted at the time of bidding into the power exchange. As explained in the sector inquiry, sectoral practice entails marginal cost-based bidding

(7) Usually plants in the middle of the curve to limit the cost of withdrawal and be sure of the effect.

(8) Electricity sold through the spot market (EEX) represents about 25% of total consumption in Germany.

(9) Forward/futures products are wholesale products with differing levels of standardisation and different trading venues by which electricity is sold in advance for delivery over certain periods (such as a week, month, quarter or year ahead) and in a certain shapes (such as baseload — all hours of every day — or peakload — only hours 8 to 20 of every working day).

(10) A purchaser of electricity has the choice to cover its needs by buying forward or spot. Usually it tries to cover most of its needs in advance (thus forward) in order to avoid the volatility of spot markets. In doing so it will take spot prices into account to determine how much it is ready to pay for forward products. See paragraph 376 of the final report on the sector inquiry.

(11) The delay between programming a new gas-fired plant and putting it online is a minimum of five years; for a coal-fired plant it is seven years or more and for a nuclear power plant it is ten years or more. This underlines that investment in plants generally has a long lead time. Furthermore, investment in baseload plants (which are cheaper on a per MW basis and could thus exert a downward pressure on prices) takes longer, faces more environmental and political scrutiny and is sometimes restricted (nuclear plants for legal reasons, hydro plants for availability reasons).
for all available capacity sold in the short-term market\(^{(13)}\). The investigation therefore considered the availability\(^{(14)}\) and the costs\(^{(15)}\) of all plants. Based on its analysis, the Commission took the view that E.ON may have withdrawn or refrained from bidding certain amounts of capacity into the German power exchange EEX even though that capacity was available and would have been profitable to run given the market price in those hours. As discussed above, the breadth of E.ON’s German generation portfolio may have enabled the company to undertake this profitably, meaning that it may have been able to earn higher profits from bidding less capacity in the short-term market while achieving higher prices on its entire portfolio due to the price increases caused by the withdrawal.

The investigation gave rise to another Commission concern: E.ON may in addition have pursued a strategy of deterring generation capacity investments by third parties by either offering them long-term contracts or shares in E.ON generation projects. Moreover, such behaviour may have caused the abandonment of building significant new generation capacity, rendering the market tighter and raising prices. This would also be contrary to Article 82 EC.

Given the number of links between E.ON and some of the other large German electricity companies, the Commission came to the conclusion that E.ON was collectively dominant at least with RWE on the German wholesale electricity market. The information gathered and the analysis undertaken by the Commission indicates that E.ON may have unilaterally abused its collectively dominant position in the manner described above. This is in line with established case law whereby undertakings occupying a joint dominant position may engage in joint or individual abusive conduct; the abuse only has to be capable of being identified as one of the manifestations of such a joint dominant position\(^{(16)}\).

The “balancing” case

Like the withholding case, the second antitrust case against E.ON, concerning the German balancing market, originates from information gathered during the Commission’s electricity sector inquiry. In its final report\(^{(17)}\) the Commission already noted the significance of balancing markets to the functioning of the broader electricity markets and the possible anticompetitive effects that can arise from integrated transmission system operators (TSOs) favouring their own generation affiliates when purchasing balancing services.

Given the non-storability of electricity and the continuously fluctuating supply and demand, it is crucial that certain actions are undertaken by the TSOs to ensure system balance. To do so TSOs purchase so-called ancillary services, which include primary, secondary, and tertiary \(^{(18)}\) reserves for balancing, from generators and traders active on the market. TSOs are considered to be natural monopolies in relation both to their network and to their system operation functionalities in the electricity sector. At the same time, TSOs are sometimes (as in Germany) part of vertically integrated groups which also generate and supply electricity. It is thus crucial for the cost-efficient and competitive functioning of the markets for these ancillary services that the TSOs do not favour their own affiliates.

The Commission’s investigation led to concerns that the E.ON TSO may in its daily practice have purchased secondary balancing power instead of tertiary balancing power. In doing so it would have favoured its own generation affiliate since it is the main one providing secondary balancing power whereas there is significantly higher competition for tertiary balancing power. Although secondary and tertiary balancing power are part of separate product markets due to their technical specifications\(^{(19)}\), both types of reserves are called on by the TSO\(^{(20)}\) for the purpose of balancing the system and the TSO has some flexibility to order either of the two reserves in order to resolve some imbalances. In addition it appeared that the E.ON TSO may have prevented competitive cross-border market entry for such services. Both activities have likely caused significant consumer harm by raising the costs of balancing power in Germany and thus increasing the amounts paid by consumers for network services. As a consequence, the Commission had concerns

\(^{(13)}\) Fixed costs are covered by infra-marginal rents or sometimes on a portfolio basis by the revenues of infra-marginal plants (see CPN Number 2 of 2007, page 18 for a discussion of the issue of fixed costs).

\(^{(14)}\) In doing so, the investigation took into account outages, periods of maintenance and technical constraints of plants (e.g. minimum up and down times of plants).

\(^{(15)}\) In doing so, the investigation took into account all costs related to the operation of plants (fuel-related costs, operations and maintenance costs, CO\(_2\) emission costs, start-up costs, justified additional risk-specific premiums relating to outages, etc.).


\(^{(18)}\) These are called Minutenreserve in German.

\(^{(19)}\) This is due to the different lead times they are called upon with (within a few minutes for secondary reserves and within a quarter of an hour for tertiary reserves) as well as the technical requirements for their provision on the part of the power plants themselves.

\(^{(20)}\) Unlike primary reserves, which is an automated balancing mechanism based on frequency control instruments in the respective power plants.
that E.ON may have abused its dominant position on the market.

The remedies

E.ON proposed in February 2008 to commit to divest power plants and its transmission network. These commitments were offered at E.ON’s initiative to bring to a rapid close two potentially protracted antitrust cases. The Commission’s power to accept such commitments and make them legally binding is set out in Regulation (EC) 1/2003, which also expressly refers to structural remedies. It is a matter of judgment in each case whether the public interest is best served by pursuing an infringement for the past, or fixing the problem for the future. The Commission’s primary objective in the present cases was to make the German electricity markets work better, for the benefit of German consumers. It therefore agreed to settle the two separate antitrust cases by accepting a remedy package which is both sufficient — in fact unprecedented in its size — while at the same time proportionate to the severity of the suspected anticompetitive behaviour in the two cases.

The commitments concerning E.ON’s possible anticompetitive behaviour on the German wholesale market will result in the divestiture of 5 000 MW of production capacity or about 20% of the company’s German generation portfolio. The divestiture business involves power plants (or drawing rights in the case of nuclear assets) along the entire merit curve and includes run-of-river, nuclear, lignite, hard coal and gas-fired and pump storage power plants: it includes plants which give the ability to withdraw and plants which provide an incentive to withdraw. Taking into account the plants which would remain in E.ON’s portfolio after divestiture, the size and the nature and composition of the remedy remove E.ON’s incentives to undertake profitable capacity withdrawal with its remaining fleet of German generation assets. Both in itself and due to the inclusion of types of plants which competitors have difficulty to access, the divestiture package also addresses the concerns that E.ON may have deterred competitors from investing in new plants. Accordingly, the commitments are sufficient to address the concerns on the wholesale market.

In the balancing case, the Commission found that E.ON’s commitment to sell its German electricity transmission network along with the system operation activity to an operator without generation or supply activity (thereby ensuring ownership unbundling) would be sufficient to close its antitrust investigation: this divestiture would remove the incentives for E.ON’s TSO to favour its affiliate at the expense of other market operators. The divestiture would create a level playing field in that electricity transmission zone.

According to settled case law, the principle of proportionality requires that the measures adopted by Community institutions must not exceed what is appropriate and necessary for attaining the objective pursued (34). In the wholesale case, the Commission accepted a structural commitment in exchange for settling this case because of the nature of the suspected abuse: withdrawal of generation capacity over hundreds of hours per year, involving E.ON’s fleet of over fifty power plants, would have been very difficult to monitor and would very likely have been more burdensome for E.ON than the divestiture it voluntarily proposed. Similarly, given the complexity of monitoring any behavioural undertakings on the balancing market, the Commission found that a structural solution to the possible market abuse would be most appropriate. Purchases for balancing power are decided by the TSO on a continuous operating basis (at any moment of any day and within a very tight schedule) and thus any detailed oversight would pose difficulties and be burdensome for both the Commission and E.ON.

Conclusion

The liberalisation of the European electricity sector has introduced competition with the aim of allowing customers to reap the benefits of choice and efficiency. Capacity withdrawal and deterrence of investments can deny consumers those benefits to such an extent and for so many years that it can call into question the case for liberalisation from the standpoint of consumers. It is therefore in the Commission’s view vital to track such practices down and/or prevent them. The same is true for distortions of competition due to vertical integration between networks and supply.

Since the Commission’s November 2008 decision, E.ON has already commenced its disposal of power plants. Any purchaser of the power plant assets for sale will have to be approved by the Commission on the basis of several criteria, in particular its independence from E.ON, competence and financial strength, as well as the absence of any prima facie competition concerns that it may raise. Preparations are also under way for the sale of the transmission business. Both divestitures are closely scrutinised by a trustee who monitors the asset separations and sales by E.ON under the aegis of the Commission.

This historic set of remedies shows, if need be, that the Commission is ready to do everything in its power to prevent unfair practices on energy markets and bring the benefits of liberalisation to consumers.