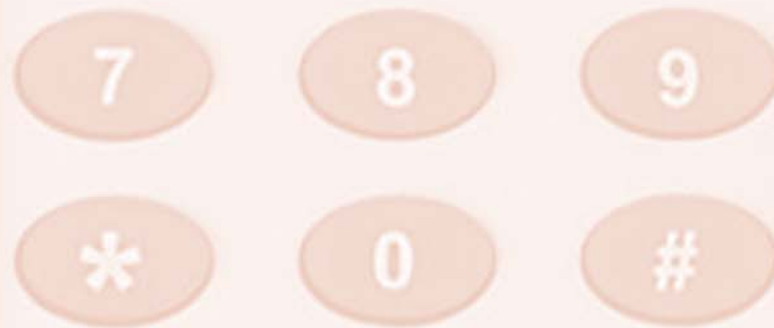


Liberalisation of electricity supply and fuel poverty: lessons from Great Britain for Northern Ireland

Competition for the poor

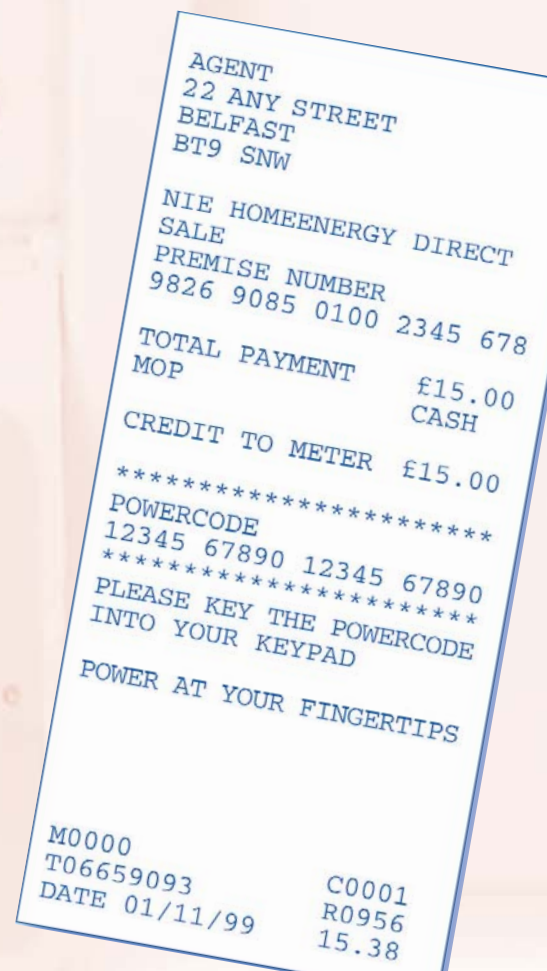


How To Key In The Ticket Number

- (1) Key in the '*' button
- (2) Key in the Ticket Number carefully
- (3) Correct errors by keying '*' to back space
- (4) Key in the '#' button
- (5) Refer to the help on displays see booklet



PROPERTY OF NORTHERN IRELAND ELECTRICITY



The Project

The Director General of Electricity Supply (Northern Ireland), Douglas McIlldoon, commissioned this research to obtain advice on how to achieve full supply competition in the domestic sector, without weakening still further the most vulnerable households in Northern Ireland.

Lower Carbon Futures, Environmental Change Institute, University of Oxford

Lower Carbon Futures (LCF) is a new research initiative at the ECI that is centred on carbon reduction policy. LCF builds and expands upon the ECI's existing energy and environment expertise, focussing on the design and analysis of policy for the efficient use of energy and the use of renewable forms of energy. LCF will combine studies of renewable sources of energy supply, energy use and lifestyle changes into a coherent, integrated strategy for policy that will reduce carbon emissions. This combination of energy demand and supply, behaviour and policy will form the core of the new research group.

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But most of all, we are indebted to Douglas McIlldoon for giving us the opportunity to undertake this fascinating – and challenging – task. We hope that it will provide the basis for protecting the fuel poor in Northern Ireland.

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**Liberalisation of electricity supply
and fuel poverty: lessons from
Great Britain for Northern Ireland**

Competition for the poor

Brenda Boardman and Tina Fawcett
Environmental Change Institute, University of Oxford

A report for the Director General of Electricity Supply
(Northern Ireland)

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Summary of conclusions and recommendations

Fuel poverty in Northern Ireland affects a minimum of 28% of households (170,000 out of 618,000), in comparison with at least 15% suffering in GB (3.5m out of 24m). Fuel poverty is worse in Northern Ireland because of:

- high generating costs – 4.5p/kWh vs 2p/kWh, these are the primary cause of
- high electricity prices – 10p/kWh, in comparison with 7p/kWh in GB;
- greater dependence on electricity by households – consuming about 1,000kWh a year more;
- low disposable incomes – £294 vs £352 per week;
- larger families: 2.8 vs 2.4 people per household.

There is nothing inherent in liberalisation of the supply market that will benefit fuel poor households. They only benefit if liberalisation delivers more savings than costs.

A major aim of liberalisation is that competition will result in cost-reflective pricing. This inevitably introduces disparities between regions and tariffs.

Electricity retail competition occurred in May 1999 for all GB householders. The separate effects of liberalising generation and of liberalising supply are difficult to disentangle, as the companies had been preparing for liberalisation for some time.

Prices in Great Britain vs Northern Ireland

Domestic electricity prices have dropped in parallel over the period 1996–2000, for consumers in GB and NI, indicating that the effect of liberalisation in GB has been matched by other factors in NI.

Prices in GB may drop further as a result of the New Electricity Trading Arrangement (NETA), whereas they increased by 9% in January 2001 in NI. The gap is 22% rising to 34% and NI consumers could be paying £110 pa more on average for their electricity than GB households.

Since 1999, the price differential between the direct debit and prepayment meter tariffs has been stable under liberalisation at 12% in England and Wales and 8% in Scotland and diminishing in NI in the regulated franchise market.

The standing charge is being dropped in GB by some companies, as a result of political pressure, but has been scrapped in NI, through regulation.

Beneficiaries in Great Britain

The main benefit from electricity supply liberalisation in GB has been reduced unit costs of electricity, but these are small in comparison with the effects of liberalising generation or liberalising the gas market.

The real cost of electricity was the same in 1999 as it was in 1970 for domestic customers, but is now lower.

In GB the cost of liberalising generation and supply was £35 per domestic customer, spread over 7 years until 2004–5. This was over four times the Regulator's original estimate. The cost of introducing NETA could be as much again.

The average householder has a net annual saving of £7, after having paid £5 (the cost of liberalisation), if all the price reductions in 1999–2001 are accredited to liberalisation. On this basis, households are saving £170m pa.

By the end of 2001, 12m households had switched suppliers, but only 8m are now with a new company. Thus, at least 4m households switched more than once or returned to their original (incumbent) supplier.

The 25% of GB households who have switched, saved £87m in 2000, but only 1% of this went to prepayment meter users – disproportionately low-income. Over half is going to direct debit customers – predominantly higher income. The switchers have saved an average of £15 per year.

The 75% who are non-switchers are saving £4.30 pa, after having paid £5 towards the cost of liberalisation. Their annual savings are £77m from lower prices.

Liberalisation costs are carried equally by all customers, but is benefitting those who have switched and these are mainly the better-off. To an extent, poorer households are subsidising the richer ones.

Price differentials

The maximum price range, across the incumbent suppliers, has dropped from £61 in 1995, to £45 in 2000. Regulated prices have converged, not diverged, in GB as a result of liberalisation.

More households have switched out of East Midlands (PowerGen), one of the cheapest incumbent companies, than have switched from SWALEC, the most expensive, indicating that price is not the only motivation.

The incumbent companies have a licence condition preventing prepayment meter tariffs being more than £15 above standard credit. This does not apply to them as second-tier suppliers or to other companies.

The additional cost of prepayment is an average of £22 per annum (£18 against standard credit, £28 against direct debit), though the cost can rise to £80. Any consumer in debt (often on a prepayment meter) is unable to switch suppliers, as companies 'block' the transfer of debt.

To obtain price reductions, electricity companies have reduced consumer debt levels and installed more prepayment meters. This is a positive benefit for low-income households, for whom debt (or the risk of it) is a major problem.

3.7m people had an electricity prepayment meter in 2001: three times higher than in 1991. The additional cost for these households is over £80m in 2001. Some of these households have moved into fuel poverty.

No evidence was found of a matching switch into less expensive payment methods, by low-income households.

The benefit to the individual, direct debit customer of switching companies in 2000 was, on average, seven times the benefit available to a prepayment meter customer: £17.50 instead of £2.50.

Direct debit customers have obtained the greatest cost reductions and would still benefit the most from switching companies. Prepayment customers have had the least cost reductions and virtually no benefit from switching.

Electricity companies have been required to invest in domestic energy efficiency; there have been no incentives for additional investment and none has occurred.

There have been no other benefits to the fuel poor, as an effect of supply

liberalisation. Innovative tariffs and schemes have been promoted primarily as a result of the Labour Government's pressure.

Northern Ireland

The fuel poverty problem in NI is so severe that every possible opportunity for alleviating it should be taken, even if the opportunity is small relative to the scale of the need.

The KeyPad is NI's innovative prepayment meter and should continue to be supported and become available for the fuel poor, at no extra cost, even if they have no bank account.

Debt levels are high in NI, but there are no disconnections.

The standing charge has been absorbed into the unit cost, for both gas and electricity. This is most beneficial for small users (mainly low-income).

The Energy Efficiency Levy (EEL) stands at £2 per customer and is spent almost exclusively on the homes of the fuel poor or vulnerable. From 1.4.2002, this could increase to £5, subject to consultation.

As a result of financial incentives for energy efficiency improvements (in the home), Northern Ireland Electricity has reduced domestic consumption by a further 110GWh (in addition to EEL). The savings are more cost effective than in GB, because of higher electricity costs.

The EEL and the incentive have provided £37m customer lifetime benefits, of which about £25m has been received by disadvantaged customers.

The outlook

The financial benefits of liberalisation in NI, with the present level of support for the generators, is unlikely to achieve price reductions as great as the fuel poor have received already, from the above administrative approach. The consensus in NI is that liberalisation is unlikely to deliver competition and price decreases to householders.

The electricity in NI is the most carbon intensive in the UK – with no nuclear component and minimal renewables, it is all generated from fossil fuels – so reducing the use of electricity and replacing it with cleaner supply in NI is an important contribution to the UK's climate change strategy.

The Availability Payments to the generators are perpetuating the production of this polluting electricity and causing hardship to all consumers in Northern Ireland, particularly the fuel poor, through high prices. This is a prime example of a perverse market structure. Over 70% of the inefficient fossil-fuelled plant will be closed by 2004 and replaced by efficient combined cycle gas turbines.

Sales of green electricity are rising fast: the Regulator gave EcoEnergy a target of selling 25GWh of green electricity by 2005, of which 6 GWh demand should come from the domestic sector. The indications are that EcoEnergy sold 30GWh in 2001 – five years ahead of the Regulator's target.

If liberalisation is successful, external companies will enter the market. ESB, in the Republic, has no surplus capacity and companies in GB will have to use the Moyle Interconnector from Scotland, to reduce prices. The interconnector can only carry the equivalent of one-third of current supply.

The development of the gas network is occurring, but will only be available to a maximum of a third of households by 2004. Targeting this benefit on the fuel poor

should be a priority. The availability of gas is welcome and is introducing lower prices (and lower carbon emissions) for domestic customers.

There are no regional electricity price differences in NI, at the moment. The introduction of gas (a fifth of the price of electricity at the meter) and, if liberalisation is successful, cheaper electricity could result in a substantial price differential across Northern Ireland, with some households having access to both gas and cheap electricity, and others to neither. The extensive use of domestic combined heat and power, whether fuelled by gas or other fuels, would provide substantially lower cost services and additional, cheaper electricity.

Safeguards in NI liberalisation/Recommendations

One of the best safeguards is to involve consumers in the debate, to ensure that proper protection is provided, from the beginning and not only after problems have been demonstrated.

At an absolute minimum, no fuel poor household should have higher electricity bills as a result of liberalisation. This depends on keeping the real benefits that have already been obtained, by the present Regulator, for the fuel poor; these should be enshrined in the regulatory process and be made permanent.

These social controls (on standing charges, the KeyPad, energy efficiency investments) should be retained, even if this lessens the likelihood of new competitors entering the market. These benefit the majority of the fuel poor, which liberalisation is unlikely to do.

The initial estimates – which may be high – indicate a cost of £100 per household to introduce liberalisation. The costs are bound to be high in such a small market.

The Regulator could investigate whether liberalisation costs can be paid, solely by those that switch, rather than all householders – as indicated by a German court.

If the Regulator is confident that liberalisation will achieve real savings, then it should be done as quickly as possible. Otherwise, it should be resisted until the last moment – 1.1.2006 in the draft directive.

The Regulator should consider requiring a maximum price differential between the payment methods, in the same company, whether the incumbent or a competitor. At the moment, there is a fairly narrow cost differential of £10 between Northern Ireland Electricity's various tariffs. This should be preserved or reduced.

The number of tariffs provided should be sufficient to allow people to pay for electricity or gas at daily, weekly, monthly intervals; in cash or through a bank account; in person, by phone or with direct debit. Support for fuel direct should continue.

A licence condition should ensure that doorstep selling occurs only through members of the appropriate, recognised body, to protect consumers.

Security of supply will be enhanced if householders use a range of fuels, to include biomass (wood fuel for domestic combined heat and power), and solar (for hot water or for electricity). With an emphasis on energy efficiency, each household needs less electricity, so that more households can be served, even from a limited grid network.

Transfer procedure, when consumers switch companies, should be simple to operate and easy to monitor and enforced through a Code of Practice.

Cost comparisons on a uniform basis should be available through an authorised website and other more accessible forms of information. This could be started soon, to give cost and carbon comparisons across the full range of fuels.

Energy efficiency advice should be made available, on a proactive basis, to help customers with high or unusual bills, to assist them in accessing grants, and to prevent the build-up of debt.

In GB, 20 utilities (owned by 8 major companies) are competing to sell electricity to domestic customers. With such large numbers of competing companies, some regulation can be relaxed. In Northern Ireland, even if liberalisation is successful, there will only be a handful of companies, so it is unlikely that regulation can be relaxed and may need to be stronger.

Liberalisation needs to be designed to ensure that the maximum benefits of both electricity liberalisation and the growing gas network occur for the fuel poor. In addition, there has to be protection for the households in the remaining areas, where there is neither cheaper electricity nor gas. If 25% of households, for a further five years, are not going to have lower prices, this should not prevent liberalisation helping the other 75%. The task would be to make sure that the different sectors (or areas) in NI are protected in different ways.

The rural areas are where there is likely to be the least competition. Many of these have substantial local, new and renewable resources (wind, biomass, domestic combined heat and power and biogas) and these should be exploited to benefit the fuel poor. There are two main options to protect the fuel poor and these could apply to all supply companies:

- Put the poorest households on a green tariff. With rising fossil fuel prices, particularly oil and gas, and the threat of carbon taxes for the domestic sector, giving low-income households a green tariff would protect them from future price rises. This would have the effect of preventing future fuel poverty. To provide protection, the cost of green electricity would have to be lower than the standard tariff, rather than carrying a premium.
- Make reducing fuel poverty a requirement of the licence to supply, perhaps supplemented by incentives (as with energy efficiency) if the target is exceeded. Because of the difficulties of identifying the fuel poor (particularly on the doorstep), this could be monitored in various ways, for instance:
 - by lowering the average carbon emissions per house – the reductions in carbon would come from introducing greater energy efficiency at all stages of the supply chain (including in the house) and greater use of renewable and new sources of energy (wind, micro-chp, solar thermal);
 - an alternative measure would be to improve systematically the energy efficiency rating of the housing stock. This could be measured through SAP ratings, in conjunction with Northern Ireland Housing Executive, because of their responsibilities under the Home Energy Conservation Act.

Through whatever route, when liberalisation occurs, the Regulator should consider imposing a statutory duty on all utilities to assess the impact of its activities on the fuel poor and report annually. This duty will require the utilities to consider fuel poverty from the outset.

NI should be treated as a showcase for sustainable energy. This is where energy efficiency, new and renewable forms of supply are most cost effective, as the electricity price is so high. The problem of fuel poverty is extensive, providing real opportunities for successful utility involvement. If sustainable energy cannot be made to work in NI, it will be even more difficult in GB.

1 Introduction and aims

The objective of this study is to provide recommendations for the liberalisation of electricity in Northern Ireland, so that the fuel poor are protected from any harmful effects, based on experience in Great Britain¹. The gas industry is largely excluded from this study, because it is still small in NI, though important lessons and caveats are included.

Fuel poverty occurs when a household would have to spend more than 10% of its income on fuel, in order to have adequate heating and other energy services, although the NI definition, in the UK Fuel Poverty Strategy (DEFRA/DTI 2001, para 7.1), only refers to heating. Fuel poverty is a multi-dimensional problem, caused by a combination of energy inefficient housing and equipment, under-occupation of properties, low incomes, high fuel prices. Therefore, fuel poverty is not going to be solved by reduced electricity prices alone, although these will make a useful contribution. Conversely, higher fuel prices would make fuel poverty worse. In addition, there are cost issues in electricity supply in NI that will not be addressed by completing the process of liberalising supply, particularly relating to the availability payments. However, fuel poverty is an important social problem in NI and it is important that the opportunities and threats posed by liberalisation of electricity are understood and, where possible, adverse impacts on the fuel poor avoided and positive benefits secured.

The principle of liberalisation is that by providing customers with the opportunity to choose their gas or electricity supplier, there will be competition between the different companies in order to grow or maintain market share. This competition will result in lower prices, better services and a greater focus on consumers generally. This assumes that there will be sufficient companies competing against each other to serve domestic customers in Northern Ireland: an assumption that is not easy to confirm.

The electricity supply industry in NI is already liberalised for large (non-domestic) customers. The main risk to the fuel poor is that the costs of liberalisation will not be offset by a reduction in prices as a result of competition.

The liberalisation of the electricity industry (in its entirety) may be required under draft EU legislation by January 2006.

¹ Great Britain comprises England, Wales and Scotland. The UK includes GB and Northern Ireland.

Aims

The aims of this work are:

- to review the effect that liberalisation in GB has had on the fuel poor, particularly to identify where opportunities for benefiting the fuel poor have been missed;
- to understand how the situation in Northern Ireland is developing and how liberalisation might impact (both negatively and positively) on the fuel poor;
- from this research to make recommendations about how Northern Ireland could maximise benefits to the fuel poor through the liberalisation process, and avoid problems experienced in GB.

The study was undertaken at the request of Douglas McIlldoon, the Director General of Electricity Supply (Northern Ireland), and has been based on interviews with key personnel (Appendix 1) and a collation of existing evidence. Many fascinating issues are raised by this study – ranging from electricity supply capacity in the Republic, the trends in fuel poverty in GB, to the financial support for electricity generation in Northern Ireland – that cannot be covered in detail. Readers will have to be tolerant of the relatively narrow focus of this report, in order, like us, to establish how to help the fuel poor in Northern Ireland.

2 Fuel poverty in Great Britain

The problem of fuel poverty is receiving serious attention from the Labour Government and includes a commitment to eradicate fuel poverty by 2010 for the vulnerable (households on benefit that contain an elderly person, young child or disabled person). The policy is being steered by an Inter-Ministerial Group on Fuel Poverty, set up in November 1999. The policy is being defined, as well, by legislation, passed as a result of a series of private member's bills (eg Home Energy Conservation Act 1995, Warm Homes and Energy Conservation Act 2000, and the Home Energy Conservation Bill 2001).

The numbers in fuel poverty depend upon the definition used and this is a contentious issue (DEFRA/DTI 2001a, p2). At a minimum, 3.5m households were in fuel poverty in the UK in 2000 and 85% of these are defined as vulnerable (DEFRA/DTI 2001b, p10). The drop in energy prices as a result of electricity and gas liberalisation is credited as one of the major reasons for the decline in the number of fuel poor:

“Between 1991 and 1996, the number of households in fuel poverty 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” (DTI 2000, pp9–10).

An examination of the distributional effects of any price reductions is required, if these benefits for the fuel poor are to be confirmed.

3 GB experience of liberalisation

The success of liberalisation can be judged on whether there is:

- 1 genuine competition, because there are sufficient companies competing to serve domestic customers;
- 2 consumers are switching companies;
- 3 a net price reduction, for all consumers, particularly for the fuel poor;
- 4 an effect on other aspects of electricity supply.

However, any analysis of price changes is complicated by the many other changes in markets, energy prices and technologies, which have occurred before and after liberalisation, as outlined by Patterson (2000):

‘In the first decade of electricity liberalisation, politicians have laid heavy stress on the price of a unit of electricity, to measure the success of the policy. The argument is shallow, to put it mildly. Tax regimes, depreciation rates and other asset accountancy, subsidies and cross-subsidies, and the regulatory treatment of monopoly networks mean that the price of electricity is what the government wants it to be.’

3.1 Structural changes, GB

In England and Wales, the gas industry was privatised in 1986 and a fully competitive and liberalised market came into force in mid 1997 – any domestic consumer could purchase from any company prepared to supply in that area. Electricity was privatised in 1990 and was fully competitive by May 1999 (DTI 2000, p3). There had been partial domestic competition from September 1998. These two major changes required the companies to accept the discipline of competing in the capital markets (privatisation) and then of competing for customers (liberalisation). A component of competition and liberalisation was introduced for the generation industries, first through a wholesale market, the pool, and more recently through the New Electricity Trading Arrangements (NETA). In addition, the industry has been restructured and broken up into smaller component parts (eg generation, transmission, distribution and supply). Regulators were introduced for electricity and gas separately and have now been combined into one office: the Office of Gas and Electricity Markets (OFGEM). The powers and remit of the regulators have changed, and are still doing so. Over this period, there have been a number of company mergers and take-overs, some of which are allowing the development of vertically integrated companies (PowerGen), reversing the principles of privatisation. Establishing the effects on any one process from this complex set of institutional changes is extremely difficult.

3.2 Has liberalisation introduced competition?

This report is concerned with the liberalisation of supply only – from May 1999 onwards for electricity – as this is the interface with consumers. However, it is difficult to distinguish the effect of liberalisation of generation from liberalisation of supply.

3.2.1 Generation

How many competing companies does it take to make a market? In England and

Wales, the electricity generation market was 'dominated by two large companies and plagued by accusations that those companies have engaged in anti-competitive practices and thus kept the price of electricity artificially high' (Graham 2000, p182). New generating companies selling in the pool produced more competition. The replacement of the pool with NETA is expected to achieve reductions of 25% in generation costs. There are concerns about the design of NETA, particularly with regard to uncertain supply, such as renewables and CHP, but the drop in price demonstrates that the number of players and the design of the 'market place' interact. The effect on the domestic bill of these continuing wholesale reductions is still unclear.

3.2.2 Supply

About 20 companies are electricity suppliers in GB. This is certainly theoretically sufficient to provide competition. Many companies are competing in each other's areas.

Suppliers are being proactive in seeking new customers. In a survey of 3,500 of their members, *Which?* Found that 60% of switches had been instigated by the supplier, through phone, doorstep and street sales (October 2001, p26).

3.2.3 Have people been switching between companies?

In brief, yes! In the electricity market, 12 million customers have switched supplier since May 1999 out of a total of 24 million domestic electricity accounts and switching is continuing at the rate of around 400,000 customers each month. These data suggest that there is genuine supply competition and that many consumers are taking advantage of this; some people have switched more than once. However, as later evidence shows, competition has not been equally beneficial to all customer groups.

3.3 The effect of liberalisation on prices

So has this competition delivered price reductions to fuel poor consumers? There are several issues to be considered when looking at what prices the fuel poor are facing since liberalisation. There are only two year's data on which to base analysis of prices since supply liberalisation, although the companies had several years' prior notice in which to prepare.

3.3.1 Average price trends – description

For both electricity and gas, 1985 was the recent peak year for prices (Figure 1). While it is true that electricity prices in GB have fallen since, it is equally true that electricity prices were, in 1999, the same as they were in 1970, when deflated by GDP. Gas prices have fallen since the late 1980s, because initially, British Gas was locked into expensive take-or-pay contracts. By 1999, the average consumer had experienced price reductions, whether or not they had changed supplier. Most references to the benefits of liberalisation conflate the effects that stem, separately, from generation and supply, though both are embedded in the final price to consumers.

Prices are still falling: Provisional 2001 figures for electricity show an average standard credit bill fell by £7 over average 2000 bills. Comparable falls for average direct debit and pre-payment bills were £5 and £6. The relative effects on different tariffs are discussed below.

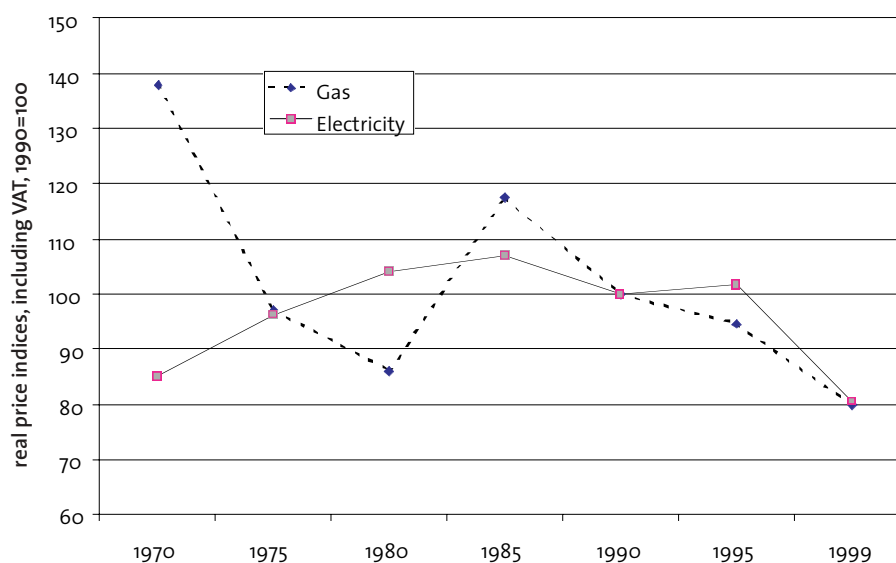


Figure 1: Domestic gas and electricity price indices, 1970–99

Note: prices deflated by the GDP deflator, with 1995 base year, but rescaled to 1990=100

Source: DTI 2001b, p30

3.3.2 Average price trends – interpretation

According to the DTI (2001a, p209), the main factors influencing electricity price reduction, in GB, are:

- reduction in fossil fuel levy, from 11% in 1991/2 to 0.3% in 2000;
- competition;
- regulation;
- reduction in VAT from 8% to 5% in 1997. VAT was first imposed, at 8%, in 1994.

In addition, there are other factors, which have been important such as the introduction of more efficient generation technology and changing world fuel prices. Disentangling the contribution each of these factors has made to falling prices since privatisation, generation or supply liberalisation is very difficult.

Nevertheless, DTI is keen to declare liberalisation a success: ‘Consumers enjoy lower prices, better choice and higher standards of service’ (DTI 2001b, p1).

One of the best dissections of price trends (1990–99) is given by Thomas, who gives a more critical analysis:

‘... the market now sets a large proportion (about 70 per cent) of an electricity bill. The introduction of markets and competition are often uncritically accepted as inevitably bringing benefits to consumers, but competition is not an end in itself, it is a means of ensuring that prices are kept as low as possible. The generation sector was too concentrated, and only now does there seem to be a large enough number of companies competing to give any hope that the market will behave competitively. The additional costs of the transitional coal contracts and of uneconomic gas-fired power plants appear to have been borne almost exclusively by captive consumers, especially residential consumers. As a result, despite large falls in the real price of gas and coal, the two main power station fuels, residential consumers are paying as much for the electricity generation element of their bills as they were when the industry was privatised. The generation companies and large consumers have been able to capture the benefits of lower fuel prices. Experience with gas seems to be similar with the picture outlined above for electricity. *Cuts in regulated prices seem to have been the*

main source of consumer price cuts while savings from cheaper fuel costs have not been passed on (emphasis added).

'It may well have been that a more rigorously regulated sector that did not allow companies to discriminate against small consumers and that forced companies to pass on much more of the cost reductions to consumers would have served small consumers better' (Thomas, 2000).

3.3.3 Price differentials between GB companies before liberalisation

There has always been a price range across the different companies in Great Britain. In 1995, there was a 22% variation between the highest and lowest regions in GB (£61), with NI 25% above the least expensive (Table 1). In 1995, when there was no effect from supply liberalisation, a customer in England and Wales on the average tariff had to pay £23 more than a customer of Norweb. Part of the variation could come from the effect of transmission and distribution costs being higher for more distant regions. However, the two Scottish companies both had lower costs than London, which would demonstrate that other factors are of greater importance. In 1995, the customer had no chance of switching companies.

Table 1: Regional domestic electricity prices, UK 1995

<i>Company</i>	<i>£pa</i>	<i>Index, based on Norweb</i>
Norweb	276	100
SEEBOARD	278	104
Scottish Hydro-Electric	289	105
Yorkshire	291	106
East Midlands	294	107
Eastern	295	107
Midlands	297	108
Southern	298	108
Scottish Power	298	108
London	299	108
Northern	305	111
SWEB	318	116
Manweb	322	117
SWALEC	337	122
England and Wales average	299	108
NIE	346	125

Note: cost is for standard credit, including standing charge, 8% VAT, based on annual consumption of 3,300kWh. This level of consumption is conventionally chosen for comparisons, by the DTI.

Source: based on DUKES 1997

3.3.4 Price differentials between GB companies after liberalisation

By 2000, standard credit customers in South Wales were paying the highest average bills at £285, with customers in the East Midlands (now PowerGen) paying the lowest at £240 (Table 2). The maximum price differential had dropped from £61 in 1995, to £45

in 2000, demonstrating that prices have converged, not diverged, in GB as a result of liberalisation.

Customers in Northern Ireland still have the highest average quarterly credit bill in the UK at £308. Thus, in 2000, the most expensive GB bill was 19% above the cheapest, and NI was 28% higher than the cheapest. All companies have shown the price drops indicated in the average (Figure 1). Between 1995 and 2000, the price differentials within GB have reduced from 22% to 19%, though the range across the UK has increased from 25% to 28%. Thus, the NI consumers are, relatively, worse off.

Table 2: Regional domestic electricity prices, UK 1990–2000

	1990 £*	1990 Index	1995 £	1995 Index	2000 £	2000 Index	2000 price as a % of 1995
Scottish Power	191	100	298	108	268	112	90
Norweb	201	105	276	100	249	104	90
East Midlands	203	106	294	107	240	100	82
SWALEC	223	117	337	122	285	119	85
England and Wales average			299	108	255	106	85
Northern Ireland			346	125	308	128	89

* based on 2,500 kWh pa, including standing charge. For 3,300kWh the ranking could be slightly different, depending on the effect of the standing charge.

Based on various DTI sources, including DUKES and Energy Trends, for consumption of 3,300 kWh pa, on standard credit, including standing charge and VAT

Northern Ireland consistently has the most expensive electricity in the UK and SWALEC has been the most expensive in GB. But there is remarkably little consistency about which company will offer the cheapest supply and in the three years examined, it has been three different companies.

ESB² supplied domestic customers at a price of 7.34 Irish pence/kWh in 2001, rising to 8.00 Irish pence/kWh (6.67p/kWh sterling) in December 2001. Therefore, electricity in Northern Ireland is approximately a third higher at 10p/kWh (CER 2001).

3.3.5 Differential pricing of payment methods

There are three main payment methods, for the general tariff: standard credit, direct debit (the cheapest) and prepayment (the most expensive). Direct debit customers receive a discount over the standard credit, in return for entering into a guaranteed method of payment. Prepayment meter users are charged for the additional cost of the supporting infrastructure, such as equipment to recharge the key or token.

Since full liberalisation in 1999, the average consumer's costs dropped by £13–14 (Table 3), this is an average of up to £7 per year. Over the years 1995–1999, the average annual price drop was over £8 DEFRA/DTI (2001b, p130), indicating the problem of establishing the relative effects of different, concurrent processes. *Prime facie*, the effect of supply liberalisation does not appear to have been that considerable.

² ESB is the electricity company in the Republic of Ireland, responsible for generation, transmission, distribution and supply.

However, according to the Family Expenditure Survey, the average household spent £6 per week (£312 pa) on electricity in 1998–99 (ONS 1999, p19), so the real benefits would be £1–2 more than those in Table 3. Although the absolute difference between the payment methods has been static, this is an increasing percentage: prepayment was 6% more expensive than standard credit in 1999 and 7% in 2001.

Table 3: Electricity prices, by payment method, UK 1999–2001 (£pa)

	1999	2000	2001	1999 above 2001
Standard credit	264	257	250	14
Direct debit	253	245	240	13
Prepayment	281	274	268	13
Prepayment above direct debit	28	29	28	

Source: DEFRA/DTI (2001b), p130

Note: for consumption of 3,300 kWh pa, including standing charge and VAT. 2001 figures are provisional.

In 2001, the prepayment user is still paying £28 (12%) more than someone on direct debit. The extra cost of prepayment can rise to at least £80 (over 35%), at the same level of consumption (Appendix 2, Figure 4).

In 2000 and 2001, the greatest savings from switching have been available to direct debit customers (Table 4). The DTI obtain this information from a GB-wide quarterly survey of what customers actually achieved. Not all companies are competing in all areas, so the range within any one region is limited. In addition, the prices offered by the non-local company are not regulated. However, the savings achieved by those who have switched are what is recorded here. Thus, for standard credit customers, at a standard level of consumption, the price range across GB appears to have fallen from:

- a potential of £61 in 1995 (the maximum in Table 1, prior to liberalisation and the ability to switch) to
- a potential of £45 in 2000 (the maximum in Table 2, after liberalisation) to
- an achieved £14 in 2000 (based on reported benefits).

The actual savings achieved by householders are bound to be less than the maximum, as few people live in the most expensive area and would be eligible for the maximum benefit. Also, the prices offered by the utilities, once outside their area, may be considerably different to the regulated prices, within area. For more details of price comparisons within and between companies see Appendix 2.

Table 4: Achieved savings for main payment methods, UK 2000–1

	Direct debit	Standard credit	Prepayment
Savings achieved from switching companies			
– 2000	£19	£14	£2
– 2001	£16	£14	£3

Based on various DTI sources, including DUKES and Energy Trends (September 2000, pp20–1), for consumption of 3,300 kWh pa, including standing charge and VAT. 2001 figures are provisional.

Direct debit customers pay the lowest tariff and have the greatest benefits from switching companies. Prepayment meter users pay the highest tariff and have virtually no savings available to them. These differentials are based on 3,300 kWh of consumption – a convenient and well-established average figure. This excludes off-peak usage. In reality, electricity consumption would be considerably higher in NI, because of the predominance of electricity as an energy source (Appendix 3).

When liberalisation was first introduced, the differentials between tariffs were increasing, as many companies introduced the direct debit discounts without altering the cost for prepayment meters. As a result, Ofgem has introduced a requirement under the supply licence to limit the extra cost of prepayment meter supply to no more than £15 more than paid by standard credit customers (DTI 2000, p11). The average is larger at £18 across all users (Table 3). The explanation is that the licence condition applies only to the incumbents (the Public Electricity Supplier – PES – in its own territory) as the Regulator has no powers over second-tier suppliers and other competing companies.

3.3.6 Risk of switching

Companies are able to offer any prices they choose, outside their own area, for any of the payment methods. The range that this provides to the local residents is greater than the range identified above, of the prices for the incumbent company. An example, based on Figure 4, Appendix 2, is that a householder on the standard credit in Yorkshire could switch to SWEB. If this customer then gets into debt and is put onto the SWEB prepayment meter tariff, they would have no protection, no chance of switching (because they are in debt) and would then have to pay an exorbitantly high extra cost (over £80 pa) for the privilege. Thus, although there needs to be a clear presumption that there will be a full range of tariffs and payment methods available to all customers, especially those on a low income, this alone will not be sufficient to protect consumers. The DTI's concern seems well-founded: 'There also remains concern, despite the presence of licence conditions, that differential pricing could become more prevalent as competition grows' (2000, p11).

3.3.7 Price control

Ofgem believes that the safety-net restraint on supply prices should be able to be removed from 2002 – it lasts until April 2002 – provided there is evidence of sufficient competition. This only applies to the prices charged by the incumbent company as there is no price constraint, other than competition, on any company acting outside its area, as a second-tier supplier. The view of the Centre for Sustainable Energy (CSE) and the National Right to Fuel Campaign (NRFC) is that 'given the lack of competition in the prepayment market, we do not believe it appropriate for Ofgem to lift price controls' (CSE/NRFC 2001). There is little incentive for companies to offer price reductions to prepayment meter users, if they are in debt and a captive customer for the utility.

One remaining protection for consumers against substantial price rises, is the 28-day rule, which permits consumers to give the utility a month's notice of termination of contract. This clause is much criticised, as it is assumed to inhibit investment in energy efficiency and the development of energy service companies (ESCOs). However, as some of the above evidence has shown, consumers still need to be free to get out of supply contracts if there is a major price rise imposed on them.

The greatest financial savings would occur if a consumer switched from one of the expensive tariffs to a cheaper one, especially if s/he could change from prepayment to direct debit. There is little evidence of whether this is occurring, though the growth in prepayment meters (below) is an example of the reverse.

'Although a lower proportion of frequent and prepayers on the Panel³ had bank accounts with direct debit facilities than consumers paying by other payment methods, over half still had access. The research therefore concluded that wider problems of poverty, financial insecurity and social exclusion explained why this group did not use direct debit, as much as lack of access to the facility itself' (CSE/NRFC 2001).

3.3.8 Who has switched?

Standard credit is still the main payment method, with about half of all households still using this form (Table 5) and less than 10% of the population having a prepayment meter for electricity. As would be expected from the benefits available, customers on a direct debit are most likely to switch and are no longer with the home supplier. Prepayment meter users are the least likely to switch.

Table 5: Market shares by payment type, GB Q4 2000

	<i>Payment method</i>			<i>Total/average</i>
	<i>Direct debit</i>	<i>Standard credit</i>	<i>Prepayment meter</i>	
Total of whole market*	37%	54%	9%	
Split between:				
Home supplier	70%	78%	88%	
Other suppliers	30%	22%	12%	
Number of households switched (m)	2.67	2.86	0.26	5.79
Saved (£pa) – Table 4	17.5	14	2.5	15
Total benefit (£m)	46.73	40.04	0.65	87
Proportion	53%	46%	1%	

Source: DTI Energy Prices, June 2001; *Q2 1999 from Ofgem 1999, p39. Based on 24.1m households in GB in 2000

In a year, £87m is being saved by consumers as a result of fuel switching, but only 1% of this is going to prepayment meter users – disproportionately low-income. Over half is going to direct debit customers – predominantly higher income. This demonstrates the extent to which liberalisation is benefitting the rich substantially more than the poor.

These numbers imply that less than 6m households are with other suppliers, whereas, at that time, 7.8m were reported to have switched. This may be a measure of the amount of 'churning' in the system, with some people swapping more than once and others returning to the home supplier. This would parallel the BG experience, where '2m of our customers have returned home' (BG advertisement).

Prepayment users are less likely to have switched, partly because consumers with debts are blocked by most companies from switching: by 2000, the electricity

³ An unrepresentative sample of 300 low-income households – see appendix 2.

companies had prevented 600,000 people from switching, for this reason (Brooke 2000, p18). In the last year, 250,000 (5%) out of 5 million switches were prevented due to debt (Ofgem pers comm). Other disadvantaged groups have not participated fully in fuel switching – see Appendix 2 for evidence on gas customers. NAO/Ofgem research shows that 30% of those with household incomes above £25,000 have switched supplier, but less than 20% of those with incomes below £9,500 have done so (MacKerron 2001, p3). The most recent research indicates that the numbers of low-income and pre-payment users who are switching is rising and becoming close to average levels, though Ofgem still have concerns about the lack of pensioners switching (2001).

It appears that price is not the only factor motivating consumers when they switch companies. East Midlands, the cheapest electricity company, has seen a larger number of consumers switch than SWALEC, the most expensive (Figure 3, Appendix 2). Either that, or consumers have been misled into switching away from cheaper to more expensive suppliers. Many companies are offering inducements, such as air miles or free cavity wall insulation, but these are available mainly for direct debit customers.

3.3.9 Numbers with prepayment meters

The utilities have, apparently, been requiring low-income consumers to use prepayment methods. For instance, in June 1999, the proportion of BGT (British Gas Trading) customers on prepayment meters was nearly twice the level in 1991, before competition was introduced (Table 6). Most of the customers had switched from other credit payment methods (budget, weekly, etc), rather than from direct debit (Ofgem 1999, p39). There has been pressure on customers not to have, or not to continue to have, fuel direct⁴, presumably as this is another tariff deemed to be expensive to the utility.

Table 6: Customers on prepayment meters, GB 1991–2001 (millions of households)

	<i>Gas</i>	<i>Electricity</i>
1991	0.75	1.15
1992	0.75	2.10
1993	0.80	2.40
1994	0.85	2.70
1995	0.85	3.25
1996	0.95	3.50
1997	1.10	3.60
1998	1.45	3.70
1999	1.60	3.70
2000	1.60	3.60
2001(p)	1.60	3.70

Source: DEFRA/DTI (2001b), p129 and DTI (pers comm)

The number of customers with a gas prepayment meter has increased two-fold, and for electricity, three-fold, over 10 years. There may be an overlap, with some households having both types of prepayment meter. At a minimum, 3.7m households

⁴ When a benefit claimant has money deducted, at source, to pay a fuel bill. There is no additional money provided in benefit levels.

have a prepayment meter, in comparison with at least 3.5m in fuel poverty in Great Britain.

The majority of prepayment meters are in the homes of low-income households – not a complete overlap with the fuel poor, as many pensioners are fuel poor, but few are on a prepayment meter. The prepayment tariff is the most expensive tariff, but the ability to budget through prepayment is valued highly by many low-income families. The use of a prepayment meter or of paying in cash can include extra ‘hidden’ costs, for instance in the low-income panel, 5% paid transaction costs (at the counter) and 23% paid extra travelling costs. This group lived on very low incomes and paid costs not associated with other payment methods (CSE/NRFC 2000).

These figures demonstrate the complexity of confirming that supply liberalisation has benefited the fuel poor in Great Britain: most of the increase in gas prepayment meter ownership has occurred since 1997, whereas the numbers of electricity prepayment users has stayed static since 1997. There is an inconsistency with the 9% of households on prepayment meters (Table 5) as 3.7 million households is 15% of all GB households.

The annual costs of prepayment meters is £28 more than direct debit and £18 more than standard credit (Table 3), so low-income households are paying an average of £22 more than other households – over £80 million in 2001 from electricity customers alone. This is money that is extracted from some of the poorest households, because they wish to budget carefully and avoid debt.

3.3.10 Costs of liberalisation

The costs of liberalising the markets in Great Britain include:

- development and running costs (over 5 years) associated with the pool. As estimated by the Director General of Electricity Supply, in evidence given to the Trade and Industry Committee, with, apparently just over two-thirds of these costs (£165m) passed on to consumers (HC871, 1998, para 22).
- developing and operating services designed for the use of second-tier electricity suppliers. These total £611m, some four times the original estimate by the DGES (ibid).

‘It is unacceptable that a major infrastructural project, originally estimated by the DGES to cost, at most, £375 million over five years, should now be costing £726 million over the same period, particularly when electricity consumers are directly footing the bill through higher prices’ (HC871, 1998, para 24).

‘The £726 million cost of liberalisation which the DGES will allow PESs to pass through to consumers over the next five years averages approximately £4 on the average annual bill’ (HC871, 1998, para 30). This appears to indicate that 69% of the costs associated with both the pool and the second-tier operations have been passed on to domestic consumers. If correct, this share is twice the proportion of sales to the domestic sector. The latter is about 34% of all electricity.

Subsequently, Ofgem increased the amount the companies were allowed to recover, and extended the period of recovery to seven years, after companies supplied new information on the costs incurred. The companies recover £121 million a year from customers on average for the period 1998–99 to 2004–5 (HC85, 2001, p2). This is about £5 per household, in each of those years. At the end of the seven years, the costs will have been paid off whereas the benefits will continue.

Subsequently, there has been the additional cost of NETA, which is thought to be

about the same sum again in total (SEEBBoard, pers comm). In addition, the companies have their own internal costs of about £50–70 for attracting a new customer.

In section 3.3.5, it was demonstrated that the average annual saving since liberalisation has been up to £7pa. Thus, the average domestic consumer has had to pay £5 to save £7, so far. The costs remain the same until 2004–5, but the future savings are not known. These average savings are an amalgam of the savings achieved by those who have switched (£15 annual saving for 6 million households – Table 5) and the remainder who have not. As one-quarter of all households have saved £15, the remaining three-quarters must have saved about £4.30, to give an average of £7. Thus, the non-switching householders have saved £4.30, after paying towards the cost of liberalisation. Liberalisation is of most benefit to the switchers.

As the switchers are more likely to be from higher income groups, this confirms that the ‘present UK system therefore effectively ‘taxes the poor’ (MacKerron 2001, p3). This raises the question of whether all consumers should pay the cost of setting up the new system. ‘A court in Germany recently agreed that “socialising” switching costs (spreading them over all customers) made it easier for competitors to enter the market. However the court also decided there was no reason why customers who do not switch supplier should pay costs incurred by those who do’ (ibid).

Ofreg could investigate what implications this ruling has for the liberalisation process in Northern Ireland and whether it is appropriate for all customers to share the cost of liberalisation, when the benefits accrue disproportionately to the better-off households.

3.4 Effect of liberalisation on other aspects of electricity supply

3.4.1 The process of switching companies

Switching companies is not a quick or trouble-free process and takes several weeks, if not months. Considerable problems have occurred with both the process of switching and the sales techniques employed by the companies to encourage this to happen.

The complexity of the choices makes it difficult to ensure that all consumers will have clear information. In the recent *Which?* survey of 3,500 members, only 65% felt that they were getting the low prices they had expected before switching (October 2001, p29).

3.4.2 Cross-subsidy

There are cross-subsidies inherent in every system: the unit costs of serving a distant customer are greater than those of supplying someone nearby, but the tariff remains the same in each region. Some cross-subsidies are easier to identify and label, and liberalisation encourages this process. Because of this, competition is said to lead to cost reflective pricing. Consumers on direct debit are the cheapest to serve, so these tariffs have dropped the most. Budget plan users pay more, so do prepayment meter users. ‘The market bias to cost-reflective pricing will damage disadvantaged consumers’ (Brooke 2000, p27), as demonstrated above. One reason for the price differential is that the costs associated with prepayment meters can be identified separately, by the utility. Equally, if a high proportion of prepayment meter users are in debt, and unable to change suppliers for this reason, there is no incentive on the company to reduce the prepayment meter tariffs.

There is bound to be some inconsistency in the identification of cross-subsidies and it is a matter for debate and regulation, which are deemed to be harmful and which not.

Some organisations believe that the poorest people, on prepayment meters, should be subsidised by better-off customers. However, Age Concern opposes cross-subsidy, believing that it would penalise more elderly people than it would help (Brooke 2000, p17). This is because the elderly rarely have prepayment meters, as they are more likely to go cold than to get into debt. There are similar arguments about the absorption of the standing charge into the unit costs. In this case, it is the small consumer, often an elderly person, who benefits, whereas larger householders with all-electric homes, who suffer.

The Utilities Act 2000 provides for cross-subsidies to be introduced to assist disadvantaged groups. In the UK, there is no unit price differentiation between rural and urban customers, though there are variations as a result of transmission and distribution costs. Otherwise, the aim of liberalisation is to expose and eradicate cross-subsidies. This is one reason why the French are reputed to be opposing the EU directive, which makes competition mandatory. The French want to 'maintain the idea of public service obligations for public services. They adhere strongly to the view that no citizen should pay a different price for an identical amount of electricity consumed regardless of where they live. European Union liberalisation blows a hole in this commitment' (Brooke 2000, p16).

3.4.3 Energy efficiency investments and energy services

As discussed above, any consumer can change company, by giving 28-days' notice. This both protects consumers against large price rises and is deemed to be a major obstacle to the development of energy service contracts and the installation of energy efficient products, to be paid for through lower consumption. The utilities argue that they cannot invest in a consumer, who might switch to a new company at 4-weeks' notice. There could be a split between the selling of electricity or gas and any service agreement, but these ideas are poorly developed.

Since privatisation, first the electricity companies and now the gas companies are required to invest in reducing demand. The original Energy Efficiency Standards of Performance (EESOP) required a specified level of expenditure. The Energy Efficiency Commitment (EEC) from April 2002–5, requires a specified level of savings. The cost of achieving these savings is part of the competitive pressure on companies. The annual cost is expected to be about £3.60 per customer, both for gas and electricity, each year until 2005. This is, in total, higher than the expenditure in NI of £2 on the Energy Efficiency Levy, currently raised on electricity.

The fuel poor are only certain to receive more, on average, in benefits, if the programmes are clearly targeted on the fuel poor. Much investment has gone to the disadvantaged, which will probably include all social housing residents and all pensioners – a much wider category (Boardman and Darby 2000, p16). Historically (EESOP 1–3), 65% of the expenditure has been on the disadvantaged, whereas under EEC 50% of the benefit has to be derived by the fuel poor. Establishing the true flow of costs and benefits is difficult, as most programmes have to be fully-funded if the fuel poor are to benefit, whereas the fuel rich can be motivated by a subsidy or rebate. The EEC requirement is therefore the best approach for the fuel poor: to obtain 50% of the benefits may take much more than 65% of the expenditure.

As the money raised is a higher proportion of the expenditure in a low-income family, it is appropriate that it is disproportionately spent on them. The majority of the expenditure has been on low-energy light bulbs, but there have been useful, targeted initiatives, such as Fridgesavers. This provides a household on benefit with a new, (fairly) efficient fridge for about £30, provided that they have an old, working appliance to trade-in.

The expectation was that price competition would only be the first stage of liberalisation and that before long competition would take place on the basis of the services offered by the company. Although there has been some talk that domestic electricity and gas liberalisation would promote the rise of energy service companies (ESCOs), that is, companies which provided an efficient energy use package to consumers including energy efficient appliances and home improvements, this has not yet been forthcoming' (Graham, 2000, p186). The companies do not invest in energy efficiency beyond the level they are required to. Advice on energy efficiency is provided by some companies, beyond that required in the supply licences, but the whole subject is in need of clarification as to what constitutes appropriate advice for the disadvantaged (Boardman and Darby, 2000).

3.4.4 New tariffs and initiatives for the fuel poor

The Labour Government has been strongly encouraging the utilities to produce innovative ideas, to assist the fuel poor: 'the energy industry must also contribute to alleviating fuel poverty' (DTI 2000, p12). Most of the utilities now have at least one such scheme (www.ofgem.gov.uk/sap/initiatives-description). Some of these demonstrate welcome new thinking and offer a real chance of benefits to the fuel poor. However, the overall benefits are not yet determined and many of the schemes are relatively local or small scale. These innovative solutions – eliminating the standing charge, lower tariffs for low levels of consumption, special schemes to bring direct debits to those without traditional bank accounts – do not appear to have a link with liberalisation. They have been introduced purely in response to the clear priorities of the Labour administration and demonstrate the problems of relying on the market to protect the fuel poor: 'consumers must not face the market without appropriate protection' (DTI 2000, p13). Some of the initiatives under the Social Action Plan represent additional support for energy efficiency, for instance the Transco Affordable Warmth scheme, which underwrites the cost of leasing efficient boilers, for local authorities. Several are targeted on the fuel poor, for instance TXU's Staywarm tariff which provides fixed payments for claimants, regardless of the level of consumption: a move towards ESCOs.

Green electricity has been introduced since liberalisation and is an example of the greater range of tariffs expected. However, the tariffs have been poorly promoted and less than 20,000 customers have taken these up in GB. It is unclear whether these green tariffs should carry a premium when they are selling green electricity from NFFO-funded projects, where the capital has been paid off.

3.4.5 Service standards

Standards of service apply to customers of first-tier suppliers, but not to the customers of new entrants (Brooke 2000, p25). They are usually stipulated, by Ofgem, in Standards of Performance and involve the measurement of the number and duration of power cuts, length of time to answer the phone, and so forth. These have

been improving over time (eg DTI 2001b, p8), independently of liberalisation, and are often of more relevance to the middle classes, than the fuel poor.

Complaints to Energywatch (the consumer representatives) have risen by nearly 400% in the year to February 2000, indicating a drop in services (Appendix 2). Many of these complaints have been generated by the process of liberalisation. This may be reversed in time, but, so far, liberalisation is causing more disquiet amongst customers. There have been three main reasons for this rise:

- A lack of clear information, especially price comparisons.
- Bad sales practice, particularly with direct selling.
- Transfer problems.

Many of these problems would have been avoided through a slower liberalisation process and more attention to the needs of consumers, from the beginning. Consumer concern has not been high on Ofgem's agenda. However, there is no evidence that liberalisation has led to more or less complaints about other aspects of service.

3.4.6 Security of supply

Security of supply is of central and fundamental importance to consumers. They need to be able to rely on the lights staying on both in the short and the long term. In the long-term, there has to be confidence that market forces, or regulation, will deliver adequate quantity and diversity of generating capacity.

In a fully liberalised market, with several competing companies, there is a risk of supplier failure. This requires a plan for 'supplier of last resort' to take over the customers of a failed utility. In November 2000, there were 20 electricity suppliers active in the domestic market in GB, compared with 21 in July 1999 (Ofgem's website – <http://www.ofgem.gov.uk/docs/dcmrgaselec.pdf>, p25).

In the short-term and of much greater relevance to the fuel poor are policies on disconnection. Householders who are disconnected, or who self-disconnect (with a prepayment meter) as a result of money shortages, have been deprived of power. Policies to reduce the occurrence of both types of disconnection are therefore vital for security of supply in many households.

3.4.7 Debt and disconnection

Householders often accept a prepayment meter as an alternative to disconnection, when they are in debt. The increasing number of prepayment customers is probably a result of liberalisation and the drive to lower prices generally, as companies are less tolerant of debt. This is a welcome development for low-income householders, as it means that they are less able to accrue high levels of debt and are given an easy budgeting method instead. However, large numbers of households are in worse fuel poverty as a result of switching into the most expensive tariff. As shown in section 3.3.8, the additional cost is around £80 million pa for electricity prepayment users only, which is a large penalty for the poorest households to pay, in order to avoid debt and manage their money.

As disconnection is the biggest threat to security of supply for many householders, it should not be permitted, as is now the situation with water (Graham 2000, p192). There are several other methods of obtaining debt recovery. But, most importantly, debts should not be allowed to become substantial.

3.5 Conclusions of the effects of liberalisation on the fuel poor in GB

In conclusion, when the effect of liberalising the generation market is separated out, the benefits for domestic electricity consumers of liberalised supply, have been surprisingly small.

Liberalisation is credited with producing lower domestic prices. These have occurred mainly from the liberalisation of generation and as a result of opening up the gas supply industry. In the latter case, there were major reductions available because British Gas had entered into expensive take-or-pay contracts. Therefore:

- The reductions in price as a result of liberalising the electricity supply market have been relatively modest and depend on the dates being compared. British domestic electricity prices are now just below the level, in real terms, they were in 1970.
- The price reductions have been greatest for people on direct debit. The average prepayment meter user could only save £2 by switching to another company in GB in 2000;
- The differential between the tariffs is growing.

Switching fuel companies has occurred with fewer of the fuel poor than the fuel rich, partly because the savings are small and partly because anyone with a debt is prevented from changing supplier.

Larger savings would be obtained if the fuel poor wanted, and were able, to move from prepayment or cash payments to direct debit. This does not appear to have occurred in many households, but is being facilitated by new initiatives from the companies to help low-income households obtain access to bank accounts.

The level of debt has been reduced, partly by offering prepayment meters more promptly (a trend since 1990). This is beneficial for the fuel poor, as they wish to avoid debt and like prepayment options. However, it makes their fuel poverty worse.

The average cost of electricity liberalisation in Great Britain is about £5 per customer, per annum, for seven years. As there is a bias towards higher income householders switching company, the poor are contributing disproportionately to the costs. It could be fairer to make the costs of liberalisation paid by those who choose to switch, rather than all customers.

Doorstep selling by the companies is both the best and the worst method: many low-income householders have switched as a result, but malpractice by the sellers causes considerable anxiety and anger to consumers. There must clear standards for the companies to adhere to.

Liberalisation has not delivered bigger investment in energy efficiency by energy companies beyond what is required by regulation. The new tariff initiatives are as a result of the Labour Government's pressure.

3.6 What could be done differently

Ofgem should have involved consumers earlier and more forcefully in the liberalisation process. Greater protection for consumers, from the beginning, could have included:

- Adequate information on price comparisons, from the start;
- Establishing authorised websites that provide the cost comparisons in a consistent way;

- Establishing a maximum tariff differential, within a company, wherever it is offered, not just as the incumbent;
- Strong licence condition on debt management and prevention;
- More effective advice on energy efficiency to prevent debt build-up, improve access to grants, and generally take a proactive approach to identifying problems (Boardman and Darby 2000);
- Stronger licence conditions on doorstep selling;
- Stronger licence conditions to prevent erroneous transfers;
- Targeting the fuel poor for energy efficiency expenditure, with a clear definition of who should receive the benefits, to avoid confusion with the broader definition of disadvantaged.

4 Energy and fuel poverty in Northern Ireland

The following events are expected to occur and will effect fuel poverty in NI:

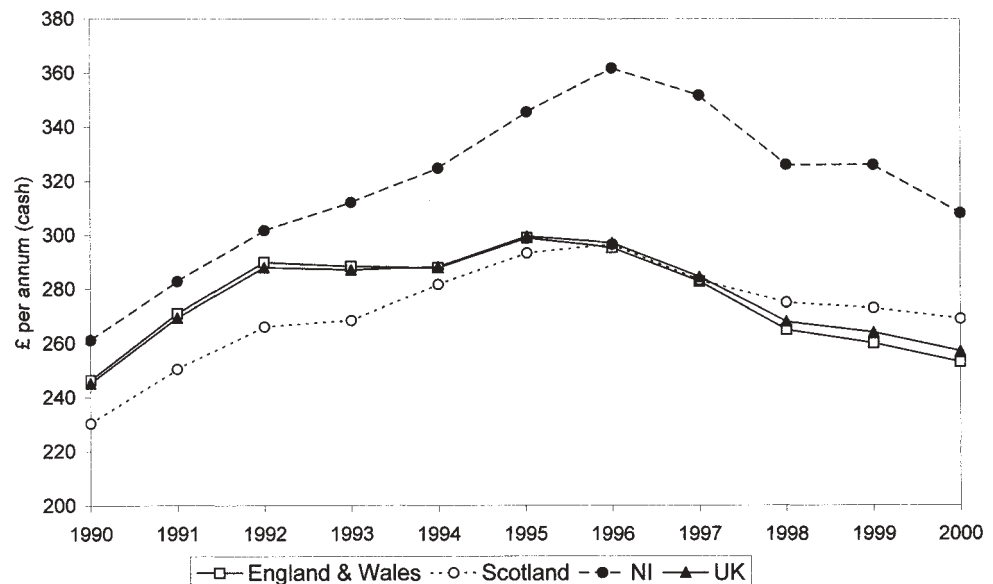
- 1.1.2002 Moyle electricity interconnector links Scotland to Northern Ireland, with a winter available transfer capacity of 400MW, which can be auctioned. For January–March 2002, Airtricity, in the Republic, is taking all the supply for green electricity;
- 1.1.2006 Liberalisation of the domestic market must occur, according to draft European legislation;
- 2010/2012 the Availability Payments for the electricity generators can be cancelled;
- By 2010, 120,000 households in Northern Ireland have to have been lifted out of fuel poverty, under the UK Fuel Poverty Strategy. These are the 71% deemed to be vulnerable.

4.1 Electricity in Northern Ireland

4.1.1 Electricity price trends: GB vs NI

There has always been a price differential between the prices charged in the different UK regions. However, the government's policy was that price per unit of electricity in Northern Ireland, should not be higher than the most expensive region in England and Wales (Boardman 1991, p239). For example, from 1980 to 1987, when oil prices were high, the government provided a subsidy of £350m to consumers to keep prices down (NEA, 1997). With privatisation, the Northern Ireland Electricity (NIE) prices became the highest in the UK (Figure 2 and Table 2).

Figure 2: Annual cost of electricity (cash terms), 1990–2000



Source: DUKES, various years (for consumption of 3,300kWh on standard credit tariff, including VAT)

The gap between the average prices in Northern Ireland in comparison with those in England and Wales has stayed wide since 1992, in both absolute and percentage terms. In 2000, a NI consumer would have paid 22% more than a householder in England and Wales. The 9% increase levied by Northern Ireland Electricity at the start of January 2001 (not included in the figure), together with the expected drop in GB figures (Table 3) means that the disparity between the average standard credit bill in NI and in Britain has expanded to 34% (£336 vs £250), at this standard level of consumption. In reality, NI households are using more electricity than those in England and Wales, perhaps as much as an extra 1,000kWh (Appendix 3), so the cost differential would then be over £110. This is the widest gap identified.

Another important feature of this chart is that, at least up to 2000, prices in NI were following the same downward trend as those in GB, although the differential, which opened up in the mid-1990s, was not significantly diminishing in percentage terms. The benefits of these price reductions can not be due solely to liberalisation of generation and have to be caused by general background factors.

Despite the higher prices, households in NI use more electricity on average than those in GB, though exactly how much more is not entirely clear (Appendix 3 for further discussion on this). This is despite electricity being used to a lesser extent as a heating fuel than in England and Scotland and Northern Ireland Electricity has a policy of discouraging use of electricity for space heating. As a result of this higher consumption, the differential in terms of actual household expenditure would be even wider than implied in Figure 2.

4.1.2 Why are prices higher?

Currently the key, but not sole, cause of the difference in domestic prices between NI and GB is the inefficiency of the generation plant, together with expensive NI generation contracts, which were drawn up by the Government when the province's electricity industry was privatised in 1993. The problem of these Availability Payments has been recognised at an official level:

'The [Enterprise] Minister freely admits that a bad deal was made at the time of privatisation, and that nobody would now sign the generation contracts drawn up at that time' (Belfast Telegraph, 2001).

The other reason for higher prices is the use of oil for generation (at a time of rising oil prices). There are changes happening to address these issues in the generation market which could facilitate lower prices in the future, but it is not expected that these will swiftly translate to lower prices for NI householders. The changes include: gas pipelines to Londonderry and thus plans for a gas power station at Coolkeeragh; new combined cycle gas turbine (CCGT) power station at Ballylumford; the Moyle electricity interconnector to Scotland; and the expansion of the Regulator's powers.

The opportunities for competition following liberalisation depend upon:

- the generation contracts in NI;
- whether the ESB would be interested in competing for supply in NI. This is unlikely as there is already a shortage of supply in the Republic;
- entry from GB companies using the Moyle interconnector.

4.1.3 Standing charges

With both gas and electricity, the cost of the standing charge has been absorbed into the unit rate. This is particularly beneficial for small users, typically low-income

households. As a result, there is a higher tariff for high usage, which gives an appropriate signal for environmental reasons.

4.1.4 KeyPad pre-payment meters

In the UK, there is a considerable differential between the price paid by prepayment meter customers and those who pay by other methods and this difference is increasing to the detriment of prepayment meter users (Table 7). The GB differentials continue to grow in percentage terms (Table 3). This disadvantages poorer members of society. In Northern Ireland, by contrast, the differentials are fast disappearing due to action by the company, backed by the Regulator. This is linked to the introduction of a prepayment system – the KeyPad meter. The KeyPad is an innovative prepayment meter being trialled by NIE, at the same tariff as credit accounts (Appendix 3). Of the 618,000 domestic electricity consumers in NI, about 100,000 have KeyPads, 100,000 are on direct debit and the remainder use the standard credit method of payment.

Table 7: Additional cost of prepayment tariff compared with other payment methods, UK 1999–2000

	<i>Credit</i>		<i>Direct debit</i>	
	<i>1999</i>	<i>2000</i>	<i>1999</i>	<i>2000</i>
Belfast	5.9%	1.7%	9.1%	4.9%
UK average	6.6%	6.9%	11.2%	12.0%

Sources: DUKES, 2000 and DTI, Quarterly Energy Prices, June 2001

4.1.5 Energy Efficiency

There is an Energy Efficiency Levy (EEL) on electricity. This is currently (2000–1) £2 per annum, per household. NIE are responsible for ensuring this £1.3m is spent, on schemes approved by the Energy Saving Trust, under contract from Ofreg.

At present, the EEL is spent so that over 80% of the expenditure is received by disadvantaged households – a higher proportion than in GB. By mid 2001, a total of 130,000 disadvantaged customers had been helped. The savings in all households are achieved at an average cost of 0.81p/kWh in 1999–2000, which compares with 1.43p/kWh in GB (1998–99). There may be some differences in the way the savings are calculated in NI, in comparison with GB. Whether cheaper or not, the NI savings are more cost-effective, because of the high cost of electricity in NI (10p/kWh not 7p).

The Regulator has provided incentives for NIE to exceed the EEL expenditure, through a payment of 0.4p/kWh per extra unit saved. This is set at a level that is sufficient to overcome the profit from sales on night storage heaters and explains why NIE are prepared to relinquish this market. Over the period 1997 to April 2001, the baseline target was 300GWh and an additional 140GWh were saved, as a result of the incentive. The resulting saving, from both the EEL and the incentives, is worth £37m to customers over the lifetime of the measures, including the value of comfort, of which £25m went to the disadvantaged, equivalent to £60 for each of the 618,000 households. This programme is providing an effective method of distributing greater benefits to the poor than the costs they have incurred.

Subject to consultation, the EEL may go up to £5 per customer, with up to 100% of this £3 million to be spent on the fuel poor. Both the EEL and the incentive are welcome policy initiatives and constitute a useful programme for the fuel poor in NI.

4.1.6 Carbon factor

All but a very small proportion of NI's electricity is generated from fossil fuel, whereas in GB about a third of it comes from nuclear power or renewables. Therefore, the electricity in NI has the highest carbon content in the UK, at least 50% above that in GB, in terms of carbon emitted per unit of electricity used (kgC/kWh). For this reason, the UK climate change strategy should focus on reducing the carbon intensity of electricity in NI. This would include the provision of cleaner sources, such as domestic combined heat and power (DCHP), solar thermal panels for water heating, as well as greater energy efficiency.

The Availability Payments to the generators are perpetuating the production of this polluting electricity and causing hardship to all consumers in Northern Ireland, particularly the fuel poor, through high prices. This is a prime example of a perverse market structure. Over 70% of the inefficient fossil-fuelled plant will be closed by 2004 and replaced by efficient combined cycle gas turbines.

4.1.7 Green electricity

NIE sell electricity to people who wish to support renewable sources, through EcoEnergy, a green fund – the money collected is invested in new generating capacity, rather than buying electricity generated from existing renewable sources. Sales of green electricity are higher in Northern Ireland than in GB, as a proportion of the population. They also appear to be high in the Republic of Ireland. More than 500 business customers have signed up in NI, together with 2,500 domestic customers, to give 3,000 EcoEnergy customers in total, in 2001. Customers can purchase a proportion of their electricity as green; it does not have to be 100%.

EcoEnergy is sold at a premium of 0.6p, to give a final price of 10.6p/kWh. The reason for the premium is that it is establishing an investment fund for new renewable generation. The experience of the non-fossil fuel obligation (NFFO) in GB has demonstrated that electricity can be generated for 3p/kWh from wind, waste and landfill gases, and this should be experience that can be transferred directly to NI. The pricing policies of NIE in relation to renewable resources will become clearer with the Regulator's current review, in relation to connection charges, lengths of contracts (hence capital payback rates) and to the cost of buy-back (to top-up shortages of demand or when there is over-supply). Part of the answer may be that the present conditions act as a disincentive to renewable developers, so there is insufficient competition to bring prices down to GB levels.

The Regulator gave EcoEnergy a target of selling 25GWh of green electricity by 2005, of which 6 GWh demand should come from the domestic sector. The indications are that EcoEnergy sold 30GWh in 2001 – five years ahead of the Regulator's target. This achievement represents a ten-fold increase in one year, as only 2.5GWh was sold in 2000, and has been enhanced by the fact that green electricity enables companies to avoid the climate change levy. Initiatives are underway in Northern Ireland to make 'renewable electricity tariffs attractive to the fuel poor' (DTER 2001, p61). Liberalisation ought to enhance, not hinder, this process.

4.2 Other sources of domestic energy

4.2.1 Gas

The extension of the gas network is producing a new situation in Northern Ireland: the opportunity for some households to use a cheaper fuel that is less carbon intensive. Prior to this, nearly all households had the choice of the same three (expensive) fuels: electricity, coal, oil. Independently of liberalisation, the extension of the gas network and the connection of low-income households is helping to reduce fuel poverty. The western gas pipeline is going ahead and the intention is that this will connect another tranche of NI homes. The development of the gas network facilitates the use of domestic combined heat and power (DCHP) – small boilers, usually gas-fired, within the house that provide space and water heating and a certain level of electricity. DCHP would, therefore, be contributing to the supply of electricity.

It is possible that by the end of 2004, a third of households (200,000) will have gas available (in the street outside). It is not clear how many will have it inside the building, nor how many of these will be fuel poor.

The Northern Ireland Housing Executive (NIHE) has taken a decision to replace old heating systems with gas central heating wherever possible – a decision supported by NIE, amongst others. The NIHE is converting 2,500 properties a year. A high proportion of these is on benefits and probably in fuel poverty. The residents should be fully informed about how to control the systems and have the technology to do so, to ensure that the running costs remain acceptable. The cost of the conversion, inside the house, beyond the meter, is about £1,500-£2,000.

Most of the conversion schemes are funded through the Department for Social Development (DSD), so that the rate at which progress is made in combatting fuel poverty, depends upon their level of investment. If more money were available:

- the NIHE could convert many more houses to gas;
- more private sector, low-income households could install gas with grants from the Warm Homes Scheme;
- it would ensure that the extension of the gas network benefits the fuel poor. Even if the Regulator ensures that low-income households are connected to the new networks, there is the need to invest within the house on new equipment.

It is recommended that all policies should support the rapid expansion of the gas network and the installation of gas in low-income homes. This recommendation will remain valid, because of the environmental benefits of using a less carbon-intensive fuel. The extent to which the gas network extends to an appropriate proportion of low-income homes should be carefully monitored, although no evidence was provided that the better-off housing areas are being treated beneficially, this is obviously a risk. The reverse could be achieved with appropriate levels of DSD investment, NIHE housing policies and Regulatory support.

4.2.2 Oil and solid fuel

There is a much higher use of solid fuel in NI than in GB. This means that the overall average heating efficiency in NI will be lower than the rest of the UK. Purchasing small amounts of oil and coal inevitably pushes up the price, in a way that does not occur so clearly with electricity and gas. Both oil and coal result in higher carbon emissions than gas, but less than electricity in NI.

Those households using solely gas and electricity have the protection of an effective regulatory system, sensitive to the needs of the fuel poor. The users of oil and coal have no regulatory protection. No evidence was provided of problems with the coal suppliers, but the oil industry appears to be creating additional problems for the fuel poor. Evidence was provided of:

- opportunistic price rises, for instance immediately after the New York disaster,
- profiteering when households need small quantities of emergency supplies,
- installations that were unsafe.

As many of the fuel poor will continue to be dependent upon oil or coal for many years, consideration should be given to how they should be protected from commercial malpractice and unsafe installations.

4.2.3 Other

The role of combined heat and power (chp), micro-chp in the home, ESCOs were not discussed extensively, nor universally favoured. With the limited gas network, chp would have to be fired by oil, coal, or biomass in many areas. There is a substantial history in NI of inefficient district heating systems. Whilst this has, understandably, alienated the householders, it should provide the basis for effective replacement. The new Community Energy grant for chp could be used to convert an old district heating scheme, as a pilot project, to demonstrate the benefits that can accrue. It should be possible for this to be funded through the Government's new Community Energy grant, worth £50m over the next three years, and handled by the EST. The UK Government has recently announced DCHP trials involving 6,000 houses, but none are in NI.

4.3 Fuel poverty

The definition of fuel poverty used in Northern Ireland extends to heating only, according to the UK Fuel Poverty Strategy (DEFRA/DTI, 2001, para 7.1), rather than all energy services. Even so, there are 170,000 households in fuel poverty, of whom 120,000 are vulnerable (as in GB, these are the young, the old and the disabled) and should be brought out of fuel poverty by 2010. This would mean providing 12,000 homes with affordable warmth (and other energy services) each year. The expectation in the draft Strategy is, 'the removal of at least 8000 vulnerable households out of fuel poverty on an annual basis' (ibid, para 9.27). Even on this, perhaps optimistic, assumption, the programme needs to be increased by 50% in order to meet the Government's target.

The main programmes that will provide this reduction in fuel poverty are:

- DEES II, the Government-funded programme to insulate homes and improve the efficiency of heating systems;
- work by the Northern Ireland Housing Executive on its own properties;
- the annual Energy Efficiency Levy on electricity and the equivalent on gas;
- the continuing financial incentives for NIE to voluntarily invest in energy efficiency, provided this continues to be targeted at the fuel poor.

For the Regulator, this involves consideration of both the cost of electricity and gas and the efficiency with which they are used to provide energy services in the home.

There is stronger recognition of fuel poverty as an issue in NI than in mainland Britain. The integrated problem of fuel poverty requires a strategy across several areas

of government policy. The evidence provided in section 4.1 demonstrated that fuel price rises in NI will cause further hardship to the fuel poor. The new inter-departmental group on fuel poverty is welcomed, though the severity of the issues involved indicate that this should become an inter-ministerial group in NI in the near future, as in GB.

5 The prospects for liberalisation in NI

The whole of the European electricity market is to be liberalised, according to the draft EU directive, effective from 1.1.2006 – so this is the last date by which NI must be fully liberalised. This will require interactions between NI and both GB and the Republic, and through GB to the rest of Europe. The objective is for each customer to be able to purchase from any supplier in Europe. Common trading arrangements will need to be developed and, perhaps, more interconnectors to establish a strong European grid.

If the all-island grid and the GB electricity grid are seen as one entity, the following appears to be relevant:

- there is a shortage of generating capacity in the Republic of Ireland, as a result of economic growth;
- there are substantial opportunities to increase supply in Northern Ireland, at least from CHP and renewables;
- there is limited capacity on the Scottish-Northern Ireland interconnector;
- there is a surplus of capacity in GB, amounting to about 28%.

Perhaps the time has come to look at all these factors together and, as is happening in the all-island study, make some rational decisions in unison. Whatever happens on the traditional supply side, the fuel poor (and the environment) would benefit more if the same level of expenditure were put into greater energy efficiency improvements and new and renewable sources of energy.

5.1 Is supply liberalisation likely to deliver competition?

The key issue is whether new entrants will be attracted to compete in the market – if they are not then none of the potential benefits – particularly lower prices – from liberalisation can be realised.

The consensus amongst the people we met in Northern Ireland (Appendix 1) is that market liberalisation will not work, in the sense that no competitors will be attracted into the market. The basis for this view seems to be:

- experience in the 35% of market already opened – there has been little competition and new players are already leaving the market;
- the frequently expressed view that NI is too small and the costs of customer recruitment too high to lead to sustainable competition;
- the lack of available low-cost generation in NI;
- a fear that liberalisation will be mishandled, which is a legacy from the badly handled privatisation.

Thus, the expected result of liberalisation in NI is that there will be no (immediate) benefits from competition to offset the increased costs to the consumer as a result of setting up trading arrangements. Some of the people we met would therefore prefer liberalisation not to be on the agenda.

This pessimism seems counter-intuitive as, on a price basis, it would seem that there are good opportunities for British companies to compete in NI given the huge price differences in electricity generating costs (around 4.5p instead of 2p/kWh). However, unless suppliers are able to get access to competitively-priced generation,

they will not be able to offer the prices they sell at in GB. Even if (and hopefully, when) the issue of generation costs is resolved, NI will remain a very small market – one that is much smaller than conventional wisdom dictates is necessary for company survival: ‘A common view in the electricity industry is that an integrated company needs 5 million consumers to achieve a critical mass.’ (Thomas, 2000).

However, other commentators are more optimistic that competition can be achieved in smaller markets. A recent report on all-island (Ireland) energy issues (IPA *et al*, 2001) concludes that: ‘... a single all-island market should be large enough to support wholesale and retail competition with the support of rules preventing the concentration of ownership of generation and supply.’

In addition, in terms of costs of obtaining new customers, it is not clear why a GB company would necessarily distinguish between a NI customer and one outside their original area in GB. Any Regional Electricity Company, initially, had to develop new mechanisms for attracting and handling customers outside its area. As they are all now obtaining customers all over Great Britain, it should provide few additional problems if the customer is in Belfast, rather than Edinburgh or London.

5.2 Costs of liberalisation

With 35% market opening, the set-up costs have been £100,000 and the annual running costs are also £100,000 (Ofreg, p15). Full market-opening, with half-hourly metering for certain customers, could cost £60m (Ofreg, p20). If these costs are spread, in their entirety, across 600,000 domestic customers, this would be £100 per household – substantially more than the £35 of total actual cost to GB customers, including running costs. If, as in GB, these are paid back over seven years, the annual cost of £15 would have to be achieved through lower prices. This looks extremely challenging.

Liberalisation may not depend on half-hourly metering – it has not been required in GB. So, the estimated costs of £60m could be reduced. However, the GB experience is that costs quadrupled between the Regulator’s first estimate and the actual cost. There must be a strong likelihood that the costs could be higher per customer in NI because of the small size of the total market. Further research would be needed into whether there are opportunities to combine the NI trading system with the GB one, whilst retaining the economic and legislative separation needed. More recent evidence suggests that these estimates are too high, although it is notoriously difficult to assess costs until the plans are more clearly outlined.

5.3 Conditions for the fuel poor at liberalisation

The Regulator has identified the following features of the NI electricity market that may be regarded as helpful to the fuel poor and that should be protected and developed (Ofreg p21):

- the abolition of standing charges;
- the absence of surcharge with the new KeyPad prepayment meter. NIE customers have major debt problems and the extension of the KeyPad will be beneficial;
- the incentive on NIE PES to promote energy efficiency and reduce household consumption;
- the £2 per customer levy which raises over £1m per annum to be directly spent on tackling fuel poverty, including insulation, heating controls and heating system. If

the EEL is increased to £5 per household (£3m in total) this may be spent on the fuel poor, as well.

The evidence given above confirms that these represent important gains for the fuel poor and should be protected when liberalisation occurs. The whole ethos behind them – protection for the poor and for the environment – should be enshrined in the statutes that make liberalisation effective in Northern Ireland.

Price controls will have to stay, as there are unlikely to be more than four players and this is insufficient competition to control prices.

5.4 Strategies for liberalisation

The Regulator may have no choice but to fully liberalise the market. The following scenarios are possible:

- **Scenario 1:** Liberalise – no competition – increased costs for customers, reduced control of tariffs and protection for fuel poor;
- **Scenario 2:** Liberalise with social conditions – no competition – increased costs for customers, equal protection for fuel poor;
- **Scenario 3:** Liberalise – competition – reduced prices for all customers, but fuel rich benefit disproportionately;
- **Scenario 4:** Liberalise with social conditions – competition – reduced prices for all customers, fuel poor continue to enjoy protection.

Whether liberalisation can be introduced in a way which lessens costs for new entrants and encourages competition (even in the absence of competitive generation capacity) is uncertain. If the regulator liberalised without social conditions being attached, then the consensus view in NI is that Scenario 1 would occur, leaving the fuel poor (and everyone else) worse off. The best scenario for the fuel poor would be 4. However, with the tentative market that there is in NI, the risk is that by including protection for fuel poor under liberalisation new entrants might be discouraged from entering the market. Considering all the existing barriers to market entry – particularly expected low profitability – this is probably a minor consideration.

Even if supply liberalisation successfully led to competition, people in NI would still face higher electricity prices than those in GB. Supply liberalisation by itself can not offer great cost savings, as only around 8% of the price of electricity is made up of supply charges. New entrants would not have much margin on which to make savings.

The Regulator has suggested a geographical approach, for instance dividing NI into four regions. The various utilities (in GB, ESB, NIE) would bid to provide gas, electricity or both, to these four regions. The first stage of liberalisation would occur through this competitive tendering process. Initially, say for five years, the consumers in each region would only have one supplier. After this period, all customers would be able to purchase from any supplier, by which time the incumbents in the four regions would be established and able to compete with each other. Thus, full liberalisation would be achieved in two stages and finalised some time after 2006.

The liberalisation of the electricity markets will introduce price differentials, with some households, probably, having access to cheap electricity and cheap gas. Some regions might attract no bids, which in combination with no gas, would leave the householders with only the current, expensive electricity. However, if it is acknowledged from the start that there will be a greater differential in prices, after

liberalisation, the task would be to make sure that the different sectors (or areas) in NI are protected in different ways. If 25% of households, are not going to have lower prices, this should not prevent liberalisation helping the other 75%.

The rural areas are where there is likely to be the least competition. Many of these have substantial local, new and renewable resources (wind, biomass, domestic chp and biogas) and these should be exploited to protect the fuel poor. There are two main options to protect the fuel poor and these could apply to all supply companies:

- Put the poorest households on a green tariff. With rising fossil fuel prices, particularly oil and gas, and the threat of carbon taxes for the domestic sector, giving low-income households a green tariff would protect them from future price rises. This would have the effect of preventing future fuel poverty. These possible taxes are not necessarily imminent, but are frequently discussed, particularly in the context of Europe and the likely failure to meet its Kyoto target. However, it will take some years to implement a policy like this, as it requires the provision of additional renewable capacity. In order to provide protection, the cost of green electricity would have to be lower than the standard tariff, rather than carrying a premium. This is possible, using the present system of auctioning renewable supply: the companies are buying cheap green electricity at the moment, even if they are selling it at a premium.
- Make reducing fuel poverty a requirement of the licence to supply, perhaps supplemented by incentives (as with energy efficiency) if the target is exceeded. Because of the difficulties of identifying the fuel poor (particularly on the doorstep), this could be monitored in various ways, for instance:
 - by lowering the average carbon emissions per house – the fuel poor have high per household emissions if they are dependent on fossil-fuel generated electricity, as in the rural areas. The reductions in carbon would come from introducing greater energy efficiency at all stages of the supply chain (including in the house) and greater use of renewable and new sources of energy (wind, micro-chp, solar thermal, etc). This could be the best way of protecting the rural fuel poor, as the urban fuel poor are likely to have access to either (or both) gas and cheaper electricity;
 - an alternative measure would be to improve systematically the energy efficiency rating of the housing stock. This could be measured through SAP⁵ ratings, in conjunction with NIHE, because of their responsibilities under the Home Energy Conservation Act⁶. In this case, the utility could ask external agencies to bid to undertake schemes. There would have to be careful links with the Energy Efficiency Levy and the voluntary energy efficiency incentives. Ideally, this approach would be the responsibility of NIHE to deliver and to co-ordinate the different contributors, such as the Domestic Energy Efficiency Scheme and the utilities.

Through whatever route, when liberalisation occurs, the Regulator should consider imposing a statutory duty on all utilities to assess the impact of its activities on the fuel poor and report annually. This duty will require the utilities to consider fuel

⁵ Standard Assessment Procedure based on the thermal properties of the building fabric and the heating system. This is not ideal for occupied houses, as it is a partial energy audit. It is used as an example here, not as a recommendation.

⁶ Under HECA, the local housing authority has to report on how to improve energy efficiency by 30% in GB and 34% in NI.

poverty from the outset and their proposals could form one of the criterion for entry. The definition of fuel poverty should fit with that used in the NI component of the UK Fuel Poverty Strategy, but include consideration of related issues:

- Is it appropriate for the utilities to know who is on benefit, or should the definition of fuel poverty be linked solely to the fabric of the house? Information on benefit recipients should be covered by the Data Protection Act.
- Will a definition based on the condition of the house eliminate any fear of stigma, that might be attached to projects that are solely for claimants?
- How to cover concerns such as these, whilst still targeting the expenditure on the fuel poor?

One of the side effects of a rigorous approach to fuel poverty – especially if combined with the strong development of renewables and new sources of electricity – is that it would release surplus generating capacity for sale to the Republic.

5.5 Making liberalisation work in favour of the consumer and the fuel poor

One of the best safeguards is to involve consumers in the debate, to ensure that proper protection is provided, from the beginning and not only after problems have been demonstrated.

At an absolute minimum, no fuel poor household should have higher electricity bills as a result of liberalisation. This depends on keeping the real benefits that have already been obtained, by the present Regulator, for the fuel poor; these should be enshrined in the regulatory process and be made permanent.

These social controls (on standing charges, the KeyPad, energy efficiency investments) should be retained, even if this lessens the likelihood of new competitors entering the market. These benefit the majority of the fuel poor, which liberalisation is unlikely to do.

If the Regulator is confident that liberalisation will achieve real savings, then it should be done as quickly as possible. Otherwise, it should be left until the last moment – 1.1.2006.

The Regulator should consider requiring a maximum price differential between the payment methods, in the same company, whether the incumbent or a competitor. At the moment, there is a fairly narrow cost differential of £10 between Northern Ireland Electricity's various tariffs. This should be preserved or reduced.

The number of tariffs provided should be sufficient to allow people to pay for electricity or gas at daily, weekly, monthly intervals; in cash or through a bank account; in person, by phone or with direct debit. Support for fuel direct should continue.

A licence condition should ensure that doorstep selling occurs only through members of the appropriate recognised body, to protect consumers.

There are several issues related to security of supply, for instance:

- in the exposed, windy areas of Northern Ireland, this is an important issue, as disruptions occur with some frequency. The transmission lines can be made stronger, so that they are less susceptible to extreme weather conditions. This may be of greater importance if there are more extreme events as a result of climate change. These supply failures cause considerable and recurring hardship to the affected households;

- if householders are encouraged to use a range of fuels, not just electricity, they are more resistant to supply interruptions. These sources could include biomass (wood fuel for domestic combined heat and power), and solar (for hot water or for electricity);
- with an emphasis on energy efficiency, each household needs less electricity, so that more households can be served, even from a limited grid network;
- ensure that there can be no disconnections for debt, as now.

Transfer procedure, when consumers switch companies, should be simple to operate and easy to monitor and enforce through a Code of Practice.

Cost comparisons on a uniform basis should be available through an authorised website and other more accessible forms of information. This could be started soon, to give cost and carbon comparisons across the full range of fuels.

Liberalisation needs to be designed to ensure that the maximum benefits of both electricity liberalisation and the growing gas network occur for the fuel poor. In addition, there has to be protection for the households in the remaining areas, where there is neither cheaper electricity nor gas.

The most important safeguard is the fuel poverty assessment, and this will incorporate the ways in which households will be protected, even though they have a limited choice of fuels.

Energy efficiency advice should be made available, on a proactive basis, to help customers with high or unusual bills, to assist in accessing grants, and to prevent the build-up of debt.

The distribution of the standing charge across all consumption provides a built-in disincentive against high levels of consumption: these households pay more than the equivalent of the old standing charge. If sufficient protection is provided for any large, fuel poor households, the differential could be further enhanced, to discourage excessive use of electricity.

The Regulator should investigate European precedents for focussing the cost of liberalisation solely on those households that switch and benefit from lower prices. The ruling of a German court provides an interesting example. It might be possible to influence the draft directive and enshrine further consumer protection over the form and timing of liberalisation, when, as in Northern Ireland, the benefits for the fuel poor appear questionable, at best.

There are very substantial challenges facing the Regulator if liberalisation is going to provide advantages for the fuel poor in Northern Ireland. This is a small, isolated market, with high generation costs. The benefits obtained by the fuel poor in Great Britain do not indicate that the costs of liberalisation in NI will be offset by benefits. Beneficial competition for the poor is difficult to achieve.

NI should be treated as a showcase for sustainable energy. This is where energy efficiency, new and renewable forms of supply are most cost effective, as the electricity price is so high. The problem of fuel poverty is extensive, providing real opportunities for successful utility involvement. If sustainable energy cannot be made to work in NI, it will be even more difficult in GB.

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7 Appendix 1: Interviewees in NI and GB

As part of this work, we had discussions with the following people:

In GB:

Peter Lehmann, Chair, Energy Saving Trust

Virginia Graham, Ofgem

Philip Kear, npower/Innogy

In NI:

Majella McCloskey, NEA

Andrea Heaney, NEA

Avril Craig, Help the Aged

Colm McNickle, St Vincent de Paul

Louise Kane, Community Efficiency Officer, Belfast Energy Advice Shop

Gavin Bell, community worker, Belfast Energy Advice Shop

Declan Donnelly, Energy Officer, Ballymoney BC

Joanne Stevenson, GCCNI

Felicity Huston, NICCE

Noel Rice, NIHE

Liz Loughran, DSD

Eleanor Gill, Armagh and Dungannon Health Action Zone

Jim McKeown, Gerry McGeown, Helen McGovern, DETI

Douglas McIldoon, Gerry Donnelly, Ofreg

Richard Rogers, Phoenix Natural Gas

Pauline McCracken, Andy McCrea, NIE

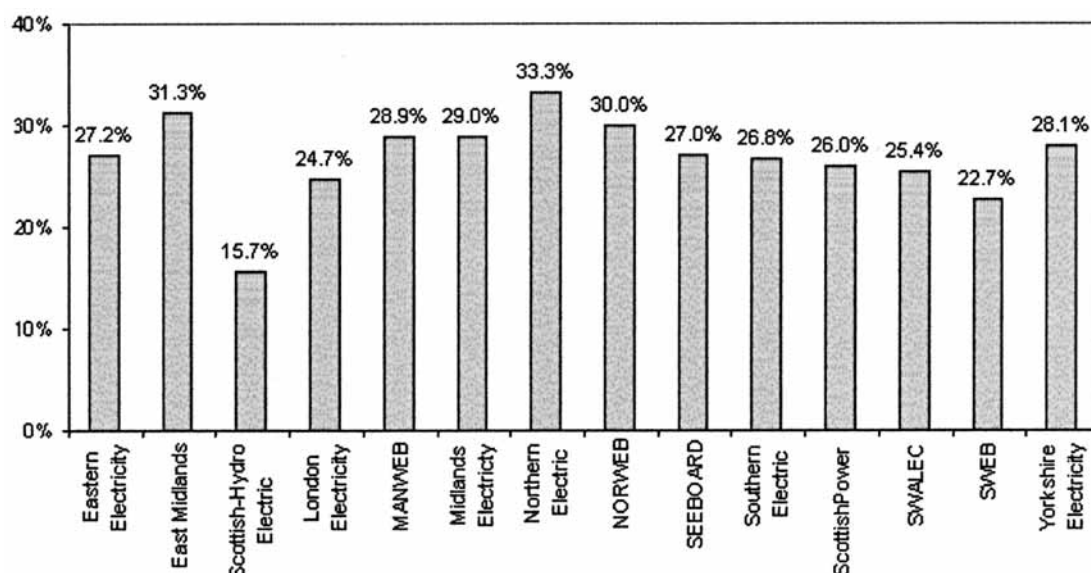
Les Allamby, Belfast Law Centre

8 Appendix 2: Additional information on GB

8.1 Who has switched – by company

Price is not the only factor motivating consumers. East Midlands, the cheapest, has seen a larger number of consumers switch, than SWALEC, the most expensive (Figure 3). However, Scottish-Hydro Electric has retained the highest proportion of its domestic customers, possibly as a result of an extensive shop network.

Figure 3: Proportion of customers switching from incumbent supplier, GB, Q2 2001



Source: www.ofgem.gov.uk/prices/switching.htm

8.2 Payment tariff differentials

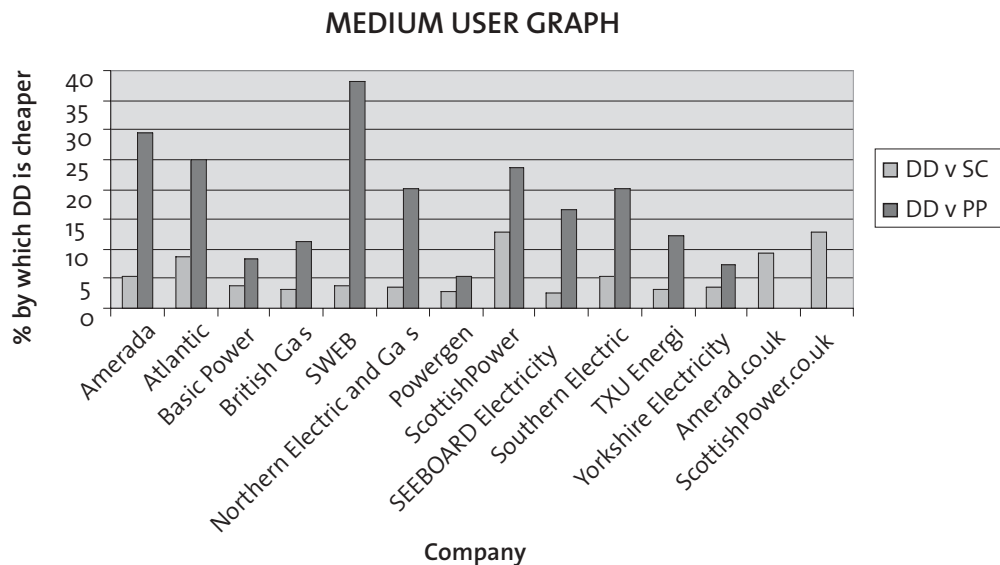
As demonstrated in Table 2, there are substantial price differences for the same tariff between different electricity companies. The greatest discrepancies occur with companies offering supply to customers out of their own area, as second-tier suppliers. For a resident in the Yorkshire area, on average consumption, the effect of paying by standard credit or prepayment, rather than direct debit, is shown in Figure 4.

PowerGen is offering more competitive tariffs than the incumbent, Yorkshire Electricity, and British Gas is about the same, demonstrating real competition. According to the last Chair of the National Electricity Consumers Council, 'it is usually cheaper to take electricity from the gas company and gas from the electricity company, as the companies cut prices to gain market share' (Brooke, 2000, p12). This further compounds the problems of making price comparisons.

The extra cost of a prepayment meter is £28pa (Table 3), which should represent about 5% on top of the average direct debit electricity bill. Only PowerGen is offering a prepayment meter in this range in Yorkshire: all the other companies are higher. SWEB's prepayment meter charge is the highest, at over 35% above the direct debit,

which is probably equivalent to £80 pa. SWEB are offering an extremely expensive prepayment tariff, presumably because it does not want to sell this tariff to customers in Yorkshire. A consumer who chooses to switch to SWEB's direct debit or standard credit payment method, then gets into debt and is transferred to a prepayment meter, would have no choice but to pay these exorbitant costs. This customer would have no chance of moving to another supplier or company whilst they are in debt – a situation which is likely to be prolonged by the high cost of prepayment.

Figure 4: Price differentials, per supplier, for Yorkshire residents



Note: The data were obtained from the energywatch website and concern prices and companies operating within the Yorkshire region. Eleven companies were offering competition to Yorkshire Electricity, and two others by email only. The comparisons given represent the extent to which the standard credit (SC) or the prepayment (PP) were more expensive than direct debit (DD). Each supplier can offer different prices in each region. Based on 3,300kWh consumption pa. All prices at the beginning of October 2001.

8.3 Service standards

Standards of service apply to customers of first-tier suppliers, but not to the customers of new entrants (Brooke 2000, p25). Complaints to Energywatch (the consumer representatives) have risen by nearly 400% in a year, indicating a drop in services:

For electricity: in the year to	February 1999	6,000 complaints
	February 2000	22,000 complaints

This may be reversed in time, but, so far, liberalisation is causing more disquiet amongst customers. Many of these complaints have been generated by the process of liberalisation (Table 8). There have been three main reasons for this rise:

- A lack of clear information, especially price comparisons. There is no standard format for price comparisons, so that it is extremely difficult for consumers to be able to judge what the real price savings would be. Ofgem were proposing to introduce a standard format, but have not. Instead, certain authorised websites provide comparative information. Companies have been marketing themselves on the basis of inaccurate cost comparisons: a direct debit tariff would be compared to a credit tariff; one price would be inclusive of VAT, the other not; and so forth (Brooke 2000, p24).

- Bad sales practice, particularly with direct selling. In a recent MORI survey, 15% of consumers considered that they had been tricked into signing a contract (1999). There is a wish for consumers to have an enforceable right to register an objection to being visited in their homes by salespeople. This would provide protection, particularly for elderly people. However, doorstep sales staff represent an important source of information and, in many instances, have helped low-income households obtain cheaper bills (CSE/NRFC 2001);
- Transfer problems – delays, wrongly estimated meter readings, billing problems, etc. And when something goes wrong, it takes too long to put it right.

Table 8: Lowest and highest levels of customer complaints, Q1 2001

	<i>Electricity</i>		<i>Gas</i>	
	<i>Company</i>	<i>Complaints (per 000 customers)</i>	<i>Company</i>	<i>Complaints (per 000 customers)</i>
Direct selling	SW Electric	0	London Electricity	0.1
	Npower	1.48	Amerada	1.76
Transfers	SW Electric	0	Cambridge Gas	0.2
	SWALEC	4.03	Beacon Gas	8.16
Customer accounts	SW Electric	0	Gas West/ Countrywide	0
	npower/ Scottish Power	0.08	Amerada	0.22

Source: energywatch

As the table shows, there are relatively few complaints about customer accounts. The large volume is to do with transfers, as a result of liberalisation. Certainly other advice centres, such as the Energy Efficiency Advice Centres, have reported substantial increases in questions relating to transfers, in particular the relative price differentials.

Recent research has shown that a quarter of all British phone, gas, water and electricity customers only want to accept sales calls from their service providers in return for a saving of at least £40 per year. Twenty seven per cent of respondents will not accept sales calls in their free time no matter what savings are offered and 13% require a saving of at least £70 per annum to make the calls worth taking. Only 5% are prepared to accept sales calls whatever the saving (MORI 2001).

8.3.1 Who has switched gas supplier, by payment method

The views of a non-representative, but national, panel of 300 low-income households were canvassed over a two-year period by the Centre for Sustainable Energy (CSE) in a joint project with the National Right to Fuel Campaign (NRFC). A relatively high proportion of full-time workers on the Panel had switched gas supplier, while relatively low proportions of retired people (particularly lone pensioners) and minority ethnic groups had switched. Few gas prepayment meter consumers on the Panel had switched supplier, while about a half of the direct debit payers had, leading to a polarised market (CSE/NRFC 2001). This replicated earlier research by the same team, during the gas liberalisation pilot in the South West, that found the majority of

discounts were being offered to direct debit customers, not to people with prepayment meters or who frequently paid by cash, typically low-income households (NRFC/CSE 1997, 1998)

9 Appendix 3: Additional information on NI

9.1 Domestic electricity demand

Customers in NI use on average more electricity than those in GB, but how much more is not entirely clear. Figures from NIE for 2000/01 (Table 9) suggest that NI customers use on average 4% more electricity than the average UK customer, whose consumption in 2000 was 4360 kWh (DUKES 2001 for total electricity consumption, ECI estimate of customer numbers).

Table 9: Average electricity consumption per domestic customer, Northern Ireland 2000–1

<i>Customer type</i>	<i>Annual consumption (kWh)</i>
Domestic with only full-rate electricity	3,980
Domestic with Economy 7	9,590
Average domestic	4,520

Source: Gerry Forde, NIE, pers comm.

However, an estimate made by BRE shows much wider differentials between NI and the rest of GB (Table 10). These figures suggest that NI households are using 24% more electricity than households in England (despite having lower levels of electric central heating) and that they use almost 30% more energy than the average in GB.

Table 10: Energy use per household, per year, by country, 1999

Country	Electricity (kWh/hh/yr)	Total Energy (GJ / hh/yr)	% electric central heating (1996)	people per household (1996)
Northern Ireland	5265	98.2	8.7	2.90
England	4335	77.3	10.1	2.43
Scotland	5827	72.6	21.1	2.37
Wales	4022	79.7	7.3	2.47

Source: Utley et al, 2001

Some of the difference between the BRE and NIE figures may be to do with differences in definitions of ‘customers’ and ‘households’. BRE state that the Northern Ireland Electricity figures for total domestic electricity use are consistently about 10% or so less than the figures from DUKES (Les Shorrock, pers comm). BRE’s estimates use DUKES data as a key source – although why NIE figures should differ from DUKES, when NIE should have provided the data to DUKES in the first place is unclear.

Reasons why NI households might use more electricity than GB:

- no gas for cooking in NI
- bigger house size
- more people per household

Reasons why NI households might use less:

- higher prices
- lower incomes

9.2 Housing stock and households

A recent report describes many of the key features of housing, insulation and heating systems in each of the UK countries (Utley et al, 2001).

Some key comparisons include:

- dwelling type – NI has more bungalows which lose most energy, and fewer flats which lose least;
- dwelling size – in 1996 the average dwelling floor area in England was 85m², whilst that in Northern Ireland was 96m²;
- apart from cavity wall insulation where Northern Ireland does much better than the other countries, insulation standards are below those of the rest of the UK;
- average number of people per household in NI is 2.7, compared with a UK average of 2.3;
- NI has a much higher use of solid fuel and oil than the other countries.

In the autumn of 2000, the Northern Ireland Housing Executive carried out an energy efficiency survey across a number of tenures. The results were very encouraging and preliminary analysis suggests that the average SAP rating for dwellings in Northern Ireland has increased from 43 in 1996 to 54 in 2000/1. This is mainly attributable to the considerable decline in the use of solid fuel as the main heat source in the domestic sector and its replacement with oil fired heating and to a lesser extent, natural gas. Improved standards of insulation across all tenures in recent years also played a part (Noel Rice, pers comm).

9.3 The KeyPad meter

The tariff is known as HomeEnergy direct – a pay-as-you-go system. The KeyPad can be charged by cash (at garages, etc) or by debit card (over the phone). It thus blurs the distinction between prepayment and credit tariffs. The householder never receives a bill, as the information on consumption and expenditure is available on a digital display attached to the meter; the stored data can be downloaded periodically by NIE. It is to be hoped that NIE continue to provide these at no extra charge to the customer, in recognition of the major savings to NIE through less administration and debt prevention.

There are currently 97,000 electricity prepayment meter customers in Northern Ireland (DETR 2001, p117). NIE had installed 27,000 keypads by September 2001, but hope to achieve a total of 100,000 KeyPad meters installed by October 2002. Many of the KeyPads are replacing old prepayment meters, which were due to be replaced. The majority of KeyPads are, at the moment, going into the homes of the disadvantaged. At a general level, all electricity prepayment meters should be replaced by KeyPads by the end of next year.

The KeyPad has been trialled successfully with 15 fuel direct customers (out of a total of 400). The programme was very supportive, involved home visits, and has enabled these customers both to take control of their electricity expenditure and to come off fuel direct.

Recent publications from Lower Carbon Futures

Fawcett, T, Hurst, A and Boardman, B (2002), *Carbon UK*, Environmental Change Institute, University of Oxford. ISBN 1 874370 31 1

Jardine, C N and Lane, K (2002) *PV-Compare: 18 month's green electricity from Begbroke, UK*, Environmental Change Institute, University of Oxford, UK. January

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