



## UK Energy Industry: Competitive Industry Structures and Regulatory Frameworks



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This paper is about the revolution that has taken place in the British utilities industries through a fundamental change in its structure and the introduction of competition. It uses as a key example the development of the gas industry into the most successfully competitive of all the utility industries, and outlines the wider implication of the changes for the industry, government and consumers. This story at present is considered inconceivable for water, but for some these perceptions are wrong; such a model can be applied to water. Whilst the story of this paper is gas, in 10 years' time, it could be that of water.

### Serving the National Interest

For governments, the great questions have been, within the context of higher national wealth and lower unemployment, how to improve the service to the public of those industries providing the basics of life, without jeopardising safety and maintaining an assured level of supply. Utilities are at the heart of this debate because of their importance in the national economy and the direct way they impact on virtually every company or household in the country.

### The Historical Path Towards Competition

In one sense, thinking on the UK utility industries in the 20th century has simply gone in a great circle. At the start of the century Victorian *laissez-faire* capitalism was at its height; most industries were in principle competitive, although *laissez-faire* had in many cases led to *de facto* monopoly. The middle decades of the 20th century saw the growth of nationalisation, public monopoly and state intervention, but this phase ended abruptly when Baroness Thatcher came to power in 1979. This ushered in an era of privatisation and independent regulation and, later, a reintroduction of competition in the former nationalised industries, but with additional safeguards against the main types of monopoly abuse.

Each successive stage came about because of a perception that the previous regime had failed in delivering the fundamentals. Thus, the excesses of Victorian *laissez-faire* capitalism, and the tendency towards unregulated monopoly, were viewed by some as a contributory cause of economic recession, and even war. Later, public ownership and central planning were assumed to be the answer to the problems of the previous structures. But, in its turn, public monopoly came to be seen as an important cause of Britain's lack of competitiveness and decent services, poor performance and social inequalities.

Privatisation was a major contribution of the Thatcher government in addressing these perennial fundamental issues and was seen as 'liberalisation' in giving management more freedom and control over their finances and business decisions and being more responsive to consumer concerns.

All the big utility privatisations set up either actual or effective private monopolies, whether on a national or a regional basis, with their activities regulated by independent regulatory offices. This system, coupled with independent regulators, undoubtedly produced benefits to consumers – in the improved services offered and in price reductions (except in water).

But there were also perceived disadvantages. Although ownership was now in private hands, the regulated industries were still characterised by monopoly, or by companies in a position to dominate. Inevitably, such industries saw the regulators as a threat to their business, continually pressing for lower prices and service improvements with cost implications, and in some cases pressing for the incumbent companies to accept a greater measure of competition. The environment was one of confrontation and game playing with information concealed or deliberately pitched demands in anticipation of better regulatory negotiated outcomes.

There were also significant elements of dissatisfaction. While the regulators had done much

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to control prices, still the profits of the regulated companies seemed too high, the quality of service not good enough and companies too insensitive to the concerns of their millions of captive customers.

Where attempts were made to introduce competition, they were not very effective. New entrant companies were frustrated at having to use the incumbent's existing network, pipeline or grid system, or by monopoly companies successfully arguing that their own break-up would be against the public interest on grounds of safety, security of supply or feasibility. The greatest progress in introducing competition during this period was made in telecoms, speeded on by the entrance of new mobile service providers who did not need to use the network of the incumbent monopolist.

### **Early Attempts to Introduce Competition**

Early moves to permit competition began in 1982, freeing up competitive supply for consumers taking more than two million therms a year. This was possible by the creation of 'third party access' rights, a legal obligation on British Gas to convey, through its own pipeline system, gas supplied by another company to an 'eligible' customer. However, little changed. As an integrated near-monopoly, British Gas had every incentive to find ways of minimising the legal obligation to offer facilities through its own pipelines to its competitors, and gas production and control of the pipeline system made it difficult for other companies to exercise their rights effectively.

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### **The Gas Industry's Transformation**

In 1993, the gas industry became the focus of serious thought about a new structure for the future. A typical example of the historical progression described, it had grown by the first quarter of the 20th century to over 1,000 gas companies supplying manufactured gas, organised on a local private monopoly basis. However, this structure came to be seen as failing the public interest and the industry was nationalised in 1948. When natural gas was discovered in the North Sea in the 1960s, its development and the construction of the National Transmission System were entrusted to the nationalised industry, known by 1972 as the British Gas Corporation. When privatisation came in 1986, British Gas was unique among the energy utilities in being privatised as an integrated monopoly, with no change to its structure at all.

Ofgas was also set up in 1986 to regulate the new private monopoly. The following period was a prime example of the confrontational environment between regulator and regulated industry, in part due to the way the industry had been structured at privatisation. The confrontation focused not only on prices and service but also on attempts by Ofgas to carry out its statutory duty to promote competition.

The provision of third party access rights to the pipeline system, while clearly a necessary condition to the establishment of competition, is unlikely to be a sufficient one; nevertheless, the European Gas Directive 1997 is based on exactly the same concept of market liberalisation.

To break these barriers, the competition authorities carried out a series of investigations, and successive rulings were handed down to enforce the establishment of competition. This proved effective and, from 1991, British Gas' market share of eligible customers fell steadily; market changes being sustained by regulatory action rather than by the natural pressures of competition.

When the threshold was again reduced to 2,500 therms a year, the whole industrial and commercial gas consuming market came into the competitive arena. But the bulk of the domestic household market remained subject to the British Gas monopoly and government aspirations to extend competition to the domestic market were becoming clear. The 1993 report, by the Monopolies and Mergers Commission (MMC), into the structure of British Gas was the final turning point; it declared it to be against the public interest and that British Gas be required to divest itself of its trading business by

1997. Recognising that this would involve a huge programme of work for the company and a period of change for the industry, the MMC suggested that competition be extended into the domestic market on a relatively slower timetable, completing during the period 2000–2002.

### *Opportunity for a Fresh Start*

The MMC proposals made were not immediately attractive to the government; it had wanted competition in the domestic gas market completed by 1998, at that time also the target for the electricity industry and it wasn't convinced of the desirability of a legally enforced break-up. However, the fundamental finding provided a basis for action and the powers to take action under the Gas and Fair Trading Acts, introduced by a newly-elected government prepared to take comparatively radical measures.

Other factors also provided encouragement for change. New thinking was challenging the accepted argument that large parts of the regulated industries were “natural monopolies” and new discoveries and excess supplies had the potential to force down prices, providing an ideal economic moment to introduce domestic competition.

Thus, in December 1993, it was agreed that British Gas would be required only to separate the activities of transportation and trading within its own group, on a phased programme between 1996 and 1998. Critically, the decision was also taken to invest time and effort to pass a new Gas Act to provide a framework for a fully competitive industry. Without it, Ofgas would have struggled to establish a competitive industry on the basis of legislation designed for monopoly. Conversely, in electricity, competition was introduced on the basis of the existing legislation in order to save time. The original scheme was that competition in electricity would be introduced first. In the event, the phased programme to extend competition to the domestic gas market was completed some months before the first phase of the electricity programme began.

The new Gas Act of 1995 provided for the licensing of three types of activity in the gas market – transportation, shipping and supply – and that the same corporate entity could not hold both a transportation licence and a licence to ship and/or supply; this statutorily enforced the separation of transportation and trading activities within British Gas. In parallel, a new Network Code was drawn up, governing the use of the monopoly pipeline system by competing shippers.

### **Principles of the New Framework**

One advantage of the new legal framework was that it forced Ofgas to sit down and think from first principles; it constructed schemes, challenged and criticised, scrapped everything and began all over again. The result was to produce a radical new structure for the gas industry.

Fundamentally, the problems of a regulated monopoly were mainly symptomatic of an inappropriate industrial structure. By defining a structure that removed the inherent confrontational element and creating an environment where the energies of the companies would be directed towards outdoing each other in service provision, not towards fighting the regulator to preserve their own positions, the objectives of industry and regulator would be aligned, rather than being in conflict. It had often been said that the regulator was a proxy for competition; experience has shown that a regulator can never hope to achieve the same benefits for consumers as a fully functioning and successful competitive market.

### *Three Key Principles*

The first key principle lay in a strict definition of the ‘natural monopoly’ element, and its isolation from other segments of the industry. Isolated, the natural monopoly element would no longer have an incentive to frustrate the growth of competition, because it would have no direct interest in any competitive activities.

The second was to introduce competition as fast and as widely as possible into all other activities; this distinction between ‘natural’ and other monopoly elements was an important one.

The third was to ensure a strong regulatory power with clear objectives: to police the natural monopoly element; and control anti-competitive behaviour in the competitive sector, particularly by any former monopolist or dominant company.

These key principles may seem simple in concept, but are quite difficult and complex in practical application. What is a natural monopoly? How can competition actually happen, particularly when a former monopolist is part of the competitive sector of the market? Although at times the level of detail and complexity required seemed overwhelming, it was important not to lose sight of the simple basic principles established early on.

Interestingly, preferred solutions to many of these questions have evolved as attitudes develop. In 1994/1995, Ofgas took a comparatively broad view

of the natural monopoly activities, including not only the whole of the pipeline business but also storage and metering services. However, by 1998, storage had moved into the competitive market, and metering services and maybe even elements of the pipeline business will follow.

different kind of regulation, with the regulator more akin to the competition authority.

In the competitive part of the gas industry there are no specific regulations on market shares or 'postalised' pricing. In the industrial and commercial market,

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#### **Application of the Principles: Getting the Structure Right**

The application of the principles produced a structure so far unique in the utility industries of the UK and key to the successful introduction of competition. The isolation of the natural monopoly and the introduction of competition into all other activities produce a structure where there is a competitive contractual chain from the wellhead to the consumer's burner. Competing producers sell to competing shippers who sell to competing suppliers who sell to final consumers. The natural monopoly (currently defined as the pipeline operator) stands outside and has no contractual relationship with producers or final consumers. This decisive break with the past is a radical change of structure with profound implications throughout the industry and for government.

#### **Regulation Working and the Market**

A key result of this change is that the monopoly pipeline operator no longer has a natural incentive to frustrate the growth of competition. If anything his natural incentive is to support such growth, since it is basically good for business. Regulation can work with the natural direction of the market. Another advantage is that decisions on the capacity of the pipeline system are more likely to be taken on straightforward economic grounds, since the pipeline operator is no longer in competition with shippers or suppliers.

This separation also eases the regulator's task, making it much easier to apply distinct approaches to regulation to the different parts of the industry. The "natural monopoly" element remains subject to the full panoply of regulation, including price control and obligation to provide defined levels of service, whereas the competitive element is subject to a

there are no price controls. In the domestic market, Centrica (British Gas trading arm) remains subject to regulatory price maxima but these controls will probably not be retained much after 2000. Pressures of competition are making the controls increasingly irrelevant as determinants of prices.

It is clear that such regulatory paraphernalia is simply unworkable once there is true competition. Equally, the regulator can no longer dictate the continuation of cross-subsidies typical of a monopolistic regime. Manipulation of the industry's pricing structures to give support to one group of consumers or another is no longer within the control of either regulator or government.

Putting the point another way, the improved efficiency of the competitive market creates extra wealth for the nation. The government can no longer hide behind the convenience of using the monopoly utilities covertly as instruments of public policy.

#### **Safety, Security of Supply to the Consumer and Social Obligations**

It had often been argued that competition in the domestic market would be inconsistent with the Three S's: the preservation of safety; continued assurance of security of supply; and maintenance of those social obligations seen as an important part of the monopoly regime. These issues turned out to be straightforward. Arrangements for safety were little changed from the previous regime and Ofgas' proposals were accepted by the safety authorities without difficulty.

Regarding security of supply and maintenance of social obligations, Ofgas believed that a competitive market is in itself ultimately the best protection for consumers but to provide reassurance a series of



licence conditions covering these matters were introduced and accepted by industry.

### **Other Important Factors to Success: Marketing and Management of the Project**

Successful introduction of competition to the market, and the domestic market in particular, requires that consumers have clear and timely information and see a visible benefit. By getting the structure right, the benefits were quite clear and, potentially, immediate. To be successful, introduction of competition to a major public domestic market must be seen for what it is; a major project, which requires management techniques, unambiguous decision hierarchies and timetables, all clearly owned. Above all, it requires leadership.

### **The Present State of the Competitive Gas Industry**

In the industrial and commercial market, companies other than Centrica now have about 80% share, prices have fallen by around 50% from 1988 to 1998 and UK prices are among the lowest in the world. The advantage to Britain's industrial competitiveness is clear and marked.

In the domestic market, competition was introduced in the UK by region between April 1996 and May 1998. Centrica's competitors have now achieved a combined market share of 15% to 30% depending on the region. Later phases of opening have shown a faster rate of 'take-up' of new competitive offers by consumers, indicating a growing public familiarity and comfort with the process. Overall, the take-up by consumers already exceeds that in telecoms over a period of several years. In telecoms, there is as yet no clear separation between the natural monopoly element (the wires) and other elements.

The advent of competition in 1996 caused prices to fall by 20% – effectively in one day – and stay there. This is a graphic illustration of the power of competition to achieve more for the consumer than even the most vigorous regulation can hope to do. And there is clear evidence from an independent MORI survey that the lower income groups are benefiting the most from the competitive offers.

### **The Implications of the Changes**

#### **Implications for the Industry**

For the gas industry, the structural changes demanded by the new framework have clearly

required radical re-shaping of the old British Gas plc, from integrated monopoly to separate trading activities and finally to demerging the parent company from its subsidiary. This created British Gas plc, (including TransCo) and Centrica, the latter having the advantages and problems of being a former monopolist in an increasingly competitive supply market.

#### **Vertical Integration**

In the early days of the competitive market, vertical integration seemed an obvious route to commercial success. Thus, many of the early entrant companies were already significant gas producers in the North Sea, or regional electricity companies who formed alliances with North Sea offshore producers. More recently, however, later entrants – such as supermarkets – do not necessarily see this as a priority; their differentiator is the franchise of well-known brand names and experience in serving mass consumer markets. This indicates a greater liquidity and confidence in the market. Where there is sufficient liquidity, it is unnecessary to own assets, and the issue of whether or not to own assets becomes one of comparative risk management. It is interesting to note however that the major 'household name' oil companies have, to date, not entered the domestic market.

#### **Change of Culture**

Perhaps the greatest implication for the industry is that gas supply has become a retail industry with a complete change of culture. Centrica in particular has transformed itself into a retail service company looking to compete aggressively in gas supply, and take advantage of its extensive customer base and service experience by diversifying into other businesses involving direct marketing to the consumer. The company is rapidly losing the old national monopoly attitudes. In other areas, the supply market has begun to display the culture of a typical retail industry, with competitive advertising and services delivered with considerably greater efficiency to the public.

#### **Demise of Utility**

These developments raise the question of whether the gas industry should continue to be viewed as a utility. The definition of this term carried with it connotations of public responsibility and assurance and appeared to describe industries supplying services important to everyday life, but curiously not the food industries. Yet the structure of the gas industry is now very similar to today's food industry; both have

competitive chains from producer to consumer, making use of transportation systems provided by an external organisation on a monopoly basis. In both cases, competition now provides the basic assurance to the consumer of a continuing supply of an essential service, with keen prices. It is perhaps time that gas should no longer be seen as a utility industry.

#### **Implications for Governments**

For governments, the main implication of competition is to give them the opportunity of distributing extra national wealth in accordance with

#### **Conclusion**

The gas industry is now a healthy and successfully competitive industry, with no compromise to safety, security of supply or to the maintenance of 'social obligations' where society considers these important. In fact, it can be argued that the competitive regime has increased the protection of the consumer on all these counts.

The main outcome has been a significant improvement in industrial competitiveness and consumer welfare through lower prices and better services. These

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their chosen policies, but this has to be balanced by the loss of control to use former monopoly utilities as instruments of policy. No longer can governments directly control gas prices in pursuit of the economic policy of the day, or introduce covert cross-subsidies to fund objectives.

There are certainly risks associated with the introduction of competition; unpredictable results, consumers groups ending up worse off in absolute terms and possibly, even if all consumers benefit, criticism that the benefits are not fairly distributed. This seems to be a particularly prevalent factor in Western Europe and North America too. Although the remedy lies in the hands of governments – through their ability to redistribute wealth – the introduction of competition may not be consistent with the ambition of many governments for a quiet life and the avoidance of controversial issues.

#### **Implications for Consumers**

Consumers are now faced with more choice and the opportunity to shop around and take advantage of attractive offers, welcomed by many, resisted by others. Experience suggests that resistance can often be overcome by the provision of reliable information. Consumers need to get used to the progressive withdrawal of regulation and that their ability to exercise choice is now the regulatory power. Regulation therefore is more about competition law and less about specific regulatory rules.

fundamental drivers are even more powerful and immediate than anticipated. Once companies were able to exploit the fundamental forces fully, consumers responded with enthusiasm. As often in such a situation, what had previously been put forward in many cases as show-stopping objections became no more than issues to be dealt with in a positive spirit.

The key to the release of these forces was getting the structure of the industry into an appropriate form. Previous failure to do this had been the main reason why earlier attempts to introduce competition had not been successful.

These successes have been mirrored in the opening of the domestic electricity market in UK and Norway amongst others and, one way or another, this route is being adopted not just across Europe (despite some slow footedness) but in the US, Australia and parts of the Far East. For the UK, the last bastion of regional monopolies lies in the water industry, but here with increased regulator pressure, competition is surely on the horizon and in some quarters even encouraged.

Vested interests against change are strong and will use all manner of emotive arguments and “accepted wisdom” to protect their position. To overcome this requires clear vision, political will and marketing, as with any great enterprise for change that directly affects industry and the general public. Above all, the successful introduction of competition into a utility requires hard work and leadership. ■