

The New Electricity Trading Arrangements in England and Wales



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executive summary

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- 1 The Gas and Electricity Markets Authority are a non-ministerial government department known as the Office of Gas and Electricity Markets (Ofgem). Their primary statutory objective in relation to electricity is to protect the interests of electricity consumers, wherever appropriate by promoting effective competition, having regard to the need to secure that all reasonable demands for electricity are met and that the businesses concerned can finance their regulated activities¹. This report examines how Ofgem have, in pursuit of their objectives, taken action to extend competition in the wholesale market. The wholesale market allows participants to trade electricity and enables generators of electricity to sell their output to companies that supply retail electricity to consumers.
- 2 The electricity regulator² had only a limited role in the England and Wales wholesale electricity trading arrangements, known as the Pool, established when the electricity industry was restructured in 1990 and most of it then privatised. Customers and others had repeatedly criticised the Pool arrangements including that prices did not reflect falling input costs, the compulsory membership of the Pool and the slow pace of reform. In response to these concerns the Department of Trade and Industry (the Department) and the regulator became increasingly concerned that these arrangements were not functioning in a way that protected customers' interests. They therefore decided to review the trading arrangements which led to the implementation, in England and Wales, of a series of reforms known as the New Electricity Trading Arrangements (NETA).



¹ Section 13 of the Utilities Act 2000. Ofgem's objectives regarding the electricity market are set out more fully in Appendix 2.

² Until the Utilities Act 2000 came into force the electricity regulator was the Director General of Electricity Supply, supported by the Office of Electricity Regulation (OFFER). From January 1999 the Director General also headed the Office of Gas Regulation (OFGAS) and his two supporting offices were effectively merged to become Ofgem, a change that was given statutory sanction by the Utilities Act 2000, at which point the Director General became the Chairman of the Gas and Electricity Markets Authority.

- 3 Ofgem and the Department decided that the wholesale electricity market would protect consumers' interests better if it became more like any other trading market. The objectives for NETA are set out in Appendix 2. In essence the Department and Ofgem wanted arrangements that promoted competitive trading between generators and supply businesses. They considered that a decentralised market where most electricity would be sold through individual contracts and through organised markets such as power exchanges, with balancing arrangements to deal with close to real time fluctuations in supply and demand, would achieve their objectives by producing prices that would more closely reflect the underlying value of wholesale electricity. The balancing arrangements were designed to reward predictability and flexibility in generation and supply by allocating the costs of imbalance to the participants who caused them. The Department and Ofgem recognised that a market of this nature might adversely affect some generators who could not predict accurately when they would be generating electricity, or vary their output at short notice, such as some types of renewable generation (which contribute to other Government objectives), and sought to mitigate the effects through measures such as the Renewables Obligation³.
- 4 The Department and Ofgem implemented the new market-based arrangements in March 2001 at a cost of £39 million⁴. Ofgem estimated that, in total, businesses in the industry could incur costs of up to £580 million⁵ including in adapting their operating procedures and IT systems to the new arrangements, and that participants could additionally incur operating costs of £30 million a year. Ofgem and the Department considered that the previous arrangements led to a lessening of competition which resulted in excessive wholesale electricity prices and the Department estimated that NETA could, taken with other changes, lead to reductions of 10 per cent in final consumer prices. Ofgem agreed this was realistic.
- 5 This report examines what actually happened once NETA was implemented, both as an immediate consequence of NETA (Part 2) and as a consequence of the price falls associated with NETA (Part 3). It then sets out the challenges facing Ofgem if the successes of NETA are to be sustained (Part 4). Our methodology is summarised in Appendix 1.

Main Findings

- 6 **NETA has facilitated lower wholesale prices.** Wholesale prices fell by over 20 per cent between the introduction of NETA in March 2001 and October 2002 and by 40 per cent since NETA was proposed in 1998. Because NETA coincided with other major changes in the electricity market⁶ there are a range of views as to what proportion of the fall happened because of NETA. The new arrangements have made it harder for prices to be artificially inflated. While it is difficult to be certain about the cause of short-term changes in prices, it may be significant that the fall in wholesale prices has accelerated after the introduction of NETA, and hence it is reasonable to conclude that NETA has, at the very least, facilitated the fall in prices.

3 *The obligation placed on licensed electricity suppliers to deliver a specified fraction of their electricity from renewable sources.*

4 *Elexon are recovering £17 million from the electricity industry. The remaining costs have been recovered by means of the general levy on the gas and electricity industries which is used to offset the costs to Government of running Ofgem.*

5 *In the event the costs of closing the Pool were £40 million less than expected.*

6 *Other changes include falling fuel prices, an increasing margin of capacity over demand and increased competition.*

- 7 NETA is developing as a market largely as expected.** The wholesale electricity market now much more closely resembles other markets, for instance with company trading functions, price reporting, brokers and exchanges, which should help to ensure a fully competitive market in the longer term. Under NETA there has been active demand-side participation⁷ and there is scope for further participation which has the potential to increase the efficiency of the market. The trading institutions are however still developing, and further increases in the liquidity and transparency of the new wholesale markets and the extent of demand-side trading would make it clearer that the Department's and Ofgem's objectives have been achieved. Most importantly, NETA has also been associated with increased risk management by market participants as they have assumed additional risks, including those arising from their own actions, previously carried by the National Grid Company (NGC) as system operator⁸. For instance, there is a greater incentive for generators to maximise plant reliability which increases the security of supply.
- 8 Prices paid by industrial and commercial customers have fallen sharply since NETA was implemented. Consumers who switch supplier can see substantial reductions. However, prices that domestic consumers pay for electricity have not fallen much since NETA was implemented, although they have fallen broadly in line with the trend in suppliers' overall costs since 1998.** The prices that industrial and commercial consumers pay for electricity have fallen by 18 per cent since the start of NETA, and by 30 per cent since April 1998. Prices for domestic consumers have fallen little since the start of NETA but by 8-17 per cent since April 1998, reflecting the much higher costs of supplying domestic consumers which have been rising due to new environmental costs and the substantial costs of processing changes of supplier. Furthermore, suppliers may be reluctant to pass on falls in wholesale prices that they expect to be unsustainable because of the consumer resistance and brand damage involved in putting prices up again. Consumers who switch supplier can nonetheless reduce their bills by up to 22 per cent⁹, and the prices for customers who have switched have fallen by around 17 per cent, in Ofgem's view partly because suppliers anticipated the fall in wholesale prices up to two years before they happened. Prices charged to domestic consumers who have not switched supplier (62 per cent are with the supplier they used when the market opened in 1999) fell by 8 per cent, largely reflecting the caps Ofgem placed on supplier's prices until March 2002 which included an allowance for falling wholesale prices. Such consumers have therefore seen a more limited benefit from falling wholesale prices. At the same time the margins of some suppliers appear to have increased as the differential between their costs and some of the retail prices they charge has widened.

⁷ Demand-side participation involves the active involvement of purchasers and consumers of electricity in competitive bilateral trading, and can include generating economic value from offering flexibility and predictability to the system.

⁸ NGC recovers costs from participants via charges known as Balancing Services Use of System charges.

⁹ The largest saving available varies according to location and payment method. For customers paying by direct debit it ranges from 13 to 22 per cent.

- 9 Falling wholesale prices have contributed to the financial difficulties some companies are facing.** Sustained low prices have inevitably contributed to the worsening financial position of some generating companies - especially those companies which used mostly debt financing to acquire high cost generating plant, those with uneconomic long-term contracts, or those with expensive fuel sources. Furthermore, smaller generators and some companies owning combined heat and power plant¹⁰ have also reported difficulties in the new market conditions. Other market participants have taken over plant leading to some concentration in ownership. The Government have intervened to rescue British Energy, whose market share is up to 20 per cent of the England and Wales electricity generation market¹¹, for strategic reasons and because of their international treaty responsibilities for nuclear safety. The Government made a credit facility available to British Energy to a maximum of £650 million in September 2002 and at the end of November 2002 announced that they were prepared to extend this facility while a restructuring plan was agreed and implemented.
- 10 The detailed operation of NETA's balancing arrangements has been controversial for some market participants with less predictable output.** The balancing arrangements were designed to reward predictability and flexibility in generation and supply by allocating the costs of imbalance to the participants that caused them. Some market participants with less predictable output, for example some renewable generators and some combined heat and power operators, have argued that the operation of the balancing arrangements exposed them to disproportionately volatile and unfavourable prices. Ofgem consider this not to be the case, especially because the operation of the balancing arrangements has settled down as participants have gained experience. Also, the detailed rules have been amended on several occasions to better target costs. The controversy highlights the need for Ofgem to continue to communicate their position clearly.
- 11 NETA relies on market signals to ensure security of electricity supplies.** "Security of supply" in this context refers to the extent to which there is enough generation available to meet demand for electricity¹². Security of electricity supply is a key Government concern as it is vital for the functioning of a modern economy. In recent years, including since NETA was introduced in March 2001 until Autumn 2002, there has been an annual margin of generating capacity over expected demand of at least 20 per cent and as yet no risk to supply is in prospect. If however generating plant is withdrawn from the market faster than it is replaced the margin of supply over demand will reduce. The market should respond to this situation through rising prices, which should in turn encourage generators to return plant to the system, invest in new plant or new generators to enter the market. An issue surrounding the reliance on market signals is that, in some circumstances, price rises in the wholesale market might, if large and sustained for long enough, be reflected in prices paid by domestic consumers, and these price rises could be unacceptable to the Government of the day, leading them to impose a retail price cap. However, the Government clarified its future energy policy in the White Paper, which emphatically set out its determination not to intervene 'except in extreme circumstances, such as to avert, as a last resort, a potentially serious risk to safety'¹³.



¹⁰ Combined heat and power operators produce heat and electricity as part of the same process, often to support an industrial process such as a paper mill.

¹¹ Figures supplied by the Department of Trade and Industry (DTI).

¹² From the perspective of customers, however, it is the overall security of supply that is important, including disruptions caused by failures on the distribution and transmission networks and fuel supply disruptions to generators. These risks are outside the scope of this report.

¹³ Energy White Paper, paragraph 6.7.



- 12 The market based NETA arrangements are more costly than the central Pool arrangements.** Moving to a more market-based trading arrangement would have been costly for participants however the market was designed. Ofgem expected market participants to incur total costs of up to £580 million in implementing NETA over the first 5 years, and for participants to incur operating costs of £30 million a year. Participants have incurred costs such as recruiting new trading teams, investment in IT and bearing risks previously managed centrally by the NGC. Some types of costs may have increased less than expected and the IT systems for the Pool would have needed to be replaced in any case. We have been advised by ILEX Energy Consulting Limited (ILEX), on the basis of a detailed survey of a small cross-section of seven market participants, that NETA is more expensive than the previous arrangements, although the impact varies between different types of businesses.
- 13 There is a continuing though reduced risk that participants in NETA may manipulate prices to their advantage.** The centralised arrangements of the Pool involved a single reference price for wholesale electricity with additional payments for making capacity available. These arrangements carried with them a risk that some generators could manipulate the market and Ofgem consider that this risk materialised through much of the period of the Pool's operation (1990 to 2001) to the detriment of consumer interests. The decentralised markets which have emerged following NETA do not have a single reference price or capacity payments, and appear to be less prone to abuse by generators. There may however still be some risk of market abuse.
- 14 Ofgem make their regulatory decisions transparent and this will continue to be a vital part of their work.** Ofgem and the Department consulted extensively on NETA during its design and undertook a thorough process to set out the objectives of and design for NETA and to assess NETA against these objectives. Following NETA's implementation, Ofgem have undertaken a series of reviews of NETA. These published reviews have incorporated detailed and useful research. There is always the risk that the published summarised presentations of these reviews do not reflect fully the detailed research, and hence these presentations may expose Ofgem to criticism. The balancing arrangements remain a subject of controversy for some, and as a result Ofgem's presentation of their decisions will continue to be a vital part of their work.

Recommendations

15 Electricity has unusual characteristics compared to other commodities: it is virtually unstoreable and supply needs to match demand moment by moment. In addition, Government and the public attach high importance to a guaranteed supply of electricity at reasonable prices. Taken together, these factors mean that regulation of the electricity market in some form is likely to remain in place. Regulation should be transparent and accountable, and, in carrying out their statutory duties and taking forward the relevant recommendations of the Government's recent White Paper on energy policy¹⁴, we recommend that Ofgem should:

- **Keep under review why domestic consumers who have not switched supplier have benefited much less than other consumers from falling wholesale prices.** The apparent reluctance of many consumers to switch supplier may have dampened price competition, so enabling suppliers to charge up to 22 per cent more to consumers with their original supplier than they charge to attract new customers, and in some cases to widen their margins as wholesale prices have fallen. When they removed price caps in March 2002, Ofgem undertook to dedicate their resources to monitoring and investigation of gas and electricity companies. They should therefore continue to monitor suppliers' behaviour to determine whether there are good reasons why more of suppliers' cost reductions are not passed on to consumers who have chosen not to switch supplier.
- **Ensure efficiency in the administration of the balancing arrangements is met by ELEXON¹⁵, the company responsible for administering these arrangements.** The decentralisation of control entailed in moving from the Pool to NETA has increased the transaction costs of market participation. Ofgem themselves cannot influence the costs of trading in decentralised markets. However, through their oversight of the governance of the balancing arrangements they can help to ensure that the administration of the balancing arrangements by ELEXON is efficient.¹⁶
- **Continue to undertake detailed market surveillance of the wholesale market to detect any abuse of market power.** The design of NETA and the large number of market participants make less likely the types of market manipulation that Ofgem consider occurred under the Pool. There may still, however, be some risks of market abuse under NETA. Ofgem therefore need to maintain the priority given to their wholesale market surveillance activities.

¹⁴ DTI Energy White Paper, *Our energy future - creating a low carbon economy*, February 2003.

¹⁵ ELEXON is responsible for managing the provision of the necessary central systems and services to effect the balancing and imbalance settlement rules under NETA, and for managing the governance processes relating to those rules. ELEXON also supports the Balancing and Settlement Code Panel, a body of individuals that reflect expertise from a cross-section within the electricity industry (including consumers), that considers proposals for modifications to the trading rules.

¹⁶ Specifically through their role in approving modifications.

- **Report regularly on whether there are barriers that could prevent market participants responding to market signals to ensure security of supply.** NETA relies on companies making investment decisions on plant capacity on the basis of their assessments of future opportunities and forward price signals, to ensure that there is enough generation capacity to meet electricity demand. Ofgem are confident that there are sufficient signals to enable timely decisions by companies on the availability of generation capacity. Ongoing risks are monitored by a joint working group, the Joint Energy Security of Supply Working Group. There is however no guarantee that the response to market signals will always work as intended since it is possible that some factors, such as fear of government intervention, may mean that investors do not respond to market signals. As part of the recent White Paper on Energy Policy, Ofgem agreed to report every six months on the performance of the electricity and gas industries in delivering energy security¹⁷.
- **Develop further the way they articulate the potential impact of regulatory changes that they sponsor.** Since NETA was first proposed Ofgem have developed further their approach to appraising regulatory proposals and are committed to the Government's approach to regulatory impact assessment. The consequences of major regulatory changes can be wide-ranging, as NETA has shown. Ofgem should build on their approach to NETA, making use of regulatory impact assessments for forthcoming projects, and analysing the whole range of potential significant consequences. Their assessments should where appropriate set out the potential costs and benefits of the proposals, identify possible risks to the achievement of the intended benefits and evaluate alternative options for meeting regulatory objectives. The White Paper on Energy Policy reported that Ofgem has committed to producing regulatory impact assessments¹⁸.

¹⁷ DTI Energy White Paper, *Our energy future - creating a low carbon economy*, para 6.46.

¹⁸ DTI Energy White Paper, *Our energy future - creating a low carbon economy*, para 9.15.