The Social Effects of Energy Liberalisation

The UK Experience

Launching a Common European Energy Market

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Summary

A high degree of liberalisation exists in all sectors of the UK energy industry. This was achieved over a period of ten to fifteen years, starting from a position of almost complete state monopoly. The UK process of privatisation through to liberalisation was unique, with very little expertise to draw on from elsewhere. The timescales for introducing a competitive market can be reduced dramatically learning from the lessons of the UK experience, and need not necessarily involve complete privatisation. Nevertheless the UK is seen as being at the forefront of a world-wide movement towards liberalisation, and many features of the UK system have been imitated elsewhere.

Inevitably, the process brought widespread concerns about the social and environmental aspects of this transformation. Some of these have been addressed, and are continuing to be addressed, through regulation and our social and environmental policies. A competitive market, within the right regulatory framework, has brought wider social benefits - falling prices have benefited all consumers, including the poor. However social issues such as fuel poverty are still not resolved.

The Government has conducted a thorough review of the Regulatory Framework and is taking statutory powers to ensure that the regulatory regime delivers the benefits of a competitive market to all consumers including the fuel poor.

The main areas of concern, and the resulting solutions, can be summarised under 3 headings.

(a) **Fears about the loss of "public service"** - Competition means suppliers must be more responsive to customer needs, and this backed by a proper framework for regulation, has alleviated concerns about maintaining the quality of service delivery. Indeed the quality of service has improved.

(b) **Helping the poor** – In the first instance, poorest customers have benefited from lower prices and market innovation in new tariffs. But Government needs to specifically address the social issues, to ensure benefits are shared by the poor who can be less attractive as customers in a competitive market. The Government, the Regulator and industry need to proactively address fuel poverty.

(c) **Concerns about job losses** – Competition and pressure to improve output can affect employment levels. Bringing flexibility to the workforce - together with fair policies on redundancy terms, pensions and retraining, alongside Government support through social programmes in specific problem areas; and a generally robust economy, are all essential to ensure the transition is carried out successfully. It is important for employment issues to be handled in a sensitive and constructive manner.

A strong framework for regulation is essential together with the benefits of a more efficient, innovative, and customer-focused industry. There is now widespread recognition in the UK of the overall economic benefits of this process and indeed, in the electricity industry there was support by employees for the introduction of private capital. The benefits have included lower prices, technological advances and an increased international role for the companies. There are also real social benefits. This Government has started to address these issues and proposals are being put together to ensure that the regulatory regime delivers the Government’s social policies as well as meeting environmental obligations.

Background

1. For all forms of energy - gas, electricity, coal and oil - industrial and domestic consumers are free to choose their supplier. The process of liberalising energy markets (which in the UK was linked to privatising the gas, electricity and coal industries) has been carried out over a number of years. The process has not been one of sudden change but an evolving introduction of competition, following privatisation, through a carefully planned and managed programme. The path to a fully liberalised, competitive market has differed for different fuels. For gas, privatisation occurred some time before effective competition was introduced. For electricity, the privatisation process created several new companies and the route to a liberalised market was generally faster. This has been a learning process for the UK with very little experience

elsewhere to guide it. Whilst the time needed to achieve a competitive market has been quite long in some areas, there are lessons to be learned about the industry structure created and how competition is introduced that would substantially speed up the process now.

2. The gas industry was privatised in 1986, with competition for most industrial consumers starting in 1992, and a fully competitive market coming into force in mid 1997. For electricity the process started in 1990 with privatisation. Competition was introduced for large industrial consumers in 1990, extended in 1994 and the market opened to full competition for all customers in May 1999. The coal industry was privatised in 1994, allowing increased competition from the new producer companies along with imported coal which had already established a strong presence in the UK market.

3. It is also worth noting that liberalising energy markets does not necessarily require privatisation. There are benefits to efficiency from privatisation, creating the need to compete in capital markets alongside the removal of any distorting effects of Government intervention. However the main efficiency gains and consumer benefits have resulted from the introduction of competition. A liberalised market, in which public sector companies compete, could therefore be realised without privatisation.

4. Liberalisation has brought important benefits for consumers giving choice and a greater responsiveness to consumer needs. But the process has not been without some social cost and public concern. This paper describes some of the benefits resulting from liberalisation and how management of the transition to a competitive market addressed employment issues and how the Government is focussing on the social issues. It sets out the impact of liberalisation in reducing prices and promoting efficiency and technology (paragraphs 5 to 11), looks at consumer benefits, the need for a sound regulatory framework and improved service provision (paragraphs 12 to 16), discusses support to the fuel poor and the introduction of innovative new services (paragraph 17 to 23) and finally covers the employment issues (paragraphs 30 to 41).

Impact of liberalisation

5. One of the overall aims of liberalisation is to increase efficiency through the pressure of competition. Greater efficiency should lead to lower costs and hence prices, than would otherwise have been the case. This improves industrial competitiveness which is crucial for companies competing in an increasingly global market. For example, US electricity prices are around 35

per cent lower than European prices, thus putting European companies at a disadvantage. On the social side the living standards of families, including the fuel poor, have improved. The UK experience has seen reductions in prices. Industrial gas prices fell by over 40 per cent in real terms (after adjusting for inflation) between 1992 and 1996 during a period of intense competition, when the former monopoly supplier's industrial market share was cut to around 25 per cent, and in 1999 prices were 45 per cent lower than in 1990. Since the domestic gas market has been opened to competition (during 1997 and 1998) new gas suppliers have been offering savings of around £50 on an average gas bill of £315. For electricity, industrial prices are down by 22 per cent in real terms since competition was extended in 1994 (26 per cent down on 1990), having fallen more quickly in recent years as competition has become more established and regulation tightened. Domestic electricity prices are falling as markets are being opened up, with new suppliers offering average savings of around £10 but rising to £40 in some areas, on a £270 bill. The gas market is now fully competitive, putting downward pressure on prices which has led to larger falls in gas as opposed to electricity prices. For electricity the pool is due to be replaced by new wholesale trading arrangements in the Autumn (see paragraph 10).

6. The strong downward pressure on UK gas prices has resulted in average UK industrial gas prices in 1998 being the lowest in Europe. The relative position has further improved over the past few years. For example, in 1990 UK industrial gas prices were the seventh lowest in the EU, but by 1996 were the lowest. Similarly UK domestic consumers compare well with EU standards, with both gas and electricity prices in the lower half of the range of prices (3rd to 4th lowest). However, the position was not as good for the very largest electricity users who in 1999 were increasingly paying relatively high prices compared to other major EU countries. This confirmed the need for still further action to make the electricity market in the UK fully competitive. A comparison of trends in UK gas and electricity prices, with the EU average, is illustrated in Charts 1(a) and (b) overleaf.

7. As liberalisation, and the introduction of competition, becomes more widespread across Europe this should lead to further efficiency gains, cost reductions, and the potential for lower prices. A completely open European market will allow all consumers to benefit from the cheapest available forms of energy and drive costs of competing companies down.

8. Liberalisation of the German electricity market has led to large price reductions. Competition has had its most visible impact in Germany. Electricity and gas are now traded across European borders through a number

of trading exchanges. Forward prices for electricity in the UK have also fallen significantly in the last few months in anticipation of the introduction of the New Electricity Trading Arrangements (NETA).

Chart 1(a): Industrial prices[1], local currency, real terms[2]

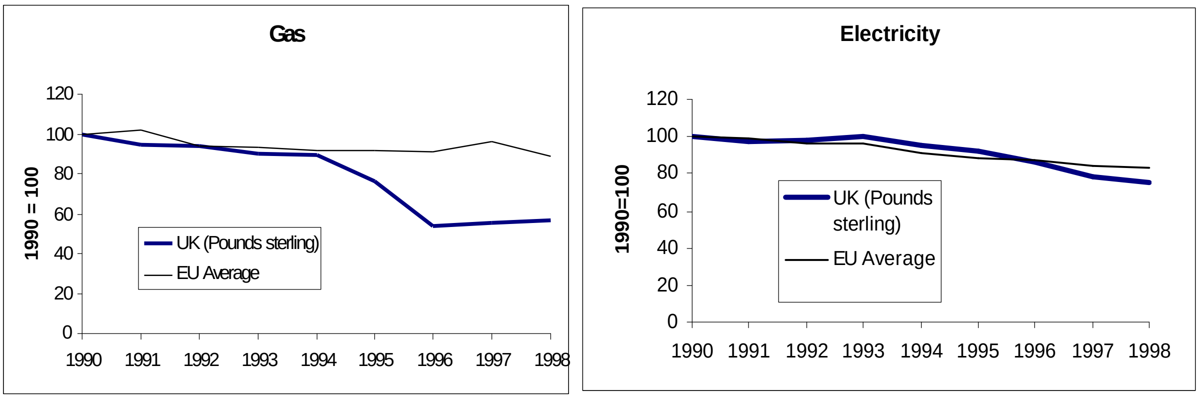
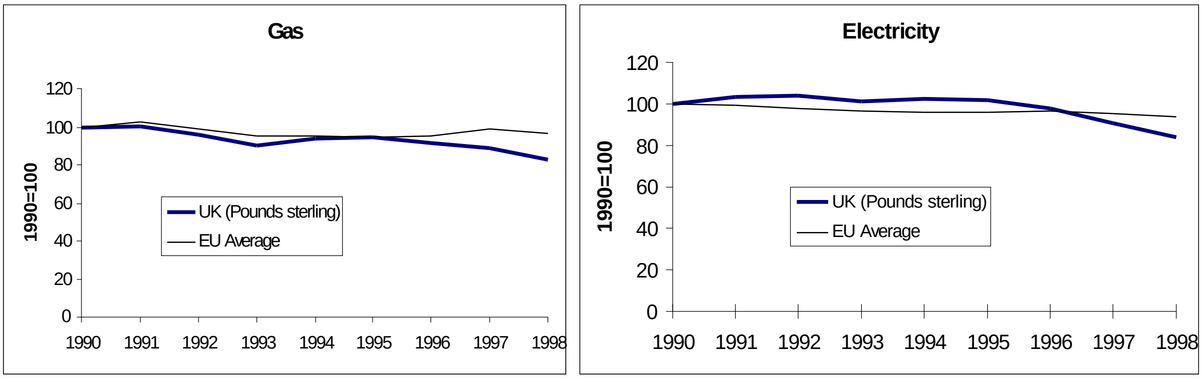


Chart 1(b): Domestic prices[1], local currency, real terms[2]



(1) Prices include all taxes and VAT where not refundable.
(2) To illustrate price movements not levels.

9. Liberalisation can also produce long-term structural changes that make the provision of energy more efficient. In the UK the operating costs of electricity generation plants are down, and the privatised nuclear stations are more efficient and contribute more to the UK's electricity requirements, whilst still maintaining a good safety record. New private capital has been available, allowing new technology to be utilised and developed; for example the increase in new generating plant, especially combined cycle gas turbines (CCGTs) has led to greater thermal efficiency and environmental benefit. These plants accounted for 21 per cent of total generating capacity in 1998 compared to zero in 1990, and supplied 32 per cent of the UK's electricity

requirements. Increased technical innovation has encouraged a wider range of local generation plant, including Combined Heat and Power (CHP).

10. The move from a publicly owned monopoly-based industry to a fully competitive private industry has been an evolving process. In the UK the process is still not complete. For example, we are currently altering the wholesale electricity market, where the present arrangements have not led to the level of price reductions which might have been expected from changes in input costs and increased efficiency. Government initiated a review of the trading arrangements, taken forward by the Director General of Gas and Electricity Supply. In so doing the Government is introducing legislation to create a market introducing based solution to ensure the benefits of lower fuel costs are fed through to consumers. As part of this the Government acted to remove distortions in fuel demand by generators by imposing a stricter gas consents policy for power stations. The New Electricity Trading Arrangements (NETA) will be introduced via licence conditions. The Utilities Bill, which is currently working its way through Parliament, contains a clause giving the Secretary of State the power to make the necessary amendments to participants' licences. Forward electricity markets in the UK are currently anticipating price reductions at the wholesale level of between 25 per cent and 30 per cent compared with prices in 1998. Once the New Electricity Trading Arrangements are in place in the Autumn of 2000, the Government will lift its stricter consents policy on building new gas-fired generation plant. The Government has also been seeking practical opportunities for plant divestment by the major coal-fired generators in order to improve the degree of competition in the generation market. In the past two years, National Power and PowerGen have sold 6,000MW and 4,000MW of coal-fired plant respectively.

11. In the initial years of privatisation in the UK there was concern that assets had been sold too cheaply and that regulation could have been tighter. The Government responded by levying a windfall tax on the excess profits of the privatised utilities in 1997 to redress the balance between shareholder and taxpayer benefits. The proceeds of the tax were used to fund job restart schemes. The continuing role of tough, but fair, regulation is a crucial component of ensuring that benefits feed through to consumers and hence the acceptability of a liberalised market.

Consumer benefits

12. Liberalisation can raise concerns, on the one hand, about the supposed abandonment of "public service provision" and, as a counterpart, allowing shareholders' interests to predominate. The effect of liberalisation is to enable customers to access the cheaper and more efficient sources of energy. There is still a statutory requirement for effective regulation of natural monopoly services such as pipelines and wires, to ensure that customers benefit appropriately. Continuing regulation of supply prices to small consumers has also been maintained following full liberalisation, in order to ensure that competition becomes fully established, incumbent suppliers who may have a dominant market position are not able to exploit that dominance at consumers' expense; it also ensures that producers and suppliers can operate in fair markets; and that environmental requirements are met. Insofar as liberalisation leads to utilities that are more clearly independent of Government, it can encourage public confidence that regulation is taken out of the political process and is fair and effective.

13. But regulation should not be static, and must adapt to changing markets and changes in Government policy. In March 1998 the Government published a Green Paper on utility regulation[1] which resulted from its review of the regulatory framework. The Government confirmed the importance it attaches to the social dimension of the regulation of the utilities within the framework of competitive markets and endorsed the principle that it should be for Government and not the regulator to set the agenda in this area. Among the conclusions of the review were that the regulators should be given a new single primary duty focusing on the interests of consumers; the duties of the regulators should be extended to pay particular attention to the interests of low income consumers; and Ministers should give the regulators guidance on the social and environmental objectives which are relevant to their responsibilities. The Utilities Bill incorporating these provisions is currently before Parliament. The Bill also includes a reserve power to cross-subsidise particular groups of disadvantaged consumers of it should become apparent that they are not getting a fair share of the benefits of competition, as are powers to place obligations (currently set by the Regulator) on licensed gas and electricity suppliers, to carry out activities that encourage and assist consumers to make improvements in the efficient use of energy. (This is along similar lines as the current Energy Efficiency Standards of Performance (EESoPs)).

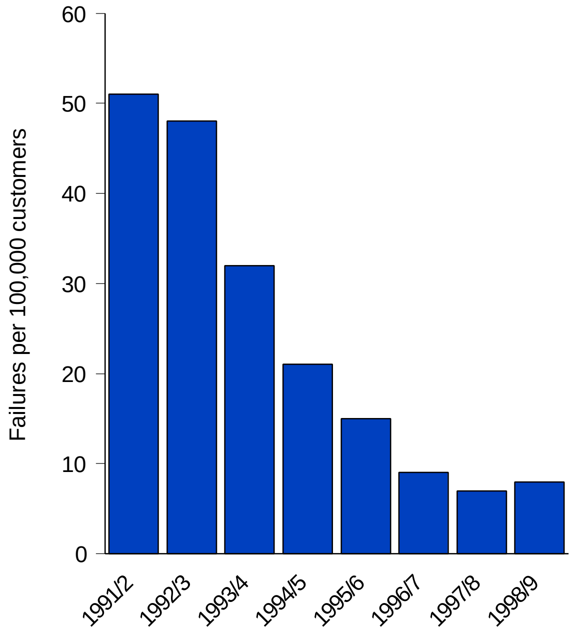
[1] A Fair Deal for Consumers, Modernising the Framework for Utility Regulation - DTI Green paper March 1998.

Service provision

14. There is concern that liberalisation could lead to cost cutting which in turn would lead to a deterioration in service. This has not been the UK experience; indeed supply companies have been forced to improve their standards of service. As part of the regulatory regime, the Regulator provides the incentive and measurement mechanism to improve customer service by setting standards for the supply and distribution companies. Performance against these standards is monitored and published on an annual basis. Standards have been tightened and extended since their introduction, resulting in higher levels of performance and service provision. Compensation to consumers is payable if these standards are not met. It is important to ensure that regulation, particularly on the monopoly activities, delivers improved services where competition cannot develop.

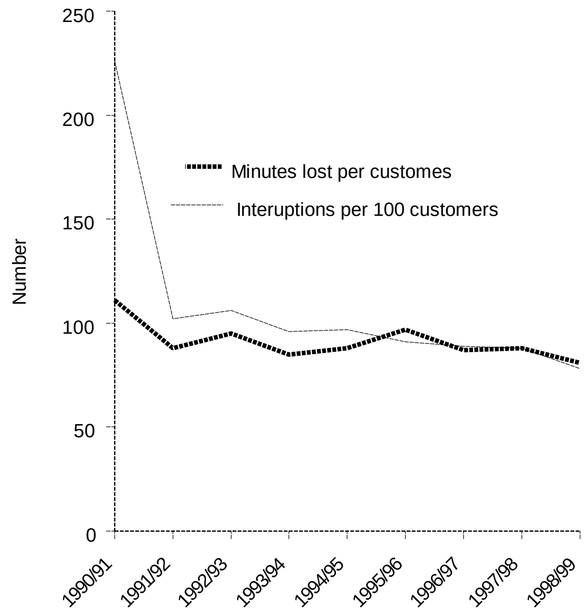
15. The standards of service set by the Regulator cover both gas and electricity. They include a wide range of services - reconnection following faults within a certain time period, making and keeping appointments, responding to customers quickly, connecting new customers, meter reading, etc. These apply to both the regulated distribution business and the competitive parts of the market. Standards have been tightened and extended since their introduction in 1991. Chart 2(a) shows how failure to meet standards that result in payments to customers have been reduced for electricity customers. On the distribution side, as a result of pressure to improve service, the number of electricity interruptions per 100 customers has fallen by 30 per cent since 1990 with the number of minutes customers are without supply down to about a third of the 1990 level (See Chart 2b). In the competitive area of generation, there has been substantial investment in new capacity and the margin of spare capacity over peak demand has been broadly maintained. Customer support has also become more responsive. British Gas responded to only 76 per cent of letters within 5 days in 1996, by 1999 they achieved 100 per cent.

Chart 2(a): Failure to meet guaranteed standards per 100,000 electricity customers



Source: OFGEM

Chart 2(b): Security and availability of electricity supply for the average customer



Source: OFGEM

16. Complaints are an indication of customer's concerns and can provide a useful guide of where action needs to be taken to prevent market abuses. The initial stages of domestic gas competition were marred by a high number of complaints about door-step selling and fears that consumers were being pressurised into signing contracts. As a result of the evidence presented via complaints, the regulator worked with the supply companies to establish rules which allowed the selling method to continue (as it was favoured by many customers) but gave the consumer the option to reconsider and pull out of contracts, thus increasing their protection.

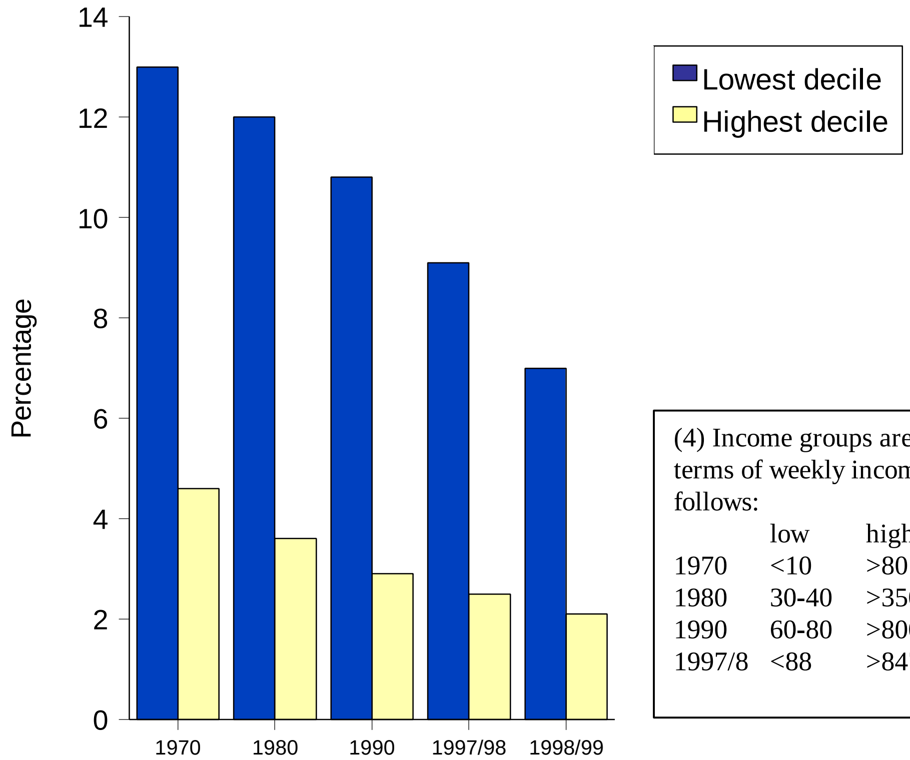
Fuel poverty

17. Price falls benefit all consumers, but particularly the fuel poor (those for whom providing sufficient energy for their home accounts for a high proportion of their income). For such households lower energy costs mean they can heat their home to a more satisfactory level or can use the money saved to purchases other goods; so lower prices are providing extra discretionary income. Between 1991 and 1996 the number of households in

fuel poverty[2] in England fell by around 2 million to 4.3 million, and it is estimated that the number in fuel poverty has fallen by about a further 1 million since 1996 due to changes in energy prices and consumer income including state benefits. More than half of this reduction is thought to be due to reduced energy prices alone. Over the period since 1991 energy efficiency investments played a part in improving the housing stock, some funded via a levy on electricity bills[3], but a major factor behind the fall has been lower energy prices.

18. The chart below illustrates how people's expenditure on fuel has changed over the last 30 years. Those in the lowest income decile have seen a considerable reduction in the proportion of their total expenditure devoted to fuel, however, with the number in fuel poverty still in the millions further work to tackle this problem is still required.

Chart 3: Fuel expenditure as a percentage of total expenditure by income group[4]



(4) Income groups are defined in terms of weekly income, in pounds, as follows:

	low	high
1970	<10	>80
1980	30-40	>350
1990	60-80	>800
1997/8	<88	>847

Source: Office for National Statistics

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[2] Defined as a household needing to spend over 10% of income on energy to maintain an acceptable standard of warmth in main living rooms.
[3] Under the Energy Efficiency Standards of Performance scheme.

19. The unwinding of cross subsidies within monopolies and the move towards cost-reflective pricing can mean that energy prices will not all have fallen by the same amount for all users. There also remains concern, despite the presence of licence conditions, that differential pricing could become more prevalent as competition grows. As new payment methods are introduced there is some evidence that poor consumers are not always fully benefiting from the largest price reductions. For example, consumers paying their gas bills by direct debit pay £50 a year less (a difference of 16 per cent) than those paying on pre-payment meters (many of whom are poor and chose this method of payment because it allows them to manage their finances more effectively, or are required to choose it by suppliers because of mounting debt). However, the differentials when prepayment meter bills are compared to standard credit customers bills are considerably smaller, particularly since British Gas Trading have reduced their gas prepayment meter rate to be the same as for standard credit customers (without the prompt pay discount). The difference for electricity is smaller but is not insignificant. The Government is concerned to ensure that all consumers benefit from lower prices and is working with the Regulator and industry to reduce prices, especially for the fuel poor; to help drive prices down the Regulator has proposed a supply licence amendment to limit the extra cost of prepayment meter supply to no more than £15 more than that paid by standard credit customers.

20. To ensure that the fuel poor benefit, the Government will continue to ensure that lower prices from competition feed through to the poor but will supplement this with (a) increased investment to improve energy efficiency in poor households, and (b) increased payments to pensioners to help with fuel bills. The Government is providing additional money for energy efficiency improvements in the domestic sector (amounting to a total of £300 million over the next 2 years) and will target funds specifically to help the vulnerable elderly. More generally the Government has made an additional £3.6 billion available to local authorities for investment on housing over the 3 years 1999-2002 which will allow maintenance and improvement to the social housing stock to be significantly expanded. The social security system provides financial support to the poor but some particular measures have been introduced to address fuel poverty. Personal subsidies from the Social Security Social Fund provide payments to people at risk from the cold - Cold Weather payments provide help to the vulnerable in cold weather and Winter Fuel payments, which have now been increased to £150 provide extra help to over 7 million pensioner households to help with their winter fuel bill. Lowering VAT on domestic energy consumption from 8 to 5 per cent from September 1997 also contributed to lower energy bills. Fuel poverty is, however, an area where Government, the Regulator and industry itself need

to work together to help reduce the scale of the problems. The market will not provide a solution on its own.

21. As action to tackle fuel poverty is spread across several departments, the Government has set up a Ministerial Group to co-ordinate and develop the wide range of activity across Government which relates to and interacts with fuel poverty, such as actions on social exclusion, poverty generally, and health. The Group has three broad objectives: first, to ensure that current Government policies and programmes relevant to fuel poverty are co-ordinated so as to maximise the benefit from the resources available; second, to develop and publish a strategic policy to reduce fuel poverty; and third, to monitor progress towards the goal of eliminating fuel poverty. The Group will produce a cross-Government strategy on tackling fuel poverty, and then develop a comprehensive work programme to take this forward. That programme will include the following :

- reviewing the current definition of fuel poverty (ie 10% or more of income spent on fuel), and determining its real extent, in terms of households involved. This could include work on disconnections, self-disconnection, and rationing;

- identifying key policies needed to take things forward. This could include improving access to banking for poorer consumers;

- identifying any mechanisms needed to ensure co-ordination of Government policy activity;

- establishing methods of monitoring progress and setting appropriate targets. This might overlap with, but go wider than, the regulator's own proposed indicators for measuring progress under his Social Action Plan;

- develop a comprehensive strategy, setting out objectives and policies to deliver them.

The Group intends to publish its strategy in the Autumn of 2000.

22. The energy industry must also contribute to alleviating fuel poverty. The Government asked the electricity and gas regulators to prepare an industry wide action plan to ensure efficiency, choice and fairness in the provision of gas and electricity to disadvantaged (poor) customers. Its objective is to

ensure that the economic benefits of liberalisation are spread fairly amongst everyone, including the most vulnerable customers. The plan must establish timescales and identify milestones to be achieved over the next five years so that progress in assisting such customers can be judged against measurable targets. The new energy Regulator has placed the social dimension as a priority and in March 2000 issued a Social Action Plan which sets out a programme of work for tackling fuel poverty. The Government is also taking a pro-active role in getting the industry to help the fuel poor reduce their bills and manage their debt more effectively. In response the industry has set up a task force on Fuel Poverty that is working closely with the Regulator. Consumers must not face the market without appropriate protection. Regulation will be maintained where competition is either impractical or has yet to become fully established.

23. The Government is using the Utility Bill to take a power which would enable it to raise a cross subsidy to be directed in favour of specified groups of customers disadvantaged in terms of the prices they are charged for electricity or gas. It is intended that this power will be used only in the event that other avenues for tackling fuel poverty – through action on prices, housing improvement, other regulatory and industry initiatives - fail to deliver satisfactorily. The broad principle of the scheme – if used – would be to identify particular groups of poor consumers who are paying more for their energy than other, better-off groups, and then put in place arrangements to reduce the price paid by those disadvantaged groups. The cross-subsidy scheme would allow distribution and / or transmission charges to be adjusted, with consequent adjustments to the charges payable by customers. This would mean that better-off consumers would pay a bit more for their energy.

Innovation

24. Pure price competition has a limit and to compete in the long term companies will need to innovate and offer consumers new ways of buying energy. Already companies are offering payment methods with no standing charge, which is a particular benefit to low volume consumers, or linking gas and electricity bills to offer further reductions. Some are offering payment schemes where consumers pay a premium to fund additional investment in environmental friendly energy schemes. As new companies enter the market, this provides opportunities to innovate and means new imaginative alliances can be formed. In the UK, some trade union members are being offered a price reduction through a link with unions and energy suppliers, the same is happening with some newspapers, shops and others.

25. Competition means choice, which in turn means supply companies can no longer take any market for granted. But liberalisation has also meant that monopolies have developed new innovative schemes. For example, companies are involved in projects in the local community, typically energy efficiency related, and these can include involvement in local banking and/or credit unions. The communities, and particularly the worse off, benefit through associated improvements in housing conditions or access to lower cost energy. These local schemes are developing across the country. On the back of a pilot project in Leeds, Transco (the main gas transportation company) has developed its "Affordable Warmth Scheme", which uses an innovative application of lease financing to install insulation and gas central heating in local authority housing. The advantages for the local authority is that these are cheaper (because of the lease basis) and can be financed from revenue rather than from capital budgets. Transco are providing the project management expertise to develop this scheme on a national basis, following a change in the tax rules relating to this equipment in the Chancellor's Budget this year; and it is expected that one million homes will be treated over the next 5 years. Other companies are also developing their own social strategies: for example, Scottish Power (responsible for transmission and distribution in Scotland, as well as being an energy supply company) are running a joint scheme with EAGA (energy efficiency experts) part of which is looking to develop flexible payment options, using recalibrated prepayment meters. Both Centrica and Powergen have developed links with charitable organisations which focus on the concerns of the elderly. Other companies are no doubt developing their own plans.

Environmental benefits

26. Environmental goals must not be lost. Indeed liberalisation has contributed to reductions in carbon dioxide emissions, enabling the UK to be well on course to meet the target to keep CO_2 emissions within their 1990 level by the year 2000. Total emissions are currently 7½ per cent below 1990 levels, despite an overall increase of 5½ per cent in energy consumption. CO_2 emissions from power stations decreased by 28½ per cent between 1990 and 1999. About half of this decrease was due to improved efficiency in electricity generation and half due to the use of less carbon intensive fuels resulting from the switch from coal and oil to gas and nuclear. This switch was made easier by investment in new technology and the availability of North Sea gas but the freedom of choice provided by liberalisation, for companies to take decisions recognising the longer term environmental sensitivities, and the opportunity for new companies to establish themselves as generating companies in a new competitive market, has also played a significant role.

27. Assuming that the fuel mix and efficiency had remained as they were in 1990 (i.e. that improvements in technology and changes in generating fuel mix not been made), CO_2 emissions would have been 58 per cent higher in 1999 than they were. Savings due to increased efficiency and fuel switching each accounted for about half of the savings.

28. There has been an even more dramatic reduction in sulphur dioxide emissions since 1990. Two thirds of these emissions come from power stations and the combination of fuel switching (away from coal and oil) and the progressive installation of flue gas desulphurisation plant has had a major impact. Trends in both carbon dioxide and sulphur dioxide emissions are illustrated in Charts 4(a) and 4(b).

Chart 4(a) Carbon dioxide emissions by sector, 1970 to 1999

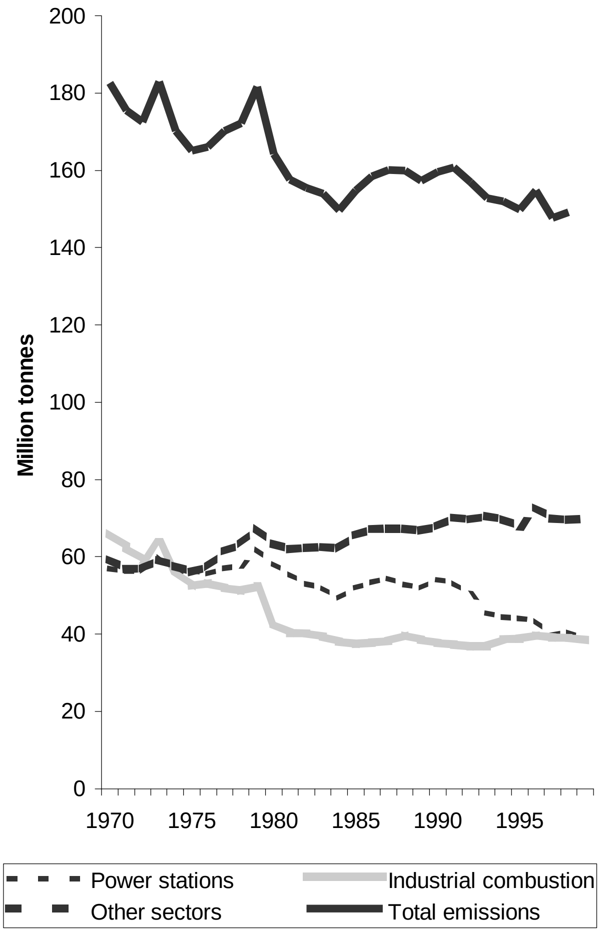
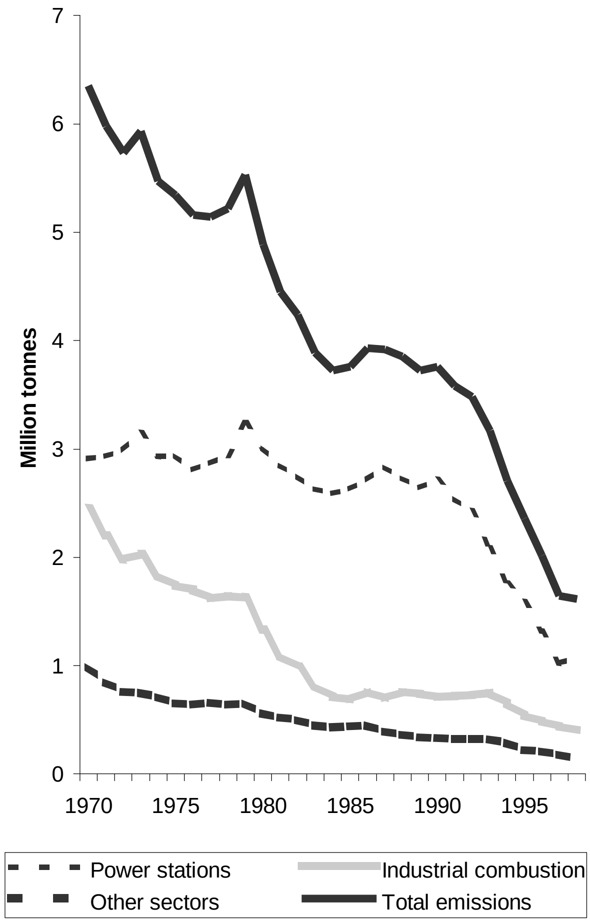


Chart 4(b) Sulphur dioxide emissions by sector, 1970 to 1998



29. The privatisation of the energy industries and the resulting competitive market has separated Government from the running of the industries themselves.

This has enhanced the public perception that regulation, particularly in terms of safety and the environment, is independent of the political process. However, the key issue is not the status of the body being regulated, but the independence and standing of the Regulator. The separation of the industry from Government, and the creation of strong independent Regulators has provided a positive signal that the Government takes the environment seriously.

Employment impacts - general

30. In general economic terms liberalisation will increase productivity, thus creating more efficient industries through competition. This may well result in some workers losing their existing jobs; government policy is to create a flexible, labour market to help workers find their way back into work.

31. Where workers find it difficult to move into new areas, perhaps because of barriers to moving into new jobs, Government has a role in addressing these issues and breaking down the barriers. Making the labour market more efficient is key to this, rather than making energy supply less efficient.

32. Greater efficiency has reduced prices and helped stimulate economic growth (see paragraph 5). Productivity growth has also come from technology improvement and the introduction of combined cycle gas turbines in electricity generation has created new jobs.

Employment impacts - Coal industry

33. There has been a reduction in demand for UK coal which in turn has meant mine closures and the net loss of around 80,000 mining jobs since 1990 (290,000 since 1980).

34. The decline of the coal industry left a difficult legacy, partly because of the lack of alternative employment in similar jobs or in certain mining areas. As a result the Government responded by providing aid to coal communities. A package worth £350 million has been made available to help former mining communities in England, already hit by pit closures, to create new jobs through regeneration programmes. The UK also received significant support under the EU's RECHAR programme to help with the restructuring of coal closure areas.

35. On 17 April the Government announced that it is exploring with the European Commission how state aid might be offered to help the coal industry at the current time of transition. The state aid, which would help the industry manage change, could be as much as £100 million, but will depend on negotiations with the Commission and coal producers as well as market conditions over the next two years.

Employment impacts - Gas and electricity industry

36. There have been large increases in productivity in the gas and electricity sectors. Productivity increases between 1990 and 1997 were nearly 2½ fold in both the gas and electricity sectors. However, net job losses have been substantial - around 60,000 and 30,000 in the electricity and gas sectors over the same period. However sensible management limited the worst impact.

37. In general people leaving the electricity and gas sectors received an enhanced pension, or appropriate redundancy payment, and support in retraining for alternative careers. Many former employees who left the newly privatised companies were aged over 55 and took early retirement packages. Others pursued slightly different careers in a rapidly expanding service sector, or moved into a related job in the same area of work as new consulting companies, new service providers, etc were established. The expansion of the service sector in the UK over the last 10 years, with an additional 2.4 million jobs being created, has provided opportunities for those seeking re-employment.

38. In the past, the restructuring of the gas and electricity industries has generally been carried out in a sensitive and constructive manner, ensuring staff are offered appropriate packages alongside support for pursuing alternative careers. It is important that companies operating in this competitive environment recognise that they have social responsibilities to ensure staff are dealt with fairly.

39. For those people remaining in the sector the drive for increased efficiency raises expectations of what should be delivered and with it rewards. An expansion in employee share ownership schemes, and its wide embrace by employees provides a positive incentive. Privatised companies can create more opportunities for employees to gain additional financial rewards. At the initial stages of privatisation, large increases in the pay packages for some senior executives led to public criticism. As personnel have changed, and the companies have set performance targets for their senior employees, there is a degree of public acceptability to salaries that are comparable to similar

private sector jobs. It remains important, however, to ensure that performance is measured through rigorous assessment processes so that such salary levels can be justified.

40. The process of liberalisation has allowed UK energy companies to export their know-how and technology to other countries, either through seizing opportunities for direct investment or in partnership. British Energy's expertise in operating nuclear power stations is being used by the company to enable it to invest in the nuclear sector in the USA and Canada. Meanwhile ScottishPower has also applied its experience of competitive markets by investing in PacifiCorp, a US power utility, where future earnings growth are to be driven by efficiency gains.

41. The development of competitive markets around the world will allow the most efficient UK companies to develop as major international organisations capable of competing successfully in global markets.

Energy Policy, Technology, Analysis and Coal Directorate
Department of Trade and Industry

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