The energy utilities – gas and electricity companies – were traditionally regulated monopolies, but once the EU decided to liberalise them, competition policy became applicable. The EU has used a series of Directives to set out the framework for a market-led energy sector, with third party access to the transmission and distribution networks, and a choice of retailer for all customers, although these depend upon the agreement of Member States. The Commission has been able to take action directly when ruling on mergers in the sector, and in several cases has obtained concessions that should increase the level of competition as a condition for allowing a merger. This is a reactive approach, however, and problems remain in the sector, as shown by the 2005-7 sector enquiry. The proposed third energy package may remove some of the barriers to effective liberalisation.

Keywords: Competition Policy, mergers, electricity, gas, liberalisation

JEL numbers: L430, L940, L950

1. Introduction

Energy was at the heart of the EU’s first precursor, the European Coal and Steel Community. As the EU’s competition policy developed, however, the energy utilities – gas and electricity companies – were rarely affected. The utilities were believed to be natural monopolies, because of the cost of duplicating the networks of pipes or wires used to
deliver the product. If the industry was fated always to be a monopoly, competition policy would be an inappropriate tool for dealing with it. Regulation, which promised consumers reasonable prices and companies reasonable profits, was seen as a much better model. In some countries (such as the US and Spain), there was a formal system of regulation covering privately owned utilities. In many others, it was more a matter of self-regulation, often combined with public ownership.

The structure of the industries varied between countries. At one extreme, Electricité de France dominated its industry, responsible for generation, high-voltage transmission and most local distribution. In contrast, Germany’s electricity sector had nine Interconnected Utilities, 46 Regional Utilities, and around 800 local distributors (Schulz, 1995). Most of the country’s generation was owned by the Interconnected Utilities, which sold bulk power to the smaller bodies, as well as selling directly to their own customers. These customers were those connected to the distribution systems owned by the Interconnected Utilities – sales were almost never separated from ownership of the distribution assets. England and Wales had the Central Electricity Generating Board, responsible for generation and transmission, and twelve Area Electricity Boards, responsible for distribution and sales. Northern Ireland, however, had a vertically integrated Board, and Scotland had two. In Spain, most utilities owned both generation and distribution, but there was an independent transmission company, Red Electrica de Espana. The largest group, Endesa, was a net generator, while the second largest company, Iberdrola, was a net buyer of power.

The structure of the gas industry was similarly diverse. Once again, France had a dominant national firm, Gaz de France, with an import monopoly and 80% of final sales, while Germany had a three-tier structure, with local and regional companies and a top tier of importers and producers (Lohmann, 2006). ENI of Italy dominated production, importing and transmission, but there were more than 700 independent distribution companies. In Great Britain, twelve publicly-owned Area Boards were formed into British Gas in 1972, allowing the latter to develop a national pipeline network and replace gas made locally from coal with natural gas from the North Sea. British Gas owned some of these gas fields itself, and was a monopsony buyer for other producers. The gas industry in Spain was very small for much of the 1970s and 1980s, but when it started to grow rapidly, consolidation occurred. Catalana de Gas and Gas Madrid merged in 1991 to form Gas Natural, with an import monopoly and 90% of distribution (International Energy Agency, 1996).
This chapter will start by outlining the reasons why it was (and is) hard to create competition in the energy utilities. Some countries started to do so in the 1980s and early 1990s, however, in another example of the process of decentralised experimentation described by William Kovacic. Their perceived successes were important in persuading the European Commission to pursue a similar course. The Commission was able to pursue a two-pronged approach, firstly by agreeing liberalisation directives that had to be transposed into national law, changing the rules under which the energy utilities operated, and second in the normal course of its competition policy, deciding on mergers and on agreements between firms. The Commission added a third prong in 2005, when it opened a sector inquiry into the gas and electricity industries. This reported in January 2007, and the chapter will consider this report and its implications.

2. Obstacles to Competition in the Energy Sector

Electricity and gas both depend upon networks – the product cannot be economically delivered to consumers without a direct connection to the power station or the source of the gas. The network is a natural monopoly – it would normally be too expensive to duplicate – and so the industry’s costs will be minimised if there is only one network operator within a given area. There are also significant economies of scale in transmission – moving gas or electricity in large quantities over long distances – and so it is generally best to organise this activity on a regional, or national, scale. Economies of scale in distribution exist, but are less important, and so distribution companies can be quite small without incurring an excessive cost penalty. This means that while in some countries, the distribution companies have millions of customers, in others, there are many distribution companies with only a few thousand customers each.

In both gas and electricity, the physical limits on the networks must be respected, and so every company using the network must respect the instructions of the system operator. Because generation and demand for electricity must be kept continually in balance if the system is not to suffer a catastrophic black-out, the system operator has to keep plant running part-loaded as insurance against failures, and other stations must be in reserve, ready to replace these if they are called upon. Electricity will always flow along every available path on a network, in inverse proportion to the resistance (strictly speaking, impedance) on each path, and the flows will instantly reallocate themselves if part of the network fails. This means that every part of the network must be operated sufficiently far
within its limits that if there was a failure elsewhere, that part of the network would still be in a stable condition. This complicates the task of defining the maximum capacity on any part of the network, as it depends on what is happening elsewhere, and how many contingencies the system operator wishes to protect against. There are other ancillary services, such as reactive power, which are essential to control the voltage level on the system, and the system operator has to procure these.

Gas networks are easier to control – the gas must actually be pushed down the routes chosen by the system operator, and minor imbalances between supply and demand can be met by varying the pressure in the system. The gas industry faces an issue that the electricity industry does not, in that it needs storage. The demand for gas is much higher in winter than in summer, but to maximise production from a gas field, it is important to keep the flow steady. Furthermore, long-distance pipelines, or Liquefied Natural Gas (LNG) facilities, that were built to meet the winter peak demand would be seriously over-sized for the rest of the year. The answer is to have storage available near demand, in the form of depleted fields, salt caverns, or (most expensively) LNG stores. Gas is put into storage over the summer, and taken out during the winter. Storage facilities have significant economies of scale, but need not be considered a natural monopoly, if the principle of allowing multiple companies to use a network is conceded.

The deregulation process in the EU and elsewhere, described below, took that principle as a given, and experience has shown that it is generally possible to have many companies following the orders of a system operator, without compromising the integrity of the system. However, the structure of the EU’s utilities has presented other obstacles to the growth of competition. First, the networks were primarily built for national use. Cross-border interconnectors usually have much lower capacity than the lines within a country, particularly in the electricity industry. In the gas industry, many European countries depend upon imports, and so they necessarily have strong cross-border pipelines.

The gas industry’s traditional import contracts, however, acted as an obstacle to competition. Their heavy investment needs meant that producers were keen to minimise their risks by signing long-term contracts, often for the entire output of a gas field, and often giving the producer a high degree of control over how the field was operated. These contracts often banned the buyer from selling the gas on to another user, if it found itself unable to use the gas, and some contracts were “take or pay”, with high minimum volumes.
If electricity trade across European borders was limited by the low levels of interconnection, and gas trade by the terms of import contracts, this meant that most EU energy markets were national in scope, rather than international. As we have already seen, in many EU countries, the gas and electricity sectors were dominated by a few large companies. When competition was regarded as impossible, or at least inappropriate, this had no downside to offset the possibility of economies of scale. The downside only emerged once competition was seen as desirable, and the liberalisation process began.

3. Moves Towards Deregulation

During the 1980s, things started to change for the energy utilities. A long period during which prices in many countries had been falling in real terms had ended with the oil shocks of 1973 and 1979. Once prices were rising, the perceived performance of the utilities was less favourable, and governments were more open to alternative policies (Gilbert et al., 1996). In the United States, access to interstate gas pipelines was gradually liberalised from the 1980s, and the pipeline operators evolved into companies that shipped gas, at regulated rates, over their network, but could not own it (Makholm, 2007). Gas was traded on wholesale markets with published prices linked to supply and demand, and shipped by companies that held contracts with the pipelines. This was thus an early example of a utility opening up to competition, even though Makholm argues that it took around 15 years for the system to reach maturity. An earlier law, the Public Utility Regulatory Policies Act of 1978, did not try to create a competitive market, but did require electric utilities to buy power from certain Qualifying Facilities (particularly combined heat and power plants) at the utility’s avoided cost of generation. A similar law, brought in by the Thatcher government in the UK, allowed new entrants to generate electricity as their principal line of business (rather than simply selling excess power from a station mostly used to power an industrial site) and required the Area Boards to buy this power at their avoided cost. That cost depended on the Bulk Supply Tariff set by the Central Electricity Generating Board, which promptly rebalanced it, adding a fixed fee and lowering the marginal charges. This cut the price that the Area Boards would offer to entrants, and, unsurprisingly, practically no entry took place (Hammond et al., 1986).

Soon afterwards, however, the government turned its attention from reforming nationalised industries to privatising them. British Telecommunications (BT) was privatised in 1984,
mainly to free it from the self-imposed constraint of a limit on government borrowing, followed by British Gas in 1986. BT was to experience competition from one entrant, while the gas market for large consumers was, in theory, opened up to any company that wished to compete with British Gas. In practice, any competitor would have needed to inform British Gas of its plans when it applied to use its network, and since the incumbent could then have undercut their offer with a confidential, individualised, contract, no entry took place. Scarcely a year after its privatisation, British Gas was referred to the Monopolies and Mergers Commission, which required to company to publish both its network charges and its prices to large customers (Monopolies and Mergers Commission, 1988). British Gas was also required to leave at least 10% of the output of any new North Sea gas fields for other companies. With access to gas, the network, and customers, entrants finally had a chance to compete with British Gas. A few years later, the company was given a formal price control for its network charges, but in a dispute over their level, asked to be referred to the Monopolies and Mergers Commission once more. The end result of the process was that the government decided to open up the entire retail market to competition by 1998, and British Gas decided to separate its pipelines from its sales to consumers. While Centrica (the company trading as British Gas) is still the largest gas retailer, the overall market is now competitive, with many participants.

The initial failure of competition in the gas industry motivated the Energy Secretary, Cecil Parkinson, to restructure the electricity industry in England and Wales for competition when he was asked to privatise it. In March 1990, the Central Electricity Generating Board was divided into a transmission company and three generating companies. Three companies turned out to be too few for effective competition, but entry to the industry, and later pressure (from the industry’s regulator) for divestitures, eventually delivered a competitive structure. Retail supply was also opened to competition, starting with the largest customers, and after the first year, fewer than half of these (by volume) were buying from their local incumbent. Domestic consumers, able to choose their supplier from 1998 or 1999 onwards, took longer to switch, but more than half have now done so. A series of mergers has transformed the industry’s structure. The fourteen regional networks are now owned by seven companies, three of which have no interests in generation or retailing in the UK. Six integrated groups dominate retailing, particularly to domestic customers, who commonly take both gas and electricity from the same company, making Centrica one of the largest power companies, at least as measured by sales to domestic customers. About one third of the industry’s output comes from generators without a mass-market retail
business, but these have faced a rocky financial ride over the first years of this century, as wholesale prices fell and then rose again. Retail prices have been less volatile, reducing risks for the vertically integrated companies.

Norway was the second country to liberalise its electricity industry, in 1991, when its cooperative power pool was changed into a wholesale spot market, Statnett Market. Norway, which is a member of the European Economic Area but not of the EU, has a large number of electric utilities of different sizes. Practically all of the country’s generation is hydro-electric, and the utilities traded power amongst themselves in order to make best use of the available water, and because many utilities had more or less generation than retail demand. Unlike Britain, Norway allowed all its customers to choose their retailer from the start of liberalisation.

New Zealand and the Australian state of Victoria were two other pioneers, starting their liberalisation in 1993 and 1994, respectively. Finland opened its market to large consumers in 1995, and Sweden in 1996. Sweden and Norway created the world’s first international electricity market, Nord Pool, in part because a purely Swedish market would have been unacceptably concentrated, with Vattenfall producing half of the country’s output. Spain started a process of liberalisation with a law to encourage more competitive wholesale procurement in 1994, and a 1996 agreement on retail competition (Kahn, 1998). By this time, however, the European Commission had adopted its own policy on electricity liberalisation.

4. The First Directives
The European Commission first produced a draft directive on electricity liberalisation in 1991 (Eising, 2002), but it was not until December 1996 that Directive 96/92/EC was adopted. This directive was a compromise between countries that were already in the course of liberalisation, or were planning to start soon, and those that had been content with their existing systems. It therefore allowed countries several choices in how they implemented the directive, setting minimum standards that the leaders already comfortably exceeded. The aim of the directive was to create competition in generation, and in supply to the largest consumers.
While the directive was being negotiated, it looked as if the choice with the largest impact on the industry would be how competition in generation was organised. France, in particular, had wanted to keep a planned system, rather than one based on free competition. It had therefore argued for the creation of a “single buyer model”, with an organisation responsible for buying generation in an orderly manner, and then selling it on to retailers and consumers. The Commission did want to create competition for generators, however, and in this model, a tendering procedure would be adopted when the single buyer wanted more capacity. The alternative was a system of authorisation, through which any qualified generator could take its own decision on when to enter the market. In order to sell their power, on the wholesale market or to final consumers, these generators would need “third party access” to the grid. To meet the concerns of some member states, there were two variants: negotiated third party access, in which the companies involved would decide the network charges, and regulated third party access, in which this would be the task of the government, or a government-appointed body.

In the event, when the Commission wrote the detailed rules for the single buyer model, they were designed to ensure that the two systems would “lead to equivalent economic results and hence to a directly comparable level of opening-up of markets and to a directly comparable degree of access to electricity markets” (European Commission, 1996, Article 3.1). Member States could ensure this by giving eligible customers – those large enough to be granted a choice of supplier – third party access to the grid, on either negotiated or regulated terms. Alternatively, a customer could contract with a generator, and the Single Buyer might be required to purchase this power on behalf of the customer, but at a price equal to its own selling price to them, less a published tariff for transmission and distribution. This was intended to be equivalent to the generator selling directly to the customer at a price exactly matching the single buyer’s offer, and paying the transmission and distribution charge itself. We do not know how this system would have worked in practice, because once these rules were announced, the French government declared that the single buyer model would no longer achieve their aims for it, and opted for third party access, along with every other Member State.

Member States had to establish transmission system operators and distribution system operators, which would run their grids and dispatch generators according to transparent, objective, criteria. Transmission, but not distribution, system operators had to have managerial independence from the other activities of an integrated electricity company.
Integrated companies had to keep separate accounts for generation, transmission and distribution.

Large customers were to be allowed to choose their electricity retailer, and distribution companies their wholesale supplier. Every customer taking more than 100 GWh a year had to be declared eligible to choose its retailer, and each Member State had to designate enough other eligible customers to open a percentage of its market equal to the EU average share of customers taking 40 GWh a year or more. This was a slightly cumbersome way of saying that 27% of each national market had to be opened. In February 2000, 3 years after the entry into force of the Directive, the threshold fell to 20 GWh, or 30% of each national market, and in February 2003, it would fall to 9 GWh, or 35% of each national market. Member States could exceed these thresholds, and 66% of the overall European market was declared to be open by 2000 (European Commission, 2001a). There was an option for Member States to refuse to allow their eligible customers to be supplied by a company from another country, if an identical customer in that country would not be eligible to receive a competitive supply. Member States could also decide not to apply some (specified) parts of the Directive, to promote public service obligations, as long as this did not significantly affect the development of trade or competition for eligible consumers.

A directive on gas followed eighteen months later (European Commission, 1998). It copied much of the electricity directive, but did not go as far. Gas undertakings had to keep separate accounts for transmission, distribution and storage activities, but there was no requirement for managerial separation between them, or to establish a formal system operator role. Third party access to the system could be negotiated or on the basis of regulated tariffs, as with electricity – there was no suggestion of a single buyer role.

Member States should designate enough eligible customers to open 20% of their consumption to competition from July 2000. From July 2003, this should rise to 28%, and to 33% from July 2018. From the start, this should include all gas-fired electricity generators and those customers taking at least 25 million cubic metres of gas a year, although a more restrictive definition could be imposed if this would open more than 30% of a Member State’s market. After 2003, the minimum threshold should fall to 15 million cubic metres a year (unless this exceeded 38% of the market), and after 2008, to 5 million cubic metres (or 43% of the market).
Member States could grant a temporary derogation from third party access, subject to Commission approval, if take or pay gas contracts would present an undertaking with “serious economic and financial difficulties.” This depended on the undertaking finding itself selling less gas than the minimum take in its contract, and being unable to find an alternative way of disposing of the gas. Derogations were also available for Member States that were not connected to the rest of the EU, and had a single supplier with a market share of more than 75% (where competition would be impractical, and the rest of the EU would not be significantly affected), and for those where gas had been supplied for less than ten years.

5. The Second Directives
Most Member States complied with these Directives on time, and the Commission was able to report reductions in prices to eligible consumers – furthermore, the reductions appeared greatest in countries with the highest degree of market opening (European Commission, 2001b). Nonetheless, the Commission also reported some problems with the markets, particularly where integrated companies could impede access to transmission and distribution, and determined that a new energy directive would be needed. The Commission wanted this to lead to market opening for all non-domestic electricity consumers from 1 January 2003, for all non-domestic gas consumers from 1 January 2004, and for all consumers from 1 January 2005.

During negotiations, this timetable slipped, so that all non-household customers were to become eligible from 1 July 2004, and all consumers from 1 July 2007. The importance of public service obligations was increased, with an annex spelling out the measures on consumer protection than Member States were expected to implement. Member States were also required to monitor and report on security of supply, and in the electricity industry, could conduct tenders for new capacity if this was necessary to secure adequate supplies. Tenders were also allowed to promote renewable generation, or energy efficiency measures.

The two Directives issued on 26 June 2003 did take substantial steps towards liberalisation, however, and in aligning the frameworks for electricity and gas. The (unused) single buyer model was discontinued, as was tendering as the normal way of procuring generation
capacity – authorisation was expected to provide enough conventional capacity in most circumstances.

System operators were created for gas transmission, LNG facilities, storage and distribution, with similar duties to those in electricity. All of these operators had to be unbundled from other parts of vertically integrated undertakings, in both their legal form and their management. Member States were allowed to exempt distribution operators with fewer than 100,000 customers from this requirement, however. Separate accounts were required for transmission and distribution, and, until full market opening, for supply to eligible and non-eligible consumers.

Third party access to the networks had to be on the basis of regulated tariffs, and each Member State had to appoint a regulator able to approve these tariffs, or at least the methodologies used to set them, in advance. Companies investing in significant new gas infrastructure (interconnectors between countries, LNG terminals or storage facilities) were able to request exemption from third party access if this was necessary to make their investments economic. The regulators would also approve the tariffs, or rules, used to set charges for balancing the system.

Member States were slower to implement these directives in national law than the first liberalisation directives, and the Commission had to issue warning notices to 18 of them in October 2004, pointing out that they had not notified it of the measures they had taken. In September 2005, it referred Estonia, Ireland, Greece, Spain and Luxembourg to the Court of Justice, obtaining judgments against Luxembourg and Spain because they had not transposed the directive into their national law, showing the limitations of this instrument. In other areas, the Commission can take direct action, although even in these, the interaction with Member States can be an important constraint. It is to these areas that we now turn.

6. Agreements Between Firms
The European Commission has long had the power to police agreements between firms for their impact on competition, and has used this power to further liberalisation in the energy utilities. In the run-up to liberalisation, a number of companies signed long-term contracts
that had the impact of foreclosing entry to the market, and the Commission has taken action against some of these.

For example, in Spain, Gas Natural and Endesa had agreed a long-term contract for gas which covered all of Endesa’s foreseeable needs for power generation. Since generators are particularly attractive clients for entrants to the gas industry, having large, steady, demands, this contract went a significant way towards foreclosing entry to that industry. Furthermore, Endesa was not allowed to resell the gas in this contract, but had a second contract, with a higher price, covering its needs as a gas retailer. This amounted to market segmentation, giving Endesa a better price where its demand was potentially more elastic, and driving up the price in the normal wholesale market. When the Commission investigated, the parties agreed to modify the contract. The contract length was cut by a third, and the volumes involved by a quarter, while Endesa was allowed to resell any gas it did not use itself.

In northern Europe, the Norwegian company Statkraft had two long-term contracts covering the interconnector between Norway and western Denmark. Between them, they reserved the whole of the cable’s capacity. The Danish incumbent, Elsam, would have 60% of the capacity for 20 years, while E.ON of Germany would have 40% for 25 years, together with a matching contract for transit through Denmark and capacity on the Danish-German interconnector. The Commission warned the parties of its “doubts about the compatibility with competition law of [these] agreements” during 2000, and they were abandoned, freeing up the entire capacity of the cable from January 2001 (European Commission, 2001a, p. 156).

Sometimes, the problem blocking cross-border trade may not be access to the interconnector itself, but access to the national grids. When the English and French transmission system operators sought the Commission’s views on arrangements for access to the cross-Channel interconnector, they were encouraged to choose a full open tender for this, while RTE, the French system operator, reviewed the way it managed internal transit rights and made them compatible with the arrangements for using the interconnector.

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1 Case COMP/37.542 Gas Natural + Endesa
2 Case COMP/37.125 - Statkraft+I/S Elsam+18
Contracts in the gas sector seem to have been particularly prone to contain anti-competitive clauses. The use of destination clauses, requiring that the gas be used in a particular country, was one common feature that limited the extent of cross-border trading, and hence inhibited the growth of a European gas market. In a series of cases, the European Commission was able to enforce changes to contracts between Gazprom of Russia and gas importers from Austria, France, Germany, Italy and the Netherlands. For any one importer, a contract with territorial restrictions will be less valuable than one without, ceteris paribus, because it is less flexible. If a number of importers all agree contracts with territorial restrictions, however, and know of the restrictions in the other contracts, each will be aware that it faces less competition from the other importers, and will be willing to pay a higher price for the gas. Imposing destination clauses can therefore be a profit-maximising strategy for an exporting company, if it has sufficient market power to make these the norm, a condition which Gazprom might meet.

Anti-competitive gas contracts did not only come from outside the EU, however. Gaz de France had sold gas to ENI and ENEL of Italy, with territorial clauses requiring ENI to use the gas outside France, and ENEL to use it inside Italy, clauses that the Commission found to be incompatible with the Common Market in 2004. In an earlier case, EdF Trading had sold gas from the UK to the German company Wingas, with a contract that specified a reduction in volume if EdF started selling gas in Wingas’ home market (except to certain incumbent firms). In other words, if EdF started to compete with Wingas, it would be at the expense of its wholesale profits. Following a Commission investigation in 2002, the contract was changed, allowing EdF to sell to any wholesaler without penalty.

7. Merger Policy
The Commission’s powers over mergers are more recent than those over other aspects of competition policy, but cross-border mergers in the utility sector were very unusual before liberalisation started. After liberalisation, however, there has been a steady stream of cases which qualify for Commission review, and the Commission has been able to negotiate pro-competitive changes to the companies’ structures or operations in return for allowing the mergers.

3 Cases COMP/38.085 PO-Territorial Restrictions Austria, COMP/38.307 - PO / Territorial restrictions Germany (Gasprom), COMP/38.307 - PO / Territorial restrictions Netherlands
4 Case COMP/38.662 GDF–ENEL, GDF–ENI
5 Case COMP/36.559 - British Gas+Wingas+1
We will start the discussion with one of the later cases considered by the Commission, however, and one that it blocked, as it shows the competition concerns that utility mergers can raise. Gas de Portugal was the subject of a takeover bid from Energias de Portugal, the local electricity incumbent, and ENI, the Italian oil and gas firm. The Commission blocked the merger because it believed that it would strengthen the dominance of the two firms in the Portuguese markets for gas and electricity, respectively. The Commission believed that the relevant markets were national in scope, given the weak interconnectors between Portugal and Spain, and the fact that plans for an Iberian electricity market had been repeatedly delayed. Both companies were dominant in their sector, for Energias de Portugal had 70% of the generation capacity and almost all the electricity distribution in the country. Gas de Portugal remained a legal monopoly until the derogation from the second gas directive, given to Portugal as an emerging market, expired in 2007.

Energias de Portugal would be the most likely entrant to the gas industry once this was opened to competition, selling gas to its electricity customers; it was also a significant potential customer for any other gas company, given the possibility of building gas-fired power stations. Combining the two companies would have the impact of foreclosing the gas market. Similarly, Gas de Portugal was a likely entrant to the electricity industry, both in retailing power to its gas customers, and in building gas-fired power stations. While the companies proposed some divestitures to ameliorate the adverse effects on competition, the Commission believed that these were insufficient, and blocked the bid.

When Energias de Portugal appealed, the Court of First Instance pointed out that the Commission had made an error in law, in assessing the state of competition in the gas market while this was still subject to a derogation that allowed Gas de Portugal to remain a monopoly. The Court ruled that “in the total absence of competition, there was no competition that could be significantly impeded” by the merger (EC, 2005, p. 113). In fact, the parties had offered remedies that would have improved competition in the short term, and the Commission was wrong to concentrate on the future detriments without taking these into account. However, even though the Court held that the Commission’s analysis of the gas market had been legally incorrect, it upheld the decision to block the merger, since the detrimental effects in the electricity sector were sufficient justification for this.

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6 Case COMP/M.3440 ENI/EDP/GDP
7 Case T-87/05 EDP-Energias de Portugal SA v Commission
The first significant merger in the electricity sector that the Commission reviewed was that between Veba and Viag of Germany, which created E.ON in 2000. This merger qualified for Commission review, because of the companies’ turnover outside Germany, while a simultaneous merger between RWE and VEW was reviewed by the Bundeskartellamt. The two authorities coordinated their responses, requiring the companies to divest their stakes in VEAG, the utility serving the eastern part of Germany, and to improve their network access rules. This allowed VEAG to become a fully independent competitor (of the German companies – it was soon bought by Vattenfall of Sweden), partially offsetting the increase in concentration brought about by the mergers. Veba and Viag had imposed a fee for transmitting power between northern and southern Germany, even if the flows might be netted off against other (simultaneous) transactions in the opposite direction, and this rule was abandoned, making it easier for other companies to move power around the country.

The following year, 2001, EdF took a large stake in Energie Baden-Wurtemburg (EnBW). EdF was the dominant electricity company in France, and while there were many potential entrants to this market, EnBW had an adjoining service territory across the Rhine, making it a particularly strong candidate. The merger thus eliminated a potential competitor, and also made it much easier for EdF to retaliate against any German firm that entered its home market by expanding sales in that entrant’s territory. The Commission’s chosen remedy was to improve the level of competition in the French wholesale market by requiring EdF to auction Virtual Power Plants. These are contracts that effectively give the buyers the right to the output from a power station, which they can dispatch and either use themselves or sell on to other retailers. EdF was required to sell contracts for 5 GW of nuclear capacity and 1 GW of cogeneration capacity, lasting for five years. EdF was also required to give up its voting rights in Compagnie Nationale du Rhone, a smaller French utility.

Soon after its acquisition, EnBW was involved in the takeover of the Spanish firm Hidroelectrica del Cantabrico, acting in a consortium with Grupo Villar Mir. Once again, the merger eliminated a potential entrant to the French market and gave EdF more ability to retaliate against any other entrant from the same country. In this case, the Commission decided that the low level of interconnection between France and Spain was the priority

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8 Case COMP/M.1673 VEBA/VIAG
9 Case COMP/M.1853 EDF/ENBW
10 Case COMP/M.2434 GRUPO VILLAR MAR / ENBW / HIDROELECTRICA DEL CANTABRICO
issue to tackle, and obtained commitments from EdF to build additional interconnectors that would raise the capacity from 1.1 GW to 4 GW.

The Commission has also used a merger that threatened to create horizontal market power to eliminate vertical integration. In 2005, E.ON of Germany was cleared to acquire the gas trading and storage activities of MOL of Hungary.\textsuperscript{11} MOL would remain active in gas production and transmission, but E.ON would acquire its import contracts. E.ON also owned distribution companies in Hungary, and the combination of these with a dominant position in storage and wholesaling raised competition concerns. The companies’ proposed remedies were for MOL to divest its remaining share of its trading and storage subsidiaries, thus achieving a complete separation between production and transmission, and trading and storage, and a large-scale gas release programme, accounting for 14% of national demand. The Commission cleared the merger on the basis that the benefits of separating trading and transmission, and the size of the gas release programme, made up for any anti-competitive concerns from combining the remaining import contracts with E.ON’s retail businesses.

While this case shows the Commission’s ability to get concessions from merging companies, two other cases involving E.ON reveal the limits to its power. In 2001, E.ON merged with Ruhrgas of Germany and acquired PowerGen of the UK. At the time when the Ruhrgas merger was notified to the Commission, the PowerGen deal had been agreed, but not completed. For the Commission’s purposes, both E.ON and Ruhrgas had two-thirds of their EU turnover in one Member State, and so the merger was referred to the German authorities. The Bundeskartellamt recommended that the merger should be blocked, but the German government approved it. It is interesting to speculate whether the Commission would have taken a different line, had the PowerGen deal been completed more quickly and the Ruhrgas decision fallen to it.

In 2005, Gas Natural of Spain launched a takeover bid for Endesa. The dominant firm in the gas industry was attempting to acquire one of the two largest electricity companies in Spain, and had proposed divesting some of Endesa’s power stations to Iberdrola, the other large power company. Once again, two-thirds of the firms’ EU turnover was within the same Member State, and the Spanish authorities decided to allow the merger to go ahead. For a number of governments, the attractions of creating a national champion appear to

\textsuperscript{11} Case COMP/M.3696 E.ON/MOL
outweigh the disadvantages of a less competitive home market, and the Commission is unable to intervene. In the case of Endesa, however, Gas Natural’s bid was thwarted when E.ON of Germany launched a counter-offer, offering a price that Gas Natural was not willing (or able) to match. Assessing the cross-border bid was the task of the Commission, which cleared it.\textsuperscript{12} There was very little overlap between E.ON and Endesa – E.ON had not previously been active in Spain, and Endesa had little activity in most of E.ON’s markets. The only potential competition concern could be whether, by increasing E.ON’s reach and hence the overall level of multi-market contact within Europe, the merger increased the likelihood of tacit collusion. E.ON’s bid in turn was to fail, however, when the Spanish construction firm Acciona built up a blocking stake in Endesa, and then launched its own counter-bid with Enel of Italy. E.ON bought Enel’s existing assets in Spain, and as the level of concentration in the Spanish market did not increase, the transaction was cleared by the Commission.\textsuperscript{13} The case clearly shows the ability of Member States to take actions that conflict with the Commission’s desire for a competitive European energy market.

8. The Sector Inquiry of 2005-7

The European Treaties allow the Commission to take action against firms with a dominant position, and on 13 June 2005, the Commission launched its first sector-wide inquiries, covering banking and energy. The energy sector inquiry had been triggered by a period of rising energy prices, in which consumers had complained to the Commission that they had been unable to get acceptable offers from energy companies. In electricity, the focus of the inquiry was on wholesale price formation, as affected by generators’ dispatching and bidding strategies, and on barriers to entry and to cross-border trade. In gas, the focus was on long-term import agreements, agreements between incumbent firms to swap gas, and barriers to cross-border trade.

The inquiry started by collecting an impressive amount of data from the firms in the industry, and released its preliminary analysis in February 2006, stating that the level of competition was unsatisfactory. A public consultation and further analysis followed, before the final conclusions were announced in January 2007. These confirmed the Commission’s

\textsuperscript{12} M.4110 - E.ON / ENDESA
\textsuperscript{13} M.4685 - ENEL / ACCIONA / ENDESA
view that further action would be needed to create properly competitive energy markets in Europe. The Commission listed eight main concerns:

1. Market concentration
At the wholesale level, gas and electricity markets remain national in scope, and generally maintain the high level of concentration of the pre-liberalisation period. This gives scope for exercising market power. …

2. Vertical foreclosure
The current level of unbundling of network and supply interests has negative repercussions on market functioning and on incentives to invest in networks. This constitutes a major obstacle to new entry and also threatens security of supply. …

3. Market integration
Cross-border sales do not currently impose any significant competitive constraint. Incumbents rarely enter other national markets as competitors. Insufficient or unavailable cross-border capacity and different market designs hamper market integration. …

4. Transparency
There is a lack of reliable and timely information on the markets. …

5. Price formation
More effective and transparent price formation is needed in order to deliver the full advantages of market opening to consumers. Many users have limited trust in the price formation mechanisms, while regulated supply tariffs below market prices discourage new entry. …

6. Downstream markets
Competition at the retail level is often limited. The duration of retail contracts for industrial customers and local distribution companies can have a substantial impact on the opportunities for alternative suppliers to successfully enter the market. …

7. Balancing markets
Currently, balancing markets often favour incumbents and create obstacles for newcomers. The size of the current balancing zones is too small, which leads to increased costs and protects the market power of incumbents. …

8. LNG markets
LNG supplies widen Europe’s upstream supplier base and are therefore important for both security of supply and competition between upstream suppliers. The
potential for LNG supplies to favour less concentrated downstream markets still needs to be realised.

(European Commission, 2007a, pp 7-11)

Many of these problems were inter-related – if markets can be made international, they will usually be less concentrated. Increasing the physical capacity between countries requires investment and takes time (although in some cases, surprisingly small investments can release a large amount of transmission capacity), but changes to market rules should, in principle, be easy to achieve. In practice, of course, many such changes create winners and losers, and the latter will try to block or delay the change, but this opposition can be overcome if there is enough political will. Significant amounts of political will would be required to break down vertical integration in the energy utilities, but doing so would allow entrants better access to infrastructure, and remove fears that balancing was being manipulated in favour of incumbents. With more market participants, it is likely that wholesale markets would become more transparent, and prices more acceptable to consumers. However, dealing with long-term contracts that may be preventing entry to retailing does present a problem. Governments interfere with the freedom to contract at their peril, and customers can have good reason for committing to a retailer willing to offer a stable price for a long period. Banning such contracts might thus be inappropriate, although the first British regulator did require retailers to allow all domestic consumers to change company with 28 days’ notice – and later argued for the rule to be relaxed.14

The Commission argued that a two-pronged approach would be needed to deal with these problems. First, the Commission would use its competition powers to the full, paying particular attention to cases of high market concentration, vertical foreclosure within markets, and barriers to cross-border trade. Two formal investigations of suspected abuse of a dominant position were launched during 2007, following dawn raids to discover evidence in May 2006. ENI has been accused of capacity hoarding and strategic underinvestment to reduce imports to the Italian gas market.15 RWE has been accused of foreclosing access to the gas market in its territory by charging high prices for access to infrastructure, fragmenting its network into an excessive number of zones (which also

14 This was some years after leaving his post, and after the market had become far more competitive. By that time, he believed that the restriction was inhibiting the development of long-term fixed-price offers, or of “energy service” offers that helped customers invest in energy efficiency (Littlechild, 2006).

15 Case COMP 39.315 ENI
raises rivals’ costs) and failing to release capacity to allow customer switching.\textsuperscript{16} Second, the Commission needed to address a number of structural and regulatory issues. These centred on the problems caused by vertical integration, and the need to eliminate gaps in regulation covering cross-border trade.

In January 2007, the Commission proposed two approaches for dealing with vertical integration (European Commission, 2007c). The more comprehensive would be to insist on full ownership unbundling of transmission system owners. This would be an enduring solution that would not require any special regulation or on-going monitoring, but subsequent events have shown that it would be unacceptable to a number of Member States. The problem is that it forces large companies to dispose of assets, something that many of them are unwilling to do, and they can call on the support of those governments that believe in the benefits of having national champions. The alternative is to create independent system operators, fully unbundled from the rest of the industry, which would operate transmission assets but would not necessarily own them. An independent system operator should not suffer from any conflicts of interest that would lead it to favour particular users, but the contractual arrangements to set it up will be complicated, and will need continual monitoring. It is therefore a second-best solution, but may be the best politically feasible outcome.

Where regulation is concerned, the Commission wants to strengthen the role of national regulators, as well as improving coordination between them. The Commission will propose a directive to ensure that regulators have “strong ex-ante powers over the following areas: i) all aspects of third party access to networks, ii) access to gas storage, iii) balancing mechanisms, iv) market surveillance of e.g. power exchanges, v) compliance with functional and account unbundling for distribution system operators, vi) all cross border issues, vii) consumer protection including any end-user price controls viii) information gathering, ix) sanctions for non-compliance” (\textit{ibid}, p. 13). The Commission had considered an evolutionary approach for strengthening coordination between national regulators by requiring Member States to give them an objective to further the Community’s interests, and believes that it will be insufficient. Two remaining alternatives were to strengthen the existing European Regulators Group for Electricity and Gas (ERGEG), giving it a formal role in harmonising some technical decisions, and to create a new, pan-European, body to

\textsuperscript{16} Case COMP 39.402 RWE
The Commission unveiled its Third Energy Package in September 2007 (European Commission, 2007b). The Commission is not insisting on ownership unbundling, allowing Member States to appoint an independent system operator instead. This decision reflects the political realities of the situation. In the area of regulatory reform, however, the Commission has chosen the more ambitious proposal, and announced plans to establish an Agency for the Cooperation of Energy Regulators. This would set out a framework for cooperation by national regulators and oversee transmission system operators’ cross-border operations. It would decide which infrastructure projects to exempt from third party access, and make decisions on specific technical issues assigned to it.

9. Conclusions
The Commission’s report on Prospects for the Internal Market (2007a) lists a number of other steps that need to be taken to improve its workings, including steps to make markets more transparent, a review of long-term gas contracts, better access to gas storage, more coordination of investment in transmission, and enforcement of the rules on unbundling distribution system operators. Much has been achieved in designing a framework for effective competition, but it is not yet fully in place across Europe.

Is the glass half-full or half-empty? Consumers in one Member State can benefit from a competitive market in that country, even if those in neighbouring countries do not have real choices. Some energy markets are becoming more liquid, and steps are being taken to improve cross-border flows, such as the scheme to link the Belgian, Dutch and French power markets, creating an implicit auction for the transmission capacity between the countries. At the same time, several Member States have been attempting to create (or at least facilitate) national champion companies, which would have a dominant position in at least part of the European market. If the market does become pan-European, then this local strength would become irrelevant, except in so far as it created a company able to compete aggressively in other areas. The danger, however, is that the market will remain fragmented, and that large companies that meet in a number of separate, but asymmetric, markets will be unwilling to compete too strongly in any of them. Security of supply has to remain a concern, as well – does Europe have access to enough different sources of gas
that it can afford to give up the prospect of buyer power to offset the actions of large exporters, particularly Russia?

As always, a lot depends upon political will. If we want to create an energy sector without significant market power, the policies required are clear, and have been applied successfully in a number of countries. The key actions are to separate transmission from the rest of the industry and to deal with horizontal market power within a country. Increasing cross-border transmission capacity is certainly possible, by investment and by better coordination, and if the will exists, that will help to create markets that, if not quite pan-European, certainly encompass several Member States. Transmission is expensive, however, and this means that relying on imports to increase competition within a national market, rather than on more competitive local production, will usually be a second-best policy.

The Commission is also in the world of the second-best when it uses merger policy to improve the structure of national markets. The constraints are that the Commission can only react to the mergers that are actually proposed, and that the remedies imposed have to appear better to the parties than the status quo. The first constraint means that the Commission may never get the chance to affect conditions in some national markets, if no eligible merger is proposed. The second limits the extent of the concessions that the Commission can win. Unless there are significant efficiency gains, or other companies will be worse off after the merger, it will be hard for the Commission to amend a merger in such a way that consumers will be better off after it, while the merging companies still believe that the merger is going to lead to an increase in their profits. Otherwise, the Commission may only be engaged in damage limitation, approving mergers that will still make consumers worse off, even after amendment.

The Commission can only use the tools that are available to it, however. The underlying problem may be that companies can have a position that is sufficiently dominant for the energy markets to work badly, without ever actually abusing a dominant position and triggering action from the authorities. That is neither a satisfactory situation, nor one which is likely to change of its own accord, given the apparent views of several European governments. The Commission is doing what it can, with Directives and other proactive

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17 Several of the points in this paragraph were made by Nils-Henrik von der Fehr when he discussed this paper, although he may not agree with my re-formulation of them.
measures that have to be politically achievable, and with a merger policy that has to be reactive, to move liberalisation forward. These imperfect measures are better than inaction.

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