

Market power mitigation in the UK power market[☆]

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Abstract

Market power in generation was a significant problem throughout the 1990s, following the privatisation of the electricity industry in England and Wales. The industry's regulators fought this market power with a series of reports criticising aspects of the dominant generators' behaviour, a temporary cap on prices, and two rounds of plant divestitures (voluntary, but agreed in the face of a possible reference to the competition authorities). At the end of the decade, the regulator and the government imposed a new set of wholesale market rules, just as the industry reached a competitive market structure, and prices fell.

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1. Introduction

Market power has been a constant theme in the history of the electricity restructuring in England and Wales. When the industry was restructured, the government created three large generating companies, two of which shared almost all the stations capable of setting prices in the industry's centralised spot market. It soon became apparent that these companies had the ability and the incentive to raise prices to undesirable levels.

Over the course of the 1990s, the industry's regulators attempted to mitigate the duopolists' market power. They published reports on unacceptable behaviour, making it impossible for the companies to repeat those tactics, while defining what would be allowed in future. The generators twice divested plant to rival companies – once to avoid being referred to the Monopolies and Mergers Commission, once in return for being allowed to merge with electricity retailers. In the end, the regulator and the government together changed

the market's rules, abolishing the Pool that had been at the centre of the original restructuring. At the end of the Pool's life, prices finally fell below the “competitive” level of new entrants' costs. We may never know whether abolishing the Pool would have reduced prices, had the market still been concentrated, for it had reached a competitive structure just before it was abolished. This paper discusses market power and its mitigation in the electricity industry of England and Wales.

2. Background

When the privatisation of the electricity industry in England and Wales was planned, the government was determined to sell the entire industry, including the 14 nuclear power stations owned by the Central Electricity Generating Board. These stations had a chequered history – the eight first generation Magnox plants had mostly performed to expectations, but had been acknowledged to be more costly than conventional plants, even while still under construction in the early 1960s. Construction started on four second-generation advanced gas-cooled reactors (AGRs) in the second half of that decade, but two of them had not been formally commissioned by 1987,

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and only one of the others had neared its design output. Work on a fifth AGR and a pressurised water reactor had started during the 1980s, although many outside observers questioned the investment appraisals that the CEBG had used to justify their construction.

In the hope of producing a saleable package, the nuclear stations were to be combined with 30 GW, or 60%, of the CEBG's conventional stations in a company later named National Power. The remaining conventional stations were given to PowerGen. It was hoped that PowerGen could act as a counterweight to National Power, despite the 70–30 split of the industry's overall capacity. Unfortunately, however, when the CEBG's nuclear costs were finally examined in enough detail, they proved so unattractive that the stations had to be withdrawn from the sale. The government would continue to own Nuclear Electric, with 20% of the industry's capacity, while National Power would now have "only" 50%. By the time that this decision was made, however, in November 1989, it was too late to consider more than a minor reshuffling of the industry's assets. The privatisation was forced to proceed with a highly concentrated structure in generation, although the original motive for this structure had been superseded.

The industry's new structure formally began at midnight on March 31, 1990, and the first privatisations took place in December. Twelve Regional Electricity Companies (RECs), successors to the former Area Boards responsible for distribution were privatised, jointly owning the National Grid Company, which had taken over the CEBG's transmission assets. From the beginning of the privatisation, the importance of ensuring fair access to the transmission grid had been recognised. NGC had been separated from the generators, and the RECs owned it through a holding company, to minimise their influence over the actual transmission company. National Power and PowerGen were privatised in March 1991, and two vertically integrated Scottish companies in June 1991. Because the companies were vertically integrated, generation prices in Scotland were regulated, using a formula that would lead them to converge with prices in England by the middle of the decade. This paper accordingly concentrates on events south of the border.¹

The industry was given a regulator, the Director General of Electricity Supply, supported by a staff at the Office of Electricity Regulation (Offer). The first regulator was Professor Stephen Littlechild, appointed in 1989. In 1998, the new

Labour government announced its desire to combine the regulation of gas and electricity, and appointed Callum McCarthy as the next gas regulator. Professor Littlechild stood down as electricity regulator at the end of 1998, a few months before his second term was due to end, to allow Mr McCarthy to combine both jobs. In due course, Offer merged with the supporting office for gas regulation to become the Office of Gas and Electricity Markets (Ofgem). Those changes were made without legislation, but the government also wished to move from individual regulators to commissions. Under the Utilities Act 2000, the responsibility for regulation passed to the Gas and Electricity Markets Authority (GEMA), with five executive and seven non-executive members.

Every company in the electricity industry is required to have a licence, with some small-scale exemptions. Licences are not used as a barrier to entry, but contain provisions requiring the company to give information to the regulator, and allowing them to bury cables in streets, for example. The licences can also contain behavioural conditions – the prices for monopoly activities are regulated through licence clauses, for example. The larger companies were also banned from cross-subsidising any activities, or discriminating between any of their customers. Licences are contracts, issued by the regulator or the Secretary of State for Trade and Industry, and as such may only be changed with the consent of the company, or after the UK's competition authority² has ruled that to continue with the licence without modification would be against the public interest.

The RECs were responsible for distribution and regulated as monopolists, but the new activity of supply had been created in order to give customers a choice over which company they bought their electricity from. In 1990, 5000 customers with a maximum demand of 1 MW or more had this choice (30% of units sold). In 1994, another 50,000 customers, with a maximum demand of 100 kW or more, joined the competitive market (another 20% of units sold). The remaining customers were originally due to become free to choose their supplier in April 1998, but the transition was actually phased between September 1998 and July 1999.

Generators were allowed to become suppliers, and RECs to build power stations, but there were limits to the extent of this vertical re-integration. The government wanted to increase competition, and feared that vertical re-integration would limit this, and make entry by outsiders particularly difficult. The major generators were allowed to supply electricity to large customers, but their share of this market was initially capped, at 15% of the total sales in each region.³ This limit turned out to be unsustainable, for the generators were offering better deals than the RECs, and customers who were left outside their quota complained. The limits

¹ The European Commission also plays practically no role in our story. While the Commission has pursued a policy of liberalisation in the electricity and gas industries, and launched an investigation into the level of competition in them during 2005, the industry in England and Wales has been an "early liberaliser", meeting almost all of the Commission's requirements well before they became binding on Member States. The Commission did have jurisdiction over several cross-border mergers involving electricity companies (EdF – London, RWE – Innogy, and E.ON – PowerGen). The UK government attempted to have the first of these repatriated to the domestic competition authorities, but without success, given the Commission's view that competition would not be impeded by the merger. It is likely that the domestic authorities would also have allowed the merger, for the same reason.

² For most of the period, the competition authority was the Monopolies and Mergers Commission (MMC), renamed the Competition Commission in April 2000.

³ Since 30% of sales had been opened to competition, these limits represented half of the market on a nation-wide basis, but a smaller proportion in areas with high proportions of industrial customers.

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