

Energy Supply Probe - Initial Findings Report

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Target audience: Energy suppliers and generators, consumers, consumer organisations and representatives, academics and other interested parties

Overview

Concerns have been expressed about the operation of Great Britain's gas and electricity retail supply markets for domestic and small business consumers. These concerns are heightened by recent price increases, caused by hikes in global fuel prices. It is even more important that retail markets work well when prices are as high as they are now.

Overall, the transition from monopoly gas and electricity supply ten years ago to competitive markets is well advanced and continuing to develop. Many consumers have benefited from lower prices, better service and a wider range of deals on offer. The Big 6 suppliers are acting competitively and we have found no evidence of cartels.

This interim report has found some important areas where the transition to competitive markets now needs to be accelerated. Many consumers are not yet benefiting fully from the competitive market and vulnerable consumer groups are disproportionately affected.

We are today consulting until 1 December 2008 on a package of measures to address these issues. We remain convinced that consumers benefit most from a vibrant competitive market and our proposed measures aim to improve the functioning of the market. Subject to consultation, we will seek agreement with suppliers on the proposed reforms. If agreement is not forthcoming we will consider making a market investigation reference to the Competition Commission.

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Terms of reference for the Energy Supply Probe

Ofgem launched its study of the state of the GB energy supply markets (the Probe) in February 2008, with a commitment to deliver initial findings by the end of September.

The Probe is concerned with the functioning of competition in GB electricity and gas retail supply markets for domestic and Small and Medium Enterprise (SME) consumers. We have considered wholesale energy markets only to the extent necessary to assess whether retail markets are working effectively. The report does, however, highlight a number of wholesale market issues, which warrant further investigation.

The Terms of Reference were set out in an Ofgem press statement of 21 February:

"The investigation will cover:

- *the customer's perspective and experience of the market including access to information and barriers to switching supplier;*
- *suppliers' market shares, switching rates for different groups of customers (such as online, dual fuel, single fuel and pre-payment);*
- *the competitiveness of suppliers' pricing in the different market segments and customer movement between payment types as well as suppliers;*
- *the relationship between retail and wholesale energy prices; and*
- *the economics of new entry and the experience of companies trying to enter the energy market.*

The investigation will cover markets serving domestic customers and small businesses".

The Probe has been conducted using Ofgem's formal information gathering powers under the Enterprise Act 2002, for the purposes of assessing whether or not it is appropriate to refer the market to the Competition Commission for an investigation.

We note the announcement of the proposed acquisition of British Energy by EDF and the announcement of a Memorandum of Understanding between EDF and Centrica, transactions which will be subject to merger control by the European Commission and/or the Office of Fair Trading. This consultation document does not consider those proposed transactions. Ofgem will take into account any findings of the merger control authorities (and the extent of any commitments/undertakings entered into) as appropriate in due course.

1. Summary

Context

1.1. Ofgem's Energy Supply Probe has been undertaken against the background of unprecedented increases in world fuel prices which have flowed through into record increases in wholesale and retail gas and electricity prices. A typical household's energy bills have more than doubled since early 2004 and many households are now struggling to pay their bills. The numbers of consumers in debt to their energy suppliers, average debt levels and disconnection rates are all rising. These energy price rises have come at a time when household budgets are under pressure from the rising cost of food, petrol, mortgages and other essentials. Vulnerable consumers and those in fuel poverty are particularly affected.

1.2. At such times, it is essential that consumers can have confidence in the operation of the competitive energy markets. As world fuel prices, wholesale energy costs and the costs of environmental compliance rise, it becomes even more important that retail markets function properly. The scale of potential adverse impact on consumers of any inefficiency in the retail market is all the greater.

1.3. This report sets out our initial findings¹ on the operation of the GB retail energy markets and sets out for consultation a package of measures to tackle the issues raised. The terms of reference are shown opposite.

Our findings

1.4. It is now ten years since GB domestic gas and electricity markets were opened up to retail competition and six years since price controls were removed. Both sectors have since moved from pure monopolies to markets where there are now greater levels of competitive activity and consumer switching than almost every other energy market in the world and most other UK consumer services markets. The fundamental structures of a competitive market are in place, and the transition to effective competitive markets is well advanced and continuing. We have, however, found a number of important areas where this transition should now be accelerated.

¹ Our findings are based on evidence from a diverse range of sources, including previously published information, business plans and data provided by suppliers, and previous and newly commissioned qualitative and quantitative market research. In addition, certain price changes have been effected by some companies in the days immediately preceding publication and it has not always been possible to reflect the impact of these in the analysis. Please contact us if clarification is needed on any of these issues or on any apparent inconsistencies between data sources.

The characteristics of GB energy supply markets

1.5. The GB retail energy supply markets have six substantial companies competing for the business of domestic consumers. This compares favourably with many other UK consumer services sectors (fixed and mobile telecommunications, supermarkets, pay television, high street banking, etc.). The market shares of these Big 6 suppliers in their former monopoly markets continue to fall year-on-year (at a rate of around 4 per cent per year for gas and 2 per cent per year for electricity)² as they penetrate further into each other's markets.

1.6. Despite this, the national gas market and each of the former regional electricity markets are still highly concentrated³. About half of the customers lost by the former monopoly suppliers of electricity in each region have transferred to British Gas, the former monopoly gas supplier, and vice versa. As a result, more than 70 per cent of customers remain with one or other of their former monopoly suppliers, although some of these have moved onto new and better terms, such as a dual fuel deal.

1.7. While the existence of six major competitors compares favourably with many other markets, it is less positive that no significant "competitive fringe" has developed – companies of a markedly different scale and business model offering a material threat to the Big 6. Most new entrants over the past decade have subsequently exited for a variety of reasons – some unrelated to the functioning of GB energy markets. Those that remain serve less than 0.3 per cent of the market. We have evidence of barriers to entry and expansion, in particular the difficulty that entrants have in securing adequate access to wholesale energy supplies. We intend to take action to facilitate efficient entry and so strengthen competitive pressure on the Big 6 suppliers.

Customer engagement

1.8. The level of consumer participation in GB energy supply markets is amongst the highest of any retail energy market throughout the world. The annual switching rate of 18 per cent also compares well with other retail services in the UK, such as fixed and mobile telecommunication, insurance products, mortgages and personal current accounts. Almost all consumers (96 per cent) know that they can change energy supplier and most (70 per cent) feel confident that they know how to do this.

1.9. The market also works well operationally. We have found that consumers generally find the switching process easy and that the majority of customers are

² For the period January 2004 - December 2007.

³ Our analysis shows the average HHI index in June 2008 for the former regional electricity markets to be 3,137 in electricity and 3,356 in gas, both of which fall comfortably into the OFT's categorisation of "Highly Concentrated".

satisfied with their switching experience and outcomes (77 per cent). These are important achievements that many other retail energy markets, including those in most of Europe, have yet to realise. They provide the fundamental platform for effective competition in energy supply.

1.10. Some 17 per cent of domestic consumers are particularly significant for the functioning of GB competitive energy markets. These "active" consumers regularly seek out competing price offers and switch suppliers on the basis of a good understanding of the range of offers available. They typically make accurate switching decisions and secure the most attractive deals.

1.11. Such active consumers are significantly in a minority. Action is now needed to encourage a greater proportion of consumers to engage in this way. Some still find it difficult or time consuming to assess competing offers; some are not confident that they can make a sound choice; some are sceptical about the scale of potential benefits and whether they will be sustained; some still worry about administrative or billing errors, service problems or moving inadvertently to a worse deal; some are unable to get the best deals because they do not have internet access, a current bank account or both.

1.12. Around half of the less active group of consumers do in fact engage with the market if approached directly by a sales person and supply companies put in significant direct sales effort in order to persuade these customers to switch. Such sales effort is to be welcomed - it is a sign of a vibrant market. Yet we have evidence that most consumers who change supplier in response to such an approach do not investigate alternative deals in the market, and may not therefore be making well informed switching decisions.

1.13. Almost all consumers tell us that they switch supplier in order to save money. Our analysis suggests, however, that price differences explain only a proportion of switching decisions and other factors may be important - including the impact of sales activity, brand and customer service. Consumers may also be switching on the basis of poor or partial information. As a result, the high levels of customer switching may not yet be exerting as much constraint on suppliers' prices as it could. As many as one third of switchers may not achieve a price reduction. This proportion is higher for Pre-Payment Meter (PPM) customers (45 per cent) and consumers who switch as a result of a direct sales approach (48 per cent for gas, 42 per cent electricity).

Supplier pricing behaviour

1.14. We have found that suppliers compete actively for those consumers who seek out the best deal in the market by offering keenly priced products. Dual fuel, direct debit tariffs offer the lowest prices and are the prime focus of competition among suppliers. We estimate that 8.5 million consumers benefit from these deals - equivalent to 38 per cent of all consumers with both gas and electricity supplies.

1.15. Since market opening, energy suppliers have also widened considerably the range of tariffs available to domestic consumers. They offer fixed or variable prices,

green energy deals and social tariffs, energy service packages and a wide range of incentive and reward deals. Suppliers have also responded in recent years to consumer demand for greater certainty by offering a range of fixed or capped price tariffs. We estimate that around 4 million consumers (one in seven households) benefit from these deals.

1.16. Although we have received no evidence, concerns that there is a cartel operating amongst the Big 6 suppliers have been raised. We have examined this issue carefully and are satisfied the suppliers' key pricing decisions are made independently and without unlawful agreements or information exchange between suppliers, although suppliers do consider the pricing policies of their competitors and possible reactions to price changes in reaching these decisions. This is a feature of a competitive market which we would expect to see. Given the market position in each region of the former incumbent electricity supplier and British Gas, we have found that suppliers typically determine the timing and, on occasion, the size of any price adjustments in relation to those two perceived market leaders in each region.

1.17. That said, there are instances of differential pricing that are of concern to us:

- Until very recently, the five former incumbent electricity suppliers charged electricity customers in their former monopoly areas an average of over 10 per cent higher prices than comparable "out-of-area" customers. The most recent price changes (which occurred during the Probe) narrowed this differential to around 6 per cent on average. Based on data provided to us by the companies, we can find no cost basis for this premium, nor are similar premiums found in gas.
- The five former incumbent electricity suppliers have consistently earned significantly higher margins on electricity supply than on gas. Higher prices are charged to customers taking only electricity under a single fuel arrangement (around a third of their electricity customers). Of these consumers, 4.3 million are not connected to the gas main and so are unable to move to a more competitively priced dual fuel deal. Again, we can find no cost basis for this practice.
- A number of the price differentials between payment types do not appear to have a cost justification - particularly for those customers who pay by standard credit. Recent price changes (after the Probe was announced) have reduced the average tariff differential for pre-payment meter (PPM) customers. These now, on average, reflect cost differences. However some PPM customers still pay a larger premium than is justified by the costs incurred (see Chapter 8).
- Suppliers compete vigorously in the online market with heavily discounted offers, the cheapest of which may be, initially at least, below cost. This enables the companies to secure the leading places in price comparison tables. The relevant suppliers told us that customers acquired online are profitable over a number of years as prices are subsequently increased. We are concerned that the temporary nature of these offers is not transparent to consumers. Equally, this may not be obvious to potential competitors who may, as a result, be deterred from entry into this most price sensitive part of the market.

1.18. Overall, these price differentials mean that companies charge more to existing (“sticky”) customers whilst maintaining competitiveness in more price sensitive segments of the market. The ability to price differentially in this way means that pressure on prices in the most competitive segments of the market does not always constrain prices for all other consumers. There is evidence in the companies’ business plans and from interviews with the Big 6 that they are aware of these dynamics and take them into account in their pricing decisions.

Supplier profitability

1.19. Any assessment of suppliers’ aggregate profitability is fraught with difficulties, given the complexities that result from vertical integration, hedging and the recent volatility in wholesale energy prices.

1.20. The energy supply business has low levels of directly invested capital and a very high level of pass-through costs. We would expect the margin on sales to be low as it represents a share of the entire value chain, including fuel costs, generation, transmission and distribution. Supply now represents around 7 per cent of the added costs and even less of the capital employed.

1.21. The effect of the differential pricing policies of the Big 6 suppliers is that profit margins differ significantly on different customers. As mentioned earlier, the margin earned by the former incumbent electricity suppliers on customers to whom they sell only electricity is typically significantly higher than the margin earned on customers in the more competitive parts of the market. On an average basis over the past 3 years, around three quarters of the gross profits of the Big 6, and all of their net profits, arise from their in-area electricity customers, which represent 48 per cent of their customer accounts⁴.

Hedging and the wholesale - retail link

1.22. We have examined how changes in wholesale gas and electricity prices are passed through to consumers by the Big 6 suppliers. There is clear evidence of a lag between changes in wholesale and retail prices. This is largely the result of suppliers’ hedging of their wholesale market exposures, and to a lesser degree the effect of administrative lags. We have found no evidence that this lag is greater when prices are falling than when they are rising, although this is unavoidably based on relatively limited historical data in relation to falling prices. We will monitor price changes over the coming months, during which wholesale prices are likely to remain volatile.

⁴ These figures represent analysis of best available figures aggregated for the Big 6; there are significant differences on an individual company basis.

1.23. There is evidence that the Big 6 suppliers seek to benchmark their hedging strategies⁵ against each other in order to minimise the risk of their wholesale costs diverging materially from the competition. Whilst this is an understandable risk management strategy, we are concerned that hedging may not be adequately driven by the risk preferences of consumers.

Pre-Payment Meter (PPM) consumers

1.24. There has been a great deal of public and political interest in whether the higher prices paid by consumers using pre-payment meters can be justified by the additional costs of metering and providing service to these consumers. The price premium charged to PPM customers differs significantly between suppliers, between geographic regions and over the range of energy consumption. PPM price premiums at the lower end of the consumption range appear to us to have a sound cost justification, while those at the upper end of the range do not. We believe that action is necessary to ensure that the premium charged to all PPM customers is placed on a sound cost basis. Moreover, we are concerned that competitive pressure on suppliers in this sector may not be sufficient and, as a result, the additional costs incurred in serving PPM customers may not be efficiently incurred.

1.25. Even once unjustified price differentials are removed, PPMs will remain among the most costly payment methods. PPM customers often choose their payment method for reasons of budget management. However, it is essential, particularly at times of rising prices, that they are aware of the price premium they pay, know the options open to them and are able to switch to a lower cost option as easily as possible.

1.26. PPM customers have recently become the most active in switching their supplier, although this is mainly in response to direct sales activity by the Big 6. This increased engagement of PPM customers is a positive development, and, indeed, we have encouraged this through our “energysmart” campaign. However, PPM customers rarely consider a wide range of alternative suppliers when switching and often switch to more expensive deals. Measures we propose to help consumers make better switching decisions in response to direct sales activity should be of particular benefit to PPM consumers, a significant minority of whom (around 20 per cent) are also fuel poor.

Vulnerable consumers

1.27. Many initiatives and programmes are already in place to protect the interests of vulnerable customers (see Chapter 9). Ofgem has made this a key priority for 2008, culminating in our recent Fuel Poverty Summit and the Action Plan agreed

⁵ There is no evidence of unlawful information exchange.

subsequently. The Probe has identified a number of concerns that may particularly impact vulnerable groups. For example:

- **Older people** are among the least active consumer groups, are most likely to be with their original supplier and most likely to pay by standard credit. As a result, they will suffer more from higher in-area pricing by former incumbent electricity suppliers and the premium charged to standard credit customers, and benefit least from dual fuel discounts. Moreover, only a third of elderly consumers have access to the internet, and so are least able to compare offers or access the cheapest online deals.
- **Low income groups** are far more likely than other groups to switch as a result of direct sales activity and therefore far less likely to compare a range of competing offers before switching. Moreover, low income groups have lower rates of access to the internet and a significant number do not have personal current bank accounts. As a result, there is lower access to the cheapest online deals and direct debit tariffs. Low income groups are also disproportionately high users of pre-payment meters, and pay higher prices as a result. A higher proportion of low income groups may also be prevented from switching by their current supplier with whom they are in debt.
- Many **rural customers** are not on the gas grid and thus are impacted by the higher margins earned on electricity consumers, but cannot benefit from lower margins on gas or the discounts available to dual fuel customers. This is compounded by higher heating costs (from their use of oil, electricity or liquefied petroleum gas), which drives a higher proportion of these consumers towards fuel poverty.

Scottish and Welsh consumers

1.28. The Scottish and Welsh markets exhibit some distinct characteristics. They are the most concentrated markets in Great Britain, with the combined market share of the former electricity incumbent and British Gas exceeding 80 per cent in the north of Scotland and south of Wales regions and close to 80 per cent in southern Scotland. All the former incumbent suppliers have retained Scottish and Welsh brands and our consumer research shows consumers in Scotland and Wales are particularly well disposed towards these companies. As a result, a higher proportion of customers remains with their original suppliers and may be paying the premiums charged to in-area consumers outlined above.

1.29. The proportion of consumers not connected to the gas grid is also much higher than the GB average in both Scotland and Wales. These consumers are unable to access competitive dual fuel discounts and are also least likely to be visited by a

sales person to encourage them to switch. An additional factor that may limit switching in Scotland is the prevalence of dynamic teleswitching (DTS), where consumers have their electricity supply remotely switched by their supplier (for example, if they have a separate heating load circuit). These consumers often use electricity storage heaters⁶.

1.30. There are low switching rates among DTS consumers. In both of the Scottish regions more than 90 per cent of DTS consumers are still with the former incumbent electricity suppliers, even though other suppliers do now offer specific DTS tariffs. However, despite these low switching rates, the prices charged by the former incumbent electricity suppliers to their DTS customers compare favourably with the average Economy 7 tariffs, perhaps reflecting action by Ofgem in 2004 when we raised concerns about these consumers with Scottish companies. We also note that there are two suppliers offering DTS tariffs in these regions that consumers could switch to.

Smart meters

1.31. In its 2007 Energy White Paper, the Government outlined plans to work with energy companies to roll out smart meters to all domestic households over the next decade. Ofgem has expressed its views publicly on a number of occasions in recent years that smart meters could have a materially beneficial impact on supply competition, by providing consumers with better information, enabling them to assess competing quotes more easily and shortening the switching process. Smart meters should also improve the quality of service available to pre-payment customers and significantly reduce the metering and cost-to-serve differences that exist today. Smart metering must be implemented in a way that ensures these benefits are realised. A roll-out of smart meters will, however, take a number of years and so earlier action will continue to be needed to promote competition.

Small business consumers

1.32. Many of the issues outlined above apply equally to small business consumers. In the small business markets, we have additional concerns about the transparency and fairness of contract terms, the use of objections, the standards of direct sales activity and the role of intermediaries. We have evidence that many small business consumers are unaware of their contract terms governing change of supplier and contract roll-over, and that this is being used by suppliers to lock in their small

⁶ There are around 224,000 DTS consumers in Scotland (around 8 per cent of all Scottish electricity consumers; 13 per cent in the north of Scotland and 6 per cent in the south of Scotland), 61,000 in South Wales (around 6 per cent of all electricity consumers in South Wales) and 1.3 million in England (around 6 per cent of all English electricity consumers).

business customers. This is harmful to the consumer and makes new entry to this market more difficult.

Wholesale market issues

1.33. Over recent years, Ofgem has taken a number of actions with respect to the wholesale gas and electricity markets (see Chapters 2 and 11), the most far reaching and high profile being our 2003 to 2006 Wholesale Gas Probe. The current Probe has focused on the operation of retail energy supply markets, given that properly functioning retail supply markets are critically important in ensuring efficient decisions in the wholesale market and an efficient allocation of risk throughout the value chain. For example, vertically integrated suppliers should make generation choices on fuel type, technology, timing, and/or contract structure on the same basis as an independent generator, without any expectation of being able to pass excess costs onto retail consumers.

1.34. In the course of the Probe, small suppliers and potential new entrants have highlighted the lack of liquidity in the wholesale electricity markets and raised concerns about the functioning of the wholesale market itself. Action is needed to address these concerns. We also need to be certain that the vertically integrated industry structure does not exacerbate these liquidity issues or distort long term investment decisions in wholesale businesses. Ofgem will continue to examine these issues in a GB context and through our significant involvement at the EU level.

Remedies

1.35. The Probe has identified a number of areas where the transition to fully effective competition should now be accelerated. Subject to consultation, the measures that we propose are summarised below.

1.36. ACTION 1: promoting more active customer engagement

- Suppliers will be required to implement a number of improvements to the quantity and quality of information they provide to consumers. This could include:
 - a requirement for **clearer information on customer bills** (for example, detailing the customer's existing tariff and consumption level) to make it easier to compare current arrangements with alternative offers;
 - an **annual statement** to each customer showing, for example, the customer's current tariff, the size of any premium they are paying (for example, relative to an average tariff or other payment method), their annual consumption level and alternative price packages available from that supplier;

- an **annual prompt** to all customers of how to switch supplier, the advantages and disadvantages of each payment method and the potential savings from changing payment method;
- A programme to **promote confidence in price comparison and switching sites** and to extend their scope, in particular to enable prepayment switching and switching among low income and vulnerable groups who do not have internet access;
- We will consider whether there is future scope to **simplify the supplier switching process** to identify any further possible simplifications to the customer switching experience;
- We will look again at **debt blocking** with the aim of re-visiting the automatic right to block switching by customers who are in debt as it is currently being applied by suppliers;
- A sustained **customer awareness programme** will be launched to explain the switching process, promote the benefits of switching and, in particular, give vulnerable customers targeted information on the options open to them.

1.37. **ACTION 2: helping consumers make well-informed choices**

- We will work with consumer groups and suppliers to explore the development of an **easy-to-understand price metric** to enable consumers to compare prices quickly and easily. This metric could be made available to all customers on their bills and proposed annual statements, and would be used by all suppliers in all price quotations;
- Rules governing **suppliers' sales and marketing activities** will be strengthened, especially focussed on enabling consumers to make well-informed decisions in response to a direct sales approach, and to prevent any misleading marketing or sales activity. This could, for example, include an obligation to provide consumers with a written quotation and comparison with the consumer's current price;
- We will actively engage with government, suppliers and others in order to facilitate an efficient **roll-out of smart meters**.

1.38. **ACTION 3: reducing barriers to entry and expansion**

- We will **review regulatory obligations** that could act as an undue deterrent to new entry or obstacle to small supplier growth and, wherever possible, remove them or make them less onerous;
- We will require the Big 6 suppliers to publish **separate regulatory accounts** for their supply and generation businesses, in order to improve transparency and make it easier for potential entrants to assess market opportunities at each point along the value chain;

- We will begin, urgently, a programme of work to identify the underlying causes of low **wholesale market liquidity**, and explore with the Big 6 suppliers how best to achieve a significant increase in liquidity.
- We are also seeking views on whether Ofgem needs new or **additional powers to guard against potential market abuses**, notably in wholesale electricity markets

1.39. **ACTION 4: helping small business consumers.** The above actions will help both domestic and small business consumers engage more effectively with the competitive market. However, we want to go further and are consulting on measures which include:

- A requirement to inform small business customers clearly in writing of the key **terms and conditions** in their contracts, especially those related to switching and contract roll-over
- A requirement to institute a code of practice to govern the **objections** and switching process, in order to ensure much greater uniformity in the arrangements for changing supplier and contract extension
- An extension of the **accreditation scheme for switching sites** to cover those dealing with small business consumers, in order to reduce confusion and ensure tariff information is presented in an easily understandable format
- A strengthening of the existing industry **code of practice for Third Party Intermediaries** (TPIs) with new provisions requiring TPIs to tell consumers how they are remunerated and whether they provide information on all or only some suppliers

1.40. **ACTION 5: addressing concerns over unfair price differentials.**

Encouraging more consumers to participate actively in the market and improving the quality of switching decisions should intensify competitive rivalry among suppliers. We would expect unfair price differentials to be eroded as a result but in addition:

- We will propose a new licence requirement on suppliers that differences in charges for different **payment types must be cost-reflective.**
- We are also considering placing a further new condition in the licences of the Big 6 suppliers that would either impose **a prohibition on undue price discrimination** or introduce a form of relative price control. Any such condition would seek to ensure that price differentials are objectively justified by cost differences. We would need to be sure that such a condition is a proportionate measure and serves to help, rather than hinder, progress towards effective competitive markets. We will conclude on this in the light of responses to the consultation and progress made in securing commitments to the market reforms we seek.

Next steps

1.41. We invite views on our findings, our proposed reforms and the specific actions necessary to realise these reforms. **We seek responses by 1 December 2008.**

1.42. Following this consultation we will seek agreement with suppliers on the proposed reforms, modified as appropriate in the light of comments received from all stakeholders, so that they can benefit consumers as soon as possible. If agreement is not forthcoming, we will consider making a market investigation reference to the Competition Commission. We invite views on whether the concerns identified in this report are sufficiently serious to warrant such a reference.

1.43. While this initial findings report is focused on GB retail energy supply markets, we have also identified a number of issues concerning GB wholesale energy markets. We will explore these issues further, and respond fully to the concerns about wholesale gas and electricity markets expressed by the Business and Enterprise Select Committee in its recent report on energy prices⁷.

1.44. Great Britain is increasingly integrated with wider European markets, especially in gas, which means that the interests of GB energy consumers are increasingly impacted by developments in continental Europe. The third package of energy market reforms currently progressing through the EU represents progress towards more effective markets and we are hopeful that it will be agreed later this year. Ofgem continues to work through the Council of European Energy Regulators (CEER), the European Regulators' Group for Electricity and Gas (ERGEG) and regional initiatives to realise concrete improvements in transparency, cross border trading arrangements and access to networks.

Structure of the report

1.45. This report is organised as follows:

- **Chapters 2 to 7** set out **the Probe's main findings** on the functioning of GB energy supply markets. Chapter 2 sets out key developments in the domestic markets since they were first liberalised. Chapter 3 assesses the extent of market concentration and shows how consumers now purchase their gas and electricity. Chapter 4 sets out the evidence on consumer switching and the drivers behind switching decisions, supported by the results of our surveys of consumer attitudes in Chapter 5. Chapter 6 looks at the history of entry and exit. Chapter 7 examines the key elements of supplier behaviour.

⁷ *Energy prices, fuel poverty and Ofgem*, Eleventh Report of Session 2007-08, 28 July 2008

- **Chapters 8 and 9** summarise the **impact of competition** on each key group of consumers. Chapter 8 quantifies the adverse effect on consumer groups of a number of concerns identified in this Probe. Chapter 9 focuses on the position of vulnerable consumers.
- **Chapter 10** describes the structure of the **small business sector** and the issues we have identified.
- Finally, while the Probe has focused on the GB retail energy markets, we have looked at **wholesale market issues** where they impinge on the effective functioning of the retail markets. **Chapter 11** describes the wholesale market issues identified in the course of this Probe which may warrant further examination.

1.46. The **Appendices** contain the **market research** commissioned by Ofgem for this Probe, and some of the **evidence and analysis** that underpin our findings.

2. History and development of the GB energy supply sector

This Chapter sets out the key developments in competition in the domestic retail energy markets since they were first liberalised. Those who are already aware of developments in the sector should proceed to Chapter 3. This Chapter sets out our reasons for removing price controls on the former incumbent energy suppliers⁸ and summarises the key findings of several major reviews of the development of the market that Ofgem has published since price controls were first lifted. It also summarises the history of consolidation in the sector over the past decade.

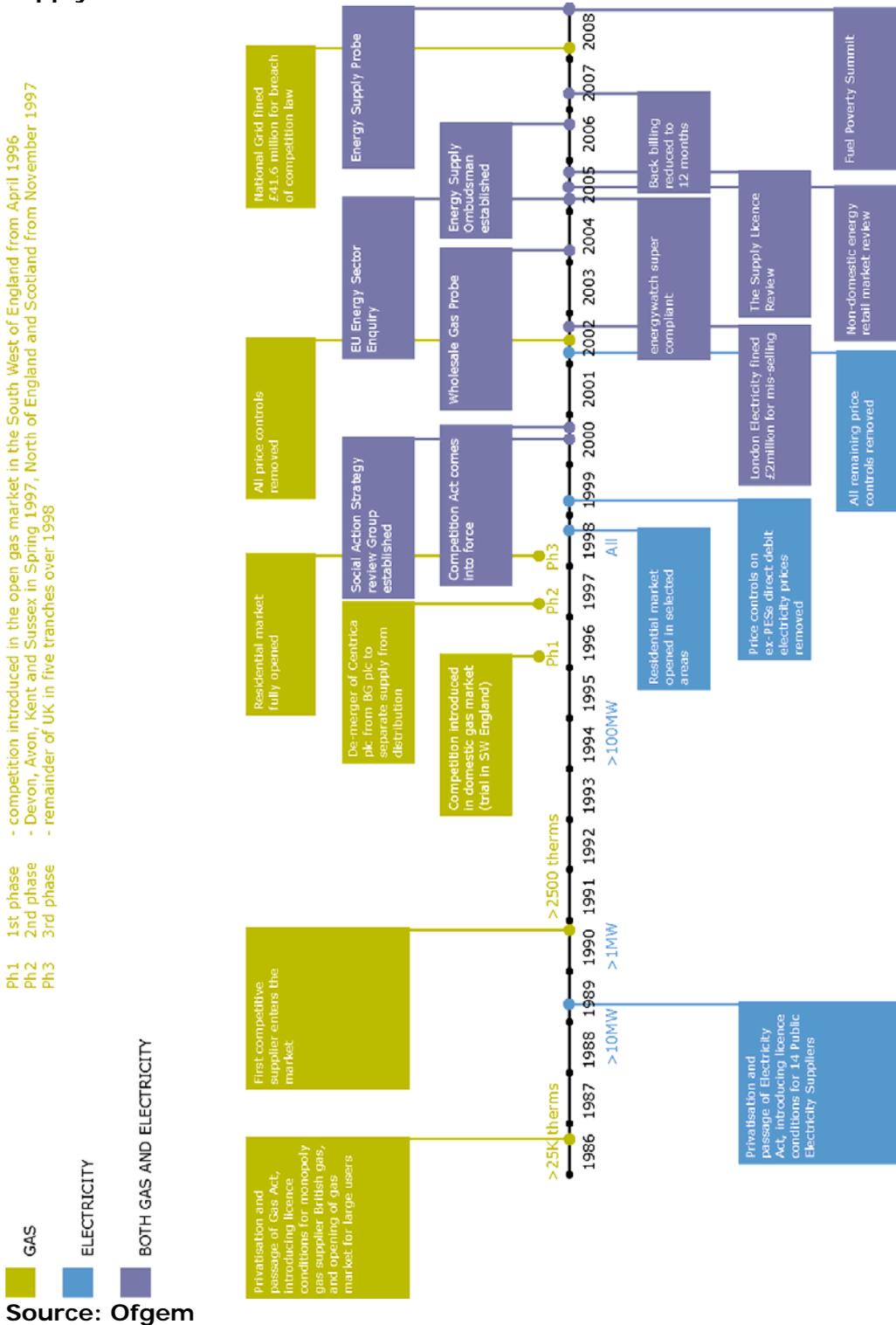
The development of competition in domestic retail energy markets

2.1. Since the late 1990s, the supply of electricity and gas to end consumers in GB has been unbundled from the rest of the industry. Suppliers represent a very important interface between the consumer and the electricity and gas markets. Properly functioning supply markets are important for the operation of the whole of the industry value chain. It is the action of suppliers buying electricity and gas for their customers that provides the economic signals to ensure that adequate and efficient investment is made in securing future energy supplies.

2.2. The process of electricity and gas market liberalisation in GB began with the privatisation and restructuring of the industry in the late 1980s, culminating in the opening of the energy supply markets for domestic and small business consumers in the late 1990s. Figure 2.1 sets out the liberalisation process, illustrating the key milestones and regulatory decisions since market opening.

⁸ In this report, the six former incumbent energy suppliers – British Gas, EDF Energy, E.ON, RWE npower, ScottishPower and SSE – will be referred to as the Big 6. British Gas will also be referred to as the former gas incumbent, and EDF Energy, E.ON, RWE npower, ScottishPower and SSE as the former electricity incumbents. In figures and tables, the former electricity incumbents will be referred to as ex-host PESs.

Figure 2.1: Timeline of key milestones and regulatory decisions in GB energy supply markets



Source: Ofgem

The introduction of competition

2.3. At privatisation, British Gas and the fourteen regional Public Electricity Suppliers (PESs) had a monopoly to supply all domestic gas and electricity consumers respectively in Great Britain. The freedom for domestic energy consumers to choose their supplier was introduced progressively between 1996 and 1999. In May 1998 the domestic gas market was fully opened to competition, closely followed by the domestic electricity market in May 1999.

Consumers get choice: removal of domestic price controls 2000 -2002

2.4. Before domestic markets were opened to competition, Ofgem set price controls that fixed the maximum price that the monopoly suppliers could charge domestic customers. These price controls remained in place when the markets were first liberalised. They were removed in stages between 2000 and 2002. In April 2000, Ofgem removed price controls on customers who paid by direct debit but retained price controls for prepayment, standard credit and prompt pay customers. In April 2001 Ofgem removed price controls on British Gas but put in place a relative price cap for prepayment customers. All remaining price controls were lifted in April 2002.

2.5. Ofgem consulted widely before removing price controls. The decision was based on our assessment that competition was developing well at the time and that the Competition Act 1998, which had been effective since March 2000, would deter companies from abusing any market power they held and provide Ofgem with sufficient powers to tackle any abuse. We based our decision on: consumer surveys that showed good awareness of the ability to switch, high and rising switching rates away from the former monopoly suppliers, and substantial and continuing falls in their market shares. We also highlighted the risk that, with competition developing, maintaining price controls could distort competition.

2.6. In June 2003, Ofgem and energywatch challenged the industry to improve its management of domestic customer transfers. At the time, consumer complaints arising from problems with the switching process were running at 3,500 a month. Suppliers responded by instigating the Customer Transfer Programme, which introduced reforms to the existing processes and established new procedures and management tools. The programme proved largely successful and consumer complaints fell, although the basic design and capability of the systems and procedures remained unchanged.

2.7. In April 2004, two years after removing the last price controls, Ofgem published a major review of the state of competition in the domestic energy supply markets. Our review concluded that supply competition had delivered substantial benefits for all consumers and that the markets were competitive but not yet mature.

2.8. Switching rates remained high and where customers had not switched this was because they did not want to - not because they were unaware they could switch and

save money or were concerned about the switching process. Doorstep selling remained one of the most important ways to attract new customers although increasing numbers of consumers were using the internet to find pricing information. Consumers did not necessarily look for the lowest price but made their choice based on which supplier approached them, the discount offered and their view of the supplier's brand and service levels. The two-tier pattern of pricing that had prevailed since the beginning of competition, where former incumbents maintained their prices to existing customers while offering lower prices to new customers, was beginning to break down.

2.9. Pricing differentials between prepayment and standard credit customers were reducing but prepayment customers had lower switching rates. We expressed concern about whether the different types of electricity prepayment meter being used in different areas of the country were preventing suppliers competing effectively. We found that vulnerable customers appeared to switch at broadly comparable rates to other customers, except for the over 65s.

2.10. Incumbents continued to lose market share but their rate of loss had slowed. The gains from switching remained broadly the same over time. Reductions in wholesale prices had been passed through to customers although there did not appear to be a strong link between wholesale and retail prices for all tariffs. There was headroom available for new companies to enter the market profitably.

Protecting consumers' interests: mis-selling and the customer transfer process 2000 - 2008

2.11. For competition to be effective it is important that consumers can be confident in the sales process. To prevent mis-selling, there are conditions in the energy supply licences which govern the processes that energy suppliers must have in place. At the beginning of this decade, mis-selling was seen as a very serious problem. Many customers, still new to the idea of switching energy supplier, were being switched without their consent. In November 2002, Ofgem imposed a penalty of £2 million on London Electricity, now part of EDF Energy, for breach of these obligations. Following this, the industry introduced a self-regulatory code and the number of energywatch complaints about mis-selling fell sharply.

2.12. In February 2008, we extended the existing marketing licence conditions for a further year. At the time, Ofgem indicated that the changes to the arrangements for consumer representation and regulations for consumer protection, together with the continued work by the industry for self-regulation of doorstep selling, could result in circumstances where the marketing conditions were no longer necessary.

2.13. However, the problem of mis-selling has not disappeared. In April this year, Ofgem launched an investigation into mis-selling by RWE npower which is ongoing. Continued mis-selling risks undermining consumer confidence in the transfer process. Moreover, the situation is now more complex with some consumers switching to more expensive suppliers on the basis of incomplete or misleading information not covered by the existing marketing licence.

Addressing wholesale issues: Wholesale Gas Probe 2003 - 2006

2.14. In October 2003 prompt wholesale gas prices in GB increased significantly with no obvious reason for the increases. Ultimately, these fed through to retail prices for both domestic and non-domestic energy consumers, resulting in a number of complaints. Responding to these complaints, Ofgem launched a probe into the causes of the movements in wholesale gas prices in November 2003.

2.15. There were a number of different drivers of higher gas prices over this period. By far the most significant was the oil price link. Declining UK gas supplies was another driver, but this was seen as a short-term issue because significant new gas resources were being developed at the time. A lack of effective competition in EU energy markets was also an important driver. At the time, not all contractually available gas in key EU wholesale energy markets was being released to the market.

2.16. Overall, these concerns highlighted more general problems with EU energy markets relating to transparency, access to capacity, balancing rules and ineffective unbundling between parts of the energy value chain. As a result, Ofgem called on the European Commission to devote more resources to considering competition issues in the energy sector and pledged to work with them to identify infringements.

2.17. The lack of transparency on offshore information was also noted as causing additional and unnecessary volatility in gas prices. Since the review, additional information on offshore gas supplies and maintenance has been published under a voluntary agreement involving BERR, producers and the System Operator.

2.18. Finally, there were some outstanding questions about gas sale contracts relating to the Sean gas fields in the North Sea. At the time, these gas fields and associated facilities accounted for approximately 5 per cent of National Grid's forecast maximum daily gas delivery from the North Sea. An informal investigation was launched into the extent to which, if at all, these sales contracts had contributed to high gas prices historically and could contribute to high gas prices in the future. After a detailed assessment of the conduct of the counterparties to the Sean contracts and of the contractual arrangements themselves, Ofgem decided in January 2006 that there was no reason to take any further action at that stage. It was, however, agreed that it would be necessary to maintain a watching brief as part of Ofgem's ongoing market surveillance activities.

Protect the interests of non-domestic energy consumers: non-domestic energy retail market review 2005

2.19. In 2005, Ofgem conducted a review of the non-domestic energy retail market. This involved collecting information from large businesses, SMEs, brokers, suppliers, trade and consumer associations as well as a review of data on market shares and new entry. Responses to the consultation highlighted that small businesses faced a range of difficulties with their energy suppliers, particularly around understanding their contract terms, and many felt that they were not always getting the best deal from the market. At the time Ofgem took the view that it did not have sufficient

evidence to warrant new licence conditions on companies supplying to small businesses. We were also concerned at the time that further regulation may reduce the degree of competition for small business consumers, constrain the degree of innovation in contract offerings and not be in customers' best interest. Instead, a forum for SMEs and energy suppliers to agree how to address the specific issues around contracting practices was established. Ofgem committed to reconsider the case for further regulatory intervention if no progress was made.

Breaking down barriers: the Supply Licence Review 2005 - 2007

2.20. Between 2005 and 2007, working with energy suppliers and customer groups we carried out a review of the standard supply licence conditions to see if they remained appropriate in a competitive energy market. As a result of the review, we cut the number of obligations in the licence in half and the length by nearly two thirds to provide a clearer, simpler set of obligations. We retained only the conditions that were necessary to allow the market to function properly and to protect vulnerable customers.

2.21. We did this because of our duty to better regulation, to reduce barriers to entry to the supply market and because we were concerned that some of the detailed, prescriptive obligations could stifle innovation in the retail market such as the emerging fixed and capped long term deals and the development of energy service firms who would sell energy and energy efficiency measures to customers.

Improving consumers' experience: new energy supply ombudsman

2.22. In April 2005, Ofgem received a supercomplaint from energywatch under the Enterprise Act 2002, claiming that the billing processes of gas and electricity suppliers were significantly harming the interests of domestic consumers. We published our response in July 2005. We found that for the vast majority of consumers the market was working well and we did not identify significant or widespread consumer detriment because of billing. However, for a relatively small number of consumers who had reason to complain, we recognised that there were problems: complaints were resolved slowly, they often suffered great inconvenience and did not always receive adequate compensation.

2.23. We therefore required suppliers to do three things by July 2006: establish and fund a new energy supply ombudsman to look into and resolve complaints and award customers compensation of up to £5,000; write off any amounts owed by customers where a supplier had failed to send them a bill for over twelve months; and review their supply contract terms and conditions to make them simpler and easier to understand. The suppliers complied with all three requirements by July 2006.

On-going monitoring role: retail market reports 2005 - 2008

2.24. Ofgem keeps the operation of GB retail energy supply markets under continual review. Since 2005, Ofgem has, on several occasions, reported on how effectively these markets have been transitioning from former monopolies to fully functioning

competitive markets. We have, to date, been able to give consumers some assurance on this transition, while identifying a number of areas in which further progress has been required. Our preference has been to allow the competitive market to become fully established, as we believe that this provides the best long term assurance of consumer benefit.

2.25. In September 2005 we published our first retail market report. This followed the decision of some suppliers to raise retail prices in response to significant increases in wholesale energy prices. This was the first time that former monopoly suppliers had increased prices since the market was opened to competition. The report concluded that competition remained effective: the discounts available for customers switching from the former monopoly suppliers had increased as a result of the price rises, that switching rates remained high and that the market shares of the incumbent suppliers continued to fall.

2.26. In March 2006 we published our second report. This followed a second round of significant price rises by all domestic suppliers following further increases in wholesale energy prices. We concluded that competition was effective and vigorous. The difference between the cheapest and most expensive deals had widened but customers on all payment types, including prepayment and standard credit, could make significant savings by switching supplier. Switching rates were at their highest level for over four years, and incumbent market shares were continuing to fall. Suppliers were also trying to help their customers manage as energy bills increased. They launched, for the first time, new fixed and capped rate deals lasting up to five years and a range of special tariffs to help their most vulnerable customers.

2.27. In June 2007 we published our third report. Wholesale prices had fallen and there was concern about the size and speed of suppliers' price cuts. There were also widespread concerns about whether the market adequately protected vulnerable and fuel poor consumers. Our analysis showed that all segments of the market remained competitive. The spread between the most and least expensive suppliers had shrunk and more expensive suppliers had been forced to cut prices to stem accelerating customer losses. There was evidence of increasing innovation with over a fifth of consumers on a fixed, capped, online or green tariff. Suppliers were investing heavily in new IT systems to improve service. Switching rates were at their highest level in four years. We also committed to making sure that all consumers had access to good information and that switching remained simple and hassle free.

2.28. As part of this review, we analysed the relationship between wholesale and retail prices and found that all consumers had been protected from the full impact of rising wholesale prices. On average, suppliers had shielded customers from around £100 of the wholesale price increases over the previous four years. Customers who had switched supplier or to a fixed price deal had saved up to £300.

2.29. We also looked in depth at how well the market worked for prepayment customers. We concluded that suppliers faced higher costs in supplying prepayment customers than customers who used other payment methods and that the best offers in the market had reflected these costs differences since competition had been introduced. However, we also found that prepayment customers were less likely to

switch and wanted more information. To address this, we published a factsheet and launched a switch and save campaign specifically targeted at prepayment customers.

Working with the European Commission: Energy Sector Inquiry 2007

2.30. The European Commission looked into competition in EU gas and electricity markets as part of its Energy Sector Inquiry⁹. Its findings, published in early 2007, identified serious shortcomings in EU energy markets. In particular, many national markets exhibited high levels of concentration. It also raised concerns about lack of wholesale market liquidity and transparency, and also limited integration between Member States' national energy markets. Ofgem strongly welcomed the findings and believes the Commission should continue to make full use of its competition powers where evidence of abuses exist and in the examination of mergers and acquisitions. European regulators, including Ofgem, continue to work with the Commission to establish effective competition through a series of initiatives to improve transparency and create regional markets in Europe.

Tackling serious breaches of competition law: National Grid 2008

2.31. When the metering market was opened to competition, National Grid entered into contracts with five of the Big 6 to supply and maintain gas meters. These contracts included financial penalties that applied if suppliers replaced more than the small number of meters allowed under the contract by National Grid. They severely restricted the rate at which suppliers could replace even National Grid's older meters with cheaper or more advanced meters from rival meter operators. By restricting competition, National Grid deprived gas suppliers and consumers of access to lower prices and improved service. Furthermore, it curbed innovation in the provision and maintenance of domestic-sized metering.

2.32. Ofgem fined National Grid £41.6 million for this serious breach of competition law. National Grid had abused its dominance in the domestic gas market, restricting competition and harming consumers.

Initiatives to help the vulnerable: Ofgem's Social Action Strategy and Fuel Poverty Summit 2008

2.33. Higher prices present real difficulties for those on low incomes who may struggle to pay their fuel bills. In 2006, BERR estimated that there were around 4 million households in fuel poverty, equivalent to around 1 in 7 households. Recent record price rises mean that many more will struggle to pay their bills. While the

⁹ Final Report and associated documentation see:
<http://ec.europa.eu/comm/competition/sectors/energy/inquiry/index.html#final>

numbers of energy consumers in debt has remained fairly stable over recent years, the average level of debt has increased steadily as bills have risen and as the wider credit squeeze has started to take hold. Currently, around 10 per cent of attempted domestic transfers are debt blocked by suppliers. There was also an increase last year in the number of disconnections, although the number remains at a historically low level and the figure fell again in the first quarter of 2008, following Ofgem's debt and disconnection review.

2.34. Ofgem has a long history of involvement in these issues. We first published a Social Action Plan in 1999, linked to which a number of important protections for vulnerable customers were introduced into licences. In 2002, Ofgem and energywatch published their first debt and disconnection guidelines and Ofgem has published three subsequent best practice reviews in this area, the most recent being earlier this year. In 2004, we worked closely with industry on a self-regulatory arrangement to prevent the disconnection of vulnerable customers. In 2004, we published guidance on social tariffs making clear there were no regulatory barriers to the introduction of such tariffs. In 2005, we published our first review of suppliers' corporate social responsibility programmes and followed this up in 2007 with a fuller scrutiny of individual suppliers' social tariffs and other programmes which we have now committed to publish on an annual basis.

2.35. Through our Social Action Strategy Review Group, established in 2000 and involving representatives of industry, government and consumer groups, we have helped take forward the debate in important areas (such as the links with the financial inclusion agenda) and have initiated a number of initiatives such as the winter mail-out using DWP data to target help to those most in need. Building on this tradition, in April 2008 we hosted a Fuel Poverty Summit involving Ministers, suppliers and other stakeholders to agree what more can be done to help vulnerable consumers participate more effectively in the energy market and to help suppliers and others better target the help available. The output was a Fuel Poverty Action programme with a number of agreed actions – Ofgem is meeting with Ministers later this month to review progress against the plan. We set out more fully in Chapter 9 our Probe conclusions in relation to vulnerable consumers and the range of current initiatives to help these consumers.

2.36. In May 2008, following the Summit, Ofgem published an open letter highlighting concerns about PPM consumers switching to more expensive suppliers, seeking further evidence and views on a range of potential remedies. As explained in that letter, the responses from consumer groups, suppliers and others have been considered as part of the Probe and all non-confidential responses have been published on Ofgem's website. In particular, these responses have been taken into account in our proposed remedies.

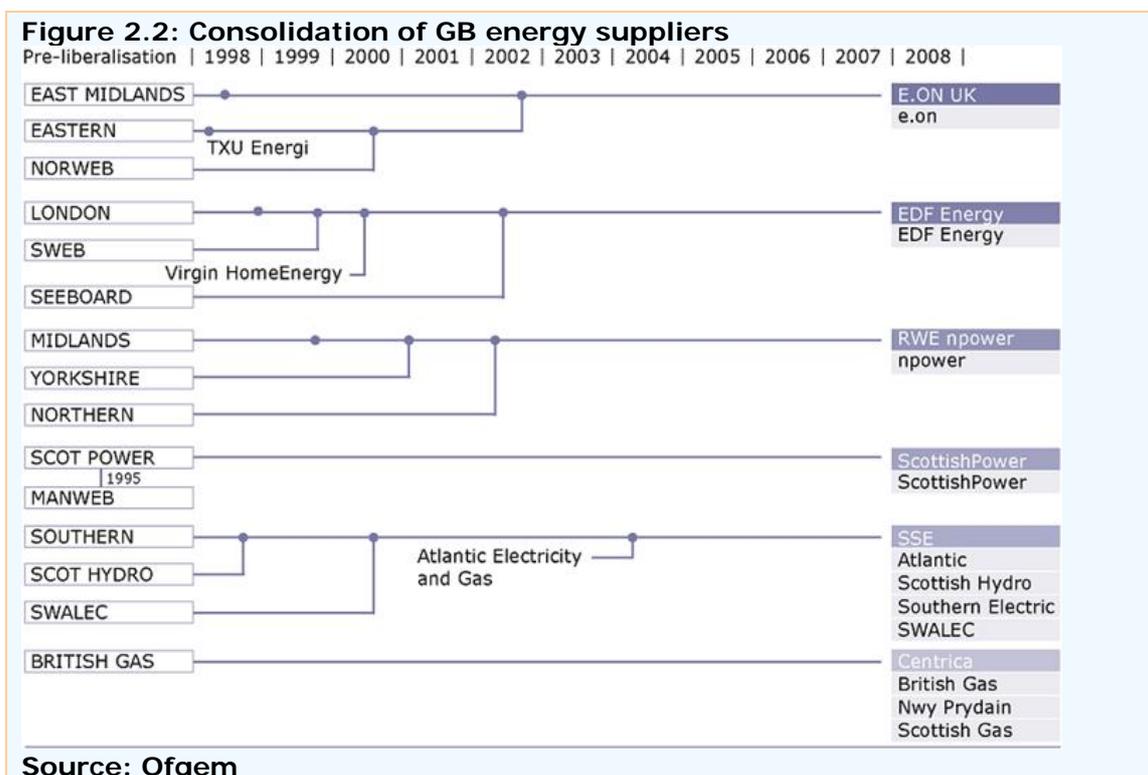
Media campaigns: Naming and shaming of suppliers 2007 – 2008

2.37. Over the past two years, Ofgem has carried out a media campaign to name and shame suppliers who were not putting their customers first. In February 2007, we urged former electricity incumbents to cut prices or risk losing customers in response to British Gas' price cut. In April 2007, excluding those on fixed price

tariffs, we identified that dual fuel customers with EDF Energy could save up to £140 a year, and those with ScottishPower could save up to £122, if by switching supplier. We also identified that consumers could save £35 to £40 a year by moving to direct debit. In January 2008, we named RWE npower as the supplier with the most to do to improve the help given customers who risk falling into debt with their energy bills.

Evolution of market structure

2.38. The GB electricity sector saw numerous changes of ownership, but very little consolidation, prior to market opening. At the start of 1998, fourteen of the original fifteen incumbent energy suppliers remained; in the subsequent five years this number fell to six as businesses merged to realise scale economies (contemporary commentary talks of “critical mass” at five million accounts) and to create balanced vertically integrated groups. Figure 2.2 shows the timeline over which today's Big 6 energy supply companies have evolved from the fifteen former incumbent suppliers.



2.39. Over 99 per cent of GB domestic energy consumers are now supplied by six companies:

- **Centrica plc:** Centrica plc owns British Gas Trading which operates three retail brands: British Gas (in England), Nwy Prydain (in Wales) and Scottish Gas (in Scotland). Its energy supply business was operated by the former gas incumbent, British Gas, prior to demerger in 1997.

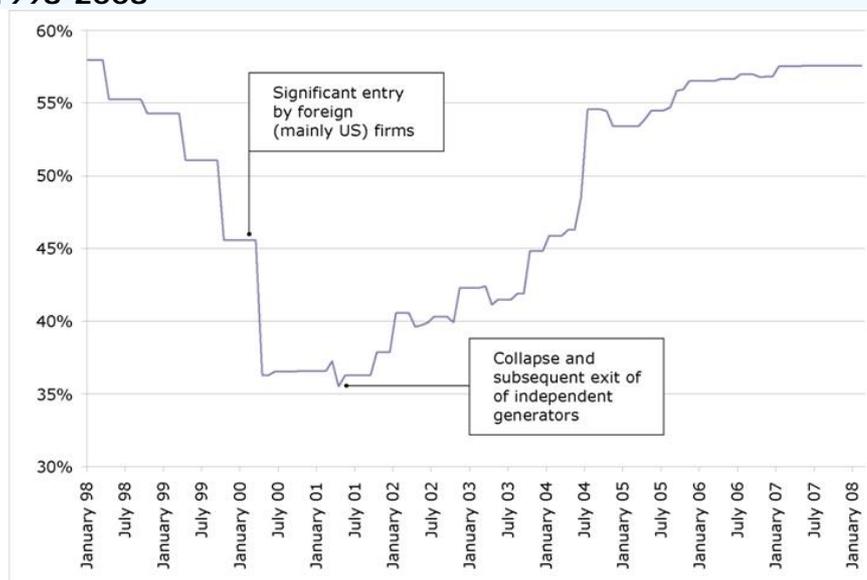
- **E.ON UK:** A wholly-owned subsidiary of the German energy group, E.ON Group, E.ON UK acquired Powergen in 2002, which operated the Eastern, East Midlands and Norweb ex-PES regions. Today, it operates under the e.on brand.
- **EDF Energy:** A wholly-owned subsidiary of the French energy group, EDF Group, EDF Energy acquired London Electricity (in November 1998), SWEB (in July 1999) and SEEBOARD (in July 2002). It operates under the EDF Energy brand. In September 2008, EDF Group announced an offer for the entire share capital of British Energy.
- **RWE npower:** Part of the German energy group, RWE Group, the supply business operates under the npower brand. It is an amalgamation of the Midlands, Yorkshire and Northern ex-PES regions.
- **Scottish and Southern Energy ('SSE'):** SSE was formed in December 1998 with the merger of Scottish Hydro and Southern Electric. It subsequently acquired SWALEC (in August 2000) and Atlantic Electric and Gas (in April 2004). It has maintained and promoted separate and distinct energy retail brands in each of England, Scotland and Wales, as well as the Atlantic brand.
- **ScottishPower:** A wholly-owned subsidiary of the Spanish energy group, Iberdrola, Scottish Power's supply business is an amalgamation of the Manweb and South of Scotland ex-PES regions. It operates under the ScottishPower brand.

2.40. All six are, to a large extent, vertically integrated in electricity, together owning sufficient generation capacity to supply the entire domestic and small business sectors. There are also five active suppliers who are not former incumbents. However, they serve less than 0.3 per cent and 0.05 per cent of the domestic electricity supply and gas supply markets respectively. As set out in Chapter 6, 15 suppliers have entered since market opening, although none have grown to the scale of the Big 6 suppliers. Those that did build scale, such as TXU Energi and Atlantic Electric and Gas, have been acquired by the former incumbent suppliers.

Vertical integration

2.41. The GB electricity sector has been increasingly vertically integrated in recent years. Several takeovers of independent generators followed the collapse and bankruptcy of AES, Enron, Independent Energy and TXU Europe in 2001 and 2002. Since mid-2004, the share of generation capacity held by the Big 6 suppliers has been consistently between 50 per cent and 60 per cent, as illustrated in Figure 2.3.

Figure 2.3: GB generation capacity shares of the Big 6 since market opening, 1998-2008

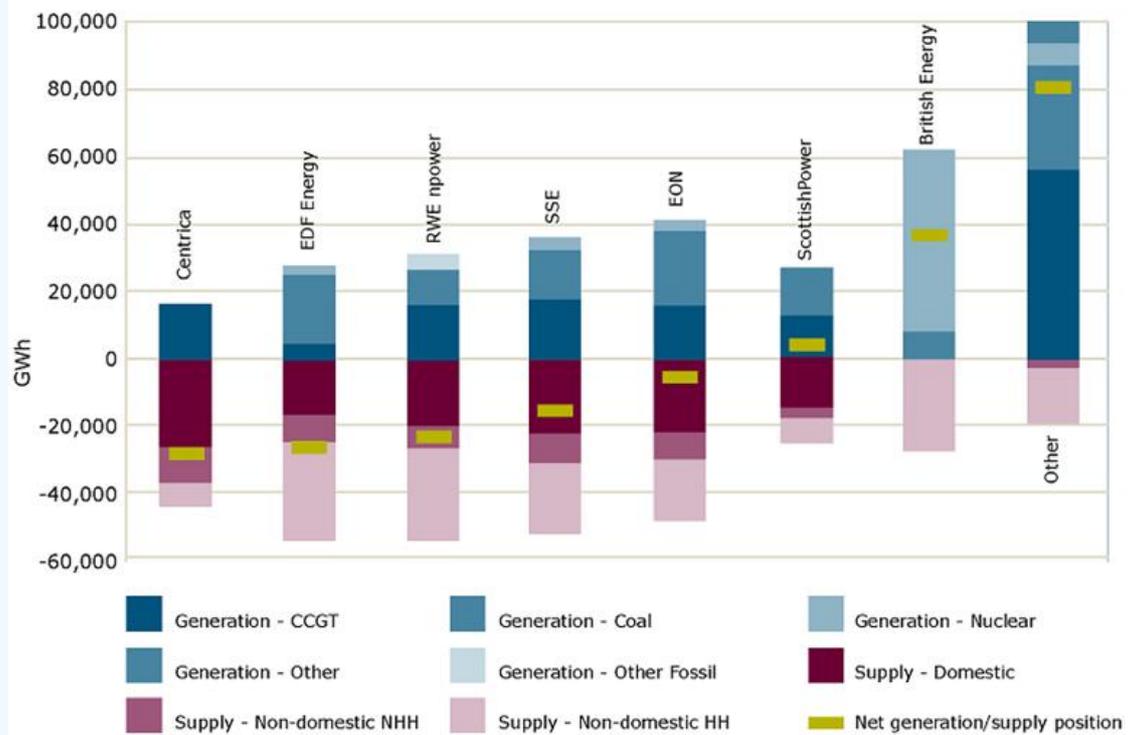


Source: National Grid

Note: For England and Wales only. Capacity not allocated on an equity share basis. Also includes monthly traded volumes.

2.42. The market for electricity supply to larger non-domestic customers usually reflects prices in the wholesale market. As a result, a better indication of vertical integration would be to compare generation volumes against the requirements of the domestic and SME markets. The five former electricity incumbents can meet all of their domestic and SME requirements from their own generation. Only Centrica has a need to buy a proportion of its requirements in the wholesale market.

2.43. Figure 2.4 shows the extent to which the Big 6's supply liabilities (broken down into domestic, non-domestic non-half-hourly (NHH) (a proxy for SME) and non-domestic half-hourly (HH)) were matched by generation capacity in 2007.

Figure 2.4: Electricity generation and supply balance, 2007

Source: Ofgem, BERR, Datamonitor report: *Q4 2007 B2B Market Share Monitor*, and Elexon.

2.44. In the GB gas sector, vertical integration is less of a feature. Only Centrica (British Gas) has significant gas production capability as a part of its UK group with production in 2008 representing around 29 per cent of its GB domestic and SME supply business requirements.

2.45. The GB market for gas supply is well connected with other markets through import pipelines and interconnectors and Liquid Natural Gas (LNG) import terminals. These links make the GB gas market part of a wider international market for gas. This differs markedly from the wholesale electricity market, which has only 2GW of interconnector capacity with France (equivalent to 3 per cent of maximum demand). In addition, although some storage and interconnector capacity is owned or leased by major suppliers, ownership is much more diverse than in the GB electricity sector.

3. Overview of GB energy supply markets

This Chapter considers the market position of the Big 6 suppliers, their market shares and extent of vertical integration, and the level of concentration in the market. It also details the breakdown of the customer base of the Big 6 according to location, fuel and payment type¹⁰.

Market shares and concentration

3.1. The evolution of GB retail energy supply markets over the past decade is summarised in Chapter 2. It describes the emergence of six major, vertically integrated energy supply companies who now supply over 99 per cent of the domestic gas and electricity markets.

3.2. Inferences about how competitive a market is can be made by considering the structure of the industry. Structural measures include: the number of competitors; market shares^{11, 12}; concentration ratios¹³; and Herfindahl-Hirschman Indices (HHIs)¹⁴. Of these, HHIs are commonly used to assess concentration, ranging from 10,000 for a monopoly to just above zero for perfect competition. Office of Fair Trading Guidelines categorise a market as 'concentrated' if its HHI exceeds 1,000 and 'highly concentrated' if its HHI exceeds 1,800.

3.3. Whilst such indicators do not provide conclusive evidence on the level of competition, they do offer pointers as to whether a market has the potential to deliver non-competitive outcomes.

¹⁰ The data in this Chapter is predominantly sourced from an information request submitted to all GB energy suppliers. It covers the period from January 2004 to December 2007. Where particular data was unavailable, the trends suggested by the sector as a whole have been used to provide an estimate. HHI data for gas and electricity supply have been sourced from Ofgem's Gas Suppliers and DNO market monitoring databases, which cover the period August 2001 to June 2008.

¹¹ As will be apparent from the analysis, a number of putative or possible market delineations are employed, from which market shares are then derived. These possible market definitions are not necessarily the delineations that might be found to be correct in considering application of the Competition Act 1998 (in respect of which further analysis would be required).

¹² We have used customer numbers to measure market shares.

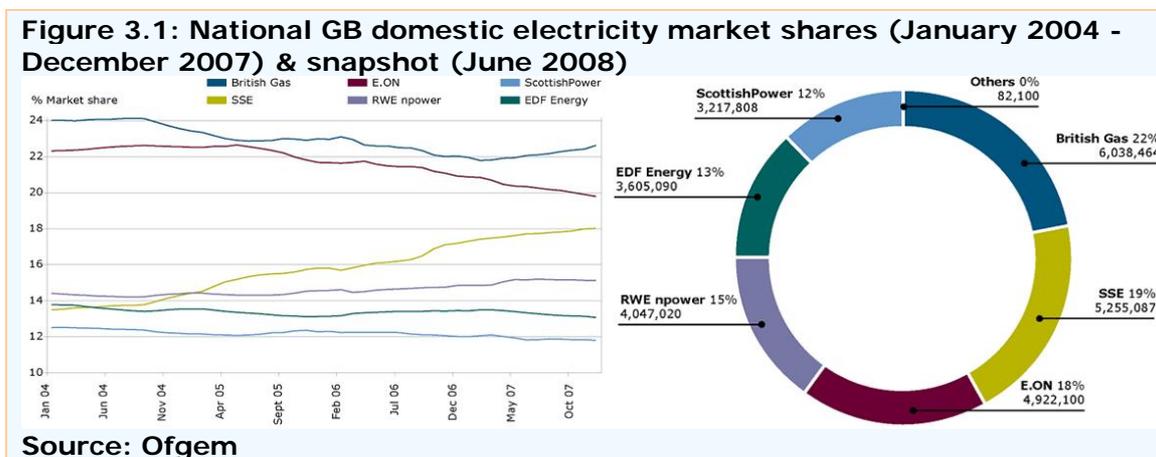
¹³ In this report, we will often look at the six firm concentration ratio, which is the sum of the shares of the six largest firms in the market.

¹⁴ HHI is defined as the sum of the squared market shares of all firms in the market.

National market shares

Domestic electricity supply

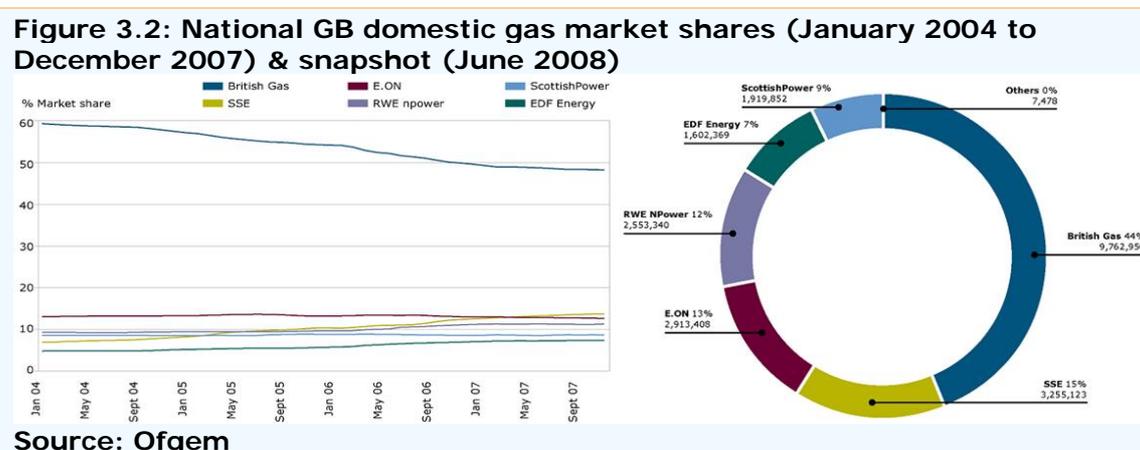
3.4. In December 2007, there were around 26.7 million domestic electricity accounts in GB, an increase of just over one million since January 2004. The Big 6 account for nearly all of this market, and are of a similar scale (see Figure 3.1). British Gas has the largest share with a 22 per cent share, followed by (in order of share) E.ON, SSE, RWE npower, EDF Energy and ScottishPower. There are currently four smaller suppliers in the market. They are: Ecotricity, First Utility, Good Energy and Utilita. Collectively, they account for around 0.3 per cent of domestic electricity supply.



3.5. SSE has significantly increased its customer base from 3.4 million in January 2004 to 4.8 million in December 2007 (an increase from 13 to 18 per cent market share). Elsewhere, changes have been modest over this period, with small declines in share for British Gas (24 to 23 per cent), E.ON (22 to 20 per cent) and EDF Energy (14 to 13 per cent) and a slight increase for RWE npower (14 to 15 per cent). ScottishPower's share has remained broadly stable at 12 per cent.

Domestic gas supply

3.6. In December 2007, there were around 22.4 million domestic gas accounts in GB, an increase of around 810,000 since January 2004. In contrast with electricity, British Gas has a markedly higher market share (44 per cent) than the other Big 6, all of whom are new entrants into gas supply since liberalisation. The largest of these (SSE) has a market share of 15 per cent and the smallest (EDF Energy) 7 per cent. There are two smaller suppliers active in the domestic gas supply market, accounting for just 0.05 per cent of the market in December 2007.

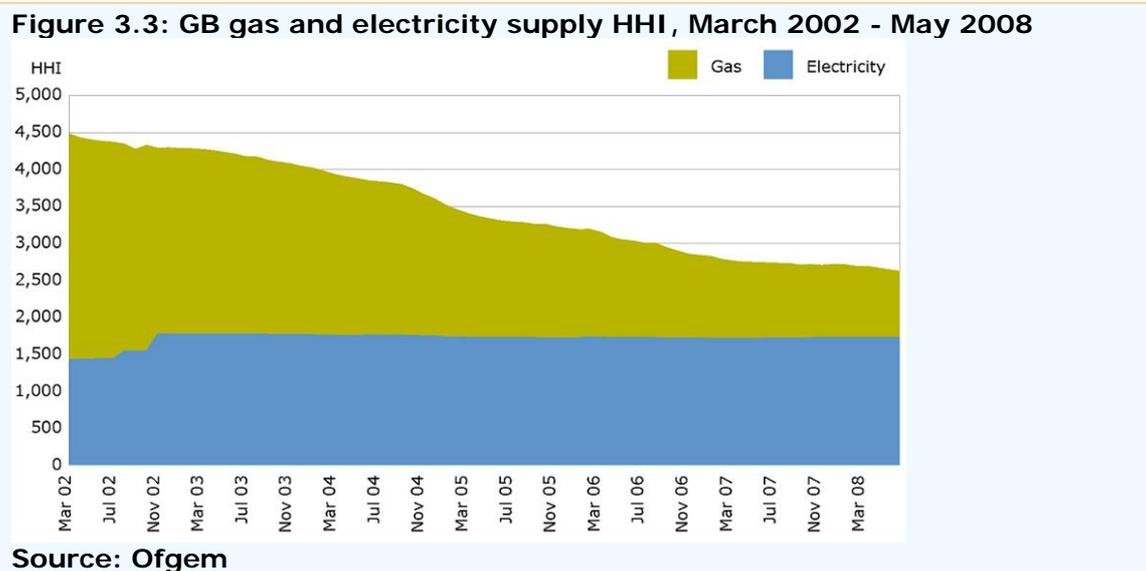


3.7. In the ten years since market opening, British Gas has seen its share fall to 44% by June 2008. The principal beneficiaries of these losses are the other main suppliers: SSE has more than doubled its gas customer base over this four year period. It moved from being the fifth to the second largest supplier. E.ON, EDF Energy, RWE npower and ScottishPower also grew their gas customer bases at British Gas' expense, albeit at much lower rates.

National Herfindahl-Hirschman Indices (HHIs)

3.8. At market opening, the domestic electricity supply market comprised fourteen regional monopolies, each of which had a national market share of 12 per cent or less. As a result, the national HHI was low (around 800). On a national basis, with the consolidation of the former electricity incumbents into five groups, concentration levels rose sharply to around 1,779 at the end of 2002. They have remained close to this level ever since. In June 2008, the national electricity HHI was 1,735. It should be noted that the minimum HHI for a market with is 1,666.

3.9. For gas, there was a single national monopoly at market opening, so the HHI has fallen from 10,000 to 2,625 in June 2008. Overall, despite these falls, gas supply continues to be, on the basis of the OFT's categorisation, highly concentrated.



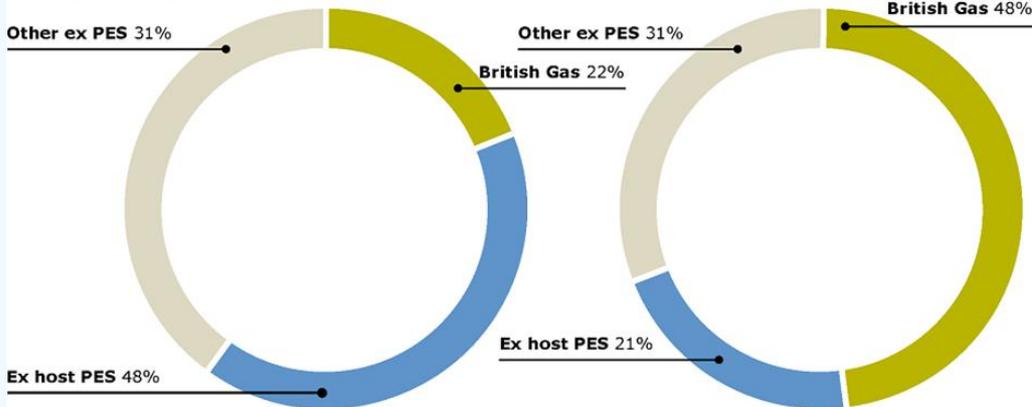
Regional market shares

3.10. National market shares do not reveal certain regional characteristics of the electricity or gas supply markets, which are a legacy of the regional monopolies that existed in the electricity sector prior to market liberalisation. As a result, the former electricity incumbent in each region typically has a market share of around 50 per cent and that former incumbent is the leading regional challenger to British Gas in the gas supply market.

3.11. British Gas, the former gas incumbent, on the other hand, has a more even regional spread in both gas and electricity supply, reflecting its former status as a national monopoly supplier of gas. As a result, British Gas is the leading challenger to the former electricity incumbent in each region

3.12. Figure 3.4 shows the regional market shares in June 2008. There is a great deal of symmetry between the two markets because approximately half the customers that have left the former electricity incumbents since liberalisation have moved to British Gas and around half of those that have left British Gas have moved to the former electricity incumbent, typically as a result of their migration to dual fuel deals (see below). As a result, the former incumbent suppliers retain, on average, a combined regional share of around 70 per cent in both electricity and gas. The remaining 30 per cent is shared between the four other Big 6 suppliers, typically with less than a 10 per cent share each.

Figure 3.4: Current average regional supply market shares electricity (left) and gas (right)

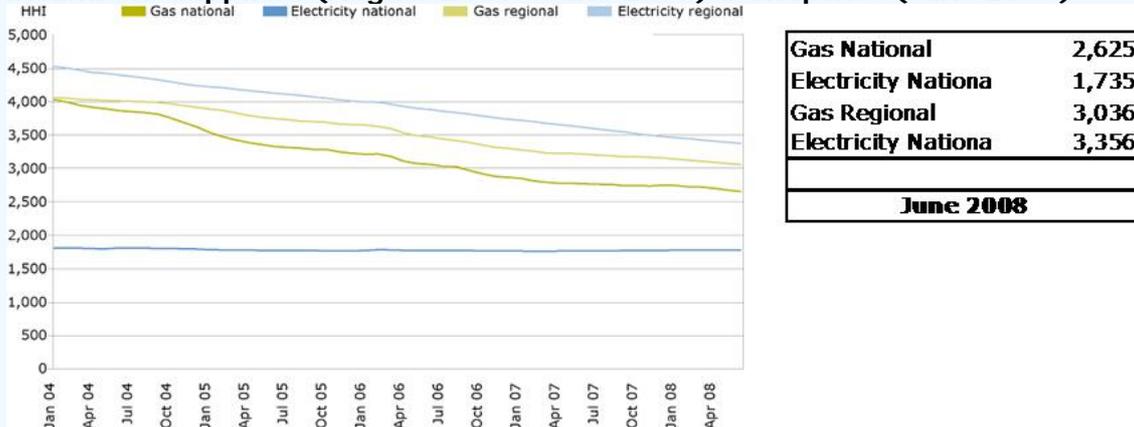


Source: Ofgem

Note: Electricity shares are for June 2008; Gas shares are for December 2007.

3.13. As a result of this structure, regional markets are significantly more concentrated for both electricity supply and gas supply HHIs are higher than the national average. The GB regional HHI average in electricity is 3,356 and gas is 3,036 – compared to national HHIs of 1,735 and 2,625 respectively. The trends in the regional HHIs are presented in Figure 3.5.

Figure 3.5: Average electricity and gas supply HHIs for former electricity incumbent suppliers (August 2001 - June 2008) & snapshot (June 2008)



Source: Ofgem

Dual fuel supply, separate fuels and electricity-only

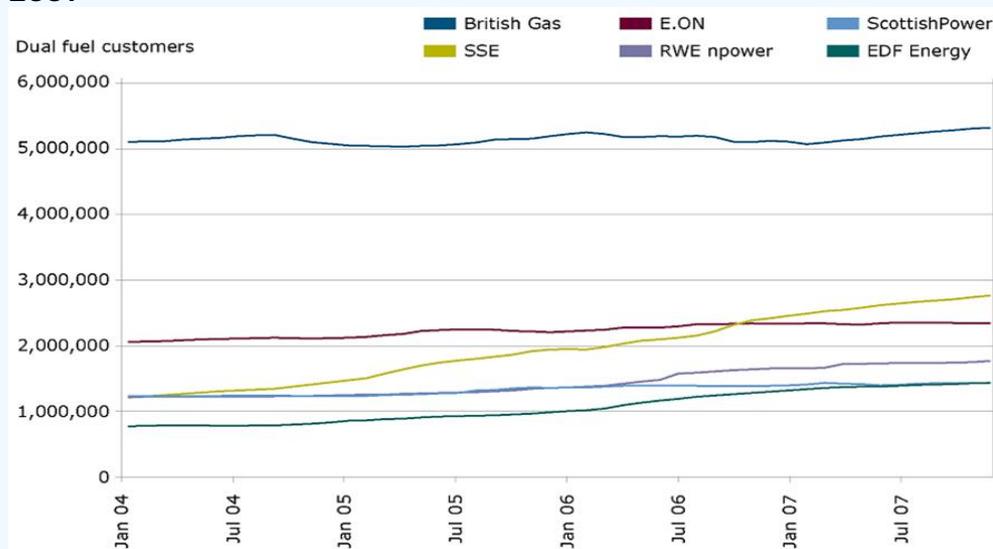
Dual fuel supply

3.14. Since market opening, the focus of competition has been on dual fuel offerings (i.e. consumers purchasing both gas and electricity from the same supplier in a

combined package). The Big 6 actively market and promote their dual fuel packages by offering discounts to consumers that sign up to them for both fuels. Our quantitative market research shows that, excluding consumers off the gas grid, around 90 per cent of switching over the last year resulted in consumers taking their electricity and gas supply from the same supplier.

3.15. In December 2007, there were 14.8 million dual fuel customers representing around two-thirds of all consumers with both an electricity and gas supply. This was up from 11.4 million in early 2004, an increase of around a quarter (see Figure 3.6).

Figure 3.6: GB domestic dual fuel consumers, January 2004 - December 2007



Source: Ofgem

3.16. Although British Gas remains the clear market leader with a share of 36 per cent, over this period its market share has declined by around ten percentage points. However, this is in the context of a growing dual fuel market. In absolute numbers, British Gas's dual fuel customer base has remained broadly stable, and over 2007 it gained 400,000 customers. By contrast, all electricity suppliers have been gaining dual fuel customers.

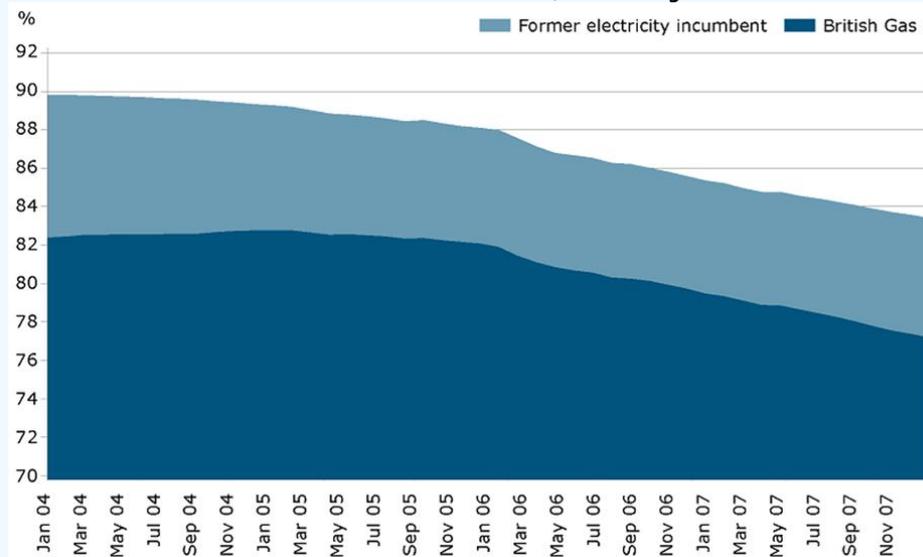
Non-dual fuel supply

3.17. As a result of this shift to dual fuel deals, only around 28 per cent of all consumers (7.6 million) take gas and electricity from separate suppliers. Most of these have remained with the former electricity incumbent and most have never switched either gas or electricity supplier. A further 4.3 million (16 per cent) do not have access to gas supply, so cannot benefit from dual fuel deals.

3.18. Figure 3.7 presents the national picture for "stand-alone" electricity consumers (both on and off the gas grid) showing the share of the former electricity incumbent

and British Gas. Over the period we have looked at, the former electricity incumbents' average share has declined from 82 to 77 per cent. British Gas share has marginally decreased from 7 per cent to 6 per cent. Others account for 17 per cent of these consumers in December 2007, an increase of 7 percentage points since January 2004. Collectively, the former electricity incumbents and British Gas account for 83 per cent of these consumers; down from 90 per cent in January 2004.

Figure 3.7: Domestic electricity only consumers - Former electricity incumbents and British Gas GB share, January 2004 - December 2007



Source: Ofgem

3.19. A similar national picture emerges for gas “stand-alone”. British Gas has seen its share decline from 76 to 73 per cent over the same period. The five former electricity incumbents have seen their individual shares marginally grow from a maximum of 7 per cent in January 2004 to a maximum of 9 per cent in December 2007. Many of these gas stand alone customers with ex-PES suppliers are, we believe, a legacy of the fact that the domestic gas market opened first.

Off the gas grid

3.20. Of the 26.7 million electricity accounts, around 4.3 million are not connected to the gas network. It is not always possible for suppliers to distinguish between these “electricity-only” customers and those that take their gas from another supplier. However, we estimate that the former electricity incumbents have an average share of around 60 per cent of this market, and British Gas a share of around 15 per cent.

3.21. The erosion of the former electricity incumbents’ position in this market has been slower amongst these consumers than the market in general. We explore the reasons for this in more detail later in the report.

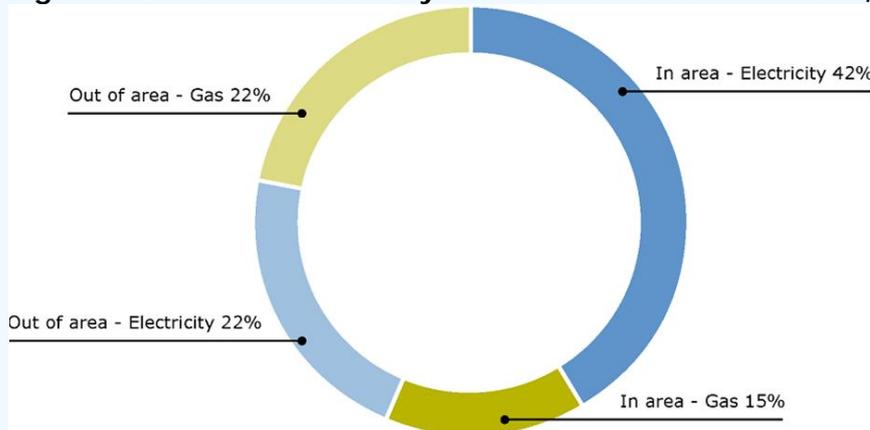
In-area versus out-of-area

3.22. Looking at these market shares from the perspective of the former electricity incumbents, it is notable that their customer bases are still dominated by customers in their former monopoly regions. Their customers, whether gas or electricity, can be categorised into:

- **In-area:** those that have remained with, or switched back to, the former incumbent supplier for their area; and
- **Out-of area:** those that have switched to a new entrant supplier into their former electricity incumbent region. This could be British Gas, the former national gas incumbent, or one of the other electricity suppliers who originally did not operate in that region.

3.23. Analysis of the former electricity incumbents' customer bases shows that 57 per cent of their accounts (both gas and electricity) are in their former monopoly regions. Almost 30 per cent of their accounts are "stand-alone" customers (either not on a dual fuel deal or off the gas grid).

Figure 3.8: Former electricity incumbents' customer bases, December 2007



Source: Ofgem

3.24. Table 3.1 shows the shares of the former electricity incumbents, British Gas and out-of-area suppliers (which excludes the former electricity incumbents and British Gas) for dual fuel, gas "stand alone", electricity "stand alone" and electricity-only. The former electricity incumbents supply 59 per cent share of electricity-only customers and almost a 90 per cent share of electricity "stand-alone" consumers.

Table 3.1: In-area versus out-of-area

By consumers, Millions, December 2007	BY IN-AREA VERSUS OUT-OF-AREA			
	Dual fuel	Gas & electricity but not dual fuel		Electricity supply only (Without gas)
		Gas stand-alone	Electricity stand-alone	
Ex-Host PES	3.9	0.9	6.8	2.4
British Gas	5.3	5.5	0.1	0.6
Excluding ex-Host PES or British Gas	5.7	1.1	0.9	1.1

Source: Ofgem

Payment methods

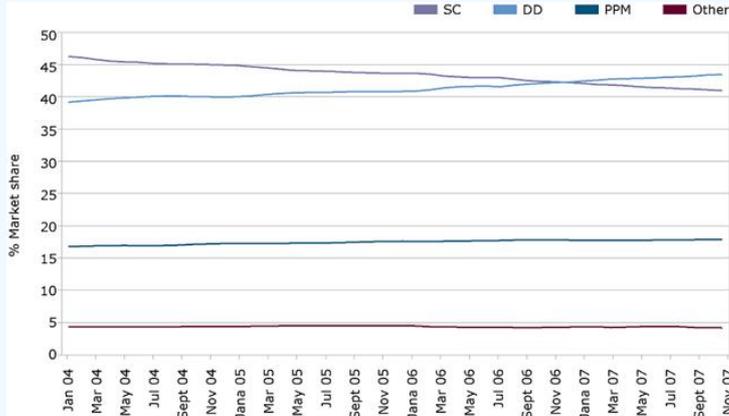
3.25. There are three main payment methods by which energy consumers can pay for their domestic energy supplies:

- **Direct debit (DD)** – A method of payment where a fixed amount is taken from a bank account each month, quarter or year.
- **Standard credit (SC)** – A payment method where customers pay on receipt of the bill. This typically covers a wide range of payment mechanisms, including cash, cheque, credit card and standing order.
- **Prepayment meter (PPM)** – These are meters that require payment for energy to be made in advance of use or they will prevent the supply of gas or electricity. A prepayment meter customer pays for energy by inserting electronic tokens, keys or cards into the meter.

3.26. Figure 3.9 shows the payment methods used by consumers across the whole of GB and for both fuels¹⁵.

¹⁵ Other payment methods include Payment card/book, Weekly/fortnightly payment scheme and Fuel Direct, although the majority are on Standard Credit tariffs.

Figure 3.9: GB payment methods for both fuels, January 2004 - December 2007



Source: Ofgem

3.27. Direct debit (DD) is the most common form of payment for a domestic energy bill, with just under 14.7 million accounts (43 per cent) settled using this method. However, standard credit (SC) remains a significant payment method for domestic energy consumers: around two-fifths of accounts (13.8 million) continue to be settled in this manner. Trends since January 2004 suggest that DD will continue to grow, although it will be a number of years before it is used by a majority of households. Use of prepayment meters (PPM) is broadly stable accounting for 16 per cent of accounts (5.4 million), an increase of around 165,000 since January 2004.

Online tariffs

3.28. Today, energy consumers can sign-up and maintain their gas and electricity accounts online. Figure 3.10 illustrates the number of consumers that have an online energy account.

Figure 3.10: GB online energy customers by payment type, January 2004 - December 2007



Source: Ofgem

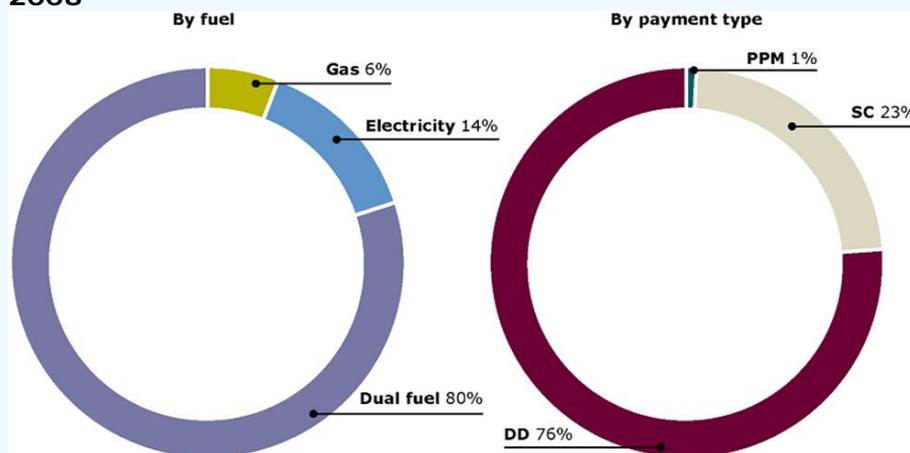
3.29. There has been a rapid increase in the number of online accounts, rising from around 500,000 customers in July 2005 to 960,000 by the end of 2006 and climbing to 1.3 million a year later. At the end of 2007, 90 per cent of online customers settled their energy bills via direct debit. In contrast, less than 500 prepayment meter customers had an online account, although British Gas has recently launched a prepayment meter online offering.

Price guarantee tariffs

3.30. Since May 2003, domestic energy suppliers have offered price guarantee tariffs. These tariffs offer consumers certainty that over a fixed period (usually 1 to 3 years) their tariff would either be fixed or not rise above a specified capped price. These tariffs allow consumers who are worried about the risk of rising energy bills to pay a premium in order to pass this risk to their supplier.

3.31. We estimate that around 4.6 million customers (over 1 in 7 households) are on a price guarantee tariff of some form. Figure 3.11 illustrates how this breaks down by fuel and payment method.

Figure 3.11 - Price guarantee tariffs by fuel and payment type, Summer 2008



Source: Ofgem

CONCLUSIONS

- Despite erosion of former incumbents market shares, domestic supply markets remain highly concentrated
- Discernable regional features remain in those domestic supply markets as the legacy of the former regional electricity supply monopolies
- Dual fuel has emerged as the focal point of competition
- The Big 6 suppliers are all now significantly vertically integrated in electricity

TABLE 3.2: GB ENERGY CONSUMER SEGMENTATION

Millions, December 2007	GB				
Total domestic accounts	22.4 gas		26.7 electricity		
Total consumer by fuels taken from suppliers	14.8 dual fuel	7.6 gas and electricity but not dual fuel		4.3 electricity supply only*	
	BY IN-AREA VERSUS OUT-OF-AREA				
By consumers, Millions, December 2007	Dual fuel	Gas & electricity but not dual fuel		Electricity supply only (Without gas)	
		Gas stand-alone	Electricity stand-alone		
Ex-Host PES	3.9	0.9	6.8	2.4	
British Gas	5.3	5.5	0.1	0.6	
Excluding ex-Host PES or British Gas	5.7	1.1	0.9	1.1	
	BY PAYMENT METHOD**				
By accounts, Millions, December 2007	Direct Debit		Standard Credit		Pre-payment meter
	32.1 (65%)		10.9 (23%)		6.0 (12%)
All fuels	32.1 (65%)		10.9 (23%)		6.0 (12%)
Dual fuel	20.8 (70%)		4.7 (16%)		3.9 (13%)
Non-dual fuel	8.5 (56%)		4.9 (32%)		1.8 (12%)
Electricity supply only	2.8 (62%)		1.3 (31%)		0.3 (7%)
	BY ACTUAL ENGAGEMENT***				
Millions, June-July 2008	Proactive		Reactive		Non-active
	4.5 (17%)		9.9 (37%)		12.3 (46%)
	BY PRICE GUARANTEE TARIFFS				
Millions, mid-2008	c.4.0				
	BY ONLINE				
December 2007	BY ONLINE				
By customers	1.2 million DD	c.100k SC		<500 PPM	

* = estimate taken from subtracting total gas customers from total electricity customers

** & *** = From Ipsos MORI data, June - July 2008 - see Appendix [x] for a summary of this research

Source: Ofgem

Note: Segments may not sum to totals due to rounding. See appendix 6 for charts on consumer segmentation.

4. Switching and its drivers

Consumer switching is the engine of competitive energy supply markets. By switching suppliers, consumers can act as a competitive constraint on suppliers' pricing and provide strong incentives on suppliers to reduce costs, improve service and develop innovative products. In this Chapter, we assess the evidence on switching to date, examine the factors that are driving consumer switching decisions and assess how effective it has been in exerting price discipline on the market¹⁶.

Historical switching rates

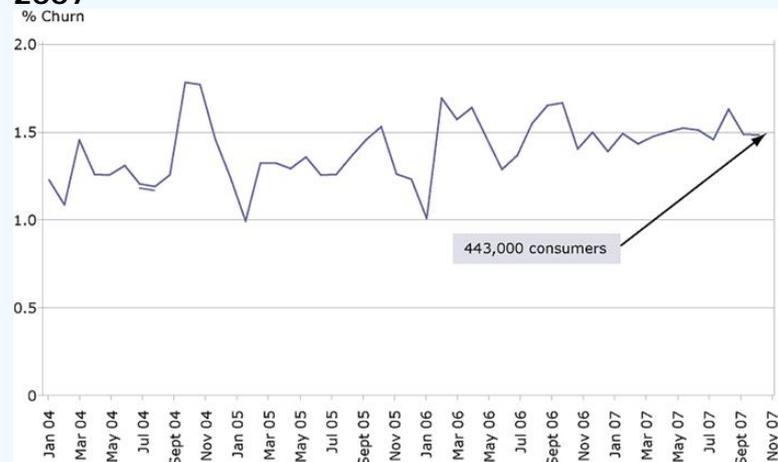
4.1. A significant number of GB consumers have switched energy supplier since the markets opened to competition in the late 1990s. At least 75 per cent of consumers who take both gas and electricity have switched energy supplier at least once, equivalent to just under 20 million households. Our consumer survey found that just over a quarter of our sample had switched at least one of their suppliers in the past twelve months.

4.2. The churn data provided by the Big 6 also shows high levels of market activity¹⁷. Figure 4.1 shows that across all fuel types and regions, GB energy suppliers experienced churn in the range of 1 to 2 per cent per month from 2004 to 2007. This is equivalent to an average churn of around 16 to 17 per cent per year. Our data shows evidence of a slight upward trend over this period.

¹⁶ The analysis for this Chapter has drawn on the following sources of information: (i) our Call for Evidence issued as part of the Probe; (ii) a quantitative survey of just over 2,000 consumers that we commissioned Ipsos MORI to carry out in June/July 2008, the aim of which was to explore the level and type of engagement that consumers have with GB energy supply markets; and (iii) a number of external data sources such as Datamonitor, the Office of Fair Trading and the European Commission.

¹⁷ Churn is calculated as a supplier's customer losses divided by its total customer base.

Figure 4.1: Dual fuel average monthly churn, January 2004 to December 2007

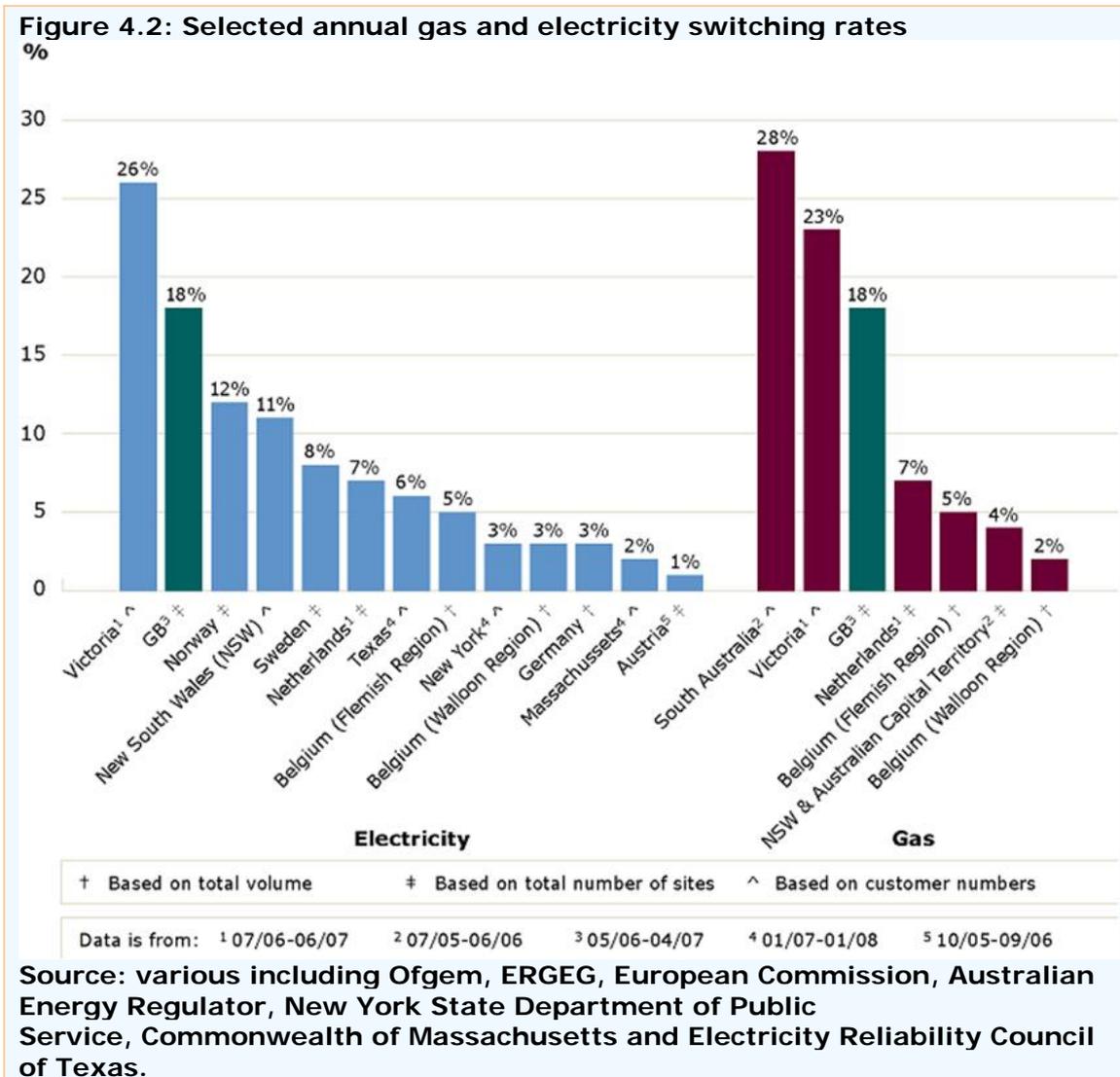


Source: Ofgem

International and cross-sector comparisons

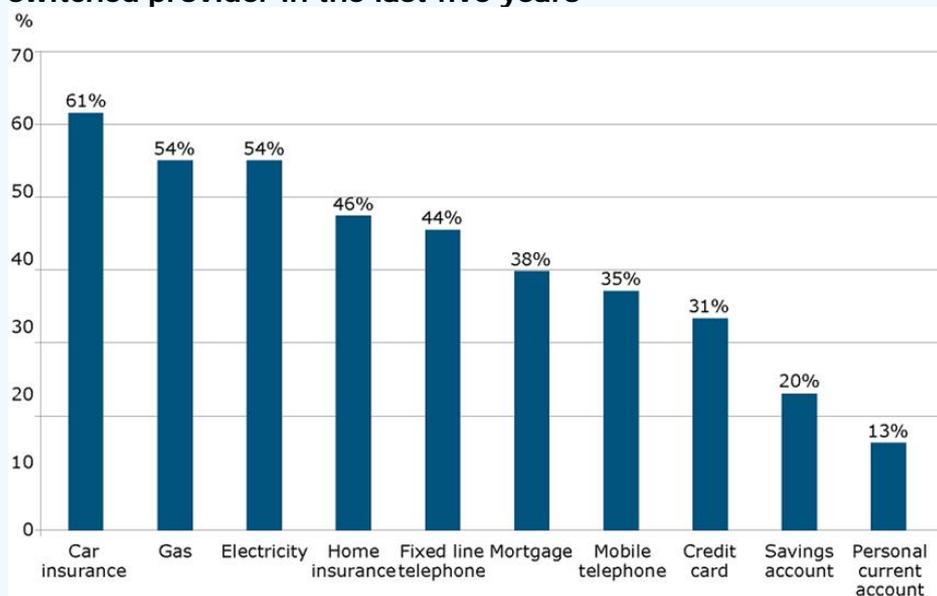
4.3. Gas and electricity annual switching rates in GB are the highest of any sizeable competitive energy market in the world (see Figure 4.2¹⁸). In Europe, GB is the most active market by some margin. Of the countries surveyed, only Norway, Sweden and the Netherlands have annual switching rates of more than a few per cent.

¹⁸ The data for Figure 4.2 may not be directly comparable. For example: the calculation rate varies (some based on volume, some on number of sites, some on customer numbers); it is uncertain whether consumers that switch twice are counted both times or if migrating between grid areas constitutes a switch; and some numbers are sector specific while others are aggregates based on the whole population or on small businesses and households.



4.4. Figure 4.3 shows that, with the exception of the car insurance market, more gas and electricity consumers have switched their supplier than in any other major consumer services sector in GB over the past five years - many of which have had a far longer history of customer choice.

Figure 4.3: The proportion of people with various products who had switched provider in the last five years



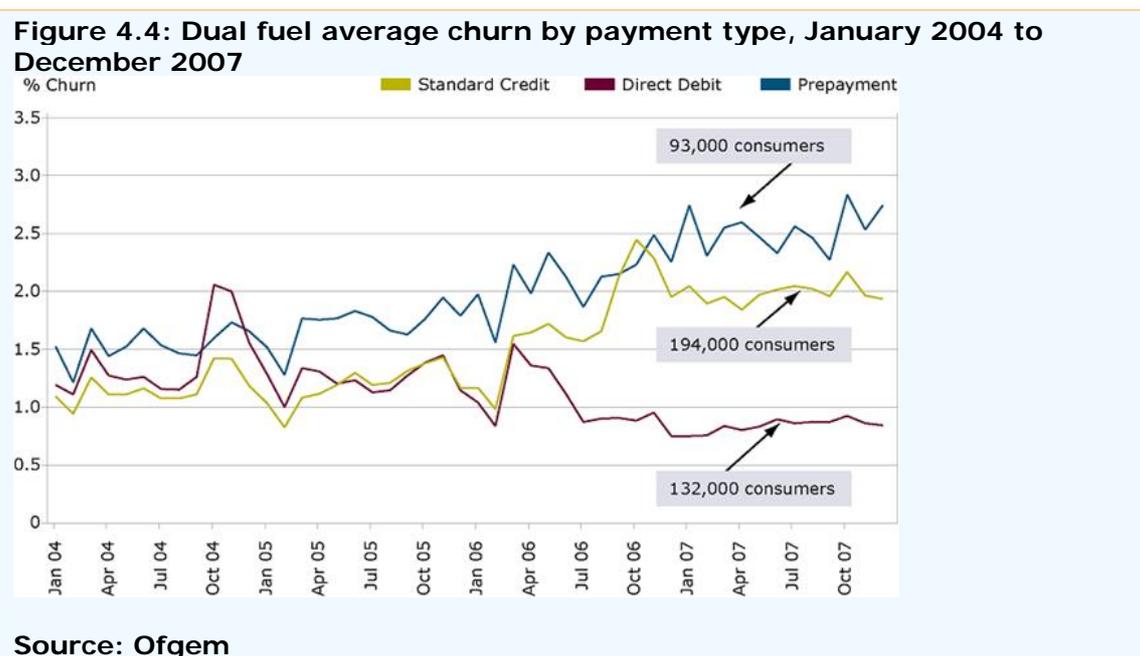
Source: Ipsos MORI Consumer survey carried out for the OFT, July 2008

4.5. The net effect of these switching rates is to continue to erode suppliers' market shares in their former monopoly regions, as shown in Chapter 3. This tells us that more customers are engaging in the market and switching for the first time - indeed we estimate that around one million consumers switch for the first time every year.

Switching rates by consumer segment

4.6. There is considerable variation in switching numbers by consumer segment. Early adoption of switching was by higher social classes and the middle-aged. Switching rates for those on standard credit terms and vulnerable consumers more generally have lagged behind other consumer groups, although switching rates amongst PPM consumers have recently increased significantly.

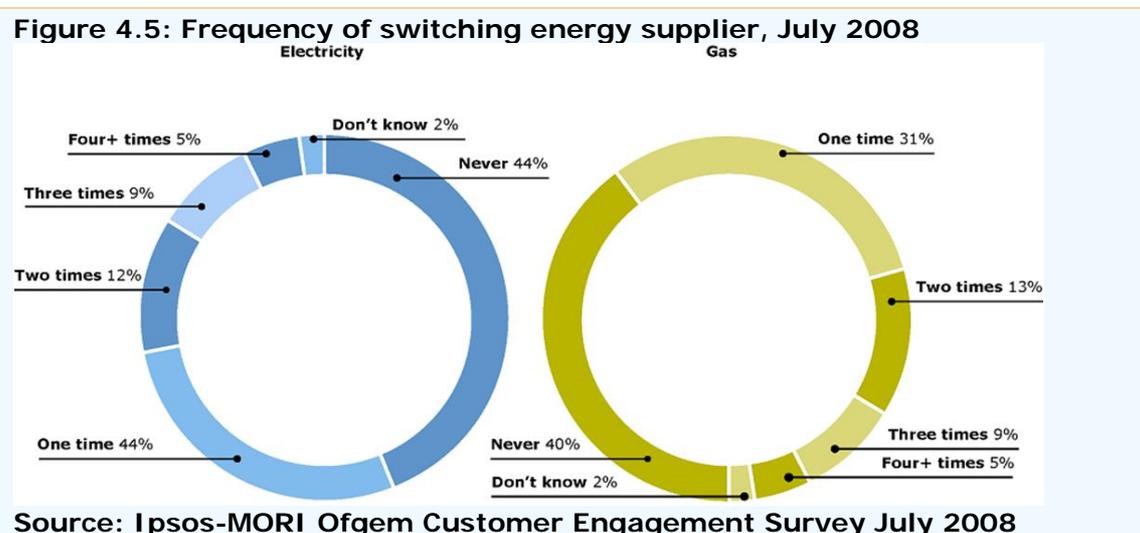
4.7. Figure 4.4 shows the churn rate of customers on different payment schemes (based on data provided by the suppliers). It shows that PPM consumers now churn at a greater rate than both SC and DD consumers, and that the churn rate of DD customers has been falling in recent years.



4.8. Our survey has highlighted that switching in Scotland and Wales is lagging behind that in England. This may relate to:

- the strong identities of the former regional electricity incumbents;
- the relatively high number of electricity-only consumers who cannot benefit from attractive dual fuel deals; and
- a number of consumers using dynamic teleswitching which can make it difficult to switch supplier.

4.9. While our quantitative survey found the incidence of switching to be widespread, for most this is not a frequent event (see Figure 4.5). Just over half of those who have switched have done so only once. Multiple switchers are in the minority and mostly in higher social groups or PPM consumers.



4.10. The trend in switching has been strongly towards dual fuel deals with a single supplier (around 90 per cent of recent switchers who are on the gas grid), although vulnerable consumers are significantly less likely to have switched to a dual fuel deal.

Drivers of switching

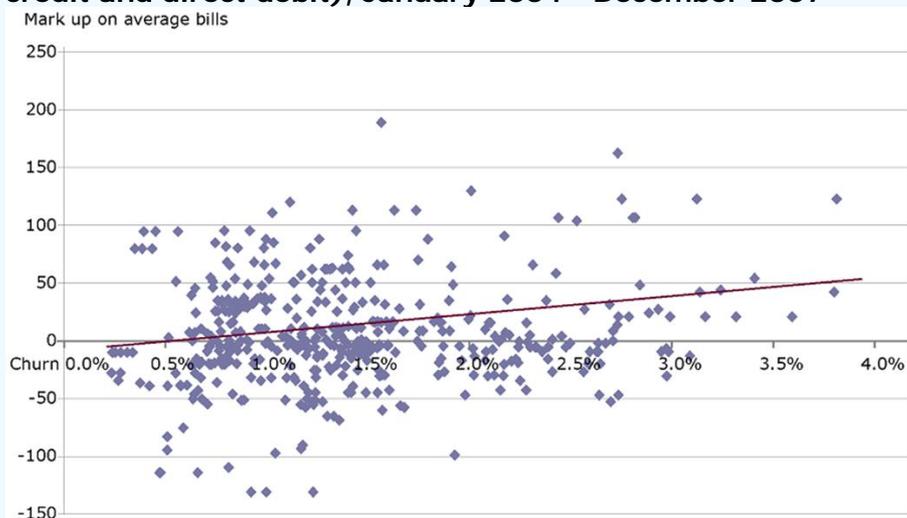
4.11. Four-fifths of the consumers we surveyed stated that price is the main reason they switch. A simple analysis of the relationship between prices and switching suggests that customers do move from more expensive to cheaper suppliers, but that this relationship is not particularly strong. This suggests that, in practice, something other than price is encouraging energy consumers to switch supplier.

4.12. Figure 4.6 shows each supplier's relative price¹⁹ plotted against their monthly churn for the period January 2004 to December 2007. With price sensitive consumers, a supplier with a high relative price should suffer higher churn, and so the data should move from bottom left to top right in a north-easterly direction. While we do see this pattern to some extent, the relationship is weak. The "line of best fit" has an "R-squared"²⁰ statistic that suggests that less than 15 per cent of the observed churn is explained by relative prices. This implies that 85 per cent of the change in customer numbers is explained by something other than price.

¹⁹ This is own price minus average price of other suppliers, referred to as 'mark-up on average bills' in Figure 4.6.

²⁰ The R-squared estimates the 'goodness-of-fit' of a line fitted to the data.

Figure 4.6: Net customer gains against relative price (dual fuel, standard credit and direct debit), January 2004 - December 2007



Source: Ofgem

Note: Data is monthly from January 2004 to December 2007, with the exception of one supplier which is January 2005 to December 2007. Each point represents one monthly observation from a particular supplier.

4.13. We have undertaken econometric analysis in order to gain further insight into consumer switching behaviour (see Appendix 2). We modelled historical churn data (for three of the Big 6 suppliers²¹) against a range of factors including relative prices, marketing spend and brand. Our model explained over 80 per cent of dual fuel churn rates on both a national and regional basis. The key results for dual fuel are:

- a 1 per cent rise in the price of firm x, relative to the average market price, is associated with around a 2 to 4 per cent increase in churn, depending on payment type and region; and
- a 1 per cent rise in marketing expenditure of firm x, relative to the average market expenditure, leads to a 1 to 2 per cent fall in churn, depending on payment type and region.

4.14. The conclusions we draw are that:

- the single largest factor affecting a supplier's churn rate is its relative price; however

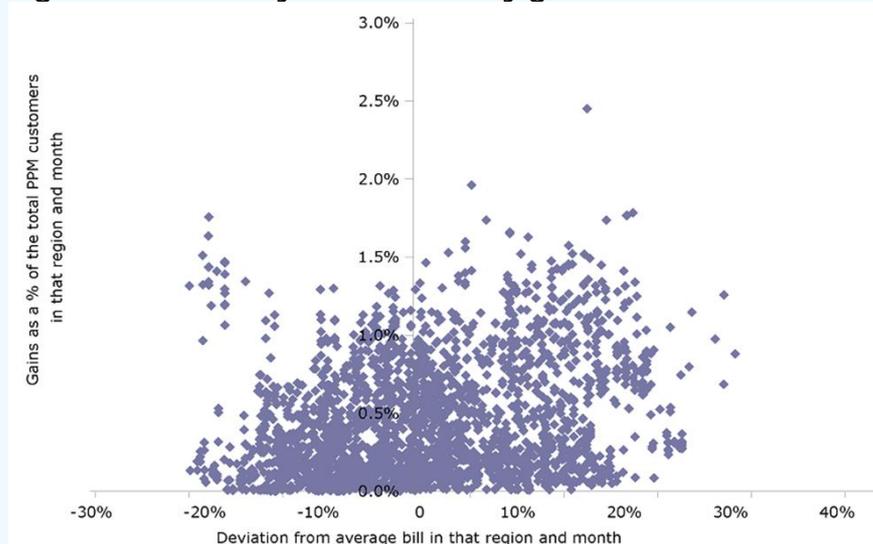
²¹ Data for the others has been omitted given concerns over comparability and missing values.

- churn rates are affected by a far wider range of factors than relative prices; and
- the level of marketing expenditure is very similar to price in its effect on a supplier's churn rate - the more it spends on marketing, the lower its churn rate.

4.15. We also compared consumers' behaviour by payment methods. The key conclusion from this analysis was that PPM consumers appear to react least to price differentials. Appendix 2 sets out further details.

4.16. Consistent with this weaker price response of PPM consumers, Figure 4.7 shows that a number of PPM consumers are switching to more expensive deals. This is of concern as it suggests that consumers may not be constraining suppliers' pricing as much as the level of switching suggests.

Figure 4.7: Monthly PPM electricity gains and PPM bills in 2007 - all regions



Source: Ofgem

4.17. From our survey we have been able to identify whether specific consumers who switched supplier achieved a better deal. In order to do this, we have looked at the change in the average bill that a consumer in a particular region would have observed from their actual switching behaviour. Using average bills is inferior to using actual bills but should allow inference of actual consumer experiences in larger samples.

4.18. Table 4.1 shows that around 60 per cent of consumers that switched did succeed in reducing their bill when they switched supplier. This confirms that churn is influenced by factors other than price and our concern that some customers may (perhaps inadvertently) be switching to worse priced deals. Table 4.1 also confirms that PPM consumers may benefit marginally less often from switching.

Table 4.1: Do energy consumers benefit from switching?

Within payment method	Gas % benefitting			Electricity % benefitting		
	Overall	Direct Sales	Own enquiries	Overall	Direct Sales	Own enquiries
DD	66%	-	-	59%	-	-
SC	62%	-	-	70%	-	-
PPM	53%	-	-	59%	-	-
Average	61%	52%	74%	60%	58%	60%

Source: Ofgem analysis of Ipsos MORI Quantitative Survey July 2008, Note: Sample size approx. 400. Empty cells are due to very small sample sizes.

4.19. Overall, the average net saving made by those consumers who switched ranges from 1 to 2 per cent for gas customers and 3 to 4 per cent for electricity customers in this sample. Broken down by sales route, the average net saving made by gas consumers who switched as a result of their own enquiries ranges from 2 to 6 per cent, compared to a net loss of 0.5 to 2 per cent for those who switched as a result of a doorstep sale. For electricity, the average net saving for own enquiries is 3 to 5 per cent compared to 1 to 5 per cent for direct sales.

Consumer segmentation according to switching behaviour

4.20. In order to understand how consumers engage with energy supply markets, Ofgem commissioned Ipsos MORI to look at factors that influence consumer switching behaviour. The switching data suggests that consumers fall into three broad categories in terms of their engagement with energy supply markets²²:

- **Proactive** - around 17 per cent of all consumers who have either switched supplier as a result of their own enquiries during the last twelve months or who regularly check relative prices.
- **Reactive** - around 37 per cent of all consumers who have switched supplier at least once, but do not regularly research the market and typically only switch in response to a call from a sales person.
- **Inactive** - around 46 per cent of consumers who have either never switched or have done so only once, and say that they are unlikely to switch again in the future.

²² Further findings from this research are presented in Chapter 5 and a summary is presented in Appendix 4

CONCLUSIONS

- GB has one of the most active retail energy supply markets in the world
- Switching rates compare favourably with other GB consumer services sectors
- Around four-fifths of all consumers have switched energy supplier at least once
- Churn across all suppliers is, on average, between 16 and 17 per cent per year
- PPM consumers churn at a higher rate than Standard Credit and Direct Debit consumers
- Electricity switching rates in Scotland and Wales lag behind England
- Consumers do not always move to lower price deals when they switch
- Consumers can be categorised as either proactive, reactive or inactive on the basis of their engagement with the energy supply markets

5. Consumer characteristics and behaviour

This Chapter examines the customer behaviour that lies behind the evidence on switching presented in Chapter 4. We assess levels of consumer awareness, the factors that influence consumers' decisions to engage in the market and the issues and barriers they face in doing so.

What factors influence consumers' decision to switch?

5.1. A typical household's energy bill has more than doubled since early 2004 and many households are now struggling to pay their bills. Energy price rises have come at a time when household budgets are under pressure from the rising cost of food, petrol, mortgages and other essentials. Vulnerable consumers and those in fuel poverty are particularly impacted. During such times, it is essential consumers can have confidence in the operation of competitive energy markets.

5.2. Ofgem commissioned qualitative research, using focus groups and individual interviews with a range of domestic vulnerable and non-vulnerable consumers, to understand consumers' attitudes and experiences of GB domestic energy supply markets. This was undertaken by FDS International²³. This confirmed that a number of conditions need to be met for consumers to engage successfully in the energy markets. Consumers must:

- be aware that they can switch energy supplier;
- know how to switch, or be willing to have the process explained to them;
- be convinced that there are benefits to switching; and
- be confident that the switching process itself is not difficult or risky, and that they are unlikely to encounter problems (particularly billing errors, subsequent price increases or poor service) after the switch has been completed.

²³ See Appendix 3 for a summary of this qualitative research.

How do consumers engage with GB energy supply markets?

5.3. Ofgem also commissioned quantitative research among domestic consumers to investigate their awareness, experience and satisfaction with switching suppliers. This was undertaken by Ipsos MORI²⁴.

Awareness

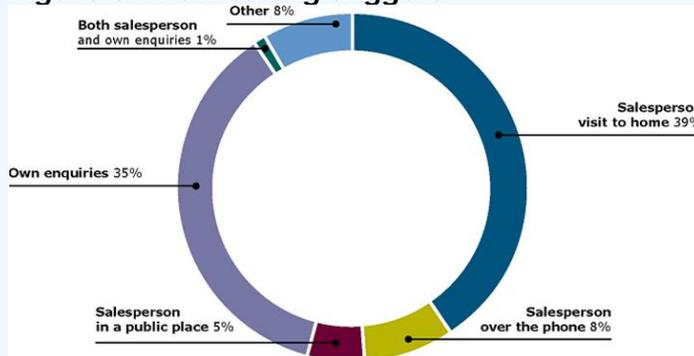
5.4. Almost all domestic consumers (around 96 per cent) are aware that they are able to switch their energy supplier. Domestic consumers can, on average, name three energy supply companies unprompted. Prompted awareness of the Big 6 brands is high, especially for British Gas (reflecting its former national gas supply monopoly), and awareness of Scottish and Welsh brands is particularly high in those regions.

5.5. This almost universal awareness of both the option to switch and the names of competing companies in the market is a very positive and important foundation for the continued future development of the competitive market.

Switching triggers

5.6. Over half of consumers who switched in the past year did so in reaction to a direct approach by a sales person from one of the supply companies. Vulnerable and PPM consumers are more likely to switch via this route.

Figure 5.1: Switching triggers



Source: Ipsos-MORI Ofgem Customer Engagement Survey July 2008, in response to Question: "On the last occasion you switched, would you say you switched as a direct result of a visit or telephone call from a supplier's salesperson or was it from making your own enquiries?"

²⁴ See Appendix 4 for a summary of this quantitative research.

5.7. The predominant reason given for switching in response to a direct sales approach was that the consumer was told that the supplier that approached them was cheaper than their current supplier (82 per cent). 18 per cent reported that the salesperson had told them they were the cheapest on the market. Saving money is also the main trigger for those who switch as a result of their own enquiries, although some do switch as a result of having received poor service from their current supplier.

5.8. Just under a third of consumers in the survey said that they check regularly to see if it is worth switching.

Switching process

5.9. There is good evidence that the switching process is now working well. Just over three-quarters of those who had switched said the switching process had gone smoothly for them and this is borne out by falling complaint levels related to the switching process. Difficulties with the switching process were much more prevalent in the early days of the competitive retail market, and the majority of switches now go through smoothly.

5.10. The fear that something might go wrong is still strong, however. Almost half of consumers worry that service may be worse as a result of the switch. Memories of issues such as double billing remain large in the public memory, and bad switching experiences even now attract significant adverse publicity.

5.11. Just over 60 per cent who have switched say they were satisfied with the amount they believed they had actually saved by switching, although a significant minority of PPM consumers said they were dissatisfied with the actual savings achieved. This is in line with the numbers actually receiving a lower price shown in Chapter 4.

Decision-making process

5.12. Despite good levels of awareness of competing suppliers, only 30 per cent of those who switched supplier during the last 12 months considered deals offered by other suppliers. Nearly fourth-fifths of electricity PPM consumers made a decision without first comparing other deals in the market, and where a doorstep salesperson was involved just 15 per cent considered other deals.

5.13. Price comparison websites are the main source of information for those consumers who do investigate other available deals before switching. However, overall only 18 per cent of people who switched during the last year consulted a website. This in part reflects availability of the internet, with just over two-thirds of consumers having some form of access to the internet.

5.14. When seeking additional information, PPM consumers are more likely than other customers to rely on friends and family for advice. Those who have never

switched (58 per cent), in rented accommodation (57 per cent), aged over 65 (33 per cent) or standard credit gas consumers (55 per cent) have lower rates of internet access than the average (68 per cent).

5.15. Even amongst those with internet access, only 38 per cent of consumers have used the internet to compare prices for gas or electricity, compared to 46 per cent who have done so for other services such as insurance or telephone services. Use of the internet to compare prices is particularly low amongst vulnerable consumers, PPM consumers and consumers on standard credit terms.

Future likelihood to switch

5.16. Around 1 in 3 of all consumers indicated to us that they would be at least "fairly likely" or "likely" to switch energy supplier at some time in the future, and around 1 in 4 said that they would do so in the next twelve months. This is in line with the annual switching rates that we typically see. Those who have never switched are much more likely to say that they will never do so: 69 per cent of non-switchers say they are unlikely to ever switch, representing around 26 per cent of all energy consumers.

5.17. Vulnerable consumers are far less likely than others to believe that they will switch in the future. Only 15 per cent of consumers in social group E say that they would be at least fairly likely to switch, compared to 45 per cent of those in group AB. Similarly, only 17 per cent of those aged over 65 say that they are at least fairly likely to switch in the future compared to 39 per cent of those under 65s.

Barriers to switching

5.18. A significant majority of consumers (70 per cent) said that they were reasonably confident about switching suppliers. When we sought to understand why many of them do not proactively switch, the vast majority said that they saw no compelling need. Nearly three-quarters were happy with their supplier and saw no benefit from changing. Many customers in Scotland and Wales also report a degree of loyalty to who they perceived to be their national supplier.

5.19. Central to this is that consumers appear unsure or sceptical about the savings to expect. A majority believe the savings are not worth the hassle of switching or that the savings will only last a short time. Many consumers tend to think in terms of weekly or monthly savings and even a quite substantial yearly saving may not seem sufficient when considered on this basis. However, when shown price comparisons during our qualitative work many were surprised at the amount they could save. 70 per cent also find the number of tariffs on offer confusing and just over half find it too hard to work out whether they would save anything if they did switch.

5.20. Our qualitative work also shows lower interest in engaging in the energy markets compared with markets for such services as mobile phones, internet access or car insurance. In part people find these other products and services intrinsically more interesting and are more likely to discuss them with family and friends. For the

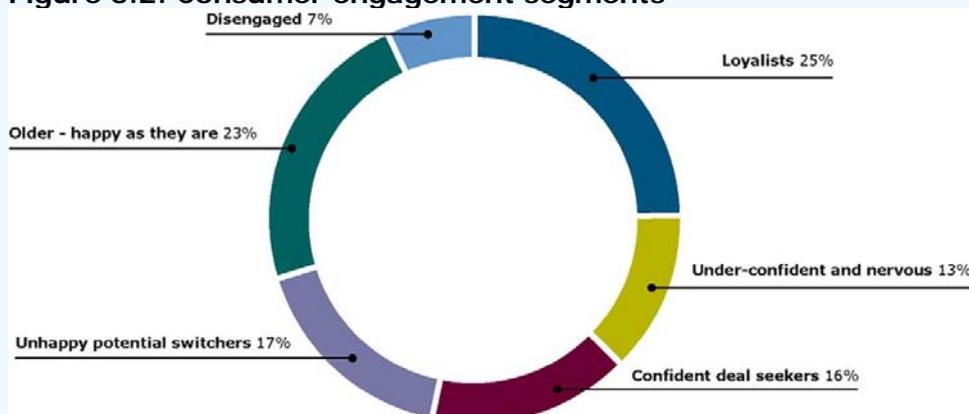
most part, consumers see relatively little differentiation in the products or services offered by energy suppliers compared to many other products and services. The fixed contract periods requiring periodic renewal of other products and services also drive engagement in those markets. In addition, many people feel they are simply too busy, with just over a third feeling that they have no time to think about switching.

5.21. Finally, almost half of consumers – and 58 per cent of non-switchers - say that they worry that if they switch things will go wrong or service may be worse as a result of the switch. Low-income groups tend to be particularly worried as they are less easily able to recover from unexpected debts or expenses.

Segmenting consumers by their engagement with the energy market

5.22. In Chapter 4 we suggested that domestic consumers can broadly be classified into those who participate proactively in the market, those who engage reactively and those who are inactive. The analysis of consumer behaviour in this Chapter enables us to look behind those broad categories according to the type and motivation of the customer. Figure 5.2 shows six groups of domestic consumers and Table 5.1 summarises the key characteristics of each group.

Figure 5.2: Consumer engagement segments



Source: Ipsos-MORI Ofgem Customer Engagement Survey, July 2008

Table 5.1: Consumer engagement segmentation and key characteristics

<p>Confident Deal Seekers (16 per cent) Very confident about switching and its value in saving money</p>	<p>Highest level of past switchers and proactive switchers. High intention to switch again; likely to check deals frequently; will check deals from more than one supplier before switching. Most likely to be full time workers in ABC1 social group. Most likely to have make good choices when switching whether they have done so proactively or reactively.</p>
<p>Unhappy potential switchers (17 per cent) Keen to switch in order to save money but confused about how to and not confident</p>	<p>Quite likely to check deals now and again to see if it is worth switching and tend not to believe salespeople. Find the number of tariffs confusing. Most likely group to switch in the future but often feel past switches haven't been good. They may have been proactive switchers in the past but if they switch again seem likely to do so reactively</p>
<p>Under-confident and nervous (13 per cent) Financially struggling but little confidence about switching</p>	<p>Few switchers and low intention to switch again. Those who have switched unlikely to have done so because of their own enquiries. Worry if they switch they will be worse off so stay with original supplier. Mainly younger (16–44), C2DE social groups.</p>
<p>Loyalists (25 per cent) Loyal and positive to energy suppliers. Confident about switching but not really interested.</p>	<p>Switching energy supplier is not a priority but open to information and sales calls. Generally positive about their supplier but not very knowledgeable about others. Most likely to be young full time workers and to be largely inactive in the energy market but may turn into reactive consumers with the right sales approach.</p>
<p>Disengaged (7 per cent) Financially struggling but uninterested or scared of switching</p>	<p>Think the savings from switching are not worth the hassle, find it difficult to work out potential savings and worry about things going wrong or worse service when they switch. Many have switched before, nearly always reactively, but intention to do so again is low.</p>
<p>Older (23 per cent) Happy as they are</p>	<p>Lowest penetration of switchers and intention to switch, see no reason to do so and happy with current supplier. Think any savings will be short-lived and that switching is pointless because all suppliers increase their prices at the same time. Tend to be retired and to be inactive in the energy market although some will switch reactively.</p>

Source: Ipsos-MORI Ofgem Customer Engagement Survey, July 2008

CONCLUSIONS

- Awareness of the ability to switch is almost universal but most consumers see no reason to do so
- The vast majority of consumers switch in order to save money, but most do not believe there are big savings to be made
- Many consumers find it difficult to assess the savings to be made or believe that any savings will be short-lived
- Most switchers do so in response to an approach from a sales person
- Few customers check the deals available from other suppliers when deciding to switch
- For the majority, the process of switching is straightforward but non-switchers in particular worry something may go wrong if they switch
- The proportion of consumers who are proactively and confidently engaged in the energy market is relatively small
- Vulnerable consumers are less positively engaged in the energy market than others (see Chapter 9)

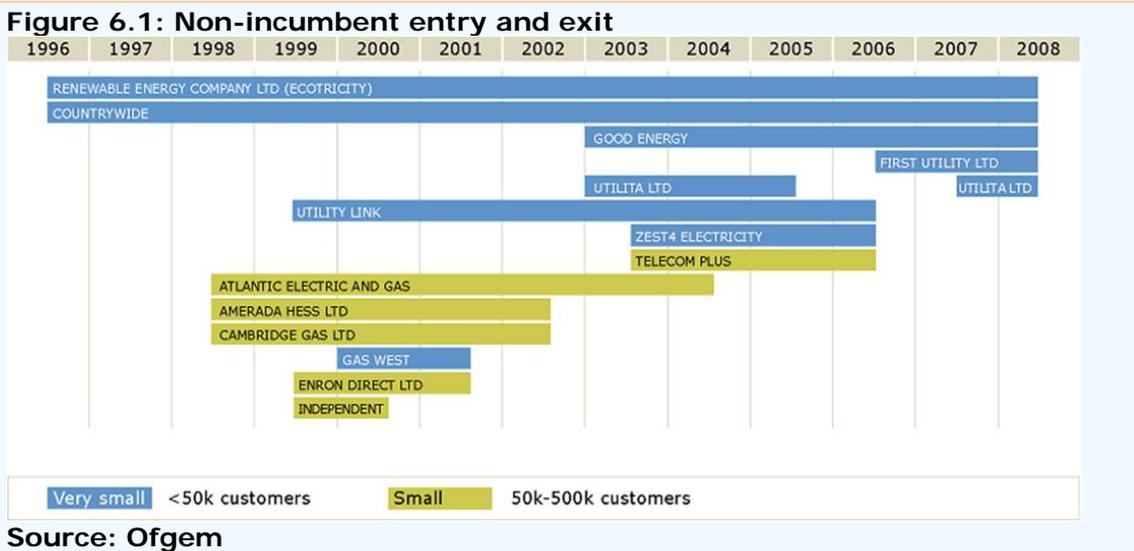
6. Barriers to entry and expansion

The threat of new entry can act as an important competitive constraint on existing suppliers, providing incentives to become more efficient, price keenly and offer innovative products and services. It is equally important that small suppliers can expand without undue hindrance. This Chapter considers the history of entry and expansion in GB energy supply markets since they were liberalised in the late 1990s. It then examines a number of issues raised by new entrants and small suppliers which may represent significant barriers to efficient entry and subsequent expansion.

History of entry and exit

6.1. Figure 6.1 shows the history of entry and exit in the GB domestic energy supply markets since 1996. It shows the firms that have entered, the period over which they were active and the number of customers they had gained by the time of their exit.

6.2. The number of active suppliers in GB energy supply markets has never been higher than in the period immediately following market opening. The former incumbent suppliers entered each other's domestic markets and a number of small scale new entrants emerged. By 1999, there were 21 electricity suppliers and 13 gas suppliers. The subsequent years saw both rapid consolidation through mergers and acquisitions (as described in Chapter 2), and attrition in the number of small suppliers.



6.3. Of the 14 small suppliers who have entered since market opening, only four²⁵ remain and none have succeeded in building a scale of business close to that of the Big 6 suppliers. In addition to these, there are and have been a number of 'affinity deals' or 'white label' deals whereby companies with established brand names (for example, Sainsbury, Lloyds TSB) market the electricity of a supplier, most commonly one of the Big 6.²⁶ However, independent new entrants now have a combined share of less than 0.3 per cent. Unlike many other retail markets, we have not seen the emergence of a sizeable "competitive fringe" – companies with a radically different business model and culture acting as a genuine competitive constraint on the major suppliers.

Possible barriers to entry or expansion

6.4. The history of new entry, the lack of a competitive fringe and the inability of any new entrant to grow a business of significant scale, is of concern to Ofgem. We need to be sure that there are no artificial barriers to entry to the market, or subsequent barriers to profitable expansion.

6.5. As part of this Probe, Ofgem requested information on perceived barriers to entry and growth from existing suppliers, potential entrants and firms that have exited the sector. We also carried out a series of interviews with selected market participants during May and June 2008²⁷. We discuss in turn each of the following factors most commonly raised by respondents:

- scale economies, branding and cost of finance;
- pricing policies of the Big 6 suppliers;
- inadequate liquidity in wholesale markets, particularly in electricity;
- regulatory and compliance requirements; and
- vertical integration.

²⁵ Countrywide exited the market in 2008

²⁶ The best known of these is probably the Lloyds TSB's deal with Scottish Power. This deal was in fact distinct from the more common 'affinity deal' arrangements in that Lloyds effectively owned its customers, whereas other companies have not done so. Lloyds closed the service in 2007.

²⁷ Our request for information drew in part on existing work on barriers to entry such as the *Domestic Competitive Market Review (2004)*, and Stephen Littlechild (2005), *Small Suppliers in the UK Domestic Electricity Market: Experience, Concerns and Policy Recommendations*.

Scale economies, branding and cost of finance

6.6. New entrant suppliers face a range of start-up costs. It is important first to understand the extent to which an efficient new entrant could incur these costs and still establish a profitable business. The major categories of start-up cost are set out below:

IT system costs

6.7. New entrants need to develop, purchase and maintain IT systems to administer customer acquisitions, manage customer information, bill customers and manage cash collection. Information gathered from small suppliers and the Big 6 suggests that this is the single biggest entry cost. We estimate that these costs can range from about £1.5 million for a firm expecting to enter on a small scale (i.e. around 50,000 customers which is around the customer level of the current 'small suppliers' in the market) to £100 million for a firm with a customer target of 5 million households. It appears that there is a step change in IT requirements beyond around 500,000 customers.

6.8. As part of our work on suppliers' costs, PKF²⁸ asked suppliers to provide data on costs associated with the IT infrastructure of their retail supply businesses, including operating costs and depreciation for the period 2005 to 2007. Across all years, the IT cost data provided by suppliers was around £30 million for electricity and £15 million for gas. However, there was significant disparity between different suppliers' costs, even on a per customer basis. This largely reflects the way in which IT costs are allocated to different customer segments and across time. We therefore believe, whilst not accurate, this data does provide an idea of the scale of the costs associated with suppliers' IT systems.

Brand building and customer acquisition costs

6.9. The expenditure on advertising and brand-building required to enter the market depends on the entry route and sales channel used. Some have entered and grown quickly with relatively little up-front advertising by adopting an online sales model and competing aggressively on price for online customers. Many of the existing small suppliers have entered with niche products, especially green tariffs. Access to less active customers, however, does require brand recognition. Existing non-energy brands would require less up-front expenditure than others, but even these businesses would need to inform their existing customer base of their entry into gas and electricity supply.

²⁸ Ofgem commissioned PKF to collate cost information from energy suppliers in order to establish a robust and detailed understanding of the costs borne by retail supply businesses.

6.10. All suppliers, both new entrants and established players, must incur costs to acquire customers. These will typically be a disproportionately high burden on the business of a new entrant which, as in any market, must spend to acquire all of its customers and cannot benefit from the economies of scale in marketing and sales activities that come with a large established customer base.

Wholesale market and regulatory management costs

6.11. In addition to customer related set-up costs, new entrants need to establish the systems, processes and skills to deal in the wholesale energy markets and manage their regulatory obligations.

Finance costs

6.12. Entry to the energy supply business requires an initial and on-going commitment of funds. This is to finance set-up and customer acquisition costs, along with the working capital required to cover customer credit periods and bad debt provisions. Compliance with a number of industry codes and agreements adds additional financing costs in the energy supply business. The gas and electricity industry codes require lines of credit or collateral for network operator costs, and there are significant collateral requirements for the purchase of electricity or gas on the wholesale markets. All small suppliers report these financing costs to be a significant burden and several believe that current arrangements favour larger, established suppliers.

Pricing policies of the Big 6 suppliers

6.13. We have considered the extent to which the fixed and set-up costs outlined above represent a significant barrier to entry or expansion for new suppliers. Our analysis suggests that entry into dual fuel supply would not have been profitable on any scale at any time since 2005, even under our most optimistic assumptions. Since significant positive margins were being made by the former incumbent suppliers over this period, this suggests that these margins were concentrated in the prices paid by customers who are unlikely to switch to new entrants.

6.14. We discuss the pricing behaviour of the Big 6 suppliers in some detail in Chapter 7. We note there that the Big 6 pursue a strategy of differential pricing, targeting the keenest, lowest margin prices at the most active part of the domestic market, while sustaining significantly higher prices for their less active customers.

6.15. New entrants and small suppliers seeking to grow do not possess the historic endowment of a large base of stable, inactive customers. By definition, entry to the market requires them to attract customers away from existing suppliers – that is, to attract customers into the active part of the market. With prices charged by the Big 6 incumbent suppliers to such customers significantly lower than those to the inactive customer base, aggregate profitability of the Big 6 would appear inevitably to be higher than that achievable by any new entrant, even if the new entrant is more efficient and/or has a more attractive offering than the incumbent.

6.16. The pricing policies of the Big 6 may serve, therefore, as a form of barrier to efficient entry to the market as prices and margins are low in the most active part of the market and acquisition costs are high in other parts.

Wholesale market liquidity

6.17. New entrants need to secure access to wholesale gas and electricity supplies in order to supply retail consumers. The ease with which they can do this we refer to as market liquidity. Liquidity can be measured in a number of ways: the number of trades, the variety of products on offer, traded volume, delivered volume, tightness of the bid-offer spread²⁹ and churn.³⁰

6.18. The more liquid the wholesale markets, the easier it is for:

- non-vertically integrated entrants and competitors to participate on the same terms as vertically integrated firms;
- new entrants to be confident that the wholesale markets are not artificially distorted by vertically integrated players;
- all market participants to respond to and compete around the risk and hedging preferences of their customers;
- all market participants to secure the full range of products required to hedge their specific profile of risk exposure; and
- all market participants to make long-term hedging and investment decisions on the basis of the traded wholesale price.

6.19. Respondents to our information request and interview programme cited inadequate wholesale liquidity, particularly in electricity, as the most significant issue facing potential new entrants and small scale suppliers. Small suppliers' wholesale market requirements differ markedly from those of larger suppliers. They need smaller volumes and shapes of output, whether purchased directly or through a traded market³¹. Concerns over liquidity may reflect the availability of specific sizes, shapes and duration of contract as much as they reflect concern over the aggregate level of market liquidity. While there may be good reasons why large generators

²⁹ In a liquid market, we would expect to see the price which buyers are willing to pay for a commodity (bids) closely match the price at which sellers are willing to provide it (offers).

³⁰ Total volume traded expressed as a multiple of the volume of underlying physical commodity traded.

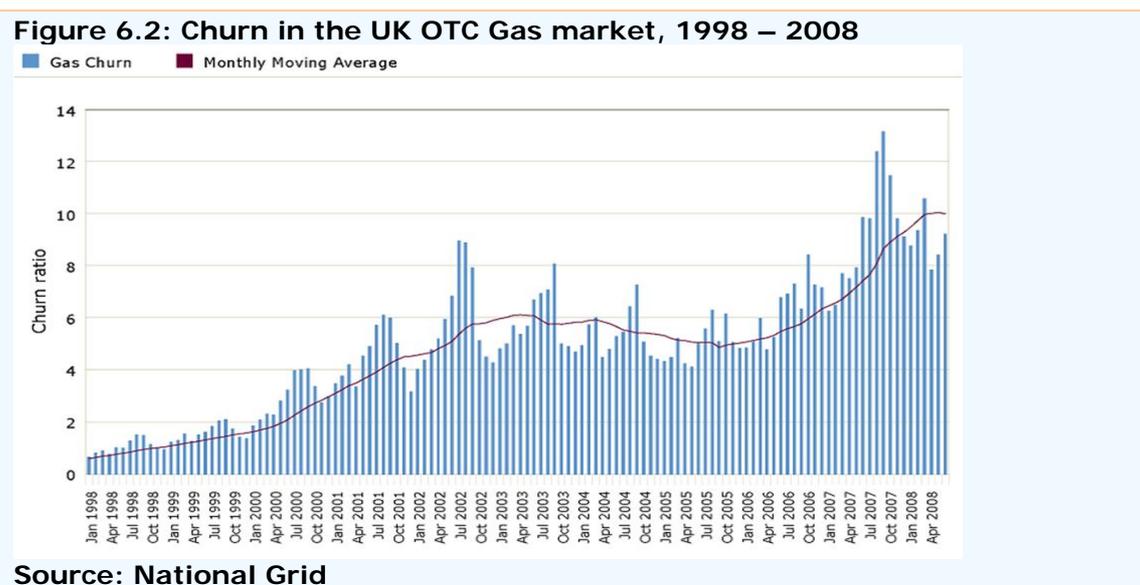
³¹ Respondents have indicated that volumes of under 10MW are likely to attract little interest from generators and other market participants.

have not found it economic to offer such bespoke arrangements, it is notable that intermediaries have not emerged to fill this gap.

6.20. Gas and electricity are traded in a number of ways within the GB energy sector. Brokers and trading platforms such as Spectron and Tullet Prebon facilitate over the counter (OTC) trading, where energy is traded bilaterally. Exchanges, such as Intercontinental Exchange (ICE), also facilitate trades. Energy companies can also deal directly with each other through long-term contracts. Our analysis shows that the majority of traded gas and electricity is traded OTC, with most activity in products with a short duration to expiry (for example, day-ahead, month-ahead) and longer-term products that are close to delivery³².

Gas

6.21. Figure 6.2 shows that churn in the gas market has increased significantly over the last 10 years, from less than 1.2 in 1998/99 to around 10 in 2007/08³³.

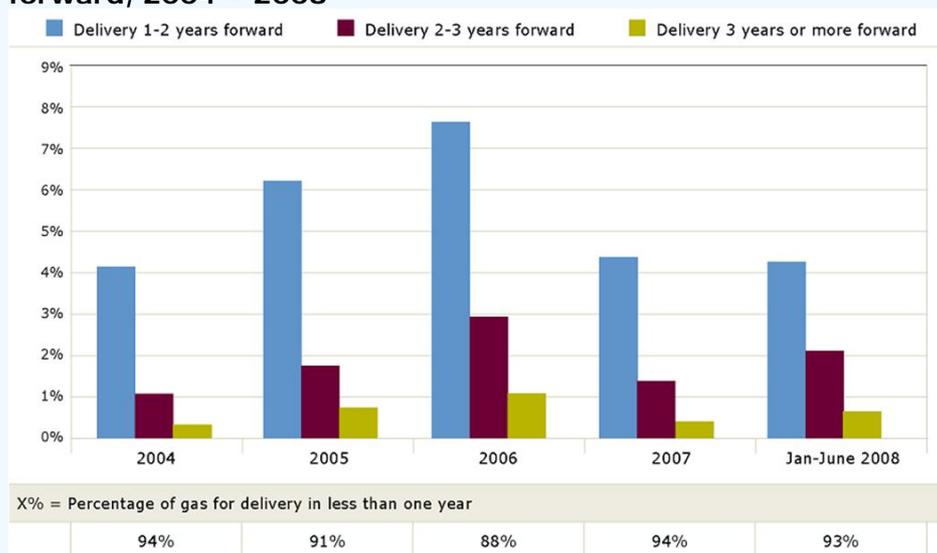


³² A similar issue is found in the forward market for oil, a commodity for which the market is commonly thought of as liquid. Bank of England research suggests that liquidity in oil further out on the forward curve is very low compared with the prompt market. (<http://www.bankofengland.co.uk/publications/quarterlybulletin/qb060105.pdf>).

³³ Based on reported trades to NG for balancing purposes (includes both forward and prompt trades).

6.22. Whilst the majority of OTC gas trading remains concentrated in the prompt market, trading with delivery two years or more along the curve increased in 2008 when compared to 2007, though still lower than in 2006 (see Figure 6.3).

Figure 6.3: Percentage of OTC gas contracts traded one, two and three years forward, 2004 – 2008



Source: Spectron

6.23. Exchange-based trading in gas on the ICE platform has increased significantly since 2004, with an average of around 400 million cubic meters (mcm) traded per day (equivalent to total daily demand on a winter's day). Furthermore, between 2006 and 2007 the number of participants increased by 24 per cent, distributed across all types of participant (banks, funds, utilities, traders). However, as with OTC trading, the majority of exchange-based trading is concentrated in products with a short duration to expiry (prompt trading). Liquidity in GB gas markets compares favourably with gas markets in other countries and other commodity markets. Analysis from the FSA shows that GB gas traded volumes are significantly higher than other European countries³⁴.

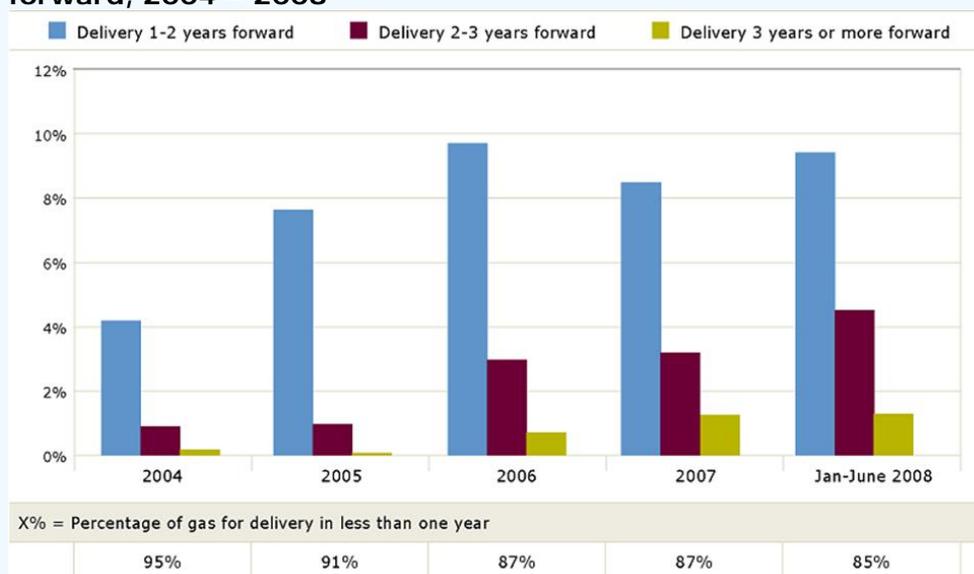
Electricity

6.24. Our examination of traded volumes in the wholesale electricity markets indicates much less liquidity than in many other commodity markets and electricity markets in other countries, and this therefore is a matter of some concern to Ofgem.

³⁴ See e.g. http://www.fsa.gov.uk/pubs/other/analysis_energy_2007.pdf

6.25. The majority of trade in the electricity market is similarly concentrated on the OTC, rather than exchange, market. However, churn is low in comparison to the gas market, despite a rise from 2.2 in 2006/7 to 2.7 in 2007/8. Trading in the OTC electricity markets is dominated by the prompt, with lower levels of liquidity further along the curve. However, the number of trades in products with a delivery date of more than two years has increased since 2004, albeit from a low starting level, as shown in Figure 6.4.

Figure 6.4: Percentage of OTC electricity contracts traded 1, 2 & 3 years forward, 2004 – 2008



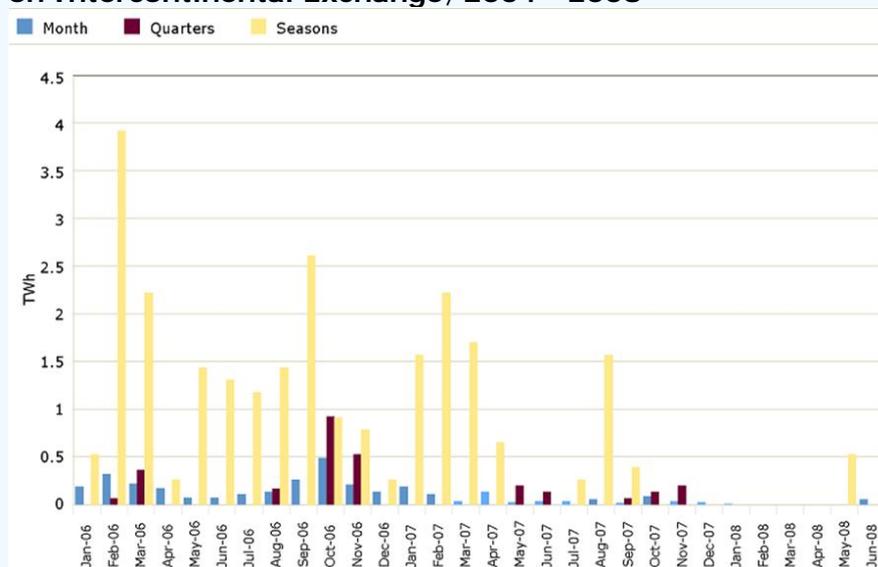
Source: Spectron

6.26. Although the number of OTC electricity trades has recently been increasing slowly, exchange-based trading has declined significantly over the past few years to a negligible level by the end of 2007 (see Figure 6.5). Furthermore, the bid-offer spread for day-ahead base-load electricity has risen from an average of 26p in 2003 to 59p in the first 6 months of 2008^{35,36}. Reliance on OTC trades is a particular issue for small and new-entrant suppliers in electricity, in particular because the counter parties to those transactions are commonly their competitors in the retail markets.

³⁵ One small supplier claimed that the winter 2008/09 and summer 2009 products were traded on only 54 per cent of days, but we have found no evidence for this. Both contracts traded almost every day during the period (Source: Heren).

³⁶ Source: Heren

Figure 6.5: Exchange-based electricity trading: delivered volume by product on Intercontinental Exchange; 2004 - 2008



Source: Ofgem

Regulatory and compliance requirements

6.27. Concern was also expressed by respondents and interviewees over the burden on new entrants and small suppliers of compliance with gas and electricity regulatory and market rules and obligations.

Accreditation requirements

6.28. Firms must obtain a licence from Ofgem in order to supply gas and/or electricity to the market. Once a licence is acquired, firms must become parties to a number of agreements, including the electricity Balancing and Settlement Code (BSC), the electricity Connection Use of System Code (CUSC) and the gas Uniform Network Code (UNC) to name a few. Each agreement contains several market entry processes. Potential electricity suppliers also need to adhere to the Master Registration Agreement (MRA) requirements, and must demonstrate that they have adequate credit cover in place, a process managed by the Funds Administration Agent (FAA).

6.29. Small suppliers have raised a number of concerns about these accreditation requirements – over the length of time taken, the time and resource needed to complete the process, and the equity of the obligations. On this latter point, several have suggested to us that many of the IT systems of the Big 6 would not, in their view, pass the rigorous system tests required of new entrants and that the Big 6 should have to go through a re-accreditation process every few years.

6.30. In gas and electricity, it is important to strike the right balance between ensuring that all market players have robust systems in place so that data transfer and interactions between parties are problem-free, whilst not being so onerous as to deter entry. We note that, over the past two years, changes to the BSC have sought to make the accreditation process more efficient - in particular, modification proposal P197 made qualification/accreditation more risk-based, so that it was simpler for smaller parties. It also relaxed the rules for re-qualification, so that gradual expansion would not require re-qualification of systems. We also note that Elexon will be issuing a consultation shortly that will seek views on barriers to entering the electricity market from a systems/administration point of view.

Regulatory requirements more generally

6.31. All suppliers face a cost in monitoring changes in government policy, regulation and industry code developments.

6.32. With regard to government policy, there have been and are ongoing developments in a range of areas including the environment (currently in relation to the Renewable Energy Strategy), smart metering and tackling fuel poverty.

6.33. In striving for effective industry regulation through licences and codes, there is again a balance to be struck. Ofgem's Supply Licence Review (2005-2007) was discussed in Chapter 2. On industry codes, smaller suppliers complain that the current volume of documents, meetings and seminars confer a significant advantage on larger players who carry large regulatory departments and are better placed to exert influence in the development of codes and governance arrangements.

6.34. Ofgem aims to comply with the principles of better regulation and has taken significant steps in recent years to reduce the volume, and increase the accessibility of documents it publishes, through the Project Paperless initiative. In addition, the current Code Governance Review has identified a number of potential improvements in the way industry codes are developed. One aspect of the review has been to look at how smaller parties can be more involved in the process. Ofgem is also taking forward a proposal for moving away from the requirement for firms to be a direct party to the industry codes (as currently prescribed in supply licences). In practice, this should make it easier and more efficient for smaller firms to access services from others in the market to undertake certain functions required by the codes. It is also helpful that there are energy sector consultancies which offer services to small energy companies to monitor and filter information on regulatory developments. This remains an area, however, in which we need to continue to strive to remove any undue burden on small suppliers and new entrants.

Vertical integration

6.35. Finally, small suppliers have also raised concerns about the vertically integrated structure of the Big 6 suppliers and about some of the strategies that they pursue in the market.

6.36. Much debate has surrounded the vertically integrated structure of the electricity industry, notably by the BERR Select Committee inquiry³⁷. A number of responses to our Call for Evidence and interviews we conducted with market participants also highlighted this and its implications for the effective functioning of both wholesale and retail energy markets. In a market with economies of scope, vertical integration can be the result of economically efficient strategic decisions by firms, to reduce transaction costs and facilitate risk management. Equally, vertical integration can be the result of anti-competitive behaviour intended to foreclose a market, for example, denying other firms the same purchasing opportunities.

6.37. In response to our Call for Evidence, smaller suppliers expressed concerns that they were not able to obtain competitive quotes for gas and electricity from larger suppliers, generators and other parties. They also noted that trading prices frequently bear little or no relation to the offers that are being made to customers by the vertically integrated players. This may be in part because vertically integrated suppliers are able to offset changes in supply margins through their generation businesses.

6.38. We noted above the relatively low levels of liquidity in the wholesale market for electricity, which in part reflects the fact that the vertically integrated companies do not need to trade all of their energy requirements. Reducing the extent of vertical integration, however, does not guarantee increased liquidity. Evidence submitted to the BERR Select Committee inquiry illustrates that, while most accept the gas industry is not vertically integrated, opinion is divided as to whether the forward market is sufficiently liquid. Also, while the German market is considered liquid, with churn rates amongst the highest in Europe, the European Commission's Energy Sector Inquiry found both the supply and generation markets in Germany to be the least competitive in Europe.

CONCLUSIONS

- **Over the last five years the number of new entrants into GB energy supply markets has decreased substantially**
- **Of those new entrants that have remained, none have built scale close to that held by the former incumbent suppliers: there is no sizeable "competitive fringe"**
- **Amongst a number of significant barriers to entry, the effect of the pricing policies of the Big 6 suppliers and low levels of electricity market liquidity appear to be the most significant**

³⁷ *Energy prices, fuel poverty and Ofgem*, Eleventh Report of Session 2007-08, 28 July 2008

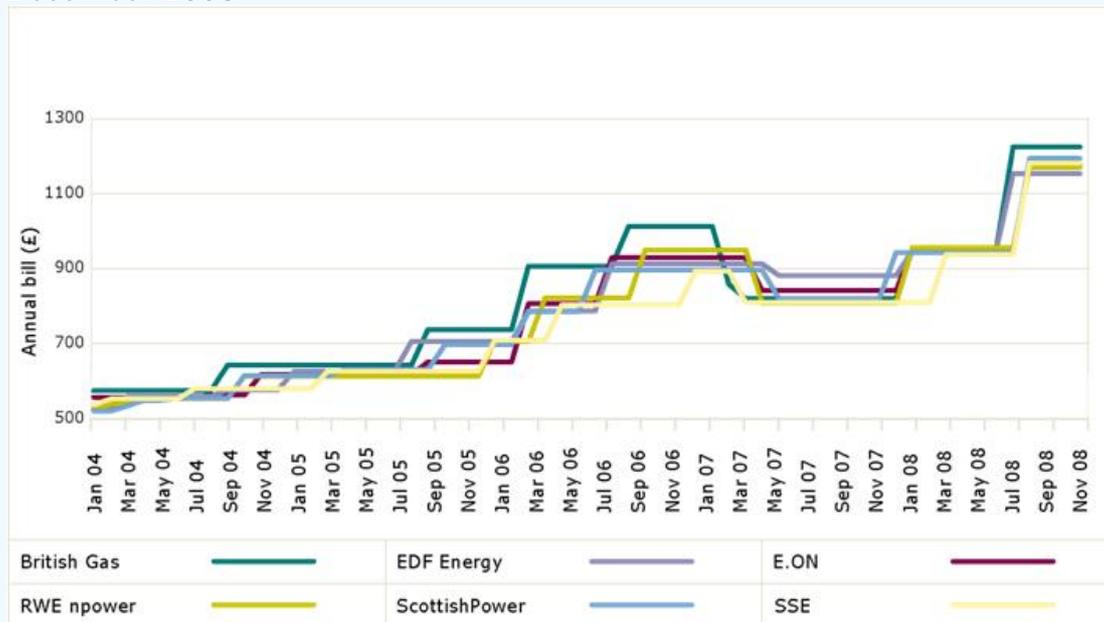
7. Company behaviour

An effective and vibrant competitive market is one characterised by firms striving to out-perform each other on price, on the quality of their service and on the innovative design of their products in order to attract and retain customers - underpinned by efforts to purchase inputs more keenly and reduce internal costs. This Chapter sets out, on the basis of the evidence we have collated and analysis we have undertaken, how energy suppliers behave in GB energy supply markets. The focus of the Chapter is on the behaviour of the Big 6 suppliers. It considers in turn the key drivers of suppliers' retail pricing strategies, their pricing strategies with respect to particular consumer segments and their record to date on product innovation and cost reduction.

Retail pricing strategy

7.1. Recent movements in retail prices form an important backdrop to our current investigation into the GB energy supply markets. Figure 7.1 shows how the average dual fuel direct debit price of each of the Big 6 suppliers has moved over the five years from early 2004. It shows the extent to which supply prices of the Big 6 have tracked one another and, in particular, how closely aligned they have been through the price rises this year.

Figure 7.1: Dual fuel direct debit prices (£ per year), January 2004 - December 2008



Source: Ofgem

Note: Annual bill paid by a dual fuel direct debit customer using 3,300 kWh of electricity and 20,500 kWh of gas per year. Recent price changes extended to year end for illustrative purposes.

7.2. British Gas consistently priced above other major suppliers over this period, until it dropped its prices in early 2007 as a result of accelerating customer losses. Most other suppliers soon followed by lowering prices, although EDF Energy remained significantly more expensive. During the first few weeks of 2008, five out of the Big 6 raised prices in quick succession and to similar levels. In the last round, record price rises have been implemented by the Big 6, with British Gas re-establishing itself as the highest priced supplier. As a result, a household with average consumption on a dual fuel direct debit tariff has seen its annual energy bill more than double from £555 in early 2004 to £1,195 in September 2008.

7.3. It is important that we understand the basis for these price movements and the key factors that the Big 6 suppliers take into account in their pricing strategies and individual price decisions. We consider in turn: the overall business context in which companies decide retail prices, the role of wholesale price movements in driving retail price changes, the importance that suppliers attach to customer reaction in their retail pricing decisions, and the constraint imposed on a supplier's pricing behaviour by competitor considerations³⁸.

The business context of retail pricing decisions

7.4. The Big 6 suppliers are all part of larger vertically integrated energy groups. From the business plans of the Big 6 and interviews we have held with them, we have gained a detailed insight into the strategic and financial context of the energy supply businesses within these groups. It is important to understand this context when considering pricing decisions and the evidence on profitability that we present in this Chapter. We have generalised in order to preserve commercially sensitive information, although we have found sufficient similarity in the commercial strategies of the Big 6 to make these generalisations valid. Where important differences of approach exist, we point this out.

7.5. Energy supply businesses have two important functions within the wider integrated energy businesses in which they operate:

- they act as a hedge for the electricity generation businesses which, in terms of capital invested and future investment requirements, are far more significant than energy supply; and
- they are a profit centre in their own right.

7.6. For several of the former incumbent electricity suppliers, this distinction is blurred because the energy retail and wholesale functions are run as a single

³⁸ While the average GB prices in Figure 7.1 indicate some convergence of prices, at a regional level prices diverge more significantly.

integrated business. Some suppliers do not maintain separate accounts for these businesses even for internal management purposes. Both the retail and generation activities operate in the context of the financial expectations of their ultimate investors, in terms of profits, dividends and other performance metrics (such as customer numbers). The parent companies of all the Big 6 are publicly-quoted utilities, either in the UK (in the case of British Gas and SSE) or elsewhere in Europe.

7.7. As would be the case in any company, the energy businesses in GB are set a range of targets and objectives. Principle amongst these is a target for profit - always at the level of the GB energy business, but sometimes for the supply business alone. In many cases, it is clear that top priority is given to the delivery of profits from the GB energy businesses as a whole, rather than from individual businesses - even for those businesses with clear separation of retail and wholesale. However, there is also evidence that companies see a prolonged difference in the profitability of their wholesale and retail businesses as unsustainable in the long term.

7.8. Supply businesses are also set other performance targets, including targets for customer numbers, customer service metrics, meeting regulatory compliance standards and other goals for enhancing the capability and efficiency of the business. Maintaining customer numbers is an important priority, both to ensure future profits from energy supply and to maintain the hedge for the generation business.

7.9. Supply business plans often have expectations of future retail price movements factored in to reflect expected movements in wholesale energy and other costs, usually based on forward prices prevailing at the time. Suppliers review the impact of subsequent wholesale price movements on meeting the business plan targets regularly (usually monthly) throughout the year.

7.10. Pricing decisions are considered carefully. An important priority of the suppliers is to meet business plan objectives and, therefore, shareholders expectations. The timing and extent of price rises are important levers in meeting business plan objectives and companies consider a wide range of options, taking into account the implications for profits, competitive positioning, customer numbers, brand and government or regulatory risk. Sales input and advertising budgets are also used to "fine tune" both customer numbers and profitability.

7.11. Within the year, most suppliers accept that changing wholesale prices may lead to profit shifting from upstream to downstream and vice-versa. In general, high electricity prices will tend to result in higher upstream profits and lower downstream profits, and vice versa in times of falling prices.

7.12. Suppliers' longer term plans reveal expectations for customer numbers and the target margins they seek to achieve. Four of the six suppliers express targets for sales margins in their supply businesses which are used as the basis for setting future budget expectations. These targets range from 4 to 10 per cent. Several suppliers have cited British Gas's publicly quoted target of a 5 to 8 per cent sales margin for energy supply as justification for their own expectations, though we have

found no analysis justifying why these profit expectations might be sustainable in an effective competitive market.

7.13. Similarly, we have seen all companies' future expectations for customer numbers. Although there are exceptions, most suppliers seek to sustain customer numbers at close to current levels, primarily to maintain balance between their upstream and downstream positions.

The link between wholesale energy costs and retail prices

7.14. As wholesale costs typically account for around 60 per cent of a domestic consumer's gas and electricity bills³⁹, developments and changes in wholesale energy prices are a key factor in suppliers' retail pricing decisions. However, the relationship between wholesale and retail prices is complex for several reasons:

- first, firms can employ a range of hedging strategies⁴⁰ and these may change over time;
- second, there is a cost to suppliers of changing their retail prices, which means that the retail price will not always reflect the wholesale cost that the supplier is facing at a particular point in time;
- third, firms face a range of other costs that may be beyond their control and difficult to forecast, including network charges and environmental obligations; and
- finally, the speed and extent to which it is optimal for a firm to pass wholesale price changes through to consumers will be determined by external profit and performance expectations and the behaviour of consumers, who may switch to an alternative supplier and/or adjust their consumption level. This latter point is discussed later in this Chapter.

7.15. Figure 7.2 shows the volatile movements in day-ahead prices in the wholesale gas and electricity markets and contrasts them with the much smoother movements in wholesale costs which suppliers can and do achieve through hedging. The illustrative hedged wholesale costs are based on a strategy whereby firms start purchasing energy eighteen months in advance and have purchased all their requirements for the year ahead⁴¹. The figure illustrates how, by hedging, a supplier

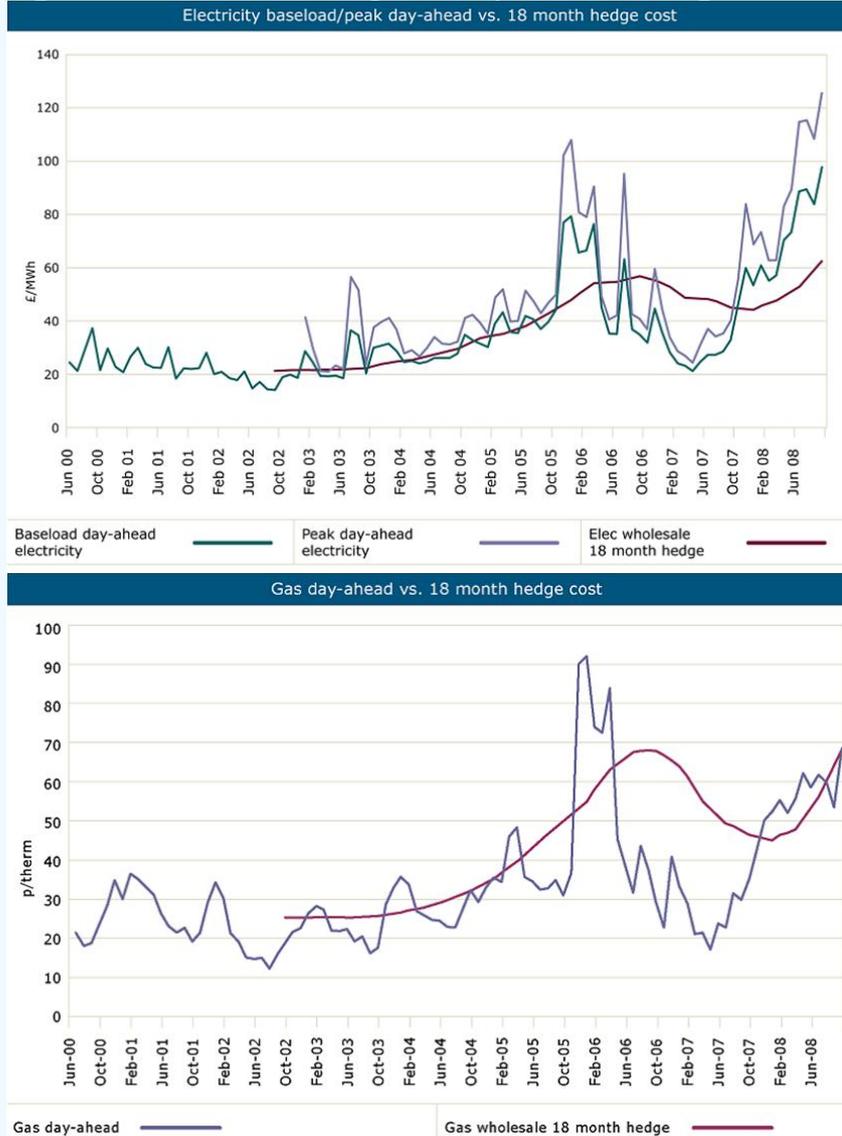
³⁹ This depends on, among other things, fuel and customer type.

⁴⁰ That is, what proportion of energy should be bought ahead on the forward markets.

⁴¹ This is similar to the model presented in the 2007 Domestic Retail Market Report. For the current analysis we constructed a range of representative hedging models, drawing on the information in company business plans, including a model where firms buy 10 per cent of their energy requirements on the day-ahead market. These models are discussed in Appendix 5

introduces a lag between changes in prices in the wholesale markets and its own energy purchase costs. Hence Figure 7.2 shows periods in which a supplier's estimated smoothed costs are rising when wholesale prices are falling, and periods when a supplier's actual costs are falling when wholesale prices are rising.

Figure 7.2: Wholesale day ahead prices vs. hedged wholesale cost



Source: Heren, Ofgem analysis

together with the econometric analysis. The wholesale cost series does not extend back prior to 2002 due to lack of data.

7.16. As a result of suppliers' hedging strategies, therefore, we should not expect to see a close relationship between wholesale market prices and retail price movements. Instead, it is the relationship between a supplier's smoothed (and lagged) actual energy purchase costs and its retail prices that is of interest. Figure 7.3 illustrates this second step in the analysis. It shows the relationship between the hedged wholesale costs (yellow line, measured on the left axis) and average retail prices less other costs (green line, also on left axis)⁴². The purple line on the chart, measured on the right axis, shows the spread between retail prices and wholesale costs. The solid lines represent actual wholesale and retail prices; the dotted line shows what would happen if we roll the hedging model forward, assuming wholesale and retail prices remain at current levels. (Since forward curves have been rising, the hedged wholesale cost for providing energy for the next year is therefore increasing).

Figure 7.3: Relationship between hedged wholesale costs and average retail prices (electricity, gas and dual fuel), September 2002 - December 2009



⁴² Other costs include network and environmental charges. Retail prices are weighted by payment type. See Appendix 5 for more detail. The statistical analysis in the Appendix examines the relationship between retail prices of former incumbent suppliers separately.



7.17. Figure 7.3 shows a much closer relationship between movements in wholesale energy costs and changes in retail prices. It shows that both wholesale cost increases and decreases tend to be passed through to retail prices with a lag. As a result, the spread between wholesale and retail prices typically narrows at times of rising wholesale prices (as suppliers delay the pass through of higher wholesale costs into retail prices) and widens at times of falling wholesale prices. It is not clear from these figures that there is a systematic tendency for this lag to be longer at times of

falling wholesale prices or vice versa. However, we note the limitation of this analysis given the short duration of data used and the fact that there was only one short period of sustained falling wholesale prices in this six year period.

7.18. It should also be noted that this analysis starts in September 2002, which is close to the low point after a period of sustained falling wholesale prices from the start of retail competition in 1998/99. As a result, we would have expected retail margins to be at a cyclical high, reflecting the lag we have already mentioned. Analysis presented in Appendix 5 shows that this was the case, particularly in electricity. Therefore, it would not be surprising to see a squeeze in margins from this level during an upswing in wholesale prices.

7.19. The figure shows a sharp increase in gas and electricity margins earned by suppliers as a consequence of the recent price increases. However, it should be noted that these margins are projected to erode very quickly as the benefit of forward hedging at lower prices declines and hedged costs trend towards today's higher market prices. Indeed, based on today's forward curve, our model predicts that dual fuel and gas margins may become negative by spring 2009, indicating a possible risk of further price rises.

7.20. We have also undertaken econometric analysis on the relationship between wholesale costs and retail prices. The key conclusions from this analysis are as follows:

- There is a long-run relationship between wholesale costs and retail prices based on this model of wholesale purchasing strategy, i.e. firms do pass through changes in wholesale costs to retail prices.
- It is difficult to quantify the extent of pass through with much precision. Estimates of pass-through range between 59 and 168 per cent depending on the model.
- The evidence on whether firms tend to pass through wholesale costs to a greater extent when prices rise as compared to when they fall is inconclusive, as the period for which we can construct a representative wholesale cost series only contains a limited period with price falls.

7.21. These results are discussed in more detail in Appendix 5.

Constraints imposed by consumer behaviour

7.22. Demand for gas and electricity is fairly inelastic, by which we mean that when energy prices rise, most consumers reduce their energy demand by only a modest amount, at least in the short run⁴³. This demand response, therefore, acts as only a very modest constraint on suppliers' pricing decisions. Of much greater relevance to a supplier is the price that it charges relative to that of its competitors, as it is this relative price differential which may prompt at least some of its consumers to change supplier.

7.23. As we discussed in Chapter 4, customer switching is only weakly correlated with price. While we have found some relationship between price differentials and customer switching, we have also found that switching decisions are affected by a number of other factors, including the level of direct sales activity.

7.24. It is understandable, in this context, that the Big 6 suppliers put significant effort into direct selling in order to avoid having to compete solely on price. Indeed, it is apparent from our examination of the their business plans that they understand these consumer dynamics and use the level of their direct sales effort to offset, as far as possible, the effect of a price increase or a disadvantageous price position. This serves to weaken the constraint on suppliers' pricing exerted by consumers' switching behaviour.

7.25. Suppliers are also aware, however, that they cannot get too far out of line with competitors' prices, for fear that this would trigger a significant loss of consumers.

7.26. As wholesale energy prices comprise such a large proportion of a supplier's costs, its wholesale energy purchasing and hedging strategy is a major determinant of its competitiveness in the retail market versus its competitors. A natural way for a firm to protect against the risk of having to set its retail price above that of its competitors is therefore to ensure that its strategy for purchasing wholesale energy closely matches that of its competitors. We have examined the business plans of the Big 6 suppliers and it is apparent that this is precisely what they seek to achieve. The benchmark purchasing strategy appears to be that of British Gas⁴⁴. Indeed, British Gas used to publish their hedging strategy in their annual reports.

7.27. We recognise that this is a rational risk management strategy for any commercial business, and there have been times when a supplier has adopted a

⁴³ Both the price elasticity of demand and the income elasticity of demand is low i.e. the quantity of energy demanded is fairly insensitive to the relative price of energy and to changes in income.

⁴⁴ When we asked firms about how the original hedging strategy arose, they suggested that it was natural to benchmark against the original market leader, British Gas.

significantly different hedging strategy and suffered financially as a result. We are concerned, however, that it is a pattern of behaviour which can only serve to weaken the competitive pressure on wholesale energy prices. Retail supply businesses competing vigorously to secure the cheapest possible wholesale energy, in order to out-perform the competition and secure a commercial edge in the retail market as a result would, we believe, be in the long term interests of consumers.

Constraints imposed by competitors

7.28. We have found no evidence of a cartel among the Big 6 suppliers, either in the business plans of the suppliers or from the many interested parties that responded to our Call for Evidence.

7.29. As any business would do, suppliers take account of competitor positioning, likely future behaviour and reaction when setting retail prices. This is apparent from the suppliers' business plans and acknowledged by the firms themselves. In particular, decisions on the timing and, on occasion, the size of any price adjustments are typically determined in relation to the perceived market leaders in each region. Several firms' business plans state that they wait until competitors have announced their price changes, not just to avoid the adverse publicity of going first with a price rise, but to assess the extent of their own price adjustment. For example, one company stated:

"Whilst the decision to increase rates is primarily influenced by the adverse movements in the commodity curve....., [company x's] decision to "go first" and increase prices on average by [a]% for gas and [b]% for electricity gives us the confidence to increase by the higher amount of [c]% [as compared to the original intention of a [d]% price increase] for both gas and electricity"

7.30. Another recommended the following pricing strategy:

"Improve our in-area competitive position against [company x] and [company y]. Therefore wait for [company x] in order to price competitively"

7.31. The pricing policies of some of the suppliers are explicitly expressed as a certain percentage or amount in £s above or below the incumbent supplier. For example, one company stated in their key planning assumptions:

"We are assuming we can operate at a price point which is [company x +y%] on an 'average' UK position for [a period of 3 years]"

7.32. Another stated its objective:

"... to be no more than £100 more expensive than [company x] in [our] former PES areas"

7.33. Whilst we are satisfied that the Big 6 make their key decisions independently, there is significant further scope, as increasing numbers of consumers engage actively in the market, for the level of competitive intensity among suppliers to increase.

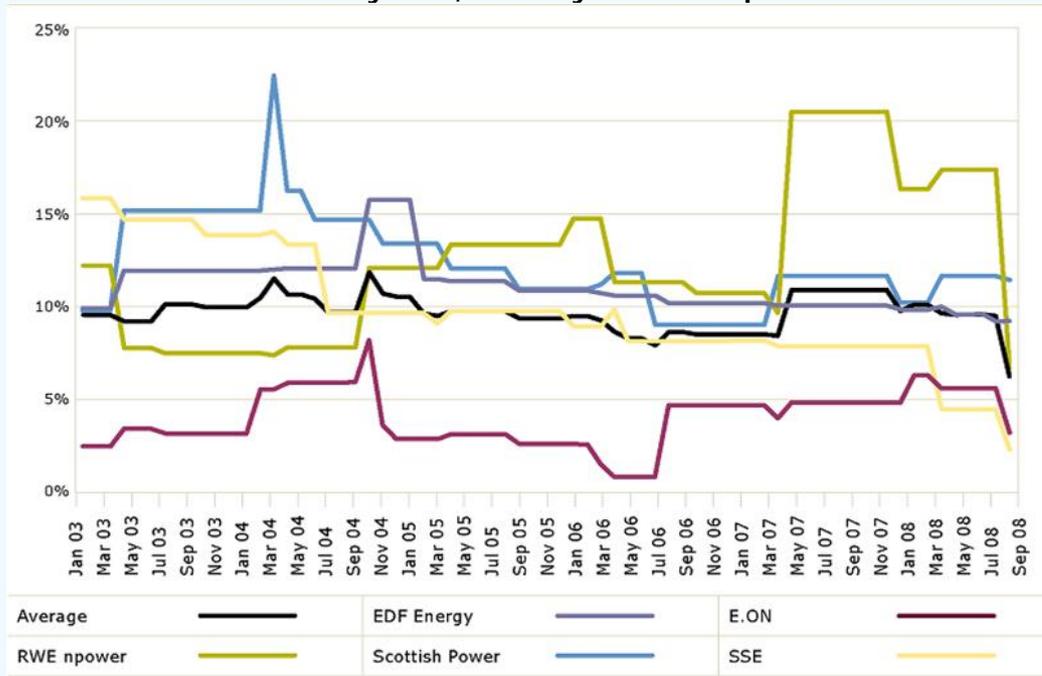
Price Differentials

7.34. This section discusses suppliers' pricing structures with respect to particular segments of the domestic market. We examine price differentials between regions ("in-area" versus "out-of-area"), between products (gas, electricity and dual fuel) and also differentials by payment type.

Electricity in-area versus out-of-area price differentials

7.35. The five suppliers that evolved from the former electricity incumbents charge lower electricity prices outside of their former monopoly regions ("out-of-area") than they do to consumers within their former monopoly regions ("in-area"). Figure 7.4 shows the percentage difference between each of the five incumbent suppliers' in-area and out-of-area electricity Standard Credit (SC) bills. Network charges (i.e. DUoS and TNUoS charges) have been removed from this analysis in order to show in-area and out-of-area prices on a comparable basis, and all prices are expressed in nominal terms.

Figure 7.4: Average percentage difference between in-area and out-of-area standard credit electricity bills, January 2003 – September 2008



Source: Ofgem

7.36. Figure 7.4⁴⁵ shows that since January 2003 the five former incumbent electricity suppliers have charged on average 10 per cent more to their in-area Standard Credit customers than to their out-of-area Standard Credit customers (after adjusting for network charges in each region). This differential has persisted throughout this period, varying at times and by supplier in a range from 5 per cent to 20 per cent since mid-2007. Following the latest round of price increases, the average differential has narrowed to 6 per cent, with a range of 2 to 11 per cent. We note that this narrowing of these differentials has occurred while Ofgem was conducting its Probe.

7.37. Similar regional pricing differentials are found in electricity for other payment types (direct debit and prepayment). The extent of in area premiums for each payment method is summarised for electricity in Table 7.1.

Table 7.1: In-area versus out-of-area electricity price premiums

Payment method	Scale of price premium (over whole period prior to last round of price changes)	Scale of premium after last price round (post-July 2008)	Consumers affected
SC	10% Range over year to July '08: 5-18%	6% Range: 2-11%	SC: 4.4 million
DD	11% Range over year to July '08: 5-20%	6% Range: 2-12%	DD: 3 million
PPM	Since Jan '03: 6% Year to July '08: 8% Range over year to July '08: 5-12%	6% Range: 2-9%	PPM: 1.5 million

Source: Ofgem

7.38. We have found no such systematic regional differences in gas (indeed on average, suppliers charge less for gas in-area than out of area). As a result, the premium paid on a dual fuel product is reduced by the inclusion of gas, compared to that paid by a consumer who purchases only electricity from its local former incumbent electricity supplier. Indeed, after recent price increases, the in-area premium on dual fuel direct debit tariffs has almost entirely disappeared.

7.39. To consider whether electricity price differentials can be explained by differences in the costs of supplying energy, detailed information was requested from

⁴⁵ Electricity bills in each region have been estimated based on an annual consumption of 3300kWh. No adjustment has been made for differing levels of consumption between regions.

suppliers on costs incurred and revenue earned from supplying gas and electricity to retail customers. This data was provided on an annual basis for each year between 2005 and 2007 and was broken down by in-area and out-of-area customers. Box 7.1 below explains the key terms we use in this report when presenting this analysis.

Box 7.1: Notes on Ofgem's analysis of supplier costs and revenues

Cost to serve – costs attributable to providing services to customers, including billing and payment processing, cost of call centres relating to answering and resolving customer issues, debt management costs and recovery of debts, bad debt write offs and provision for bad debts. We will sometimes present these costs excluding overheads and bad debt costs.

Costs of competition include:

- **Acquisition costs** - the marketing and sales activities to attract new domestic customer accounts, and costs associated with influencing existing customers to change tariffs.
- **Account closure costs** – the administrative costs attributable to closing accounts including any associated costs of resolving queries and issues relating directly to the loss of domestic customers.
- **Customer retention costs** - the marketing and sales costs attributable to retaining existing customers.

7.40. Our analysis for the period 2005 to 2007 shows that the cost to serve an in-area customer was only £3 per customer per year higher than an out-of-area customer (£43 versus £40 per customer per year). The £30 price differential that we have observed for a typical in-area customer therefore appears to us to have little or no cost basis. The average net margin earned on an in-area customer during the period 2005 to 2007 was £36 a customer per year more than the equivalent out-of-area customer.

Gas pricing compared to electricity pricing

7.41. Our cost and margin analysis of the former electricity incumbents, combined with the evidence from business plans, has revealed an additional dimension of differential pricing in energy supply - electricity companies have consistently earned significantly higher margins from electricity than gas in the past 3 years⁴⁶. In effect, this represents a large price differential between dual fuel customers and those who

⁴⁶ This is based on historic financial data from 2004 to 2007 provided by suppliers. This analysis does not take account of the most recent round of price increases in September 2008, although there is no clear evidence yet of widespread rebalancing.

buy their electricity and gas from separate suppliers, or do not have access to the gas grid.

7.42. As explained in Chapters 3 to 5, dual fuel products are the focus of competition in the domestic market. Companies benchmark dual fuel prices against other suppliers, and most specifically against the former incumbents in each region. By pricing electricity higher and gas lower, this enables former electricity incumbents to price up to their stand alone electricity customers whilst remaining competitive with British Gas in the dual fuel segment of market. This pricing behaviour is universal amongst the former electricity incumbents. All five former electricity incumbents were significantly loss making in gas in 2007, whilst being significantly profitable in electricity.

7.43. We have been unable to find adequate cost related justification for this differential in profitability of gas and electricity. Based on the cost information provided by the suppliers, both cost to serve and direct metering costs are higher in gas, by around £6 per customer per year.

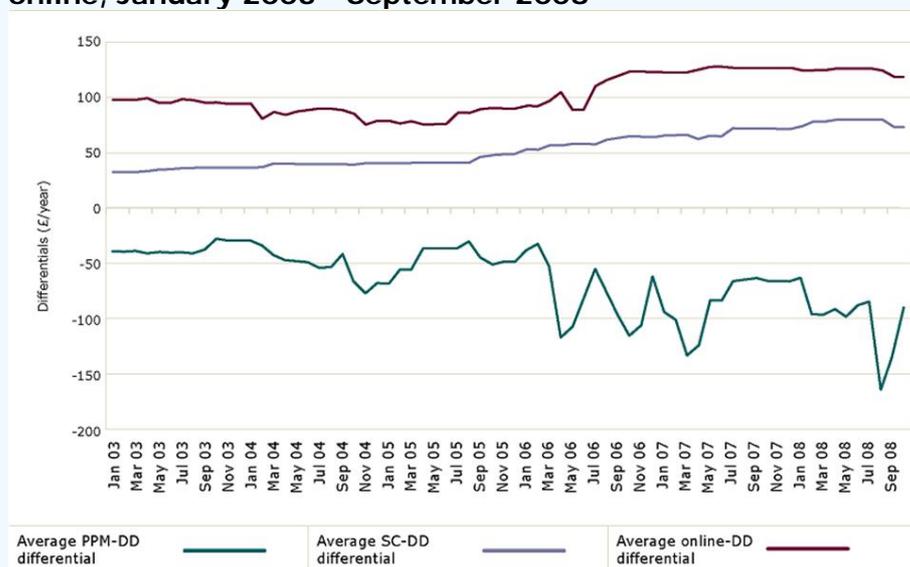
7.44. Given the absence of an adequate cost justification for differential pricing between both in-area and out-of-area electricity and between electricity and gas, we conclude that the five former electricity incumbents have adopted this practice to optimise the revenue from their large number of legacy customers, including less price sensitive in-area and stand-alone electricity customers, whilst at the same time maintaining a competitive proposition in the more active dual fuel markets, particularly outside their host region.

Payment type differentials

7.45. This section considers the different prices charged by energy suppliers depending on how domestic consumers pay for their energy and manage their account, in particular the differences between prepayment (PPM), standard credit (SC), direct debit (DD) and online direct debit tariffs. Our analysis is with reference to direct debit, which, as illustrated in Chapter 3, is the most common payment method and the principal focus of competition among suppliers.

7.46. Figure 7.5 shows the difference between average gas and electricity PPM and dual fuel DD bills of the Big 6 between January 2003 and September 2008. It also shows the average difference between SC and DD bills and the average difference between DD online and DD offline.

Figure 7.5: Average tariff differentials between PPM, SC, DD offline and DD online, January 2003 - September 2008



Source: Ofgem

Note: Based on a customer using 3,300 kWh of electricity and 20,500 kWh of gas per year

7.47. The average differential between PPM and DD of the Big 6 has increased from around £80 at the beginning of 2005 to around £125 at the beginning of 2008 – an increase of more than 50 per cent. Over the same period, the average differential between SC and DD increased from around £40 to £80 – an increase of 100 per cent. During the latest round of price increases, the average differential between PPM and DD of the Big 6 has fallen to £118. The average differential between SC and DD has remained at just under £80⁴⁷.

7.48. Online discounts (relative to standard DD) averaged around £50 per customer per annum between 2004 and early 2006, since when the average discount has ranged between £60 and £150 a year. Online prices often do not change concurrently with other prices - meaning the differentials can be volatile, particularly at times of sharply rising prices.

7.49. Figures 7.6, 7.7 and 7.8 show the difference between each supplier's gas and electricity PPM and dual fuel DD bills; each supplier's dual fuel SC and DD bills; and each supplier's online-offline DD bills respectively. The charts illustrate that the price

⁴⁷ These differentials do vary depending on the consumer's consumption level. The impact of this is discussed later in this Chapter.

differences vary considerably across suppliers, with SSE currently offering the lowest premium for PPM and EDF Energy offering the lowest premium for SC.

7.50. Figures 7.6, 7.7 and 7.8 do not include social tariffs or British Gas' new online pay-as-you-go tariff for PPM key meter customers. EDF Energy, SSE, RWE npower, Centrica and Scottish Power each offer tariffs to some of their vulnerable PPM and SC customers which are at least equivalent to or cheaper than their standard DD tariffs.

Figure 7.6: PPM-DD differential by supplier, January 2003 - September 2008

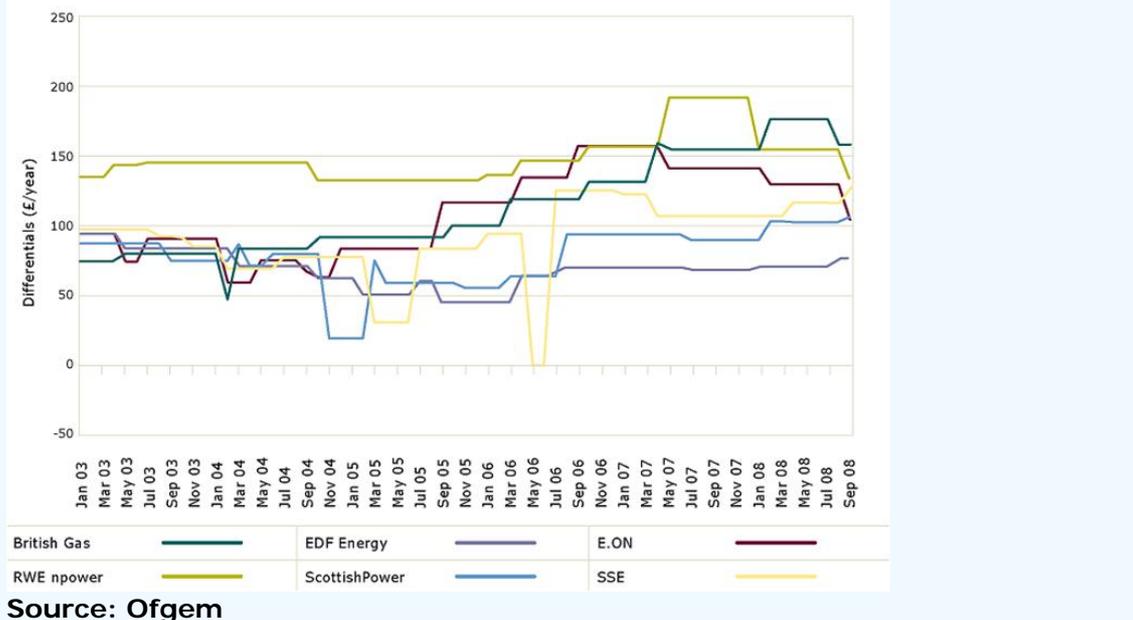
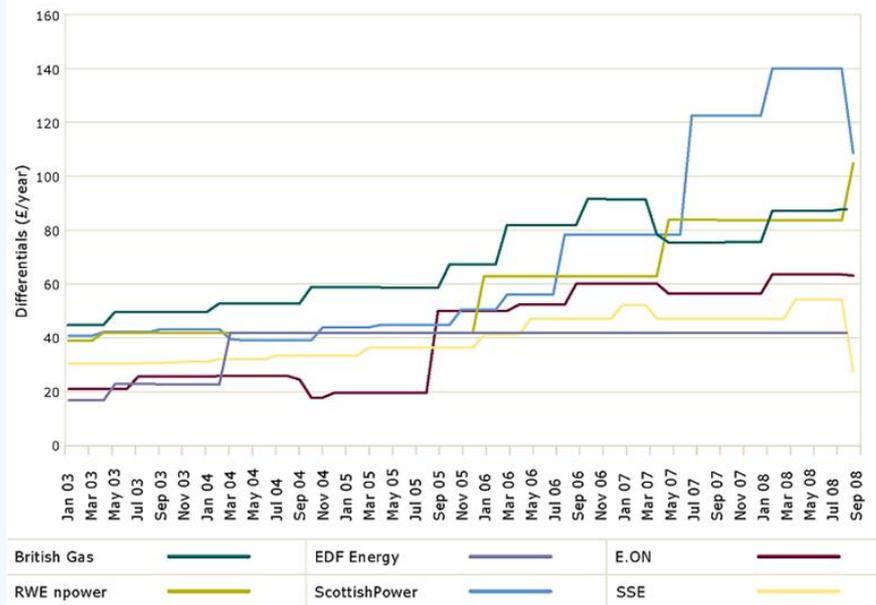


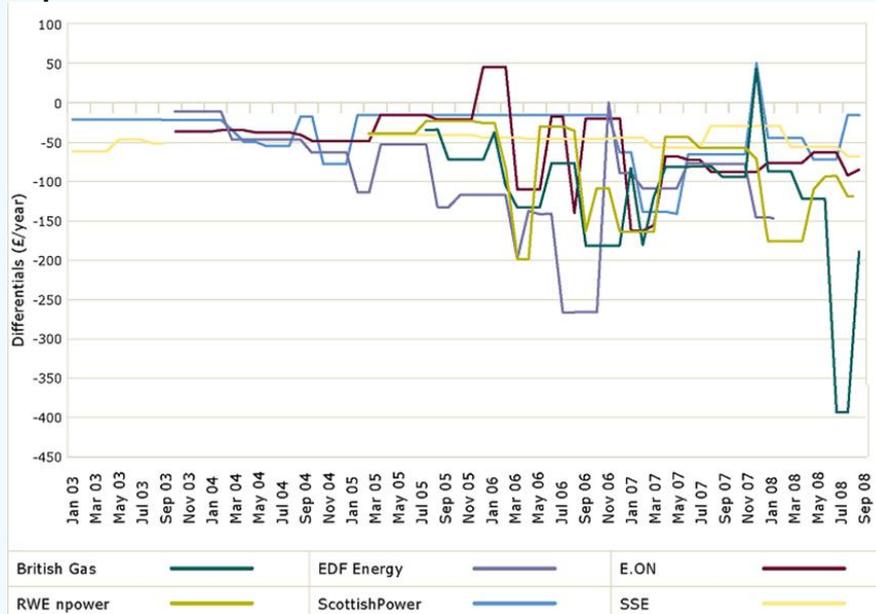
Figure 7.7: SC-DD differential by supplier, January 2003 - September 2008



Source: Ofgem

Note: Based on a customer using 3,300 kWh of electricity and 20,500 kWh of gas per year. SSE's ScottishPower's and E.On's standard credit bills include their prompt pay discount.

Figure 7.8: online-offline DD differential by supplier, January 2003 - September 2008



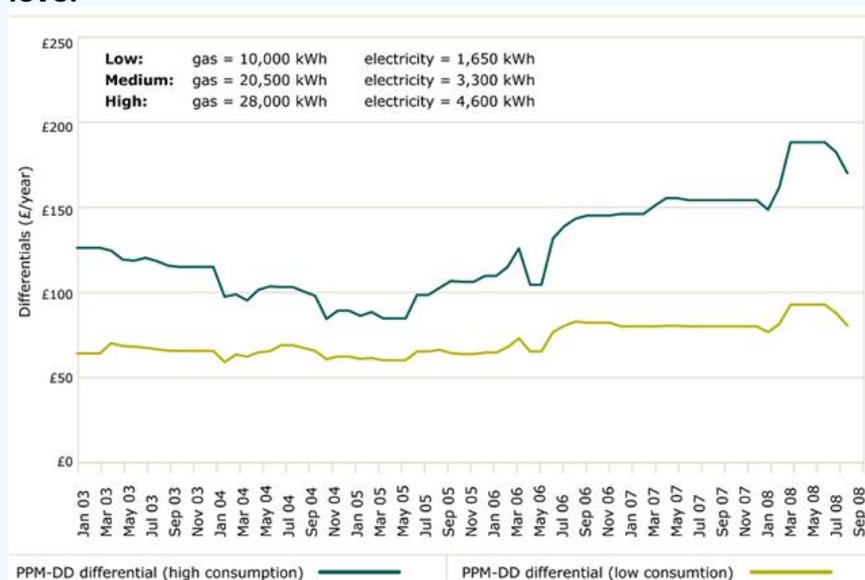
Source: Ofgem

Note: Based on a customer using 3,300 kWh of electricity and 20,500 kWh of gas per year

7.51. Our analysis of tariff differentials is based on a "medium consumption" customer, which assumes annual electricity consumption of 3,300 kWh and gas consumption of 20,500 kWh. However, as can be seen in Figure 7.9, the PPM-DD differential varies considerably, depending on the assumed level of consumption. This is because suppliers appear to recover some of the additional costs of PPM services through the unit charge, rather than the standing charge. The average differential between PPM and DD for a "low consumption" customer is just £80 a customer, whilst for "high consumption" users it is £170.

7.52. Evidence from company submissions suggests that average PPM consumption is 8 per cent below average in electricity and 20 per cent below average in gas. We estimate that for a typical PPM customer, therefore, the price differential actually paid would be around £86. This is confirmed by the cost and revenue information provided by the companies.

Figure 7.9: Gas and electricity PPM-DD differential by annual consumption level



Source: Ofgem

7.53. Using cost information provided by suppliers, we have undertaken high level analysis to gain a broad understanding of the extent to which the premiums paid by SC and PPM customers and the discounts enjoyed by online consumers might be justified by differences in the costs that the suppliers currently incur in serving these consumers.

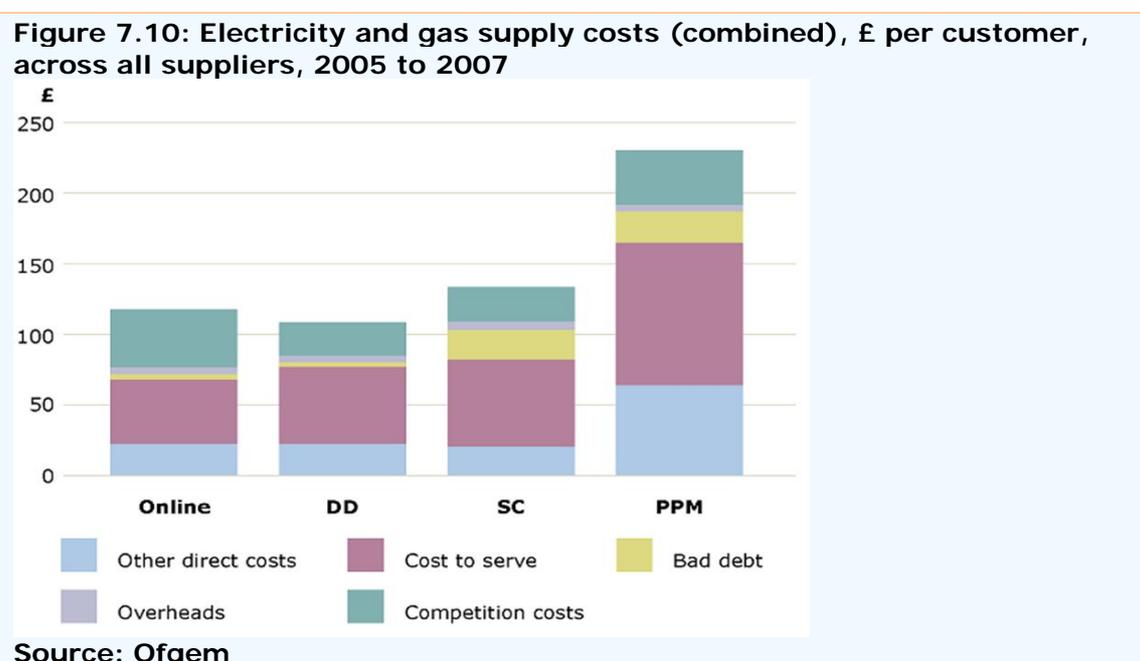
7.54. The cost to serve a typical **PPM** customer is higher than a typical DD customer principally because prepayment meters are themselves:

- more expensive to buy and service; and

- require a specialised back-office administration system (known as prepayment meter infrastructure provision or PPMIP) which provides for the allocation of payments from customers to suppliers.

7.55. In addition, token meters require visits to the customer's premises to recalibrate the meter when prices change – although the need for such visits has declined over time as suppliers have replaced token PPMs. PPMs may also incur more costs relative to DD because of increased call centre costs resulting from additional issues that can arise for PPM consumers (such as loss of payment devices).

7.56. Figure 7.10 shows, on a £ per customer basis, electricity and gas retail supply costs across all suppliers for the different tariff types.⁴⁸



7.57. Figure 7.10 shows that on a £ per customer basis, other annual direct costs (which include metering costs but exclude fuel, transmission and distribution, and environmental costs) and service costs for PPM customers are £88 per customer higher than for a direct debit customer. We note that if bad debt costs were included, this difference would rise to £107. However, we question whether bad debt costs are

⁴⁸ These figures are based on cost data for the five of the Big 6 suppliers due to data availability.

directly attributable to PPM customers since a number of those PPM customers in debt have been switched by their supplier from another payment method for debt reasons (as such, the cost of such debt should arguably be attributed to an alternative payment method). We also note that the costs of competition are also higher for PPM customers, by around £15 per customer, reflecting higher churn rates compared to DD. Again, however, we do not believe it appropriate to recover these costs through higher prices from PPM customers.

7.58. Across the entire customer base, the additional costs of prepayment currently incurred by suppliers exceed the price premium charged to PPM consumers. As a result, the average dual fuel PPM customer is around £11 less profitable than a DD customer (ignoring higher bad debt and acquisition costs). On average, therefore, we conclude that the premium charged to PPM customers is broadly justified by the costs incurred. If some PPM customers pay more than can be justified (in the sense of not being related to costs), this is the consequence of other dimensions of non cost reflective pricing, such as gas versus electricity, regional pricing and the balance between fixed and unit charges, which impact all customers not just PPM customers.

7.59. While **Standard Credit** (SC) customers have the same metering systems as those that pay by DD, they typically cost more to serve because they generally pay quarterly in arrears (whereas DD pay monthly in advance) and occasionally require follow-up by suppliers to secure payment. This does not occur to the same extent with DD consumers whose payments are received automatically.

7.60. However, the largest cost difference between standard credit and direct debit appears to be the cost of bad debt. Of the £25 overall annual cost differential, cost to serve represents £7 and bad debt represents £18. As for PPM customers, we question whether bad debt costs are directly attributable to all SC customers. However, SC customers do impose higher working capital costs, because payments are recovered in arrears. Evidence from business plans and our own calculations imply additional working capital costs for a quarterly credit customer of around £12 per annum.

7.61. These additional costs, including working capital and bad debt, amount to around £37 per Standard Credit customer. This compares to an average premium paid by a typical SC customer of close to £80. This suggests that a substantial proportion of the SC premium cannot, on average, be justified by differences in cost. This was recognised by some companies in our interviews, one of whom described the premium as an "incentive" to encourage greater take up of direct debit.

7.62. **Online customers** generate some savings for suppliers because of the lack of a paper bill being sent to customers and the fact that these customers may be more likely to supply their own meter readings. Our evidence suggests this cost saving is worth around £10 per customer, which confirms our view that the large discounts available through online tariffs are principally driven by acquisition strategies, rather than cost differentials, in this most price sensitive segment of the energy supply markets. We consider online offers later.

Sales activity

7.63. This section considers the range of sales channels used by suppliers to access the market, which can be broadly classified as follows:

- **Inbound - requires proactive engagement by the consumer**
 - online (for example, switching sites);
 - suppliers' own websites; and
 - direct customer calls to suppliers.

- **Outbound - generally requires no active engagement although the consumer has to be receptive to selling by suppliers**
 - doorstep selling;
 - telemarketing; and
 - direct mail activity.

7.64. It is clear from our discussions with the Big 6 suppliers and from their business plans that they put significant effort into direct sales as an effective means of acquiring new customers. This is to be welcomed as part of a healthy and active competitive market. Annual expenditure on direct sales by energy supply firms has averaged around £250 million⁴⁹ per year over recent years and the level of direct sales activity has increased considerably from the early days of domestic competition.

7.65. Unsurprisingly, suppliers see direct sales activity as a means of securing new customers at more attractive margins than might be possible through other, customer initiated channels such as the internet. In Chapter 4 of this report we provided a broad segmentation of customers into those who proactively search the market, those who are reactive to sales approaches by companies, and those who are largely inactive. Suppliers' direct sales activities are targeted at winning the business of the reactive customer groups. This is the customer group most likely to switch in response to a direct sales approach and least likely to compare the prices of multiple suppliers before making a decision to switch. As noted in Chapter 5, they are also the group most likely to switch inadvertently to a more expensive deal.

7.66. The information provided to us shows many of the suppliers to be active in targeting their sales efforts on those geographic areas, streets or (in some cases) specific properties which meet their target criteria – based on socio-demographic

⁴⁹ This figure does not include costs of administering the switching that results from this expenditure or general advertising expenditure.

information as well as any known fuel consumption data and payment method. A number of the suppliers do not target those consumers identified as vulnerable.

7.67. Acquisition of PPM customers through direct selling has increased markedly in recent years. Several suppliers have a higher propensity to gain consumers who pay by PPM, particularly through doorstep selling. Suppliers deny actively targeting PPM customers through direct sales. Reasons provided for high rates of PPM customer acquisition include the fact that consumers paying by PPM are more likely to be at home when sales agents call and that PPM customers are more likely to be receptive to direct sales because they are less likely to have access to other sales channels (for example, the internet). Our quantitative consumer survey found that nearly three-quarters of PPM consumers who switch supplier do so as a result of a direct sales approach.

7.68. There is evidence in their business plans that suppliers see changes in direct sales activity as a means of attaining customer number targets, and see the channel as less price sensitive. It is seen as a more effective way of increasing customer numbers than pricing more keenly (the exception is in the online market). Indeed, we have examples of suppliers committing additional sales expenditure in order to offset the increased churn following a price increase – for example:

“ If needed, £6m could be diverted from [company x's]brand marketing budget to defend against a 'price event' and cover additional cash collection costs”

“..reversal of field staff reductions could be put into place to protect customers numbers in the event of a large price event”.

Product innovation

7.69. Before market opening, consumers were supplied by regulated monopoly suppliers and had limited choice over their form of tariff or supply arrangement beyond the three main payment methods. Recent years have seen a welcome widening of the range of tariffs, payment schemes and other incentive or loyalty schemes on offer in the market, in addition to the social tariffs that suppliers are obliged to offer. We see this as a positive indication of competition at work; of suppliers responding to customer needs and tailoring their offerings accordingly. A number of the principal types of tariff available are outlined below.

Price guarantee tariffs

7.70. Domestic energy consumers have been able to sign up to price guarantee tariffs since May 2003. When first introduced, these tariffs offered consumers certainty that over a fixed period their tariff would not rise above a specified capped price. These caps were either fixed in absolute terms, or set relative to other suppliers' offerings. Initially these tariffs cost no more than standard tariffs, but shortly after their introduction most suppliers set a premium over the standard tariffs available at the time of commitment. These tariffs allowed consumers who were worried about the risk of rising bills to pay a premium in order to pass this risk to

their supplier. By March 2005, suppliers were offering entirely fixed price deals, and by March 2007, all of the Big 6 had a price guarantee deal on offer.

7.71. Price guarantee tariffs are offered over a one to three year period. Some have been made available to all consumers without limit, while others have been made available only to a fixed maximum number of customers, reflecting limitations on suppliers' ability to secure adequate forward wholesale market cover. Consumers on fixed or capped price deals have generally benefited significantly during the recent period of price volatility.

7.72. The first tracker product was launched at the end of 2005. This type of tariff links the retail price to wholesale prices much more closely than any other tariff. Consumers on a tracker tariff are more exposed to rises in wholesale costs, and so benefit more immediately when wholesale prices fall but suffer more immediate price increases at times of rising wholesale energy prices than they would on a supplier's standard tariff.

Online

7.73. Online tariffs were born out of discounts offered for customers who agreed to receive their bills online. These tariffs now range from those which allow customers to sign up and view their bills online, to those which require customers to submit meter readings online and allow them to track their energy use through time. There are currently around 1.3 million consumers on online tariffs, just under 5 per cent of GB households.

7.74. The online tariffs of three of the Big 6 suppliers (British Gas, E.ON and RWE npower) remain open to new customers for only a short period, usually until a new tariff is offered. Generally, a supplier's online tariff is its cheapest tariff at the time that it is open to new customers. However, as soon as a 'new' online tariff is opened for new customers, those on the previous tariff start to pay more. Customers signing up to an online tariff therefore generally find that they are no longer on their supplier's cheapest tariff once online prices change. Only by switching to the newest online tariff each time prices change would a customer ensure they are consistently on their supplier's cheapest tariff. For example, until 1 October customers on British Gas's first Click Energy online tariff were paying 46 per cent more than new online customers. We are concerned that this may not be apparent to many online customers.

7.75. Table 7.2 sets out the September 2008 range of online tariffs offered by the Big 6 suppliers.

Table 7.2: Dual fuel online tariffs open to new customers, 23 September 2008

Supplier	Tariff name	Valid from
British Gas	Click Energy 6. Click Pay As You Go Energy (for PPM customers)	30/09/2008 24/06/2008
E.ON	EnergyOnline Extra Saver 9 (with or without a standing charge)	16/09/2008
RWE npower	Dual Fuel Sign Online (v13)	29/08/2008
SSE	Dual Fuel Standard Energy Online (with or without a standing charge) Atlantic Gas and Electricity – Dual Fuel Internet SignUp (with or without a standing charge)	31/08/2007 Pre 04/2004
ScottishPower	Online Energy Service (with or without a standing charge)	04/2005
EDF Energy	Online v6 (this is an electricity only offer and is only available in 8 of the 14 regions)	01/10/2008

Source: Ofgem

Notes: British Gas introduced new online tariffs on 1 October 2008

Green tariffs

7.76. The first green tariff was introduced in 2000 by RWE npower. Customers who signed up for this tariff contributed to a fund which assisted with the development of renewable energy. Other types of green tariffs offset carbon emissions or contribute in some way to carbon reduction. Two small suppliers, Ecotricity and Good Energy also entered the market with green tariff offerings.

7.77. Most (though not all) green tariffs charge a premium above a supplier's standard tariffs. Green tariffs have a very wide range of characteristics, making them difficult for consumers to compare. We have recognised this and are seeking to address this issue by publishing voluntary green supply guidelines. In July 2008 we issued an update of these guidelines⁵⁰.

Incentives, loyalty cards and energy services

7.78. Some suppliers offer tariffs which reward customers for reducing their energy consumption. These rewards can include cash credits which can be offset against customers' bills or used to buy energy saving devices such as more efficient appliances or better insulation. Others have loyalty cards which offer reward points for each year that a customer succeeds in reducing energy consumption. These incentives are, however, very small in relation to a consumer's total bill. For

⁵⁰ See [http://www.ofgem.gov.uk/Sustainability/Environment/Policy/Documents1/Green per cent20supply per cent20guidelines per cent20- per cent20proposals per cent20July per cent202008.pdf](http://www.ofgem.gov.uk/Sustainability/Environment/Policy/Documents1/Green%20supply%20guidelines%20-20proposals%20July%202008.pdf)

example, one supplier is offering a £25 credit on a dual fuel bill for a 20 per cent reduction in energy consumption.

7.79. Suppliers are also offering energy services alongside their supply tariffs, such as boiler maintenance contracts, energy efficiency services and energy saving devices. Some also offer free advice on how to reduce energy consumption.

7.80. Loyalty schemes from suppliers offer customers points in loyalty schemes such as Nectar points or Clubcard points, through affinity deals with large retailers. Some large retailers also now offer white label supply, effectively striking a deal to sell an energy supplier's products through their own channels.

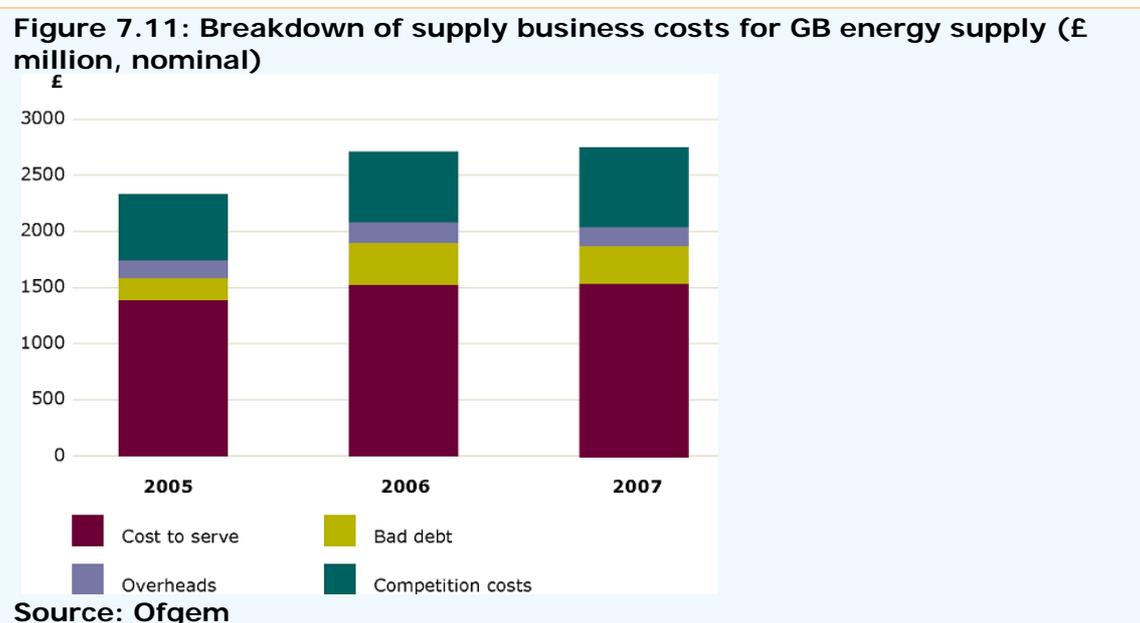
Cost efficiency

7.81. In a competitive market, competitive rivalry should also drive companies to improve efficiency as they seek a competitive advantage in setting prices to final consumers. A supplier's costs can be broken down into three broad categories:

- **Direct costs:** wholesale energy purchase costs, network access and environmental costs. Movements in these costs are, to a greater or lesser extent, outside the direct control of the suppliers – although we note the issue we highlighted earlier with respect to the tendency for the Big 6 to adopt very similar wholesale hedging strategies as a risk minimising device.
- **Cost of competition:** these are the customer-specific marketing and sales costs incurred in winning a new customer.
- **Cost to serve:** these are all of the other costs incurred by a supplier in operating its business and serving customers (including billing, cash collection, etc.).

7.82. In this section, we focus on trends in cost to serve and costs of competition, which is where we would expect to see the results of efficiency measures. While movements in direct costs may be outside the supplier's control and competitive activity might serve to drive costs of competition up, we would expect competitive pressure to force costs to serve down.

7.83. Figure 7.11 uses cost data provided by the Big 6 to show how retail supply costs have changed since 2005. All aspects of supply business costs have increased since 2005 - cost to serve by 11 per cent, the cost of competition by 21 per cent and bad debt by 71 per cent. Some suppliers' business plans identify inflationary pressures as a driver of increased cost bases. However, only the rise of overheads, up 5 per cent, could be explained by the general rise in inflation over that period (+7.5 per cent). Increases in the costs to serve do not seem to be consistent with a relentless drive towards increased efficiency. We are aware of significant cost overruns on major IT programmes by several suppliers.



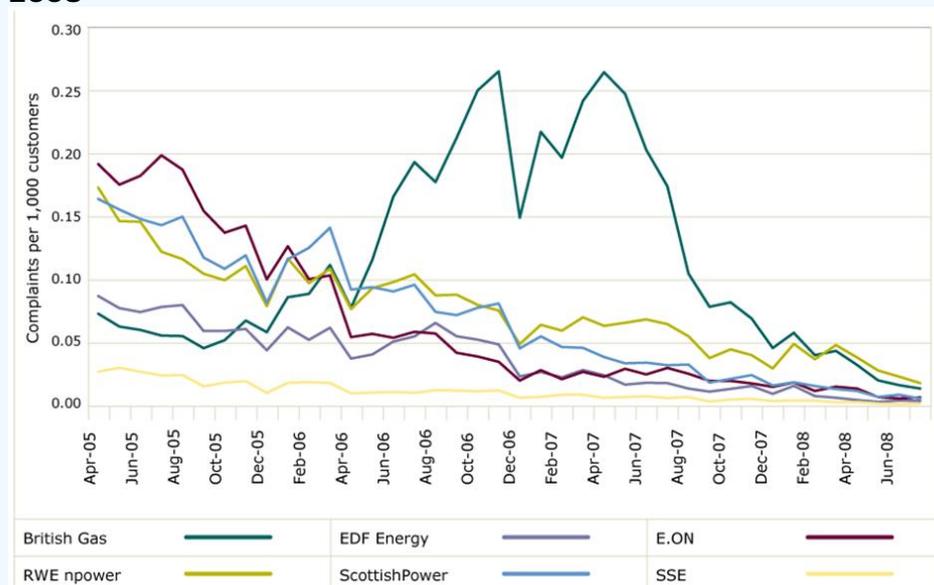
7.84. Increases in the costs of competition are consistent with the increased levels of churn over this period. In addition, we have seen large increases in the advertising budgets of some companies, reflecting their re-branding. Rising competition related costs could be beneficial if they result in more effective competition, thereby driving prices down, efficiency up and improving service quality. If this is not the case, these costs could be regarded as inefficient from a consumer's perspective.

7.85. All of the Big 6 suppliers' business plans set out cost reduction programmes going forward. If realised, this is a positive indication of competitive pressure. Examples of such programmes include off-shoring and reduced headcounts to directly reduce costs, to indirect approaches such as redesigned IT systems and process enhancements in order to reduce complexity and eliminate duplication.

7.86. The cost data provided to us by suppliers shows a wide range of operating costs per account, with the cost per account of the highest cost supplier around 90 per cent higher than those of the lowest - a difference of around £20 per account per year, or about 4 per cent of a dual fuel bill. Once again, this evidence is not consistent with an effectively competitive market, where we would have expected such material cost differences to have been competed away.

7.87. Of course, operating costs are not the only measure of operating efficiency. There is evidence that customer service standards have improved markedly over the period since market opening as illustrated in Figure 7.12, although British Gas's customer complaints rose sharply in 2006 and 2007 as a result of significant customer service issues with the implementation of a new customer billing system.

Figure 7.12: Customer complaints per 1,000 customers, April 2005 - August 2008



Source: energywatch

Note: Over the last year energywatch has been referring an increasing number of complaints back to suppliers in preparation for its closure on 30th September 2008.

CONCLUSIONS

- Changes in wholesale costs tend to be passed through to retail prices with a lag (attributable at least in part to hedging), but the evidence is inconclusive on whether this lag is longer when prices are falling or rising
- The former incumbent electricity suppliers seek to benchmark their hedging strategies against British Gas
- The Big 6 match each other's retail pricing structures closely
- However, we have found no evidence of a cartel
- Prices are consistently higher for in-area customers than out-of-area customers, and we can find no costs basis that fully justifies the differential
- Margins on electricity are consistently higher than margins on gas, and again we can find no cost justification for this practice
- The price differential charged to Standard Credit customers and some PPM customers appears to be higher than would be justified by the underlying differences in the cost to serve these customers
- Energy suppliers utilise a variety of sales channels and around £250 million a year is spent on targeted direct sales activity
- Product innovation has delivered a range of new options for consumers

8. The impact on consumers

In this Chapter we present our assessment of how the functioning of GB energy supply markets impacts on consumers, both as a whole and for each of the following groups of consumers: (i) Proactive; (ii) Reactive; (iii) Inactive; (iv) Electricity only; (v) PPM; (vi) Standard credit and (vii) Scottish and Welsh consumers. We estimate the scale of the impact of suppliers' pricing policies and the numbers of consumers affected.

8.1. In the previous Chapters we have examined the characteristics of GB energy supply markets, the behaviour of consumers in engaging with the market, the barriers facing new entrants and the activities of the Big 6 suppliers. Although competition is well established in GB energy supply, and continuing to develop, we have identified some features of energy supply markets that are constraining effective competition. This could cause adverse effects for consumers in a number of ways – either for specific consumer groups or in aggregate. In this Chapter, we seek to identify whether this is the case.

Profitability

8.2. Consumers are best served when prices and levels of profit are set by a properly functioning competitive market. Companies that are more efficient, more innovative or better at meeting their customers' needs should be more profitable, providing an incentive for improvements in performance. However, less than effective competition could lead to higher profit levels than would be consistent with a properly functioning competitive market.

8.3. By analysing profitability, we are not suggesting that it might be necessary or desirable to regulate the level of profits in energy supply. Indeed, we would regard this as an option only when competition has irredeemably failed. However, an analysis of profitability is, in our view, an appropriate part of a study of this type.

8.4. Assessment of suppliers' aggregate profitability is fraught with difficulties, given differences in accounting treatment, the complexities arising from vertical integration and hedging strategies, and the recent extreme volatility in energy prices. Supply businesses have low levels of fixed assets, with most capital employed being in the form of a volatile working capital requirement. Traditional measures of profitability, such as Return on Capital Employed (ROCE) are volatile, difficult to establish and possibly inappropriate.

8.5. Energy supply is a business with low levels of invested capital and a very high level of pass-through costs, a proportion of which is price regulated. As such, we would expect the margin on sales to be low as it is a percentage share of the entire energy value chain – including fuel production, generation, transmission and distribution. Supply now represents around 7 per cent of the added costs and even less of the capital employed.

Overall supply business profitability

8.6. Based on suppliers' submissions, we estimate the average pre-tax margin on sales in energy supply between 2005 and 2007 (inclusive) was around 2 per cent. Evidence from business plans suggests that this was below companies' expectations, although compensated for by higher profitability in electricity generation and gas production. Several companies cite a "through the cycle" supply margin of 5 per cent as an appropriate benchmark for the retail energy sector, based on public comments by Centrica, owners of British Gas⁵¹.

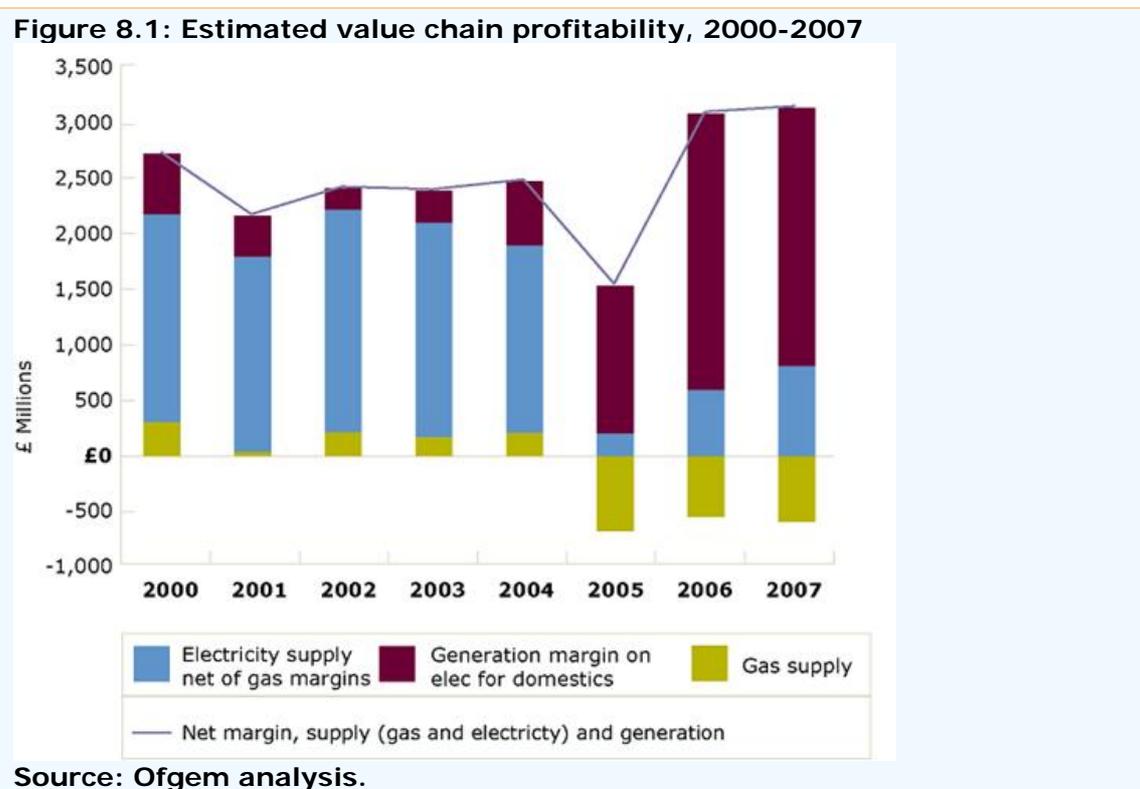
8.7. Net margins underestimate the underlying profitability of individual customers because they are expressed after the deduction of competition costs. These costs ought, more properly, to be seen as an investment to acquire the future cash flows from an acquired customer. Net margins before customer acquisition costs averaged almost 6 per cent over this period.

8.8. This highlights an important dynamic within the vertically integrated supply businesses. As explained in Chapter 7, during times of sharply rising wholesale electricity prices, we would expect the retail businesses to make lower margins. This is partly because the upstream businesses (generation, gas production) act as a hedge over the short to medium term, and partly because, when wholesale prices rise very quickly there are inevitably delays in passing higher costs through to end customers.

8.9. In order to understand this dynamic, we have estimated retail and generation business profitability for the Big 6 suppliers, based on publicly available data and reasonable assumptions about hedging strategies for gas, coal and electricity. Figure 8.1 shows our estimated value chain profitability for the supply of gas and electricity to the domestic sector.⁵²

⁵¹ For example, in their 2002 interim presentation, Centrica's finance director said "We've stated that we believe sustainable UK energy supplied margins ought to be near 5%, with British Gas earning a brand premium above that". At the full year results presentation in February 2008, Centrica's CEO said "What we have consistently said is that we believe that this business on a through-cycle, sustainable basis, should have a 5% return for the industry average and with the cost savings and economies of scale that we expect to get and with the brand premium that we expect to have, our target is a 6-7% through-cycle margin."

⁵² The generation profits are based on average for all generation in the industry, scaled to meet the requirements of the residential sector. It is not a reflection of the profitability of generation owned by the Big 6. It is consistent with profits earned by independent generators over this period.



8.10. Although actual hedging strategies used may have been different, we believe this reflects the broad swings in profitability over this period. The chart shows that our estimated retail margins were materially higher, on average, during 2000 to 2004 – around 15 per cent of sales on average. This was a period of lower and more stable wholesale prices and consequently lower generation profits. As electricity and gas prices increased, supply margins were squeezed but, by 2006, were more than compensated for by higher generation profits. As confirmed by the PKF data, our analysis shows negative average retail gas margins.

8.11. While we do not believe that evidence about the high level of retail margins in the early days after competition are relevant today, it does support the view that suppliers would expect "through the cycle" profitability to be higher than we have seen in 2005 to 2007. Projections in the companies' business plans support this expectation.

Profitability by ex-PES region and fuel type

8.12. As mentioned above, pricing for the five former incumbent electricity suppliers varies by both region and fuel. Table 8.1 sets out the gross and net margin for both in-area and out-area gas and electricity supply over the period 2005 to 2007 for the former incumbent electricity suppliers.

Table 8.1: Gross and net margin for in-area and out-of-area electricity and gas, 2005 to 2007 for the five former incumbent electricity suppliers

%		2005		2006		2007	
		In-area	Out-of-area	In-area	Out-of-area	In-area	Out-of-area
Electricity	Gross	25	18	24	18	22	16
	Net	11	3	11	3	8	1
Gas	Gross	3	5	0	3	-4	-1
	Net	-12	-9	-14	-12	-20	-16

Source: Ofgem

8.13. Table 8.1 confirms the picture that emerges from the price differential analysis outlined in Chapter 7. Over the past three years, the profitability of the major electricity supply companies has been very heavily skewed towards electricity rather than gas, and towards the in-area electricity consumer. The existence of low or negative margins in gas is also apparent in the management information provided to us by the Big 6 and was confirmed in meetings we held with them. Indeed, if we focus on absolute profit numbers rather than margins, we can see how important the profits from in area electricity customers are to electricity suppliers, as can be seen from Table 8.2.

Table 8.2: The distribution of gross profits earned by former incumbent electricity suppliers, 2005 to 2007, between in-area and out-of-area and between electricity and gas

%	Gas	Electricity	TOTAL
In-area	-0.9	74.3	73.4
Out-of-area	2.6	24.0	26.6
TOTAL	1.7	98.3	100.0

Source: Ofgem from supplier submissions

8.14. The former electricity incumbents earned nearly 75 per cent of their gross profit from their in-area electricity customers, which represent just 48 per cent of their customer accounts⁵³. Gas customers almost exactly break-even at the gross margin level, although given most of these customers are dual fuel, the incremental operating costs from these additional accounts will be modest. The remaining 25 per cent of gross margin arises from out of area electricity customers.

⁵³ Figures vary significantly between suppliers – the figures quoted are averaged across suppliers, using best available data.

8.15. There is no evidence that British Gas is mirroring the former electricity incumbents by earning higher margins from its more inert legacy customers.

What is an efficient level of profitability in retail energy?

8.16. Having gathered evidence on the actual and planned level of profitability in GB energy supply markets, we need to judge whether or not this is consistent with an effectively competitive market.

Margin on sales

8.17. An often quoted profitability measure for energy supply businesses is the net margin on sales. While a margin of a few per cent on sales appears very moderate, it should be remembered that total sales include a very large pass through element, which includes the costs of the entire electricity and gas value chain – from coal mine and gas field to the meter - including price regulated elements such as transmission and distribution. The added costs of energy supply represents, in cost terms, only a small part of this value chain (around 7 per cent), so margins on sales of a few per cent may still represent very substantial remuneration given the scale of supply operations.

8.18. We can consider evidence from other sectors and from previous decisions by competition authorities in the UK.

8.19. In 1995, in the Monopolies and Mergers Commission report on Scottish Hydro, a margin on sales of 0.5 per cent was considered adequate for first tier electricity supply. At the time, supply was still a monopoly activity, so we would expect a relevant margin today to reflect the increased risks associated with the competitive environment. However, this study highlighted the importance of the low level of capital employed and the high proportion of pass through costs in considering the margin. In setting price controls in 1998, Offer and Ofgas considered a margin on sales of 1.5 per cent to adequately reflect the increased risks from the introduction of competition. At the time, revenues per customer were less than half today's levels.

8.20. This level of margin was used by the Competition Commission (CC) in its 1999 report on BT's charges to connect to mobile phones. The report stated that "*a key consideration ... is the extent to which the turnover... is accounted for by bought in services*". They also suggested that it is not appropriate to consider direct comparisons with retail businesses which involve substantial capital employed.

8.21. In its 2008 report, the CC reported that all large grocery retailers earned a margin on sales of between 2 and 6.4 per cent or less. However, the cost of bought in goods relative to costs incurred is far lower in grocery retailing (2x added costs compared to 8x for energy supply) and capital employed is much higher (38 per cent of turnover compared to less than 5 per cent for energy supply).

8.22. It is also worth comparing retail margins with profitability elsewhere in the energy value chain. For example, a net margin of around 5 to 8 per cent of the total value chain revenues would be considered adequate to remunerate investment in new coal or gas fired build generation. We also note that margins in the large industrial and commercial supply sector are typically well below 1 per cent of sales - which can partly be explained by the even greater proportion of pass through costs as well as more intense competition.

The impact on specific consumer segments

8.23. The concerns arising from this Probe impact on different consumer groups to a greater or lesser extent. In this section we consider how these concerns impact specific consumer groups, in terms of both the impact on individual households and the number of households affected. Given Ofgem's specific duty with regard to vulnerable customer groups, we describe the implications for vulnerable customers in some detail in Chapter 9. Our assessment of the small business market is provided in Chapter 10.

Proactive consumers

8.24. In Chapter 4, we described a segmentation of the domestic consumer base (into "proactive", "reactive" and "inactive" consumers) that best captures their level of engagement with the competitive energy supply markets. Our research suggests that proactive consumers tend to actively seek out the best deals, investigate suppliers' offerings regularly and seek information about more than one supplier when switching. Around 68 per cent of these proactive consumers have switched supplier for at least one fuel over the last twelve months. They are the most likely to be making well-informed choices when switching energy supplier by securing attractive deals and are more likely to switch in response to price differentials in order to secure a better deal.

8.25. Proactive consumers are likely to act as a competitive discipline on suppliers since they continually seek out better deals. Our research has found that the supply companies compete aggressively on price for such customers, with the most keenly priced products typically available in the online direct debit dual fuel segment of the market. 68 per cent of proactive consumers were satisfied with the amount they believed they saved by switching (only 6 per cent were dissatisfied). This was a considerably higher level of satisfaction than other segments. Our analysis of consumer churn found that around 60 per cent of consumers had switched to better deals in the last twelve months.

8.26. Proactive customers are more likely to have switched away from their former incumbent supplier (59 per cent compared to 39 per cent of reactive consumers and 25 per cent of inactive consumers, according to MORI) and are more likely to be on dual fuel deals (83 per cent versus 66 per cent overall). As a result of this and their higher rate of switching, they are less likely to be impacted by the higher prices paid by in-area, stand alone electricity customers.

8.27. Around 90 per cent of proactive consumers have internet access, and 74 per cent use it to seek out better deals (compared to 38 per cent of all customers). Suppliers target such customers through the price comparison sites using online tariffs, which tend to be the cheapest available. Around 45 per cent of this proactive segment of consumers used the internet to make their most recent switch (compared to 25 per cent for all consumers).

8.28. We are concerned about the transparency of pricing for online products, however. While these are typically a supplier's most keenly priced offer at the time they are made available, an online deal is typically only available until that supplier's next online offering is made available. From that point onwards the original online deal ceases to be the best available and consumers on that deal will see their prices rise. To remain on the best available deal, consumers need continually to switch to a supplier's latest offering. Suppliers tell us that very few online customers switch to the latest offering from a previous, now higher priced, tariff. As a result, we do not believe that it is apparent to most online consumers, even those most actively engaged, that they are no longer on the most competitive deal. Online deals are typically not marketed as "initial discounts" or using any other mechanism to make clear to consumers that their prices will, over time, fall behind the best in the market. This is a matter of concern which we believe now needs to be addressed.

Reactive consumers

8.29. Reactive consumers tend to be confident that they know how to switch but are fairly sceptical about the potential benefits. They also tend to think that it is too hard to work out whether or not they would save (53 per cent compared to 34 per cent of proactive consumers) and are unlikely to check to see if it worth saving (22 per cent compared to 79 per cent of proactive consumers). Overall, reactive consumers do not think that they are very likely to switch in the next 12 months (only 20 per cent say that are very or fairly likely to do so).

8.30. Vulnerable consumers are more likely to be reactive than proactive: 24 per cent of reactive consumers are in social groups DE, compared to 17 per cent of proactive consumers. Reactive consumers are also more likely to pay by PPM or standard credit than proactive consumers: 12 per cent pay by PPM and 21 per cent pay by standard credit compared to 8 per cent and 13 per cent respectively for proactive consumers.

8.31. Our principal concern for reactive consumers is the quality of the switching decisions that they make. This group tends to switch suppliers only rarely and do so typically in response to a direct approach from a salesperson from one of the supply companies. As a result, these customers are rarely aware of the full range of deals available in the market and we have evidence that they may switch inadvertently to a more expensive deal.

8.32. Our research shows that these customers are more likely to be on a dual fuel deal than inactive customers, with a tendency to be with their former electricity incumbent or British Gas compared to proactive customers. This reflects the

prioritisation of former electricity incumbents' marketing activity in their former monopoly areas as well as the more conservative tendency of reactive consumers. As a result, while these consumers will have benefitted from lower prices by switching to a dual fuel offering, they may still be impacted by the higher prices of the former supply incumbents.

8.33. As well as resulting in this large consumer group paying more for their energy than they might, this reactive behaviour serves to lessen the extent of competitive intensity among the supply companies. As most consumers do not research the full range of offers available, there is little advantage for a supplier seeking to be the cheapest in the market. Hence suppliers typically set prices with reference only to the former incumbent supplier in a region.

8.34. Action is now required to improve the quality of information available to this large group of reactive consumers and hence improve the quality of their switching decisions.

Inactive consumers

8.35. Inactive consumers are those who have never switched or who switched more than 12 months ago but say they would not switch again in the future. Around 81 per cent of inactive consumers say they are unlikely or very unlikely to switch in the next 12 months and 75 per cent say they are unlikely or very unlikely to switch anytime in the future. Inactive consumers often find it difficult and time consuming to engage, are generally less confident about switching and tend to be sceptical of the potential benefits. As a result, a large proportion of this group are unlikely to ever switch - or to switch again if they have already done so.

8.36. Inactive consumers generally perceive there to be high costs to switching (for example, time, effort and risk) relative to the perceived savings. For some, particularly the vulnerable, the perceived risks of something going wrong are too great to switch.

8.37. Those that are inactive are much more likely to be in social groups DE than those that are proactive (29 per cent compared to 17 per cent). They are also much more likely to be over 65 than those in the proactive group (28 per cent compared to 12 per cent). Inactive consumers are also much more likely to pay by standard credit (32 per cent) or through a PPM (11 per cent) than those in the proactive group (13 per cent and 8 per cent respectively).

8.38. Ofgem is concerned that the inertia of this group may be being exploited by suppliers. As outlined in Chapter 7, suppliers are charging higher in-area electricity prices and significantly higher prices for standard credit than direct debit customers. They are also likely to be impacted by the premium prices charged for stand-alone electricity as most of them will not be benefiting from the discounts offered to dual fuel customers and the (relatively) discounted prices offered by former incumbent electricity suppliers for gas. Inactive consumers - who are more likely to still be with their former electricity incumbent, not benefiting from dual fuel and paying by

standard credit - are therefore likely to be feeling the impact of this differential pricing the most.

8.39. Any market will always have a group of least actively engaged consumers - though every effort should be made to draw as many of these consumers as possible into the competitive market by making it as easy, transparent and risk-free as possible to change supplier. In many markets, however, the action of a significant minority in switching from high to low priced deals is sufficient to protect the inactive majority. Companies are induced to lower their prices to all consumers in an effort to retain the most active consumers. The ability of the major suppliers to differentiate prices among consumer groups, however, means that this constraint is at best a weak one in these markets. It is apparent that we cannot rely on switching by the active minority in energy supply to drive down prices for inactive consumers.

Electricity-only consumers

8.40. By "electricity-only" consumers, we mean those who do not have a gas supply. They can be proactive, reactive or inactive. Electricity-only consumers are less likely to have ever switched supplier than those that are connected to the gas mains: only 44 per cent have ever switched compared to 57 per cent of consumers that have both fuels, and only 15 per cent switched in the last 12 months compared to 25 per cent of consumers that have both fuels. However, these differences may be as much a result of the way suppliers compete in this market than any differences in the customer base. From a socio-economic perspective, customers off the gas grid vary little from the population at large.

8.41. As outlined in Chapter 7, a number of suppliers charge their in-area electricity consumers substantially more than those they supply outside their former incumbent regions. This has a particular impact on those that only have electricity because they are less likely to have switched their supplier and are likely to use more electricity.

8.42. We noted earlier that suppliers are making substantially higher profits from their electricity customers than their gas customers. Electricity-only consumers pay these higher margin electricity prices but are unable to benefit from the keener pricing on gas or from dual fuel discounts. Suppliers do offer significant potential savings to electricity-only customers who purchase on-line, but we estimate that less than 5 per cent of electricity-only consumers do so and, as noted in Chapter 7, a customer would need to keep moving to the most recent on-line tariff to secure the full saving.

8.43. The competitive dynamics off the gas grid are also different to the rest of the market. As all five former electricity incumbents have similar pricing structures (in-area and electricity prices are highest, out-of-area and gas are lowest), the position of the former electricity incumbents as a price leader is very clear. As a result, the average discount to the former electricity incumbent's price is about five per cent, despite these customers remaining highly profitable.

8.44. The only credible competitor to the five former electricity incumbents that might break this pricing structure is British Gas. However, BG has tended to price its standard electricity products at a similar level to the out of area prices of the former electricity incumbents. Moreover, British Gas has tended to focus on leveraging its existing customer relationships. As a result, according to Ipsos MORI, British Gas has a market share of just 15 per cent of consumers off the gas grid, compared to more than 27 per cent elsewhere.

8.45. In addition, we believe these higher prices are sustained because many of these customers are in rural areas and are less easily accessed by direct sales. Only 39 per cent of switches over the last 12 months are as a result of direct sales compared to 55 per cent for the wider market. The proportion of proactive switches is only slightly below the market average.

8.46. The high prices paid by electricity-only customers for their electricity is compounded by the fact that these customers rely on more expensive alternatives to gas, such as two-rate electricity, heating oil or LPG. As a result, despite having similar income characteristics to the wider population, customers off the gas grid are far more likely than others to be fuel poor⁵⁴.

Dynamic teleswitching

8.47. A further issue that arises with consumers that are not connected to mains gas relates to dynamic teleswitching (known as DTS). DTS is where consumers have their electricity supply remotely switched by their supplier, for example if they have a separate heating load circuit. These consumers often take their heating through electricity storage heaters.⁵⁵

8.48. Recent work by Ofgem suggests that there continues to be low switching rates among DTS consumers. In both of the Scottish regions more than 90 per cent of DTS consumers are still with the former incumbent electricity suppliers. In one region in England (East Midlands) there are also more than 90 per cent of DTS consumers still with the former electricity incumbent supplier.

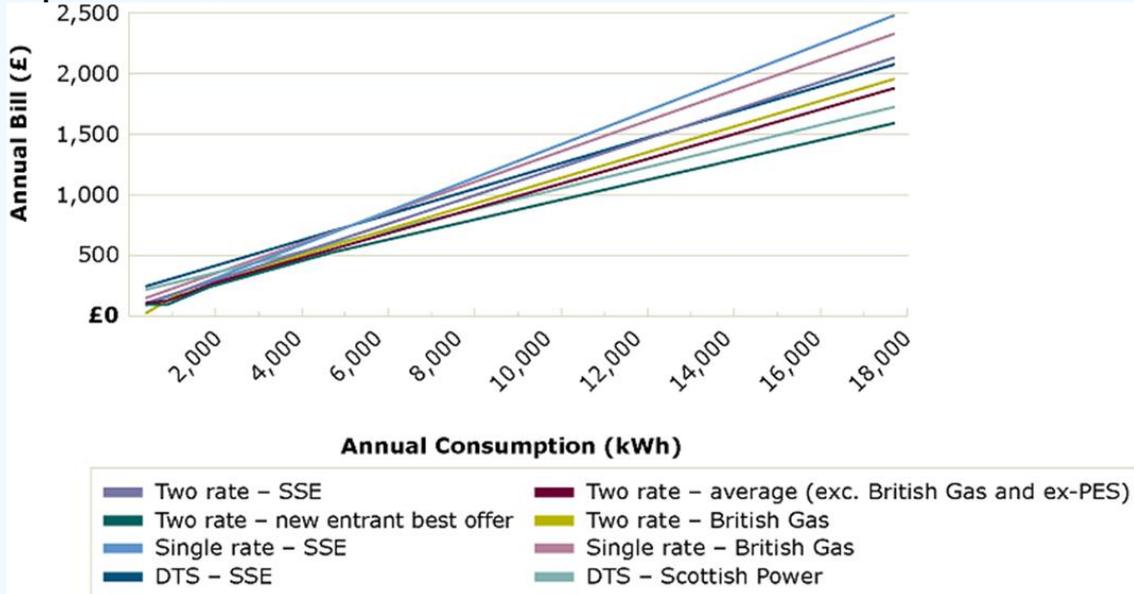
8.49. In order to understand whether the lower switching rates amongst DTS consumers in Scotland has impacted on suppliers' pricing to these consumers, we

⁵⁴ Based on 2005 English Housing Condition Survey, 2004 Scottish Housing Condition Survey and 2004 Living in Wales survey - 20 per cent of those off the gas network were fuel poor compared to 7 per cent of the total population.

⁵⁵ There are around 224,000 DTS customers in Scotland (around 8 per cent of all Scottish electricity customers; 13 per cent in North of Scotland and 6 per cent in South of Scotland), 61,000 in South Wales (around 6 per cent of all electricity customers in South Wales) and 1.3 million in England (around 6 per cent of all English electricity customers).

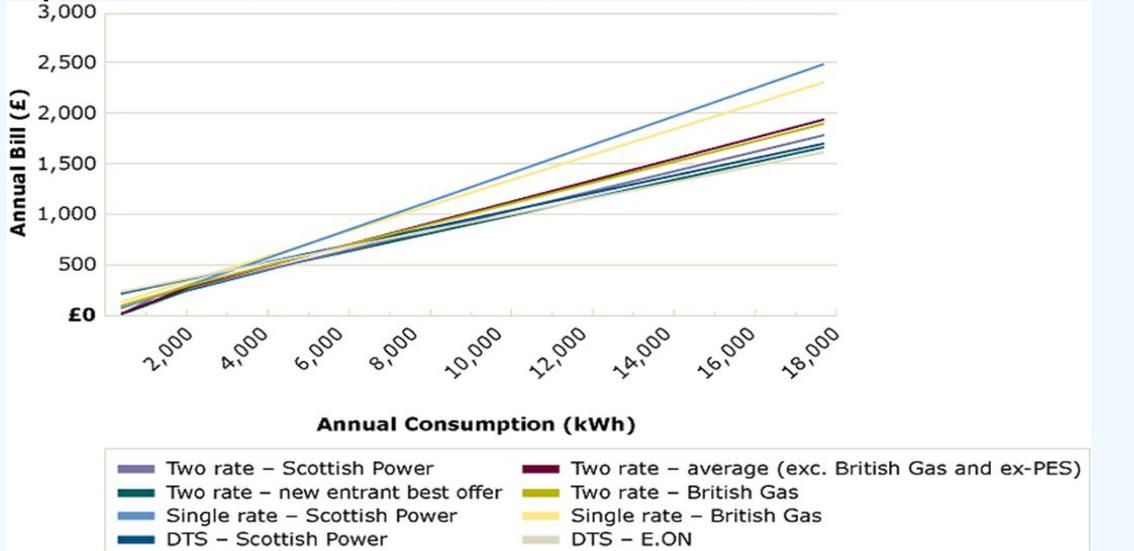
have analysed the different prices these suppliers, and others in these regions, charge DTS customers. Figures 8.2 and 8.3 illustrate that, despite the low switching rates, the former incumbent electricity suppliers are charging lower prices to their DTS customers and these compare favourably even with the best offer Economy 7 tariffs.

Figure 8.2: DTS pricing for the north of Scotland (Scottish Hydro region), September 2008



Source: Ofgem

Figure 8.3: DTS pricing for the south of Scotland (ScottishPower region), September 2008



Source: Ofgem

8.50. Figures 8.2 and 8.3 illustrate that ScottishPower is offering a specific DTS tariff to consumers in the north of Scotland and E.ON is offering a specific DTS tariff to consumers in the south of Scotland. Currently, there is little saving to be made by DTS consumers by switching to another supplier. However, it is likely that our conclusion that the former electricity incumbents do not appear to be charging high prices to these customers is the reason for this.

Prepayment meter customers

8.51. As outlined in Chapter 7, our evidence shows prepayment tariffs to be, on average, broadly cost reflective. The differential for a typical dual fuel customer is now £118, down from around £125 at the start of the year. This compares to a cost differential for the major suppliers of around £85 to £100 per year on dual fuel. Indeed, when the low consumption level of an average PPM customer is taken into account, suppliers appear to be making slightly less money from these customers compared to direct debit customers. Nevertheless, many PPM customers may still be receiving a poor deal, particularly those who remain with the former incumbent supplier for their region.

8.52. A majority of prepayment meter customers (52 per cent) are in social groups DE, compared to around 33 per cent of standard credit customers and 16 per cent of direct debit customers. However, while vulnerable groups are disproportionately represented among PPM customers, it is important to recognise that only 22 per cent of consumers in social groups DE pay through a PPM, so this group is not a particularly good proxy for vulnerable groups - the majority of vulnerable consumers are not PPM consumers. This is particularly true for the over-65s, of whom less than 6 per cent use an electricity prepayment meter and 2 per cent for gas. As such, an over-focus on this payment method as a strategy for helping vulnerable consumers (at the expense of consumers that pay by other means, such as standard credit) potentially misses many consumers in lower social groups and especially the elderly.

8.53. In the past, PPM consumers have been less likely to switch than those that pay by direct debit. According to the Ipsos MORI survey, 55 per cent of electricity and 59 per cent of gas consumers have switched supplier, compared to 62 per cent and 66 per cent of direct debit consumers. More recently, however, PPM customers have switched in greater numbers than those consumers that pay through other methods. Analysis of the churn date provided by the Big 6 shows that PPM consumers churn at greater rate than both SC and DD consumers.

8.54. Our research suggests that over 70 per cent of PPM customers switch in response to direct sales - far more than consumers on other payment methods - and analysis of suppliers' PPM gains provides evidence that some among this group are switching to worse deals. Of those PPM consumers that switch as a result of direct sales, over 48 per cent of gas consumers and 46 per cent of electricity consumers are switching to more expensive deals. Analysis of suppliers' monthly PPM electricity gains also suggests that some PPM consumers are switching to more expensive deals. These two pieces of research therefore suggest that PPM customers may not be constraining suppliers' behaviour as much as the gross level of switching

suggests, leading to a lower level of competitive intensity, higher costs and less innovation.

Standard Credit customers

8.55. Standard credit - paying bills quarterly in arrears - remains widespread, with 40 per cent of accounts still settled by this method according to supplier data. This is despite, in some cases, active measures by suppliers to move customers onto other payment methods that incur lower cash collection, working capital and bad debt costs.

8.56. Standard credit customers pay an average of around £80 more than direct debit for a dual fuel product. However, SC prices are usually presented as the default terms by suppliers with direct debit prices being offered as a discount from SC. As a result, customers on standard credit may not be aware of the premium they are paying on the most common payment method, which all suppliers see as the focus of competition in the market. This lack of transparency is a concern, and we will be considering whether it would be appropriate to make the SC premium more transparent.

8.57. Our evidence in Chapter 6, based on submissions by the companies, suggests that the SC premium is not justified on cost grounds, even when taking account of the cost of financing the additional working capital required. Some suppliers have an active policy of "incentivising" SC customers onto direct debit by charging an above-cost premium for SC. Given evidence that SC customers are amongst the least active in the market, we question this approach.

8.58. In addition to the non-cost justified premium for SC over DD, SC customers are also more likely to remain with their former incumbent electricity suppliers, and are, therefore, likely to be impacted more from the other elements of differential pricing highlighted in this report. Indeed, there are 7.1 million gas and electricity accounts where customers still pay by standard credit and remain with their original suppliers. These customers are amongst the most impacted in the market.

8.59. SC is also a particularly important payment method for vulnerable customers, with 50 per cent of the fuel poor using this route to settle their bills. In particular, SC tends to be used by over 65s and social group DE households (in both cases around 25 per cent more frequently than the average, according to Ipsos MORI).

Scottish and Welsh consumers

8.60. The issues outlined above apply throughout Great Britain. The Scottish and Welsh markets do, however, exhibit some distinct characteristics. They are the most concentrated markets in Great Britain, with the combined market share of the former electricity incumbent and British Gas exceeding 80 per cent in the north of Scotland and south of Wales regions and close to 80 per cent in southern Scotland. All of the former incumbent suppliers have retained Scottish and Welsh brands and our consumer research shows consumers in Scotland and Wales are particularly well

disposed towards these companies. As a result, a higher proportion of customers remain with their original suppliers and may be paying the higher premiums charged to in-area consumers outlined above.

8.61. In addition, the proportion of consumers not connected to the gas grid is higher in rural areas of both Scotland and Wales. These consumers are least able to access competitive dual fuel discounts and are also least likely to be visited by a sales person to encourage them to switch.

Quantifying the size and scale of the impact

8.62. In order to quantify the scale of the impact of the features we have found in the electricity and gas supply markets we have segmented the market and matched these segments with the average bills that these segments pay (see Appendix 6). We have segmented the market into: (1) dual fuel customers; (2) customers taking gas and electricity from separate suppliers; and (3) customers off the gas grid and therefore unable to take advantage of dual fuel offers.

The choice of benchmark

8.63. The objective of doing this analysis is to determine the premium certain groups of consumers are paying over the competitive level as a result of the differential pricing activities of suppliers. Establishing the benchmark of a competitive level of prices is always subjective, particularly in a market such as energy supply, where price differentials are widespread. There is a risk that the benchmark we choose is *below* the competitive level, exaggerating the premiums.

8.64. The clearest example of this would be the online tariffs marketed by some suppliers that have been discussed elsewhere in this report. These are usually the lowest price tariffs in the market. However, as these online tariffs often incorporate implicit introductory offers available only to a small number of consumers for a limited period we believe they would be misleading as a competitive benchmark for prices in the sector and their use would exaggerate the level consumer harm.

8.65. The core product that forms the basis of price competition in the energy supply market is the standard dual fuel, direct debit tariff (DF-DD) product. Suppliers seek to acquire out-of-area customers without a general expectation of increasing margins at some later date. DF-DD is one of the most popular products, with around 10.4 million customers on such terms.

8.66. Therefore, we believe that the out-of-area DF-DD price (equating to £1,184 per annum for a typical customer) is the closest proxy we have for a price consistent with an effective competitive market. This is the tariff we use as a benchmark for assessing differentials in this analysis. We recognise, nonetheless, that DF-DD prices may currently be below competitive levels as a consequence of differential pricing, and may rise if price differentials are eliminated. We note that, based on financial data provided by the companies for 2005-2007, the average DF-DD product only just breaks even at the net profit level.

Customers off the gas grid

8.67. Around 4.3 million customers are unable to benefit from dual fuel deals because they do not have access to a gas supply. As a result, they lose out from the higher margins earned in electricity without benefitting from the low (or, more recently negative) margins earned in gas. We estimate that, based on 2007 data, if in-area margins earned in gas and electricity were equalised, electricity prices would need to fall by around 14 per cent and gas prices rise by around 6 per cent. On this basis, the premium paid by electricity-only consumers is equivalent to around £55 per electricity customer. Although we have not specifically assessed the profitability of night rate electricity, for the many consumers that rely on electricity for heating under multi-part tariffs, these premiums may well be higher.

8.68. Despite the higher margins available in electricity, out of area competitors discount the former electricity incumbent by an average of just 5 per cent and British Gas discounts by around 10 per cent. Switching supplier would, therefore, offset only part of the premium and very few customers take advantage of the largest discounts available. British Gas' market share off the gas grid is less than half its average electricity market share.

8.69. Based on average consumption levels, we estimate that the 4.3 million customers off the gas grid pay an additional £240 million in aggregate because of the higher margins earned by the former electricity incumbents from electricity consumers compared to gas – which may be an underestimate, because around 2 to 3 million of these customers are on time-of-day tariffs (such as Economy 7) which are predominantly used for heating.

Customers remaining with their former incumbent suppliers for gas and electricity

8.70. Customers who have never switched either their electricity or gas supplier, of which we estimate there are around 5 million, are paying a significant premium – both because they do not benefit from a dual fuel discount and because they do not benefit from the losses implicit in the gas prices charged by the five former electricity incumbents – which has the effect of an additional and large dual fuel discount. Typically, compared to the same payment type, these customers pay around 9 per cent more than a typical dual fuel customer or £115 a year. Only around 2.5 per cent of this difference is accounted for by the explicit dual fuel discount.

8.71. We estimate that the additional cost incurred by consumers on the 15.8 million gas and electricity accounts still on higher prices (because customers have remained with their original suppliers and have not moved to more competitive dual fuel deals), may amount to around £585 million a year. This is based on a comparison with average prices in the sector rather than the best offer available.

8.72. A further 2 million consumers who have switched one or other supplier still do not benefit from a dual fuel discount because they are with different suppliers for electricity and gas. However, they do, in general, benefit from the discounted gas prices offered by the former electricity incumbents. For these customers, the

premium paid is more modest – between 2 and 4 per cent depending on the exact combination of supplier.

8.73. Although consumers who have not switched and consumers off the gas grid are both adversely impacted by the same pricing practices, a key difference is that this group has the opportunity to switch and benefit from the most competitive dual fuel deals. This opportunity is denied those consumers without access to gas. Ofgem's priority, for this group, is to facilitate participation in the market.

Payment type differentials

8.74. We are also concerned about tariff differentials between payment types. Based on analysis using standard consumption levels, we estimate the total premium paid by SC and PPM customers is around £1.4 billion. We estimate additional costs associated with these customers of around £850 million, leaving a net benefit to suppliers of £550 million. However, we know from our financial analysis that this is likely to be an overestimate, because PPM and SC customers consume considerably less energy than average, particularly for gas.

8.75. Indeed, based on financial data provided by the suppliers for 2005-2007, the average premium paid by these customers is just £780 million per annum, with offsetting costs of £640 million, suggesting just £140 million of benefit, all of which is a result of the premium charged to standard credit customers. As mentioned in Chapter 7, prepayment premiums, on average, appear cost justified.

Levelling up, levelling down or rebalancing?

8.76. Net of £650 million of costs, we have identified that suppliers benefit in total by around £1 billion per annum from premiums charged to certain groups of customers. This is equivalent to around 4 per cent of total revenues. This premium is borne disproportionately by vulnerable consumers and those without access to the gas grid.

8.77. Although our calculations are based on current tariffs, and are not directly comparable, it is notable that the annual premium we have identified exceeds the average annual net margin earned by the Big 6 retail energy businesses between 2005 and 2007. As a result, if these differentials were eroded, it may be through a re-balancing between prices rather than by a straightforward decrease in price for the most impacted customers.

8.78. If we assume the average prices paid by the consumers remains unchanged, the annual cost of energy to a DF-DD customer would have to rise by around £40 per customer, or 3.5 per cent on the average dual fuel bill, to rebalance the differentials. If we used this higher level as the new benchmark for assessing the scale of differentials, the impact would fall from £1 billion to around £550 million.

8.79. Although a rebalancing of this type would not reduce average prices paid by consumers it would disproportionately benefit vulnerable groups. It would also

improve the prospects for new entrants and small suppliers because margins for the most price sensitive and active segments would improve to levels that may make market entry profitable.

CONCLUSIONS

- **Assessment of supply companies' profitability is difficult**
- **Former incumbent electricity suppliers are earning significantly higher margins in electricity than in gas, and on in-area customers than out-of-area**
- **Proactive consumers are most likely to secure attractive deals, but suppliers ability to differentiate their prices means that these customers do not act as a competitive constraint on supplier prices in the rest of the market**
- **Reactive consumers are more likely to switch in response to a direct sales approach and some may switch inadvertently to a more expensive deal**
- **Many inactive consumers are unlikely to ever switch**
- **Electricity-only consumers tend to pay higher margin electricity prices but are unable to benefit from keener pricing on gas or from dual fuel discounts**
- **PPM tariffs are, on average, broadly cost reflective. Nevertheless, many PPM customers are switching to worse deals as a result of direct selling**
- **Standard credit customers are paying a premium over direct debit that appears not to be fully cost justified**
- **Rebalancing of margins across customers would benefit vulnerable consumers and improve the prospects of new entrants**

9. Vulnerable consumers

This Chapter considers the extent to which vulnerable consumers, to whom Ofgem owes a particular duty, are affected by the issues identified in this Probe. It identifies the range and number of vulnerable consumers in GB, highlights the issues of particular concern from our Probe and briefly summarises the current range of initiatives that aim to help these consumers⁵⁶.

Definition of vulnerable consumers

9.1. In meeting its principal objective to protect the interests of consumers, Ofgem has particular responsibility towards those who are disabled or chronically sick, of pensionable age, on low incomes or residing in rural areas. Ofgem recognises that a number of other groups may also be classed as vulnerable, including those:

- with low levels of literacy and numeracy or without a good command of English, which makes it difficult for them to engage with suppliers;
- without a bank account and hence very restricted in their payment method and unable to access many of the more competitive tariffs;
- without easy internet access and so less able to use switching sites or sign up to an online tariff;
- living in poor housing that is hard to heat; and
- restricted by their landlord from switching supplier.

9.2. There are also a great many people with physical or mental disabilities, or conditions covered by the 'disabled or chronically sick' category, who have very different needs. Some have no vulnerability in terms of the energy market whilst others are particularly reliant on an energy supply; have high energy bills because

⁵⁶ The analysis for this Chapter has drawn on the following sources of information: (i) our Call for Evidence issued as part of the Probe; (ii) qualitative research that we commissioned FDS International to carry out in February 2008. The aim of the research was to understand the barriers that vulnerable consumers face in engaging with the GB energy supply markets; (iii) an omnibus study that we commissioned Ipsos MORI to carry out in March 2008. The aim of this research was to track switching rates amongst vulnerable groups; (iv) a quantitative survey of just over 2,000 consumers that we commissioned Ipsos Mori to carry out in June/July 2008. The aim of this research was to explore the level and type of engagement that consumers have with GB energy supply markets; (v) a number of external data sources such as the Office of National Statistics (ONS); and (vi) the quarterly monitoring that Ofgem carries out of suppliers' social obligations.

they are largely housebound or suffer from a condition which requires them to heat their home more than average; or need specific services from their energy supplier such as bills and correspondence in Braille or large font.

9.3. We also recognise that many of those who may fall into the definition of vulnerable consumers under our remit are not in fact vulnerable, or are only so in particular circumstances. For example, many of those of pensionable age are physically fit and/or well off and those living in rural areas may be vulnerable in certain circumstances because of lack of access to services such as gas or broadband networks but may otherwise not be particularly vulnerable.

9.4. It is important to note that while there is an overlap between vulnerable consumers and the fuel poor⁵⁷, the two are not synonymous. Some vulnerable consumers are not fuel poor but face barriers to participating in the competitive energy market that others do not. Similarly, many fuel poor consumers are fuel poor for reasons unrelated to the functioning of the energy market - such as low incomes or poor housing.

9.5. Similarly PPM customers are sometimes assumed to be fuel poor and/or vulnerable. However, whilst the proportion of consumers on PPM tariffs is high among some categories of the vulnerable (such as those on income-related benefits), for other groups, particularly pensioners, it is below average. On average, around 12 per cent of households pay for at least one fuel by PPM. However, amongst those over 65 only 4 per cent do whilst 25 per cent of those in social group DE and 37 per cent of those in social housing use a PPM to pay for at least one of their fuels⁵⁸.

9.6. Standard credit is the most common payment method among the fuel poor. Overall only 19 per cent of PPM customers are fuel poor (with 26 per cent of the fuel poor paying for at least one of their fuels by PPM, 16 per cent paying for both by PPM and 24 per cent paying for both by direct debit)⁵⁹.

The scale of the issue

9.7. The absolute number of vulnerable energy consumers is difficult to calculate. However, the following estimates for each of the major categories suggests that as many as a quarter to a third of all consumers may be vulnerable in some way:

⁵⁷ Those who spend more than 10 per cent of their annual income to have an adequately heated home.

⁵⁸ Ipsos-MORI Ofgem Customer Engagement Survey July 2008.

⁵⁹ Fuel Poverty Action Group 2007 Annual Report, data based on English Housing Condition Survey 2004 updated to 2006.

- there are 9.1 million people aged over 65 (15.5 per cent of the population). This includes 4.4 million over the age of 75⁶⁰ who are more likely to be physically vulnerable;
- around 2.5 million individuals between the age of 16 and 74 are registered as permanently sick or disabled⁶¹;
- in 2006/7 13.2 million people in the UK were living in households in income poverty⁶² (around 22 per cent of the population);
- one in five of Britain's population lives in a rural area (settlements with less than 10,000 population)⁶³. Of these, 600,000 households⁶⁴ are in rural isolated communities and are therefore likely to be more vulnerable because of a lack of access to services;
- 5.2 million (16 per cent) of the working age population have literacy levels below that expected of an average 11 year old, whilst 15 million people (46 per cent) have numeracy levels below that expected of an average 11 year old⁶⁵;
- 27 per cent of adults have never used the internet⁶⁶ (71 per cent for those aged over 65)⁶⁷;
- around 1.4 million households (5 per cent), containing around 2.1 million adults, do not have access to a bank account⁶⁸; and
- 4.3 million British households (16 per cent) have no access to mains gas.

9.8. The numbers of people in fuel poverty is rising. The official estimate for 2006 was around 3.5 million⁶⁹ and recent record price rises will have pushed this up further.

⁶⁰ ONS, mid- 2006 population estimates.

⁶¹ ONS, 2001 Census.

⁶² Having a household income, after housing costs, that is less than 60 per cent of the median income.

⁶³ ONS, 2004 rural and urban classification project.

⁶⁴ Ibid.

⁶⁵ Department for Education and Skills, Skills for Life Survey 2003.

⁶⁶ ONS, National Statistics Omnibus, 2007.

⁶⁷ Ibid.

⁶⁸ ONS, Family Resources Survey 2006/07.

⁶⁹ The UK Fuel Poverty Action Plan, 6th Annual Progress Report (BERR and defra).

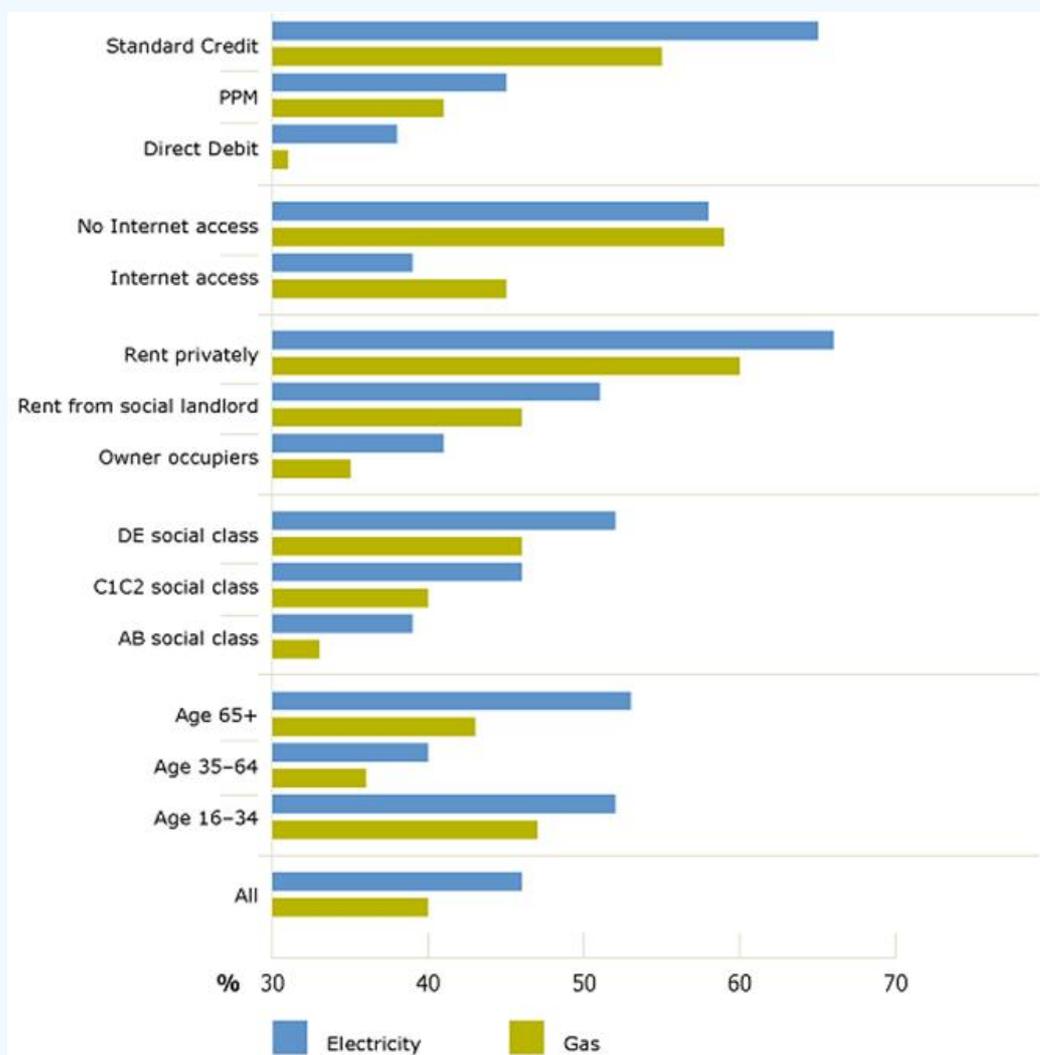
Issues identified in this Probe

9.9. Whilst all consumer segments are participating in the market to some degree, our research demonstrates that vulnerable groups are not accessing the most competitive tariffs to the same extent as non-vulnerable groups.

Lower levels of switching

9.10. As illustrated in Figure 9.1, those in social group E, those aged over 65, those without internet access and those who rent their accommodation (particularly if they do so from a private landlord) are less likely than others to switch their supplier.

Figure 9.1: per cent of consumers who have never switched supplier



Source: Ipsos MORI Ofgem Consumer Engagement Survey, July 2008

9.11. Previous research carried out in March 2008 by Ipsos-MORI⁷⁰, also highlighted that those from black and other ethnic minority groups are less likely to switch than those of white ethnicity.

9.12. There are many and complex reasons for these lower levels of switching amongst vulnerable consumers. Some of these relate to the behaviour and attitudes of the consumers themselves, including for example:

- **Lack of awareness.** Whilst knowledge of the possibility of switching energy supplier is now extremely widespread, the 4 per cent who are unaware are concentrated in more vulnerable groups: the young, the unskilled and those who rent their homes.
- **Loyalty to existing supplier.** People who are medically reliant on their energy supplier are less likely than others to switch supplier as they typically assess the risk of something going wrong to be too great⁷¹. Similarly, elderly people and those with disabilities who receive additional services such as bills in Braille or security passwords may also be reluctant to switch supplier for fear of losing these services⁷².
- **Lack of interest.** Around a fifth of people⁷³, largely the elderly, are simply resistant to the idea of changing their supplier and prefer to stick to what they know and are comfortable with. Even very high levels of savings are often insufficient to attract this group.

9.13. There are also a number of reasons for poorer engagement of vulnerable groups with the competitive market which relate more directly to the behaviour of the supply companies, including for example:

- **Lack of easily available, understandable information.** Information from suppliers, intermediaries and switching sites is difficult for many consumers to interpret. The large number of tariff names and structures adds to the confusion. Our qualitative research suggests that those with low levels of literacy and numeracy are more reluctant than others to switch supplier. They are not confident they will make the right choice and may be put off by the paperwork. Research conducted by an independent education consultant suggests that only 44 per cent of the adult population would be able to understand fully the text in energywatch's price comparison sheets and only 25 per cent would be able to

⁷⁰ Ipsos-MORI omnibus March 2008.

⁷¹ FDS International: Ofgem Research on Vulnerable Customers' Engagement with the Energy Market (Mar 2008).

⁷² Ibid.

⁷³ Ipsos-MORI Ofgem Customer Engagement Survey July 2008.

understand the price comparison information. Equally, many vulnerable groups, particularly the elderly, are very reluctant to talk to sales representatives⁷⁴.

- **Debt blocking.** Many vulnerable consumers, particularly those on low incomes, are in debt. These consumers are usually unable to switch supplier unless they can clear their debt first. In 2007, 9 per cent of all transfer requests for gas were blocked due to debt (8 per cent for electricity). Many more consumers will not have tried to switch because of a debt.
- **Targeted sales activity.** Our research⁷⁵ suggests that there is less door-to-door sales activity in rural areas. As 41 per cent⁷⁶ of consumers switch as a result of this type of selling activity, rural, and particularly remote, households are less likely than others to switch.

Vulnerable consumers often not accessing the best deals

9.14. There are a number of reasons why vulnerable consumers who do switch their supplier are less likely to access the best deals on the market than most other consumer groups.

9.15. First, vulnerable consumers are far more likely than others to make a switch as a result of door step selling (51 per cent of those in social group DE switched as a result of a door-step call last time they switched their supplier, as did 52 per cent of those aged 65 or over⁷⁷). Vulnerable consumers are therefore less likely to check available deals from other suppliers before making a switching decision, and so the risk of switching to a higher priced deal, or not securing the best available deal on the market, is high.

9.16. Second, lower internet access among several groups of vulnerable consumers make signing up for an online tariff, often the lowest price deal on the market, significantly more difficult. They are also unable to use web-based switching and advice sites and are therefore less able to easily check the deals that different suppliers are offering.

9.17. Third, those without a bank account are restricted to prepayment or cash payment and are therefore excluded from many of the more advantageous tariffs. Similarly, many on low incomes prefer prepayment meters or paying by cash as a

⁷⁴ FDS International: Ofgem Research on Vulnerable Customers' Engagement with the Energy Market (March 2008)

⁷⁵ FDS' qualitative research included focus groups in several rural and remote locations.

⁷⁶ Ipsos-MORI omnibus March 2008

⁷⁷ FDS' qualitative research suggests that other vulnerable groups, if they switch, are more likely to do so as a result of a sales call rather than because of their own enquiries.

means of controlling their budgets and avoiding unexpectedly large bills. As noted in Chapter 5, a relatively high proportion of low income consumers use prepayment meters.

Current initiatives to help vulnerable consumers

9.18. Many of the issues facing vulnerable consumers have been well understood for some time. Given the importance of energy to health and basic quality of life, vulnerable consumers require additional help and protection that the market might not otherwise provide. In addition to the package of measures announced by the Government on 11 September 2008, this help and protection currently includes:

- regulatory obligations which Ofgem places upon suppliers - such as a ban on disconnecting pensioners during the winter months;
- A Marketing Licence Condition to govern the way suppliers carry out their marketing activity. We are currently investigating RWE npower for alleged mis-selling and the results of that investigation may inform future action here⁷⁸;
- Best practice reviews that Ofgem carries out on key issues such as debt and disconnection practices, and work to encourage suppliers to adopt good working practices that help vulnerable consumers;
- The recently introduced incentive scheme to encourage gas network operators to extend their networks into deprived areas;
- Campaigns to raise awareness about the savings to be made by switching and other help available for vulnerable consumers;
- A range of initiatives, following our Fuel Poverty Summit in April 2008, to improve how those in fuel poverty are identified and targeted so that help is directed to those most in need;
- A voluntary agreement entered into by suppliers with the Government to increase their spend on social programmes by a collective £225 million over the next three years. This spend provides a wide range of help for vulnerable households including social tariffs, rebates, trust funds and partnership initiatives;
- Voluntary codes operated by suppliers - for example, the ERA safety net in place since 2004 to help ensure that no vulnerable consumers are disconnected; and

⁷⁸ Improving the licence conditions to enable mis-selling or misleading sales activity to be better dealt with by Ofgem will be considered in any event, and the result of that particular investigation will not be the sole or conclusive factor.

- The work of a wide range of consumer and voluntary groups such as energywatch and National Energy Action to help vulnerable consumers largely through campaigning and giving advice.

Initial conclusions

9.19. Ensuring that vulnerable consumers are properly protected and that the market works effectively to the benefit of vulnerable consumers as well as other consumers, is a key theme of Ofgem's work. As outlined above, we have worked closely with the supply companies to ensure that fundamental protections are in place for vulnerable energy consumers, to ensure they are protected from disconnection and benefit from a number of licence obligations, voluntary codes, campaigns and initiatives that aim to ensure that additional services that these groups require are made available to them. We will continue our programme of research and best practice reviews to ensure we understand the way consumers think, behave and are treated and introduce further remedies where we think they are needed.

9.20. This Probe has highlighted some specific concerns relating to the ability of vulnerable consumer groups to engage adequately with the competitive energy supply market and so benefit from the keenest prices on offer. The barriers to effective participation in the energy market identified in this Probe are higher for vulnerable consumers than for many other consumers. Lack of internet access, poor levels of literacy and numeracy, reliance on cash and tight budgets all create barriers in some way. This leads both to lower levels of switching and to less well informed switching, and hence to consumers paying more for their energy.

9.21. The concerns raised in the previous Chapter about the various differential pricing policies adopted by all of the Big 6 are particularly relevant here. The actions of the most active consumers in driving prices down is not currently providing sufficient price protection to those who do not themselves participate in switching supplier frequently. Suppliers' ability to charge different prices enables them to hold prices higher to the inactive than the more active consumer groups. The relative inactivity of vulnerable consumer groups is hence of particular concern in this regard.

CONCLUSIONS

- Ofgem has a particular responsibility towards those who are disabled or chronically sick, of pensionable age, on low incomes or residing in rural areas
- Aside from these categories, there are various other segments that can be classed as vulnerable, including those with low levels of literacy and numeracy; without a bank account; without easy internet access; or who live in poor housing
- The potential numbers of vulnerable consumers are vast with around a quarter to a third of all consumers being vulnerable in some way
- Vulnerable consumers participate less actively in the competitive energy markets, switch suppliers less frequently, and are less likely than other consumers to have access to the best price deals in the market

→ **Currently, there are a wide range of initiatives, promoted by government, Ofgem, suppliers, consumer groups and others, aimed at helping vulnerable energy consumers**

10. Small business consumers

This Chapter provides our assessment of the energy markets for small business consumers. It provides a brief overview of the markets and sets out our findings including our views on where the markets may not be functioning as intended.

It is often argued that business consumers should be able to engage as equals with suppliers and agree a deal that best meets their needs. Concern has been mounting that while this may be true for large and medium sized businesses, many smaller businesses are in no better position to deal with major suppliers than most domestic consumers. For this reasons, we have largely focussed on the smaller end of the Small and Medium Enterprise (SME) sector.

Introduction

The SME sector

10.1. Under existing regulations all consumers who use energy “wholly or mainly for business purposes” are considered to be non-domestic consumers. Within this group, there are both small and medium enterprises (SME) and industrial and commercial (I&C) consumers. The distinction between the two is often blurred and the rules governing non-domestic consumers do not differ according to customer size. However, for administrative and marketing purposes, suppliers often set thresholds to distinguish SMEs from both domestic and larger business consumers.

10.2. The SME sector ranges from relatively large businesses for whom energy is a fairly major cost, and who have the incentive and skills to search out the best deal for their business, to small businesses who are much less well placed to do so. Our research indicates that smaller SME customers are more likely to behave like the inactive or reactive parts of the domestic market. Those working in smaller firms face competing priorities and are typically less able to devote time to energy procurement.

10.3. Small businesses are a key part of the UK economy. Firms with less than 10 employees account for over 95 per cent of all businesses and nearly one third of employment⁷⁹. Indeed, government recognises the importance of small business by facilitating start-ups and encouraging their growth through programmes such as Business Link.

⁷⁹ UK Small Business Service Analytical Unit, 2004

Sources of evidence

10.4. We received 22 responses to our Call for Evidence on the GB small business retail energy supply market, from suppliers, SME consumers, consumer representatives and third party intermediaries (TPIs or energy brokers). In addition, Ofgem commissioned independent qualitative research into the smaller end of the GB SME retail supply market⁸⁰. We also contacted all non-domestic suppliers for information on SME tariffs to gain a deeper understanding of the number and range of tariffs on offer.

Product range and channels

10.5. The range of SME energy supply products has increased considerably over time, and we welcome this development. Many of these enable SME customers to manage wholesale energy price risks as well as offering a range of account and energy management services. The type of products available include:

- varying length fixed term, fixed price contracts, that may involve termination fees or objection clauses if consumers do not wish to see out the full length of their contract;
- market tracking or indexed prices;
- capped price contracts;
- green energy deals;
- contracts in which prices are reviewed at specified intervals (for example, every 6 months);
- contracts with differing off-peak or weekend rates; and
- tariff or so called "evergreen" offers, where prices may fluctuate but the customer can switch supplier at any time.

10.6. Within this market, suppliers largely rely on direct marketing via mail, telephone and door-to-door sales to attract new consumers. Suppliers may also establish relationships with, and pay commission to, TPIs who provide them with new

⁸⁰ FDS International Ltd., Research on consumers' views of issues in the small business energy supply market, July 2008. Three focus groups were conducted in July 2008. This was complemented by 55 in-depth interviews: 47 by phone, 8 face-to-face. In total, 70 energy decision-makers were surveyed: 52 with 10 or less employees; 18 with between 11 and 30 employees. In terms of regional breakdown: 50 were located in England; 10 in Wales; and 10 in Scotland.

consumers. TPIs, or energy brokers, help SME consumers to compare alternative offers available in the market, in much the same way that a consumer might use, for example, an insurance broker. Some TPIs do not have such relationships with suppliers, but the overall use of TPIs among SMEs has increased. SME consumers also contact suppliers directly for information on products and prices, and to sign up for their energy supply.

Supplier profitability

10.7. Information available from suppliers' business plans indicates that gross margins in the SME sector are broadly similar to those observed in the domestic electricity sector, and somewhat higher when both fuels are considered together. While not all of the Big 6 suppliers quote separate profitability figures for their SME energy supply activities in their business plans, those that reported gross margins for both fuels together in the last few years were in a range of 17 per cent to 30 per cent.

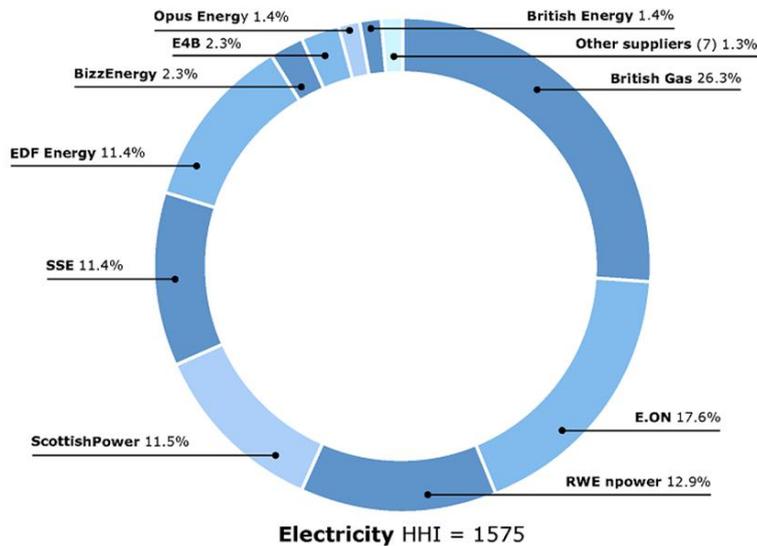
10.8. As for the domestic sector, profitability in recent years has generally been higher in electricity than in gas. However, suppliers' business plans show the difference in profitability between the two fuels to have been less stark than in the domestic sector, with suppliers reporting positive margins across both fuels. Where individual gross margin figures were reported for gas, these ranged from 8 per cent to 19 per cent.

Market shares and concentration

10.9. Figures 10.1 and 10.2 illustrate the market shares⁸¹ and levels of concentration in the small business segment of the market.

⁸¹ As in the rest of this document, references are made to a number of putative or possible markets, on the basis of a delineation of the market which may not reflect the conclusion that would be reached on an in-depth analysis under the Competition Act 1998.

Figure 10.1: Electricity supply market shares among small business consumers with an annual spend of less than £10,000

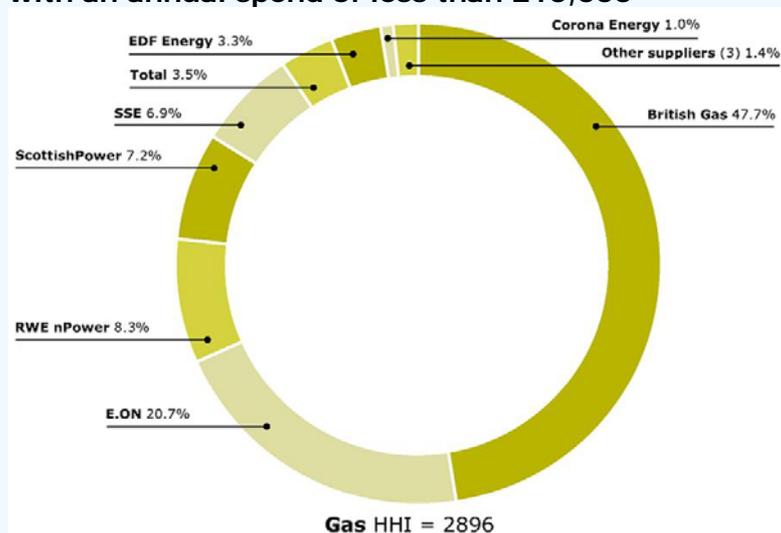


Source: Datamonitor SME Market Analysis Survey, 2007

*Electricity suppliers included within "Others" are: Total, Utilita, Airtricity (bought by SSE in January 2008), Ecotricity, Gaz de France, Good Energy and Haven Power

10.10. In electricity, British Gas is the market leader with a 26 per cent share of customers. The five other significant participants are the former incumbent electricity suppliers. However, Figure 10.1 demonstrates that a number of smaller suppliers have made some inroads into the market. Some of these small suppliers focus on a specific market niche, such as renewable energy, while others choose to compete more broadly. Small business electricity supply markets are "concentrated" according to the threshold HHI levels used by the OFT.

Figure 10.2: Gas supply market shares among small business consumers with an annual spend of less than £10,000



Source: Datamonitor SME Market Analysis Survey, 2007

*Gas suppliers included within "Others" are: Shell Gas Direct, Utilita and BP

10.11. British Gas is also the market leader for small business gas supply, with a 48 per cent share of gas customers, followed by E.ON with just over 20 per cent. With an HHI of 2896, small business gas supply markets are "highly concentrated" based on the OFT definition.

10.12. As for domestic markets, national market shares do not reveal the regional aspects of competition in small business electricity and gas supply markets, which is a legacy of the former incumbent positions.

Issues identified

Switching

10.13. Switching rates among small business customers are less than those in the domestic sector. Research conducted by Accent in 2006 suggests that just over half of SME consumers had switched electricity supplier and just over one third had changed gas supplier. A 2007 study by Accent found that 13 per cent of small

business electricity consumers (defined as having fewer than ten full-time equivalent employees) switched their electricity supplier in the previous twelve months⁸².

10.14. The FDS qualitative survey commissioned by us for this Probe found that all small business respondents were aware that they could switch supplier. However, relatively few were actively seeking out better deals. The vast majority of switching is typically in response to an approach from a supplier or TPI.

10.15. The FDS survey also revealed that unless small business consumers switch in response to specific instances of poor service, they usually require significant cost savings to motivate them to switch. Many are discouraged from switching because they feel any benefits would be short lived. A number of customers said that they believe favourable rates are only offered to new customers or those who have signalled they may switch supplier. These customers felt that unless they were willing to go through the process of switching or renegotiating with their existing supplier at the end of every contract there would be little long-term benefit to switching:

*"It's more or less a fixed cost. I know what electricity costs were last year and the year before. If the bills are more or less the same or just a bit more then I think that's OK. If your annual bill is £500 and it goes up to £550, it's not going to break your business... I wouldn't change."
(Café/Restaurant, Cornwall)*

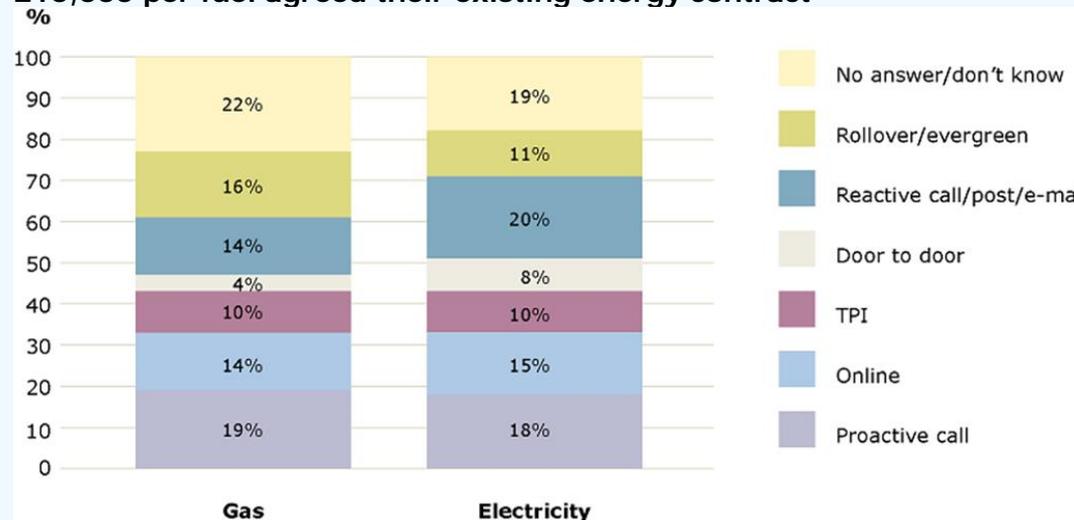
10.16. In research conducted by Datamonitor⁸³, gas and electricity consumers with an annual spend of less than £10,000 per fuel were asked how they agreed their existing energy contract. Figure 10.3 shows that one third of both gas and electricity consumers arranged their energy contract proactively⁸⁴. The proportion of consumers who reacted to a direct contact from a supplier was higher for electricity (28 per cent) than gas (18 per cent). Around one fifth of small business gas and electricity consumers did not know how their existing contract had been negotiated or did not respond to this question.

⁸² Small Business Electricity Consumers Satisfaction Survey Report, August 2007, conducted by Accent on behalf of energywatch

⁸³ Datamonitor SME Market Analysis Survey, 2007

⁸⁴ It is also possible that at least some of those businesses using TPIs approached them proactively rather than responding to TPI-initiated contact.

Figure 10.3: How small business consumers with an annual spend of under £10,000 per fuel agreed their existing energy contract



Source: Datamonitor SME Market Analysis Survey, 2007

10.17. This mixed evidence on switching may illustrate the diversity of types of smaller SME customers in the sector. Some consumers are engaging actively in the market, but a significant proportion are not.

Provision and transparency of product and tariff information

10.18. Information provided by suppliers shows a much wider range of products and services available in the SME market than is available to domestic consumers. Small business consumers also appear to enjoy generally lower energy prices than those in the domestic market⁸⁵. These are positive features of the SME market and it is important that suppliers continue to have incentives to provide a range of tariffs that are responsive to consumers' needs.

10.19. However, our research also suggests there is insufficient trusted information about the range of contract options available, which makes it difficult for SME consumers to find and select the one that works best for their business. SME consumers are often unable to find useful price comparison data and often doubt whether advice from a TPI is unbiased, complete and relevant to their particular consumption profile. The FDS survey found similar small business concerns about pricing information from suppliers, and found that initial quotes were often higher

⁸⁵ Datamonitor Monthly Pricebook, March 2008

than renegotiated offerings, which made the procurement process more time consuming and opaque:

"...if the bands they charge for the first 250 units were easily comparable, I can make my own decision and make a choice on it, even if it was only once every 3 or 4 years, it would be valuable to me to be able to do that, but having looked at uSwitch you can't make a comparison because I think they are intentionally clouded. They make the bands different so you can't make the comparison."
(Sign Manufacturer, London)

"I always go to my supplier and say 'I can get a cheaper rate than you're offering.' They always come back with a slight reduction but it's never as good as the new company."
(Publican, Wales)

10.20. Suppliers have confirmed that there are a large number of tariffs on offer for SME consumers. They say that SME consumers can access details of these offerings by directly contacting them or by engaging a TPI. In addition, tariff details are available on some supplier websites. energywatch also provide information on levels of service via their SME customer contact statistics.

10.21. Despite this, our qualitative research identified that a significant proportion of small business consumers are unaware of where to go for independent tariff information, confused about how to compare prices, and unsure how to select a tariff that best meets their needs. These findings are supported by responses to the Call for Evidence from the Federation of Small Business (FSB), the Utilities Intermediaries Association (UIA) and individual SME consumers.

Use and transparency of contract terms and conditions

10.22. Responses to the Call for Evidence and our own research have raised a number of concerns about the lack of transparency on some of the key SME contract terms and conditions. In particular, SME consumers appear to have a poor understanding of the terms that stipulate how and when a consumer can switch supplier or renegotiate a new contract. Unlike domestic supply markets, there are no fixed rules governing these processes and terms vary from supplier to supplier.

10.23. Moreover, our qualitative research highlighted significant concerns about deals agreed over the phone or on the doorstep. Many are unaware that they have entered into a formal energy contract or are unaware of the terms of that contract. Our qualitative research found that only around half of those surveyed remembered seeing a contract from their current energy supplier, and some were unsure whether they were subject to a contract. Others had not always read the contract documentation fully or were not aware of their key contract terms. A large number of these consumers agreed contracts over the telephone and did not see their full terms and conditions before, during or after that contract was agreed.

*"I think it was just done on the phone. I don't think there was anything in writing to say you had to stay with them."
(Solicitor, Scotland)*

*"It's a verbal contract and I don't know how binding they are, and sometimes you've not actually agreed, you've sort of skirted around and said I will think about it, I will let you know, and next day in the post I've a letter saying you are joining us with your gas and electricity and I think with everybody having busy lives you think, oh god, I can't be bothered to change again."
(Retailer, London)*

10.24. Some suppliers are more diligent in ensuring SME consumers have access to information about their energy contract and the full details of their service agreement – both at the point of sale and toward the end of the contracted period. Research commissioned by energywatch indicated that "clear information about the product and service" was a key driver of small business consumer satisfaction with their supplier (27 per cent). This was seen as more important than "good cost/value for money", which was cited by 19 per cent of consumers⁸⁶.

10.25. SME energy supply contracts include terms and conditions which specify how and when a consumer may contact them if they would like to switch supplier. These periods are called "notification windows" and differ between suppliers. They often commence three to six months before the end of a consumer's contract and are open for two to four weeks. If a consumer has not indicated they would like to switch supplier within this notification window, they may be unable to leave their supplier at the end of their contract term. If they try to do so, the existing supplier can object and block the switch.

*"The man I spoke to got quite shirty with me saying that they would charge me if I changed because I'd be breaking my contract. That was when I asked what this contract was and he said 'oh, it's your contract'. I said "Well I haven't signed anything" and he said I had originally and it's like a rolling thing and every year they just roll it over and I thought it was a bit odd. I mean it's our contract. I'd like a copy of it and I'd like my signature to be on it."
(Travel Agent, London)*

10.26. If consumers do not notify their supplier during the notification window, they may be automatically rolled over onto another contract. Consumers have found that this new contract may or may not charge competitive rates, and could lock them into a contract with their existing supplier for up to 3 or 4 years. The research conducted by FDS indicates that consumers feel that automatically rolling over energy contracts was unfair and resulted in a major barrier to switching.

⁸⁶ energywatch, Small Business Electricity Consumers Satisfaction Survey, Accent, 2007

"Make switching less rigid. When a contract comes to an end the automatic renewal process shouldn't be for the same period of time especially if the new contract is at disadvantaged terms"
(Accountant, Scotland)

10.27. The notification windows, objections process and automatic contract roll over conditions are intended to allow SME consumers and suppliers to balance market risk effectively. They allow suppliers to purchase energy on the forward market knowing the consumer has committed to buy that energy for a period of time, often at a fixed price.

10.28. However, it appears that consumers and suppliers are not benefiting equally from this arrangement. We have evidence from suppliers, brokers and consumers that some suppliers are using the objections process, and their flexibility to set contract terms, for the purpose of customer retention. Although largely qualitative, the volume and consistency of information regarding these issues, as well as the corresponding evidence from FDS's research, paints a clear picture.

10.29. A typical example is the following quote from a small Scottish business that sells fishing licences that would like to engage with their supplier, but having missed its re-contracting or switching notification window is unable to do so:

"We went to our supplier and asked to negotiate a new fixed term deal for the next 3-4 years. They said it's not due to run out till December 2008. We said we had a letter saying it ran out in December 2007 and we'd like to try and negotiate for a fixed price for a period of time. They said because you didn't apply you're now locked into a contract for an additional 12 months and I wasn't too happy with it at the time but there's no sense in getting stressed out about it because there's very little you can do..."

10.30. Information provided to us by one small supplier and a TPI suggests that as many as 30 per cent of SME consumer transfers are objected to, and around 20 per cent of all attempted consumer transfers may be successfully blocked by their existing supplier. According to data from switching websites, this compares to around 11 per cent of attempted transfers in the domestic market.

10.31. In some cases the SME supplier's objection to a transfer is warranted. However, we have received evidence of cases where suppliers have objected even though the consumer was fully within its rights to switch supplier. Our discussions with smaller suppliers, consumers and brokers have reinforced this view. The FDS research also found instances where small business consumers only became aware that their contracts prevented them from switching when their supplier objected to a proposed switch.

10.32. Difficulties with, and impediments to, switching have a direct impact on consumers and their ability to participate effectively in the market. They can also have a detrimental effect on smaller suppliers, and discourage potential new suppliers from entering the market. If switching is contractually difficult, it provides a

significant advantage to those suppliers who have large established customer bases and makes it more difficult for new entrants and smaller suppliers to make inroads into the SME market.

10.33. In 2005 we conducted a review of the non-domestic energy retail market. We collected information from a range of parties (large business, SMEs, brokers, suppliers, trade and consumer associations) and reviewed data on market shares and new entry. We found that small businesses faced a range of difficulties with their energy suppliers, in particular around understanding their contract terms, and many complained that they were not always getting the best deal from the market. At the time we did not have sufficient evidence to warrant new licence conditions on suppliers serving SME consumers. We were also concerned that further regulation may reduce the degree of competition for SME customers and constrain the degree of innovation. We established a forum for SMEs suppliers and TPIs, known as the Non Domestic Working Group, to agree how to address the specific issues around contracting practices and said we would reconsider the case for further regulatory intervention if appropriate.

10.34. One outcome from the Non Domestic Working Group, which aimed to increase consumer awareness of terms and conditions of both existing and potential new energy contracts, was the development of a list of nine key questions that customers should know about their contract terms (see below). We have asked consumer groups and TPIs to include these questions in literature and on their websites. We have also asked suppliers to make these questions, and their answers, available on their websites and marketing literature. These questions are now widely available on the web, and incorporated into the sales and marketing literature of some suppliers.

Nine key questions SME energy consumers should ask about their energy contract

1. What is the charge per unit?

- Are there any fixed or standing charges?
- For electricity, are there any capacity charges per KVA?

2. Can the price I pay for energy change during the life of the contract?

- If so, how will you tell me about this or any other changes to the contract? Are charges fixed or variable?
- If they are fixed, how long for?
- If they are variable, which parts may vary?

3. What happens at the end of my contract or the fixed-term period if I stay with you as my supplier?

- What can happen at the end of my contract or the fixed-term period if I do not renew my contract?
- What do I need to do if I do not wish to renew my contract?

4. What is the duration of this contract?

- Will you remind me of the contract end date?
- What do I have to do if I want to end the contract early?

5. How and when do I contact my supplier if I want to switch energy supplier?

- In what circumstances can you stop me switching to another energy supplier?

6. Who can I contact to find out more information about my contract, and what information will they need from me to look up these details?**7. Under what circumstances can my energy supply be cut off?**

- What notification would I receive and what procedures must be followed?

8. What options are available regarding payment terms?**9. Am I committed to a minimum or maximum volume?**

- If so, what charges can be incurred in relation to this?

The role of TPIs

10.35. Evidence from Datamonitor indicates that around one tenth of small business energy consumers used a TPI when switching supplier or negotiating with their existing supplier - and that this figure is on the rise. Services offered by TPIs range from simple switching or price comparison services to a complete energy services package, including contract administration and energy management advice.

10.36. TPIs can act as an important source of information for businesses. However, there is evidence from energywatch, consumers and other TPIs that some TPIs do not provide consumers with clear information about how they are compensated for their services. The qualitative work from FDS reported that consumers were often

unclear whether a salesperson represented a single supplier, or was a TPI covering many suppliers. Consumers also reported scepticism about the quality of information provided by TPIs, and questioned how it could be cheaper to enter into a deal recommended by a TPI who would take some form of commission.

Initial conclusions

10.37. Small business consumers have greater choice of suppliers and access to more sophisticated and tailored products than domestic customers. A segment of SME consumers, including some small businesses, manage their energy buying proactively. There is evidence that suppliers have been responsive to the needs of these consumers and this represents a positive development for the market.

10.38. Moreover, smaller suppliers and new entrants are playing a larger role in the SME market than they do in the domestic sector, particularly in electricity. These suppliers state they are better able to participate in the business-to-business market because of:

- the lower regulatory burden in this market;
- their ability to contract in ways that enable them to mitigate risk; and
- their ability to target advertising and marketing more effectively and so hold down costs.

10.39. However, many of the issues that we have identified in domestic energy supply markets also apply to the SME sector. Switching rates among small business customers have been lower than in the domestic sector. Given the fixed term of many SME contracts this is not unexpected. A growing number of consumers are engaging actively with the market. However, a significant proportion of small businesses are not. These consumers are finding it difficult to understand and assess the increasingly complex range of products on offer, and are finding it difficult to get the help and information they need. This can act as a barrier to switching and impede competitive pressure within the sector. Although suppliers can provide such information on request, small businesses are often unaware that these options are available, or even of the questions they should ask.

10.40. There is evidence that suppliers may be using SME consumers' lack of knowledge about their terms and conditions to behave in ways that do not facilitate the smooth functioning of the market – particularly in relation to objections and contract rollover arrangements. This is harming end consumers and making it harder for small suppliers and potential entrants to acquire customers. Smaller businesses, that behave more like domestic customers, are particularly vulnerable to this type of behaviour.

10.41. Finally, there is evidence of customer confusion regarding the services provided by TPIs, and a lack of trusted means of accessing comparative tariff

information. Again, it seems that this may impact small business consumers more than larger SMEs.

10.42. Small businesses are important to the economy. Allowing the market to function more effectively for these customers would help them take advantage of offers in the market, and negotiate the best deal for their business.

10.43. Over the past two years Ofgem has worked with consumer groups and the industry to promote better understanding of the rights and responsibilities of small business consumers and suppliers, and encourage greater transparency of contract terms and conditions. We will continue these efforts in the future. Ofgem will also continue to ensure that existing regulations concerning objections and related issues are enforced. However, it is clear from this Probe that our efforts over the past two years have delivered only slow progress and that additional action is now warranted. Measures to help small business consumers are set in Chapter 1.

CONCLUSIONS

- SME consumers have access to a range of short and long-term fixed and variable priced contracts, and a wider range of active suppliers than domestic customers**
- However, switching has been lower than in the domestic sector and many small business consumers find it difficult to assess competing offers**
- Significant concerns have been raised about the lack of transparency of contract terms and conditions for small business consumers and the use of contract roll-over and objections to switching by suppliers**
- Many TPIs play a valuable role in the SME sector, but customers are often unclear how they are compensated and who they represent.**
- The action that Ofgem has taken to date is not working quickly enough and we now propose a number of new measures to address these issues**

11. Wholesale market issues

The energy supply Probe is concerned primarily with the functioning of the retail energy market in GB. However, wholesale markets do impact on retail markets and some wholesale market issues have arisen during this study. These, along with a number of other wholesale market issues of current concern, are summarised in this Chapter.

Introduction

11.1. The Probe is principally concerned with competition in retail energy supply markets, which form the critical interface between the consumer, energy suppliers and the entire gas and electricity supply chain. We recognise, however, that wholesale energy markets do impact on retail supply, particularly as the Big 6 supply companies are all vertically integrated, and particularly because of the ways in which low levels of wholesale liquidity in the electricity supply market may add to barriers to entry (see above and below).

11.2. Increases in wholesale energy prices have been by far the most significant driver of the recent unprecedented price increases faced by domestic consumers. However, with around 65 per cent of retail prices accounted for by wholesale electricity and gas costs, and the vast majority of these costs (i.e. more than 50 per cent of the final bill) arising from the international energy commodity markets – in coal, oil, gas and carbon - these are drivers over which Ofgem has limited influence. It should be noted that retail gross margins are at least as important to the end bill as gross margins in power generation.

11.3. In their July 2008 report into energy prices⁸⁷, the Business and Enterprise Select Committee (BESC) expressed concerns about the focus on retail supply in the Probe to the possible detriment of wholesale issues. We can reassure the BESC and others that Ofgem continues to view wholesale markets as a high priority. For the duration of the Probe, our work in wholesale markets and our ongoing monitoring of developments has continued. For example, since the Probe began in February of this year, we have:

- paid close attention to the increases in balancing and constraint costs reported over the summer by National Grid;
- launched a Competition Act investigation (which is ongoing) into conduct in the generation market by ScottishPower and SSE at times of constraint;

⁸⁷ *Energy prices, fuel poverty and Ofgem*, Eleventh Report of Session 2007-08, 28 July 2008

- progressed the reform of cash-out arrangements in the balancing market;
- delivered the first phase of improvements in transparency of gas interconnections in north west Europe;
- concluded proposals to provide more flexible access to the market for decentralised energy;
- contributed to ERGEG advice to the European Commission calling for a tailor-made market abuse framework for the energy sector;
- hosted our annual Winter Outlook seminar, at which industry participants debated the supply, demand and price outlook for the coming winter; and
- continued to progress the review of industry code governance, which is likely to lead to reforms which improve the functioning of the wholesale markets and promote new entry. The review should also improve the ability of smaller participants and consumers to access and influence industry rules.

11.4. In the remainder of this Chapter, we summarise some of the current issues in wholesale energy markets, and highlight the key initiatives and work we expect to do in this area in the near future.

Wholesale issues arising from the Probe

Liquidity

11.5. The main wholesale market issue arising from the Probe is the level of wholesale liquidity, particularly in electricity. This has been raised both by small suppliers and by some of the Big 6 themselves. We see it as a potential barrier to entry into supply markets and a source of competitive disadvantage to small suppliers. It is an issue that has been examined more fully in Chapter 6. Whilst concerns over wholesale liquidity were most vocally expressed in relation to electricity, some worries were also voiced regarding wholesale gas, particularly in relation to the availability of long-term fixed-priced contracts.

11.6. Liquidity in wholesale electricity markets in GB is low compared to other comparable traded energy markets, including gas in the UK (see Chapter 6). It is also clear that, as result, many small suppliers are not always able to trade the products they need to hedge their requirements in both the short and longer term. For this reason, we will be looking for the large integrated energy supply companies to take action to improve liquidity as a matter of urgency.

11.7. A closely related issue is the degree of vertical integration in electricity markets. A number of smaller companies and consumer bodies have raised concerns about vertical integration, both in relation to the impact on liquidity and in terms of alleged cross-subsidies between the generation and supply parts of the integrated energy businesses.

11.8. In our view, the issues of liquidity and vertical integration are closely related. Integrated suppliers use their generation capacity as a hedge for their retail businesses. Non-integrated suppliers should be able to emulate that through trading in accessible and liquid wholesale markets. However, if liquidity is insufficient, the use of generation capacity to hedge retail profitability is likely to exacerbate the hedging difficulties faced by non-integrated suppliers.

11.9. For this reason, Ofgem intends to focus on improving wholesale market liquidity directly.

Impact of retail energy supply markets shortcomings on wholesale markets

11.10. As noted above the retail market is the most important interface with the end customer, and hence any weaknesses in retail markets are likely to have an impact throughout the value chain. In our view, some of the retail market issues we have identified in the Probe could have effects upstream in wholesale. For example, investment decisions may be influenced by the ability, or otherwise, to pass costs through to end customers, rather than the needs of the wider wholesale energy market. These issues are best addressed by ensuring a properly functioning retail market so that retailers are driven, by competitive pressures, to seek the lowest possible cost of wholesale energy - which in turn drives efficient wholesale investment.

EU and international gas markets

11.11. With indigenous gas from the North Sea declining, the marginal supplies of gas in GB currently come from continental Europe. Ofgem continues to work hard to influence developments in EU energy markets, over which we continue to have significant concerns. These were highlighted in our 2004 Probe into wholesale gas markets, which found a range of issues in continental European gas markets acting against the interests of GB consumers.

11.12. In particular we raised concerns relating to the lack of effective competition in key EU markets which gives rise to a link between the oil price and the gas price. We also highlighted some more general problems that we considered existed in EU markets relating to transparency, access to capacity, balancing rules and the effects of unbundling. As a result, we were unable to satisfy ourselves that all contractually available gas was being released into the market, that use of storage capacity was appropriate, and that surplus transit capacity was being made available. These features have a substantial impact on the prices paid by gas and electricity consumers in the UK.

11.13. These issues remain today and have an even greater impact on GB markets because of the increased levels of interconnection. Since the publication of our 2004 report, the capacity of the Zebbrugge interconnector (IUK) has increased and the Balgzand-Bacton pipeline has been commissioned. The third package of energy market reforms currently progressing through the EU represents progress towards more effective markets and we are hopeful that it will be agreed later this year.

Ofgem continues to work through CEER, ERGEG and the regional initiatives to realise concrete improvements in transparency, cross border trading arrangements and access to networks. We are also actively working on the regulatory aspects of new electricity interconnectors.

11.14. The European Commission has a critically important role to play in ensuring the development of competitive market in Europe, not only through the legislative programme, but also through the enforcement of the existing framework. We are encouraged by the EC's resolve in pursuing the various competition cases that have arisen from the Sector Inquiry.

11.15. We will be stepping up our monitoring of international energy markets – and particularly EU and global gas markets. This is important as international energy markets are increasingly influencing both prices and system security in GB due to increased interconnection with European and worldwide markets and increasing dependence on imports to meet gas demand.

Increases in balancing and constraint costs in electricity

11.16. Ofgem has been monitoring the sharp increase in electricity Balancing Services and Use of System costs (BSUoS) reported by National Grid since the start of the current system operating period (April 2008). National Grid is currently forecasting balancing costs for the entire year of £1,030 million, which compares to its forecast in March 2008 of £788 million. This represents an increase of 45 per cent over the 2007/08 outturn of £710 million. These increases are likely to be passed through to energy consumers.

11.17. Some of these increases reflect increases in wholesale power costs. However, National Grid explains that the increases also reflect a range of other factors - including the impact of transmission constraints, particularly between Scotland and England, the impact of the Large Combustion Plant Directive on generator bids and offers and the increased costs to National Grid of providing reserve and frequency response⁸⁸. We need to be sure that these trends and developments are consistent with what we would expect in an effectively competitive environment.

11.18. Increasing and volatile balancing and constraint costs in electricity are concerns, both for new entrants in supply and for consumers more generally. We are seeking views on whether Ofgem needs new or additional powers to ensure that potential market abuses in wholesale electricity are avoided.

⁸⁸ Services provided by generators and large customers that National Grid requires in order to ensure that demand and supply are balanced on a moment by moment basis.

The BESC report into energy prices

11.19. BESC, in its report on energy prices, expressed some concern that wholesale market issues were not at the centre of Ofgem's investigations in the Probe, given the concerns raised in that report. In particular, the BESC report proposed Ofgem involvement in a number of areas, some of which, such as liquidity, we have addressed in this report. We will respond fully to the BERR select committee's wholesale market concerns, as well as other issues raised in the BESC report, in the near future.

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Appendix 1 - Consultation responses

1.1. Ofgem would like to hear the views of interested parties in relation to any of the issues set out in this consultation document.

1.2. Responses should be received by 1 December 2008 and should be sent to:

Neil Barnes
Ofgem
9 Millbank, London SW1P 3GE
020 7901 7000
energysupplymarketsp@ofgem.gov.uk

1.3. Unless marked confidential, all responses will be published by placing them in Ofgem's library and on its website www.ofgem.gov.uk. Respondents may request that their response is kept confidential. Ofgem shall respect this request, subject to any obligations to disclose information, for example, under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.

1.4. Respondents who wish to have their responses remain confidential should clearly mark the document/s to that effect and include the reasons for confidentiality. It would be helpful if responses could be submitted both electronically and in writing. Respondents are asked to put any confidential material in the appendices to their responses.

Appendix 2 - Econometric analysis of consumer switching

This Appendix outlines our investigations into drivers of consumer switching between energy suppliers. Across a range of consumers, we found that energy supplier's relative prices and expenditure drive switching. However, the overall responsiveness of churn to relative prices was found to be small. This was especially apparent across PPM consumers.

Theoretical switching drivers

1.1. A number of factors drive a consumer's decision to switch retail supplier. Factors previously identified in the literature⁸⁹ and by FDS International, discussed in Chapter 5 include:

- perceived savings or benefits;
- income;
- retailer brand;
- switching awareness and knowledge of process;
- expected quality of service or customer service; and
- switching costs⁹⁰.

1.2. Using these 'microeconomic' factors as a foundation, we can specify a simple model of churn observed by an energy supplier. The model below postulates that a observed churn is a function of a number of drivers:

⁸⁹ For example see: Guliette et al. 2003. '*Consumer Choice and Industrial Policy: A study of UK Energy Markets*'. CSEM paper.

⁹⁰ Switching costs for example include opportunity and informational costs.

$$\begin{aligned}
 \text{Churn}_{it} = g(& \text{relative prices}_{it}, \\
 & \text{relative past and future prices}_{it}, \\
 & \text{relative marketing spend}_{it}, \\
 & \text{unobserved firm effects}_i, \\
 & \text{season}_{it}, \\
 & \text{average consumer awareness}_t, \\
 & \text{switching costs}_{it}, \\
 & \text{average bill size}_t, \\
 & \text{GDP per capita}_t, \\
 & \dots)
 \end{aligned}
 \tag{Equation 1}$$

Where:

Subscript i represents the supplier under consideration, t the time period; and $g(\dots)$ is the functional form.

1.3. The rationale for inclusion of each variable is as follows:

- **Relative prices:** This captures the comparative financial benefits of switching to a different supplier. We might expect future prices to further be of importance given a degree of forward looking consumers⁹¹. Additionally, some consumers may respond in lag to price changes potentially as a result of sticky information⁹²;
- **Relative marketing expenditure:** Marketing expenditure is likely to influence switching by establishing brand and increasing consumer awareness. It is stated in relative terms to capture the potential 'drowning-out' of message as other suppliers also market their offering;
- **Unobserved firm effects:** These are attributes which are potential immeasurable and fixed. These factors over the short and medium-run could include quality of service, brand and customer service;
- **Season:** There are reasonable *a priori* grounds for believing consumers may switch in greater numbers based on the time of year. For example, during the

⁹¹ In rational expectations modelling, consumers would indeed forward plan and on average forecast prices accurately.

⁹² For a macroeconomic example see: Mankiw and Reis. 2002. 'Sticky Information Versus Sticky Prices: A Proposal to Replace the New Keynesian Phillips Curve'. Vol. 117(4), Pages 1295-1328.

winter when consumers observe larger bills the potential benefits from switching in absolute terms may be greatest;

- **Average consumer awareness and switching costs:** These factors are discussed in Chapter 5;
- **GDP per capita:** Captures the effect of rising income of the average consumer on churn. One might expect lower consumer switching as income rises as opportunity costs and hence switching costs rise; and
- **Average bill size:** As average bills rise, all else equal, energy expenditure makes up a greater proportion of individuals income. As energy is a necessity consumers can be expected to become more price sensitive.

Econometric specification and approach

1.4. For investigation of Equation 1 a functional form needs to be assumed. One possible form is the Cobb-Douglas or logarithmic form. Specifying the model in this way has the advantage of allowing for some non-linearity in the relationship of churn to variables. Further, the coefficients can be interpreted as the relevant sensitivity⁹³. For example, the coefficient on the log of relative prices is the percentage impact of a 1% increase in that variable on churn. Assuming this form, the model can be rewritten in general terms:

⁹³ Formally, this is referred to as the 'elasticity'.

$$\ln C_{it} = \alpha + \sum_{k=1}^K \beta^k \ln X_{it}^k + \sum_{l=1}^L \lambda^l \ln Z_t^l + gt + u_i + e_{it} \quad \text{Equation 2}$$

where:

α is baseload churn;

C_{it} is supplier i 's observed churn;

X_{it}^k are variables driving churn which vary by supplier and over time;

Z_t^l are variables identical across supplier but varying over time;

t is a linear time trend;

u_i is the fixed unobserved firm effect;

β^k and λ^l are the coefficients on the churn driver variables; and

e_{it} is the residual or unexplained effect.

1.5. The model as it stands incorporates few dynamics which is likely to be an oversimplification. A more realistic specification incorporating some dynamics is as follows:

$$\ln c_{it} = a + \sum_{k=1}^K \beta^k \ln X_{it}^k + \sum_{m=1}^M \delta^m \ln X_{it-1}^m + \dots + \sum_{l=1}^L \lambda^l \ln Z_t^l + \sum_{p=1}^P \eta^p \ln Z_{t-1}^p + \dots + gt + u_i + e_{it}$$

Equation 3

and

$$e_{it} = \rho e_{it-1} + v_{it}$$

where:

δ^m and η^p coefficients on lagged variables;

ρ a coefficient determining the weighting of previous effects; and

v_{it} is the residual or unexplained effect.

1.6. This model accounts for potential dynamics from both lagged explanatory variables and serial correlation in the residual⁹⁴. In this specification serial correlation has been assumed to be 'autoregressive' which allows for each previous residual to impact on churn with declining weight.

1.7. A number of methods can be deployed to estimate the model as it stands. In this analysis we have collected 'panel' data to allow the use of a number of panel based methods. Using panel data can increase the efficiency of parameter estimates as both time and cross-sectional dimensions can be exploited.

1.8. Relevant panel data estimation techniques include pooled 'ordinary least squares' (OLS), 'fixed-effects' (FE) and 'random-effects' estimation (RE)⁹⁵. The relative desirability of each approach is determined by the statistical properties of the series. For example, when the fixed unobserved firm effect is correlated to other

⁹⁴ Serial correlation is where the unobservables are correlated to each other over time. Although parameter estimates remain consistent in the presence of serial correlation, statistical inference is invalid.

⁹⁵ These techniques are discussed further in: Wooldridge. 2002. 'Econometric Analysis of Cross Section and Panel Data'. MIT Press.

explanatory variables random effects and OLS estimation yield inconsistent⁹⁶ parameter estimates. Conversely when the unobserved supplier effect is statistically unimportant, pooled OLS provides efficient parameter estimates.

Data

1.9. Data for this analysis has primarily been drawn from a number of data requests issued to suppliers between April 2008 to September 2008. Information provided in these requests included:

- Monthly consumer numbers by fuel, payment type and PES region 2004-2007;
- Monthly consumer losses by fuel, payment type and PES region 2004-2007;
- Monthly consumer gains by fuel, payment type and PES region 2004-2007;
- Annual marketing expenditure 2004-2007; and
- Full-time equivalents (FTE) involved in marketing activities directly and indirectly⁹⁷ 2004-2007.

1.10. Given this data, there are several ways in which churn can be measured. Churn throughout the analysis has been calculated as total losses divided by total consumers, as in Equation 4⁹⁸. There are several advantages to calculating churn this way; firstly, it accounts for scale effects directly; secondly, loss data is likely to be more robust given less noise is prevalent from market exit than entry⁹⁹.

$$C_{it} = \frac{\text{losses}_{it}}{\text{total consumers}_{it}} \quad \text{Equation 4}$$

1.11. Churn has been calculated for each payment and fuel type supplied. Payments include standard credit (SC), direct debit (DD) and prepayment meters (PPMs) whilst

⁹⁶ An estimator is consistent if the distance from the true value of the parameter and the estimate falls to zero as the sample size tends to infinity.

⁹⁷ An indirect FTE refers to a FTE employed as a result of a flow of money going to a third party from a supplier.

⁹⁸ Calculating churn using gains instead led to similar results although parameter estimates were more sensitive to model specification.

⁹⁹ Given churn is measured in this way, the model could additionally be estimated in a 'censored' framework. Given the dependent variable presents relatively low variation, standard techniques however will be sufficiently accurate.

fuels include gas, electricity and dual fuel (DF)¹⁰⁰. Focus here has been placed on the analysis of DF consumers given this data was more consistently provided by suppliers.

1.12. Aside from the data request, pricing data has been taken from The Energy Shop and GDP per capita data from the IMF¹⁰¹. The pricing data is by supplier, region and payment type. Relative prices for a particular supplier are calculated as the supplier's price relative to the observed market average. Other measures were experimented with, and are discussed below.

Results: dual fuel

1.13. Estimates of the models in this section are based on monthly data for three of the big six energy suppliers; three companies were excluded because of missing or inconsistently provided data. To assess the impact of firm's marketing expenditure on churn, FTE data has been used as a proxy. This data has been used in preference to actual expenditure given it is available in monthly intervals.

1.14. Parameter estimates for our preferred specification for standard credit payment are outlined in Table 1.

¹⁰⁰ A dual fuel consumer is defined as a consumer who takes both gas and electricity from the same supplier. The consumer may or may not receive a discount.

¹⁰¹ Data measured in constant prices and taken from: IMF. April 2008. '*World Economic Outlook Database*'.

Table 1: Dual fuel preferred specification SC¹⁰²

Dependent variable: churn	Coefficient	T-value	P-value
Relative price	2.5381	4.51	0.00
Relative FTEs	-0.9651	-4.46	0.00
Season	0.0205	2.34	0.02
Time trend	0.0073	2.22	0.03
Constant	-2.0651	-16.32	0.00
Autoregressive variable order 1	0.4586	4.24	0.00
Autoregressive variable order 2	0.3851	3.59	0.00
Number of observations	144		
R – Squared	0.8611		
Adjusted R – Squared	0.8547		

Pooled OLS estimation, models selected using SIC. Serial correlation accounted for and standard errors estimated using White's procedure.

1.15. All variables in our preferred specification are statistically significant and the explanatory power of the model is good; over 80% of the churn variation is explained. The model was estimated using pooled OLS, as opposed to RE or FE, as the unobserved supplier effect was found to be statistically insignificant¹⁰³. Further, T-values and P-values were computed using White robust standard errors¹⁰⁴.

1.16. As the coefficients can be interpreted as sensitivities our estimates suggest:

- A 1% rise in price of firm *i*, relative to average market prices, is associated with around a 2.5% increase in churn; and
- A 1% rise in marketing expenditure of firm *i*, relative to average market expenditure, leads to a 1% fall in churn.

¹⁰² The T-value is the estimated coefficient divided by the standard error estimated for this coefficient. For a coefficient to be statistically significant the T-value must exceed or be equal to 1.96 in absolute terms. The P-Value is the probability of rejecting the hypothesis that the variable is insignificant when the variable is significant. This is referred to as committing a type one error. In this report a variable is considered significant if the probability of committing a type one error is less than or equal to 0.05.

¹⁰³ This was tested using a Lagrange Multiplier test. Using this test, the null of insignificance could not be rejected at 5%

¹⁰⁴ This allows for cross-equation correlation and heterogeneous error variance in each cross-section.

1.17. The magnitude of the price sensitivity is relatively low considering suppliers over the period only price above the average at most by 9%. The result however is consistent to the findings of other studies such as Wilson and Price (2007)¹⁰⁵. This study finds that UK electricity consumers have a limited ability to choose accurately between suppliers.

Robustness

1.18. Our preferred dual fuel specification was chosen on the basis of a much broader model. This specification included:

- Multiple relative price variables: Initially runs were made including separate variables for supplier *i*'s price relative to each other supplier. However, it was found that measuring the relative price as the distance from the market average performed equally as well and yielded similar results;
- GDP per capita and average consumer bill: Both variables were excluded because of the lack of relationship to churn. This is likely the result of a relative small time period of observation; and
- Up-to and including six month lagged price and expenditure variables: The 'Schwartz Information Criterion' (SIC) was used to refine the number of lags included in the model¹⁰⁶. In the final specification no lagged relative prices were included. This result is likely the result of high correlation between current and past prices¹⁰⁷. Such correlation makes it difficult for econometric techniques to discern the separate impact of each variable, a problem referred to as 'multicollinearity'.

¹⁰⁵ Wilson C. and Price CW. 2007. '*Do suppliers Switch to the Best Supplier?*'. CCP Working paper 07-6.

¹⁰⁶ SIC is a Bayesian statistic which assesses the models fit. SIC was used in preference to Akaike, an alternative criteria, given SIC tends to lead to more parsimonious specifications. This point is discussed in: Koehler A. and Murphree E. 1998. '*A Comparison of the Akaike and Schwartz Criteria for Selecting Model Order*'. Applied Statistics Vol. 37:2, 187-195.

¹⁰⁷ Preannouncements and a degree forward looking consumers could also be contributing to this finding.

Table 2: Correlations between lagged relative prices

Variable	Price	Price 1	Price 2	Price 3	Price 4	Price 5	Price 6
Price	1						
Price 1	0.85	1					
Price 2	0.74	0.85	1				
Price 3	0.68	0.74	0.85	1			
Price 4	0.68	0.68	0.74	0.85	1		
Price 5	0.66	0.68	0.67	0.73	0.84	1	
Price 6	0.63	0.66	0.67	0.67	0.73	0.84	1

1.19. Several models were also run including future prices to capture forward looking behaviour. Future prices were found to improve the model fit insignificantly and therefore excluded. This may suggest a lack of forward looking decision making or merely be the result of multicollinearity.

1.20. Nonstationarity occurs when the mean of a variable varies over time¹⁰⁸ and can lead to 'spurious regressions'¹⁰⁹. To check our model does not fall foul of this, we have deployed a range of panel based tests including: Levin, Lin and Chu test; Im Pesaran and Shin; and the Fisher variant of the Phillips-Perron test. The hypothesis of a nonstationarity was rejected at the 5% level across and variables and using all tests.

Table 3: Tests for nonstationarity P-values - Null hypothesis: nonstationarity

Variable	Levin, lin & Chu	Im, Pesaran & Shin	Fisher – Phillips Perron
Relative price	0.00	0.00	0.00
Consumer churn	0.00	0.00	0.00
Relative FTEs	0.04	0.05	0.00

1.21. A further potential problem which may invalidate parameter estimates model, is potential misspecification of the model's functional form. In order to test the

¹⁰⁸ A more rigorous definition of nonstationarity includes higher moments of the distribution varying with time.

¹⁰⁹ Granger, C. W. J., and P. Newbold. 1974 'Spurious Regression in Econometrics'. Journal of Econometrics 39, 251-66. Formulated in: Phillips, P.C.B. 1986. 'Understanding Spurious Regressions in Econometrics'. Journal of Econometrics, 33, 311-340.

validity of the assumed specification, the model was run using several differing forms. Across these specifications the logarithmic form proved more robust whilst presenting an improve fit to the data.

Payment method

1.22. Our preferred specification above was estimated considering standard credit consumers. It is instructive to investigate whether the results are consistent across consumers on differing payment types.

1.23. To look at the impact of differing payment types at the national level we have repeated the methodology described above. Identical robustness checks were also undertaken, although not reported here, which suggested that our estimates are robust.

Table 4: Dual fuel preferred specification DD

Dependent variable: churn	Coefficient	T-value	P-value
Relative price	2.6339	4.25	0.00
Relative price lagged 1 month	1.2162	1.96	0.05
Relative FTEs	-2.1114	-3.96	0.00
Relative FTEs lagged 3 months	0.6732	2.14	0.03
Relative FTEs lagged 6 months	-0.8539	-2.45	0.02
Constant	-2.1449	-10.37	0.00
Autoregressive term order 1	0.7691	9.07	0.00
Autoregressive term order 2	0.1850	2.25	0.03
Number of observations	144		
R – Squared	0.8849		
Adjusted R – Squared	0.8777		

Pooled OLS estimation, models selected using SIC. Serial correlation accounted for and standard errors estimated using White's procedure.

1.24. As summarized in Table 4 and Table 5, both relative prices and expenditure have a statistically significant impact on churn across other payment groups. Specifically, for DD consumers the relative price sensitivity is estimated to be 3.8

and marketing sensitivity -2.3¹¹⁰. PPM consumers on the other hand are less responsive with sensitivity of 1.4 and -0.6 respectively.

Table 5: Dual fuel preferred specification PPM

Dependent variable: churn	Coefficient	T-value	P-value
Relative price	1.3612	2.95	0.00
Relative FTEs	-0.6410	-3.83	0.00
Constant	-1.8590	-19.09	0.00
Time	0.0070	2.38	0.02
Autoregressive term order 1	0.3520	3.96	0.00
Autoregressive term order 2	0.4556	5.10	0.00
Number of observations	144		
R – Squared	0.8142		
Adjusted R – Squared	0.8071		

Pooled OLS estimation, models selected using SIC. Serial correlation accounted for and standard errors estimated using White's procedure.

1.25. The lower sensitivity observed for PPM consumers (1.4% compared to 3.8% for Direct Debit) is consistent to survey evidence discussed in Chapter 4. This evidence found that less savings from switching were realised by PPM consumers than consumers on other payment types.

Regional analysis

1.26. Focussing at the national level is informative of the overall national picture. However, by ignoring regional divergences, estimates may be misleading. In order to test the consistency of our models we re-estimated the model by region for each payment type¹¹¹. Results for London and Seaboard are presented below. Other regions tested presented similar results.

¹¹⁰ We have taken the total sensitivity as the sum of all coefficients on the relevant variable across all lags. This is consistent to measuring the long-run impact.

¹¹¹ Although regional pricing and churn data is available by region, FTEs are not. We have therefore had to assume a proportional breakdown of FTE by region.

Table 6 Dual fuel preferred specification PPM

Consumers	Price Sensitivity	Expenditure Sensitivity	R - Squared
Seeboard – SC	2.3	-1.0	0.80
Seeboard – DD	4.6	-0.54	0.84
Seeboard – PPM	4.9	-0.21	0.52
London – SC	2.8	-0.63	0.80
London – DD	3.76	-0.24	0.73
London - PPM	1.79	-0.29	0.82

Pooled OLS estimation, models selected using SIC. Serial correlation modelled and standard errors estimated using White's procedure.

1.27. Estimated price sensitivities range from 1.4 to 4.9, whilst expenditure sensitivities from -1 to -0.21. Looking within payment types results are broadly consistent to the national estimates derived above¹¹².

Results: other fuels

1.28. Our primary analysis has focussed on DF consumers given the greater consistency of this data. In order to assess whether our findings extend beyond these consumers, we have considered electricity consumers additionally¹¹³.

Table 7 Electricity preferred national specifications

Consumers	Price Sensitivity	Expenditure Sensitivity	R - Squared
SC consumers	1.40	0.27	0.88
DD consumers	1.49	-0.81	0.86
PPM consumers	0.00	-0.72	0.89

Pooled OLS estimation, models selected using SIC. Serial correlation modelled and standard errors estimated using White's procedure.

1.29. Broadly, price sensitivities and expenditure sensitivities are in a similar range to those estimated for DF. The only large divergence is a change in sign of

¹¹² Although for PPM customers in Seeboard the price sensitivity is large the model fit is relatively poor. This suggests other unexplained factors are driving churn.

¹¹³ Gas data has not been considered given the data was least consistently provided.

expenditure sensitivity for SC consumers. This result is counterintuitive and is potentially the result of the data issues or reverse causality¹¹⁴.

CONCLUSIONS

- **Energy suppliers observe increased churn when their prices are above the market average.**
- **The degree of churn on the basis of relative prices is low.**
- **Greater expenditure on marketing expenditure is associated with lower consumer churn away from suppliers.**
- **There is some evidence of lower price sensitivity for PPM consumers.**

¹¹⁴ For example, we may actually be capturing firms increasing their marketing expenditure in response to observed higher churn.

Appendix 3 - Domestic qualitative research

This Appendix is a summary of domestic qualitative research. It was prepared by FDS International Ltd.

1.1. As part of its Consumer First initiative, Ofgem commissioned FDS International to undertake two programmes of qualitative research, the first among vulnerable energy customers, the second a mirror-image study among non-vulnerable customers.

1.2. The first study conducted in January/February 2008 comprised eleven focus groups and ten in-depth interviews with various categories of vulnerable customers. The second, carried out in April and May comprised ten focus groups encompassing a broad spread of locations, ages and social grades although the most disadvantaged households were excluded. Both studies covered customers who had switched energy supplier recently, those who had changed but not recently and those who had never switched.

1.3. While there were many differences in the profiles of vulnerable and non-vulnerable customers, and differences in emphasis in their attitudes, their behaviour and reasons for that behaviour, there were many consistent themes. Key results from the initial work among vulnerable customers were often echoed among non-vulnerable customers.

1.4. For a market to be operating effectively, there must be genuine competition between suppliers, and consumers should feel they are able to move confidently between a number of different suppliers to take advantage of better deals or service. Pricing and other information should be easily available and comprehensive.

1.5. For some individuals, the energy market does operate like that. These consumers have the time, confidence, knowledge and motivation to research the best deals in the energy market, often through online price comparison sites. Such customers have found the switching process itself to be straightforward, not too onerous or problematic.

1.6. We found a few people such as these among vulnerable customers and slightly more among non-vulnerable customers. But such proactive, confident people who regularly review and consider changing energy providers accounted for only a small minority of the consumers we spoke to, particularly the vulnerable.

1.7. While we found the same barriers to switching supplier among vulnerable and non-vulnerable customers, on the evidence of these qualitative studies, there are major differences in the importance of different reasons for not switching among the vulnerable and non-vulnerable.

1.8. Reasons for not switching linked to risks or difficulties associated with switching, are especially likely to influence vulnerable customers.

1.9. Key barriers to switching that particularly affected vulnerable customers, although some non-vulnerable customers were also influenced, included:

- fear that something may go wrong if they switch; and
- loyalty to existing provider.

1.10. Lack of knowledge or confidence also deters some non-vulnerable customers from switching but younger customers especially, appear to be less inhibited in this regard.

1.11. Similarly younger non-vulnerable customers are much less likely than vulnerable customers to express fears that something may go wrong if they switch. Most people who switch suppliers experience no problems or only minor hassle. Younger respondents appeared less aware of or pre-occupied with the difficulties a minority of switchers have experienced.

1.12. A few of the vulnerable and non-vulnerable customers had had bad experiences, such as receiving bills from old and new suppliers, when they switched. Some had had to wait a long time to make their first payment, which then proved to be a large one.

1.13. More are able to recall bad experiences or problems encountered by people they know (or friends of friends) who had switched and some were greatly influenced by such incidents. Vulnerable customers often feel they are poorly placed to recover from incurring unexpected problems or expenses. Confusion over payments might cause minor irritation or hassle for a non-vulnerable customer; but a vulnerable customer could experience considerable anguish and long-term problems if confronted with a large bill as a result of underpaying for their energy in the months immediately following a change of supplier or payment method.

1.14. Among vulnerable customers loyalty to an existing provider was sometimes based on good service or experience of the incumbent, but sometimes based on its name or origins (for example ScottishPower or British Gas) or on mistaken or naïve views of the service they might expect from a competitor.

1.15. One of the striking features of the research among non-vulnerable was how little genuine loyalty there was to existing long-term suppliers. While some customers described themselves as 'loyal' by virtue of the fact they had never switched, their spoken attitudes suggested passivity or resentful acquiescence rather than a positive, enthusiastic loyalty for their existing provider.

1.16. Some barriers to switching applied roughly equally to vulnerable and non-vulnerable customers:

- passivity or laziness on the part of the customer (or a customer feeling they are too busy to switch), so even a small degree of effort may be too much to persuade them to change supplier;
- lack of knowledge of potential savings;
- belief that service may be poorer if one switches supplier (although this was a little more likely to be a critical factor for vulnerable customers
- dislike of talking to sales reps and fear of being pressured; and (with vulnerable customers being especially likely to worry about what might happen as a result of talking to reps).

1.17. A few of the reasons for not switching applied particularly to non-vulnerable customers. In particular, the belief that the savings achievable through switching, would be small and temporary, was found especially among these customers, including some of the most confident and better-informed consumers. They argued that prices fluctuated between the major suppliers to the extent that the company that is currently cheapest may be one of the dearest suppliers a few months later. The expectation that prices would fluctuate was a major argument against shifting. If switching suppliers involved no or virtually no effort, the short-term nature of the possible savings would be less of an issue, but even those who regarded switching as reasonably hassle-free thought it would involve some effort.

1.18. The biggest single barrier to switching is that the customer must do something to switch – the status quo favours the existing supplier in the energy market much more so than in home or car insurance where providers are chosen annually.

1.19. However, the in-built bias towards the incumbent supplier is not the only problem within the energy market. Most customers are aware that energy prices have tended to rise over the last three years. Most non-vulnerable consumers and many vulnerable consumers have heard that the price of gas and electricity is linked to the price for oil which has been rising, but some are highly sceptical as to why there should be a close link between prices of oil and gas.

1.20. In virtually all groups we found a degree of cynicism, disillusionment and mistrust (though very little genuine anger) towards energy companies. This mistrust and cynicism was often not articulated clearly yet undoubtedly existed. Sometimes mistrust manifested itself in suggestions that energy companies are all the same; they do not care about helping customers reduce energy bills but simply want to make money. And there were adverse comments about energy companies' profits, some observing energy companies were making large profits while raising prices.

1.21. The most cynical individuals tended to be middle-aged non-vulnerable customers and in these two research programmes the more cynical groups were in Scotland, Northern England and the Midlands rather than Wales or Southern England. In the most disillusioned groups, comments were made on the way in which companies follow each other with similar price increases and there were a couple of suggestions that this indicated price fixing.

1.22. Another area of concern is that the poorer, more vulnerable customers often pay bills through payment methods, most typically prepayment meter but also standard credit, which mean they often pay more for their energy than had they paid by direct debit, the payment method often favoured by more affluent, non-vulnerable customers. Many of those on prepayment meters claim to prefer this method of payment, even when aware that they end up paying more than would be the case with other payment methods. However, some group participants expressed concern that a payment method favoured by or imposed on many of the less well-off, including those with no bank account, can work out to be much more expensive than those favoured by the better-off. Furthermore, the need to change payment cards or meters, coupled with a perception that energy companies were less interested in pre-pay customers than those paying by direct debit meant some PPM customers thought it could be more difficult for them to switch than those paying by other means.

1.23. People were often surprised, even shocked, at the size of the price differential by payment method when they saw energy market literature towards the end of their sessions.

1.24. Most energy customers have stuck with the same method for many years, and those aware they could save money by switching are often nervous at the prospect of making a change. Where customers had switched payment method, some had encountered problems, for example, moving on to direct debit but going into debt as the level of payment was set too low.

1.25. Those on direct debit were usually aware this was the cheapest option but they were not immune from problems. For example:

- it had not occurred to a divorced woman whose ex-husband had previously sorted out bills to ask for money back when she ran up a surplus of over £570 with her energy company – and they did not even suggest a reduction in her monthly payments; and
- some had found payment levels set too low so ended up owing money to their supplier, and a few suspected this situation had been engineered deliberately to make it more difficult for them to switch.

1.26. Very few vulnerable but rather more non-vulnerable customers were attracted by the idea of online billing. However, between the two phases of research, companies had adjusted their prices so that online billing was not quite as attractive an option when non-vulnerable customers were surveyed.

1.27. There was limited interest in and a degree of cynicism concerning 'green' tariffs. But a few consumers expressed a strong preference for green tariffs without really understanding what they were.

1.28. Most of the vulnerable customers who had switched energy suppliers had done so reactively, in response to contact with a salesperson. Many vulnerable customers

lack the confidence, knowledge or initiative to switch proactively; that is to seek out, find, evaluate and sign up to alternative energy providers.

1.29. Among non-vulnerable customers we found fewer switchers dependent on contact with a salesperson to change companies. Yet even among those switching proactively we found most interacted only partially with the market. Relatively few sought the cheapest supplier from the internet or through calling suppliers to check out prices. A more common approach was simply to switch to a supplier recommended by friends or relatives or possibly one they had seen advertised, although people switching in this way sometimes also checked on the internet that they were getting a good deal.

1.30. Salespeople have played a crucial role in encouraging people to change suppliers. They have helped vulnerable and non-vulnerable customers who would not otherwise have changed supplier to do so, usually making short term saving, at least, as a result.

1.31. However, they have also encouraged people to make poor decisions. For example, a non-vulnerable customer switched away from a very beneficial contract with one company only to find her new company ended up more expensive. When she switched back to her original company she lost the benefits of her original deal.

1.32. Many of those surveyed believe sales reps make misleading claims in the hope of clinching deals. The persistence of sales reps had led to many vulnerable and non-vulnerable customers refusing to speak to them, so a potential source of information is lost. This is a particular issue for vulnerable customers as they are less likely to investigate the energy market themselves.

1.33. Customers tend to underestimate the potential savings available to them through changing payment method or supplier. This was especially true in January/February 2008 when vulnerable customers were surveyed, as over the next three months there was some equalisation of tariffs and relative prices. Differences were not as great when non-vulnerable customers were researched.

1.34. Most people found energywatch price comparison sheets helpful, although they were not always clearly understood by vulnerable or non-vulnerable customers. They were effective in communicating to vulnerable customers especially that price savings could be substantial and some of those who attributed their lack of switching to laziness were motivated to at least consider switching.

1.35. Vulnerable customers, relatively few of whom were internet-savvy, generally found print-offs from price comparison websites to be less helpful with the wide range of suppliers and tariffs listed thought to be confusing.

1.36. Some non-vulnerable customers reacted similarly, but internet-savvy non-vulnerable customers who visited other price comparison sites tended to prefer price

comparison site data to that provided by energywatch. The price comparison data were liked because they could be individually tailored to each person's circumstances – though some were put off because they did not know their annual consumption or expenditure.

1.37. While some non-vulnerable customers regularly checked price comparison sites out of interest or to check they were not getting a poor deal, very few used these to choose between suppliers and then switch to their preferred provider. Even among non-vulnerable customers, more switched to a company recommended to them than one they chose because of its position in a price comparison table.

1.38. We identified a number of attitudinal/behaviour segments amongst those who had never switched or had only done so once or twice several years earlier.

1.39. Two similar groups were 'Happy as they are' and 'Change Averse'. In both groups customers felt they were managing satisfactorily as they were.

1.40. The first group comprised mainly elderly, often vulnerable customers who expressed generally positive attitudes about their supplier and situations. 'Change Averse' customers were spread across all age groups, but especially likely to be vulnerable customers. Their reasons for not switching were sometimes expressed in more negative terms relating to possible consequences if they switch.

1.41. 'Uninterested' customers share similar characteristics and often have low energy bills or their energy bills account for a small proportion of total outgoings. They may live in temporary rented accommodation so saving money through changing energy supplier is an extremely low priority for them. Young people living in small properties with low energy bills whose priority is paying the rent or mortgage may fall into this category.

1.42. We found 'Loyalists' among vulnerable customers but relatively rarely among the non-vulnerable. They may have positive reasons for staying with an existing supplier who has provided excellent service who has proved flexible regarding payments or who has offered some kind of loyalty scheme. For example, we found a couple of customers who had very good experiences of British Gas's Central Heating Care and were keen to stick with British Gas as an energy provider, not appreciating they could change energy supplier while retaining Central Heating Care.

1.43. Ironically we found customers who were discouraged from switching because they always found it a hassle to contact their existing energy supplier.

1.44. The segments described above are unlikely to switch. Somewhat better prospects are offered by the following three segments, each of whom is at least likely to be aware of the potential benefits of switching:

- 'under confident and nervous' found particularly among vulnerable customers who worry about what could go wrong when and after they switch; and
- 'overwhelmed' customers may also worry – and many worry about switching to the 'wrong' supplier. These are found mainly among vulnerable and non-vulnerable customers in the 30-64 age range. They struggle to make a decision as to whether to switch, and if so to whom.

1.45. Both segments are likely to be more willing to explore options than those who, often on their own admission are 'too lazy/indolent to bother'.

1.46. However, some customers in these three segments might be willing to switch if they could be persuaded the process was simple and hassle-free and the benefits reasonably certain.

1.47. Certainly, non-vulnerable younger adults who might normally be too lazy or uninterested to contemplate switching, if they were encouraged to think about the issue, would not normally be inhibited from switching.

1.48. In contrast, customers in the 'unable to switch' segment believed they could not switch, typically because they owed money to their current provider, and had to (or believed they had to) pay this off before they could switch to a different one. These were often vulnerable customers.

1.49. Research among non-vulnerable customers suggested a possible ninth segment of non-switchers. 'Rationals' view that switching as pointless as any savings are likely to be very short-term.

1.50. They are similar to other groups such as 'Overwhelmed', 'Uninterested' and 'Too lazy' but they tend to be better-informed and more confident by nature.

1.51. For the energy market to operate more effectively in the interests of all customers especially those who are vulnerable: -

- salespeople must operate ethically and within accepted codes of practice, but they should not be otherwise discouraged as their role is crucial given the passivity of many customers;
- the 'greenness' of 'green' tariffs needs to be monitored to ensure well-meaning consumers are not misled;
- energy companies must ensure the switching process itself is problem-free with regulators coming down very hard on companies that perform poorly in this regard;
- customers should not be deterred from switching by the expectation that it will be difficult to contact their current (or the new) supplier;

- easy to understand pricing information should be available through a variety of channels and not restricted to internet;
- Ofgem should work closely with sources of financial information such as the press and consumer advisors to ensure accuracy of information and to encourage them to continue educating energy customers;
- groups such as Age Concern, CAB and community groups can play a role in informing vulnerable customers of the options open to them;
- energy companies should be encouraged to help vulnerable customers through reducing the degree of differential pricing which discriminates against PPM customers; and
- the link between the price of domestic energy and the price of oil on international markets needs to be broken or weakened – or at the very least energy companies need to provide clear arguments and evidence of the reasons for the link.

Appendix 4 - Domestic quantitative research

This Appendix is a summary of the domestic quantitative research. It was prepared by Ipsos MORI.

1.1. Ipsos MORI was commissioned by Ofgem to conduct a survey among domestic energy customers to investigate their attitudes and behaviour in respect of Great Britain's energy supply market and help to establish the extent to which the market is "working" for consumers. The study examines awareness, participation in switching, experience of the process, satisfaction with switching and intentions to switch again and barriers to future switching. Because of a particular interest in switching behaviour amongst prepayment meter (PPM) customers, their numbers were boosted to ensure a robust sample size.

1.2. Ipsos MORI conducted 2,024 quota-controlled face to face interviews in the period 20 June – 27 July 2008 in 165 systematically-selected sampling points throughout Great Britain. The total included a nationally representative sample of 1,716 customers, with a booster sample of an additional 308 PPM customers providing a total of 534 PPM customers. Data were weighted to the profile of domestic energy customers, using the variables of sex, age, social group and working status. The booster of PPM customers was weighted back to its correct incidence with the total figures (12 per cent). Based on data supplied to Ofgem by domestic energy suppliers, the sample appears to over represent direct debit customers and under represent standard credit customers. However, the split achieved in this survey is consistent with previous Ofgem surveys. Moreover, as the data from suppliers is based on meter points rather than individuals, the data are not weighted to match the suppliers' profiles. In any case to do so only makes a difference of around 2 – 4 per cent on the total figures and does not change the main messages emanating from the data.

1.3. There is almost universal awareness of domestic customers' ability to switch energy suppliers. Awareness of the suppliers is fairly good – just 3 per cent were unable to name any supplier spontaneously and a mean of just under three brands was mentioned overall. Even disadvantaged groups (eg. social class DE, renters, PPM customers and quarterly paying customers) can name on average more than two suppliers spontaneously, as can non-switchers.

1.4. There is a regional effect on supplier awareness, especially in Scotland, and also, to a lesser extent in Wales. The result of this is higher awareness for the Scottish and Welsh brands in their respective markets, but there is no evidence this reduces the number of companies customers in Scotland and Wales are aware of. Prompted awareness underlines the fact that customers are aware of a large number of companies/brands – an average of more than eight; even non-switchers are aware of more than seven. The Big Six brands are a long way ahead of the smaller brands in the market in terms of awareness, particularly British Gas because of its historic national gas supply monopoly.

1.5. Most customers are open-minded about the brands they would consider, though one in three can name at least one supplier they would avoid. Most of these are Big Six brands, led by British Gas. While some brands may be rejected perhaps because customers have already switched away from them, the minor brands are more likely to be rejected because they are simply not heard of.

1.6. The proportion who have switched gas supplier in the last 12 months is 24 per cent; for electricity it is 23 per cent. Recent switching of this kind shows a different pattern by sub-groups, compared to the profile of those who have "ever switched". There is no difference by social class in recent switching, and incidence of recent switchers is actually higher than average among those in rented accommodation and PPM customers.

1.7. To date, most customers have switched supplier for at least one fuel: 62 per cent overall, 60 per cent gas and 55 per cent electricity. These switching rates are generally higher than most other financial services and utilities, such as mortgages (31 per cent), home insurance (28 per cent), fixed line telephones (20 per cent) and mobile telephones (17 per cent)¹¹⁵. These figures show considerable variation by customer group, illustrating how early adoption of switching was by higher social classes and the middle-aged. Disadvantaged customers such as the DE social group or those in rented accommodation are lagging behind. PPM customers are a little less likely than Direct Debit customers to have switched to date, notwithstanding recent switching figures, but the lowest penetration of switchers is found among the quarterly cheque/cash payers. By nation there has been some measurable difference in electricity switching, with Scotland and Wales lagging behind England, which may relate to: (i) the strong regional identities of the former regional electricity incumbents; (ii) the relatively high number of electricity only customers who therefore cannot benefit from dual fuel deals; and (iii) a number of customers using dynamic teleswitches which makes it difficult to switch supplier.

1.8. Experience of switching is widespread, but not frequent – most switchers (52 per cent of either fuel) have only switched once. Multiple switchers are in a minority and are more likely to be found among the higher social classes, or, perhaps surprisingly, PPM customers. The trend in switching is towards using a single company for both fuels: 71 per cent of recent switchers switched both fuels in the past year and now use one company only. Some disadvantaged groups are less likely to have switched both fuels.

1.9. Of those who have switched supplier in the past year, over half (53 per cent) did so as a reaction to contact with a salesperson, whether in person or on the phone. These are more likely to be from disadvantaged groups, including PPM customers. Most of them claim their decision to switch was based on the assertion they would

¹¹⁵ National Consumer Council 2005, cited in OFT/Ipsos MORI, 'Personal current accounts in the UK', 2008.

save money and that it would be cheaper than their current supplier. When asked to be specific about the salesperson's claims, 68 per cent said the claim was to be cheaper than the current supplier. However 18 per cent reported their salesperson as claiming to be cheapest on the market. This proportion is higher for disadvantaged groups, for example the state-supported group E. PPM customers are more likely to have been told this too, but quarterly cheque/cash payers are most likely of all.

1.10. Recent switchers are mostly satisfied with all aspects of the experience. More than three-quarters (77 per cent) are satisfied with how smoothly the switch took place and their choice of supplier. Fewer, but still a majority, are satisfied with the amount they believe they saved (61 per cent), though only 11 per cent are dissatisfied. The remainder do not know or are unable to judge. Some vulnerable groups are notably dissatisfied with the savings made, including PPM customers. For example, 23 per cent of PPM customers are dissatisfied with this aspect. They are also more dissatisfied with the accuracy of information given (20 per cent of PPM customers), though PPM customers are more satisfied than others with how smoothly the switch took place (84 per cent of gas PPM customers satisfied).

1.11. Despite fairly good awareness of competing companies, most recent switchers completed their transaction without a complete picture of offers in the market – just 30 per cent considered other deals. Disadvantaged customers are more likely to have made their decision without comparison with other deals – just 15 per cent of DEs, 19 per cent of PPM customers and 12 per cent of quarterly electricity customers considered other deals. Where a salesperson was involved just 15 per cent of all recent switchers considered other deals.

1.12. Price comparison websites were the principal source of other information at the time of the switch – used by 60 per cent of recent switchers who considered other deals. This compares favourably to the personal current account market, for example, where only around a fifth are reported to use such sites¹¹⁶. PPM customers rely disproportionately on the advice of friends and family (29 per cent, compared to 10 per cent for all customers); quarterly payers are often more dependent on other suppliers' salespeople (34 per cent for electricity quarterly, compared to 8 per cent for all customers).

1.13. Internet access is skewed towards higher social classes and the under 64s. PPM customers and especially quarterly payers have a lower internet penetration. Switchers are more likely to have internet access than non-switchers. Access is perhaps less of an issue than actual usage – only a minority of those with access use the internet to compare gas and electricity prices (38 per cent). Particularly low users comprise the disadvantaged groups including PPM customers and quarterly payers. Even fewer use the internet to find out about the suppliers themselves or the process of switching. Just 25 per cent of those with access to the internet who have

¹¹⁶ OFT/Ipsos MORI, 'Personal current accounts in the UK', 2008.

switched recently did so on the internet. This falls to little over one in ten of the various disadvantaged groups.

1.14. Future intentions to switch energy supplier are fairly low – just one in three are at least fairly likely to switch at some time in the future, falling to 23 per cent in the next 12 months. Recent switchers are more likely to switch again – 34 per cent are at least fairly likely to switch (again) in the next 12 months, compared to 19 per cent of non-switchers. Intentions to switch among disadvantaged groups such as DEs and PPM or quarterly payers are much lower – the higher social class groups are perhaps more likely to plan further switching, whereas switching by PPM users, for example, is more reactive to sales calls. Those who have never switched before are much more likely to reject switching in future – 69 per cent of non-switchers say they are unlikely ever to switch: 26 per cent of all customers.

1.15. Customers are often unsure what savings they would need to be offered to make them switch. Those able to give figures tend to express them in a range of different frequencies (weekly, monthly etc), greatly complicating any potentially meaningful communication with them. Many customers do not have any idea at all of the savings they might require to make them switch – dual fuel customers are most likely to be able to come up with a figure. Some of the figures given for desired savings are clearly unrealistic, the result of either ignorance of what is possible, or deliberately inflated demands in some cases, perhaps to justify reluctance to switch on other grounds. The median annual saving required to switch dual fuel is £178, falling to £162 for previous switchers and to £119 for those likely to switch in future. Non-switchers are most likely to give very high figures, though it is, of course, realistic that someone who has never switched could make larger savings than a previous switcher.

1.16. Most people feel confident about switching in general terms, but a majority find the number of tariffs confusing and think it is too hard to work out whether they would save by switching. Customers have contradictory views of suppliers; a majority being happy with their supplier, but almost as many believing some companies are more trustworthy than others. They are deeply split on whether suppliers try and do the best for their customers, whether there are real differences between them and whether it pays to stay loyal. They are also split on whether it is pointless to switch because suppliers all increase their prices at the same time. A strong majority is willing to condemn salespeople as untrustworthy, yet general attitudes show that most people prefer to talk to a salesperson when buying something.

1.17. Scepticism about salespeople is highest among the DEs and especially PPM customers, perhaps surprisingly, given the proven importance of salespeople in facilitating switching among these groups. Disadvantaged groups more broadly tend to show more loyalty towards suppliers and to perceive less difference between them.

1.18. Worries and concerns about switching are a major issue. Almost half worry that if they switch things will go wrong and over half worry the service may be worse. Switching rates in the past year among these are lower than those of all customers.

These worries highlight the differences between perception and reality, particularly among disadvantaged groups. The reality is that the vast majority of switchers are satisfied with how smoothly the switch went, yet 58 per cent of non-switchers worry that things will go wrong. The alternative view of this is that one in ten switchers being dissatisfied with the process is actually unacceptably high as a failure rate; particularly given their likelihood of telling many others about their problems. In this context, customers may have a perception that their concerns are justified, and this presents a bigger communications challenge. In support of this, there are significant levels of concern even among those who have experience of previous switching.

1.19. Despite saving money being the key motivation to switch (as shown by our recent omnibus research) there are widespread doubts among customers about the benefits in terms of money saved. Whilst just under half agree switching is a good way to save money (and even among switchers this rises to only 57 per cent), a majority (51 per cent) believe the savings are not worth the hassle of switching or that they will only last a short time (57 per cent). Non-switchers are much more likely to agree with both statements, but significant proportions of switchers also agree (45 per cent and 48 per cent respectively). Furthermore, just a third of customers say they check regularly to see if it is worth switching.

1.20. Our customer segmentation defines six segments which provide an alternative way of viewing domestic energy supply customers. This shows that, for some segments, the market is vibrant and dynamic. The Confident Deal Seekers and the Unhappy Potential Switchers, together constituting one in three customers are previously likely to have switched, and are likely to be the source of much future activity. The Disengaged, despite their high level of past switching, are disillusioned and cynical about suppliers and the ability of the market to deliver benefits that will help their (often dire) financial position. Loyalists and the Underconfident and Nervous are by no means non-switcher groups, but their future likelihood of switching is generally poor. The Loyalists, confident in their knowledge of the system, need a very persuasive deal to agree to a switch, though recent price rises may provide the kind of dissatisfaction to prompt action from them. The Underconfident and Nervous require reassurance about everything that could go wrong, though their impulsive nature means they could still be prey to direct sales approaches. Finally the Older-Happy As They Are segment - about a quarter of customers - are likely to show least switching activity of all, and least engagement with the market. For them, the market is working to some extent in the longer term (almost half of them have switched) but it is a very slow process. Just 4 per cent intend to switch in the next 12 months, so on average, their level of churn is very low.

1.21. The rising levels of switching imply that the domestic energy supply market is working, but the evidence of this survey is that some customers are not experiencing the full efficiency and benefits of the market.

1.22. Domestic energy customers are well aware of the ability to switch supplier and, at the same time, aware of enough of the players in the market to ensure that a functional market can operate. Some structural distortions due to historic factors (previous British Gas monopoly, hegemony of regional companies in Scotland and, to

a lesser extent, Wales) still affect the shape of the market, but are not major barriers. The size of the Big 6 means they do have some advantages over the smaller brands, but the mass of competing tariffs offered by them whilst presenting choice, means comparisons can be difficult.

1.23. This survey shows encouraging levels of switching compared to earlier work, despite exposing some underlying weaknesses of the market. Notably encouraging is the profile of recent switchers in the last 12 months which goes some way towards correcting the imbalance in the profile of those who have “ever switched”, focusing as it does on a greater proportion of disadvantaged groups such as DEs, those in rented accommodation and especially PPM customers. This represents a weakening of one of the key barriers to market success, the disparity in participation by socio-economic factors. There is some evidence, however, that this has happened primarily through the medium of salesperson visits, and this emphasises a separate set of problems, which may act against the smooth working of the market in the longer term. A significant proportion of “reactive” sales were made with no consideration of competing offers from other suppliers, particularly those involving salespeople. This is, of course, part of a salesperson’s job, but if it means some customers have been saddled with products that are not optimum for them then it will be detrimental to the success of the market in the longer term. Worse still, some salespeople may have misled customers that their offer was actually the cheapest on the market. This may indeed have been so in some cases, but it seems unlikely all could be credible claims. Levels of satisfaction of PPM customers with the actual savings made through recent switches are notably lower than those of other switchers. To most customers, the credibility of energy salespeople is low, and given the desire of many customers to have salespeople help in making major purchases, this could in itself constitute a weakness in the market. Action may be required to police salesperson conduct more effectively to boost confidence in them in the longer term.

1.24. Lack of information on which to base a considered decision may be a factor in restricting the effective operation of the market. Despite high levels of satisfaction with recent switches, less than one in three recent switchers considered more than one offer. While most of those switchers who considered other deals made use of price comparison websites, it is by no means all of them, and some disadvantaged customers, in particular, were likely to rely on friends and family (in the case of PPM customers) or other salespeople (in the case of quarterly payers) for information. Disadvantaged customers have somewhat lower levels of internet access than others but, even where they have access, are much less likely to use the internet to find out about comparative prices and especially to actually make the switch. Boosting the levels of usage of the internet by disadvantaged customers would have the effect of empowering them, allowing them to compare across the whole market even when approached by salespeople and increase their chances of making the right choice of energy supplier and tariff. More people making the right decisions can only make the market more successful.

1.25. Future intentions to switch supplier are relatively low (though intentions for the next year match the current rates of annual switching). Of most concern is the group comprising one quarter of all customers who have never switched and do not intend to do so. These are in danger of missing out completely on the benefits of switching to a better deal. Many customers have over-optimistic expectations of what they

could save by switching, especially those with little experience of it. Although this does naturally vary according to individual circumstances, it seems clear that if reality cannot match expectations then customers are likely to be disappointed. This could also be a measure of the communication of likely savings in the past, which may not have been wholly successful. It is certainly a challenge, since the findings show that customers habitually consider savings at several different frequencies, some thinking in terms of weeks, others months etc. This makes the task of managing expectations very difficult at least unless and until a true “currency” of savings, perhaps akin to the financial industry’s APR, is established.

1.26. It is clear that, while many people are comfortable with the energy supply market as it stands, many are also confused on specific details such as the range of tariffs or the difficulty of calculating whether one would actually save money. These, and others, constitute real attitudinal barriers to switching, and hence many are under confident and nervous about the implications of making a switch. Findings suggest there are many aspects of the market and the suppliers that people know little about for sure, and that many judgements e.g. about the value of loyalty to suppliers or the credibility of salespeople, may be made based on gut feelings and perhaps media coverage, as much as experience and reliable information. Again the need is for better, more authoritative information to support decision-making, coupled with a strong note of reassurance on the areas that cause real anxiety. In most cases it can be shown that these perceptions of potential risk in the switching process are at odds with the reality of most customers’ experiences of it.

1.27. A key area for reassurance and affirmation of the efficacy of the competitive process is that of saving money – the cornerstone of the appeal of switching supplier. Customers are far from convinced that this will follow from switching supplier and, most damning of all, only 57 per cent of switchers agree that switching is a good way to save money. If a positive message is not going out from previous switchers then it is no surprise the intention to switch from the public at large is relatively weak.

1.28. Our segmentation shows that the barriers within the domestic energy supply apply more to certain segments than to others. Some wider issues have particular resonance for specific groups within the customer base, not affecting greatly those who are enthusiastic customers in the market, but providing the motivations (and excuses!) for many of the less enthusiastic groups, reinforcing their negative feelings about switching. The information needs of the segments are therefore subtly different, though this is mainly a difference in emphasis rather than substance – it should be possible to devise a set of messages that both reassure and establish best practice in getting the most out of switching supplier, messages that are relevant to all segments, from which customers can take what they need.

June 2008

Appendix 5 - Wholesale costs and retail prices

This Appendix reports our analysis of the relationship between wholesale costs and retail prices. Our econometric analysis finds a significant long-run relationship between wholesale costs and retail prices for a range of hedging models and retail prices between September 2002 and September 2008.

The evidence on whether firms tend to pass through wholesale costs to a greater extent when prices rise as compared to when they fall is inconclusive, as the period for which we can construct a representative wholesale cost series only contains a limited period with price falls.

Background

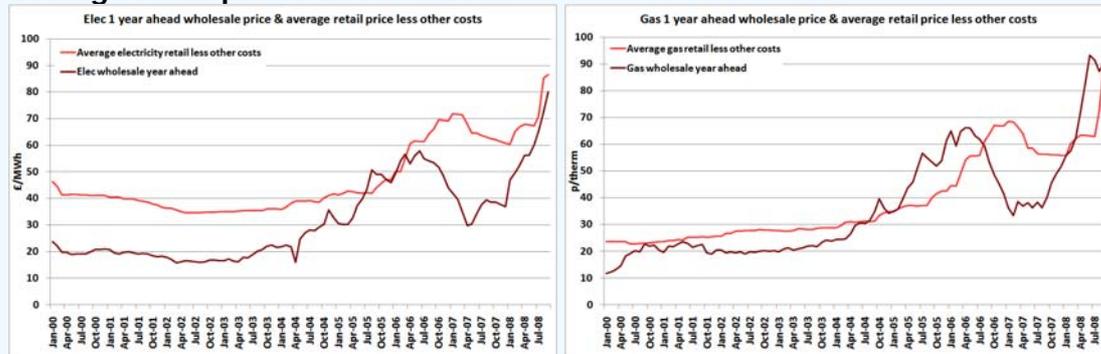
1.1. Wholesale costs now account for around 50-70 per cent of a consumer's energy bill and are the main driver for retail price changes. Pass-through of these wholesale costs to consumers can be indicative of the level of competitive pressure faced by suppliers when setting prices. Our analysis examines the relationship between suppliers' wholesale costs and their retail price setting.

1.2. Retail prices are markedly smoother compared to wholesale prices. Unlike some commodity based retail markets, such as petrol and diesel, domestic gas and electricity suppliers do not change their retail prices frequently. Suppliers may be responding to customers' preference for stable prices, in order that they can plan overall household budgets. In addition, firms face significant cost when they change retail prices, re-calibrating prepayment meters, sending letters informing customers and re-programming their billing systems¹¹⁷.

1.3. Our results should be considered in the context of movements in energy prices over this period. Though wholesale costs have fallen for some months, the majority of the period is characterised by rising prices and costs. The following charts illustrate these movements, which are consistent across both gas, electricity and dual fuel wholesale cost and price series. They also show that our analysis below begins at a time where spread between wholesale costs and retail prices was relatively high.

¹¹⁷ These types of costs are generally referred to as 'menu costs' in the economic literature.

Chart 1: History of electricity and gas wholesale prices (one year ahead) and average retail prices 2000 to 2008



These charts show wholesale price for one year ahead, not estimated wholesale cost.
Source: Heren, Ofgem analysis

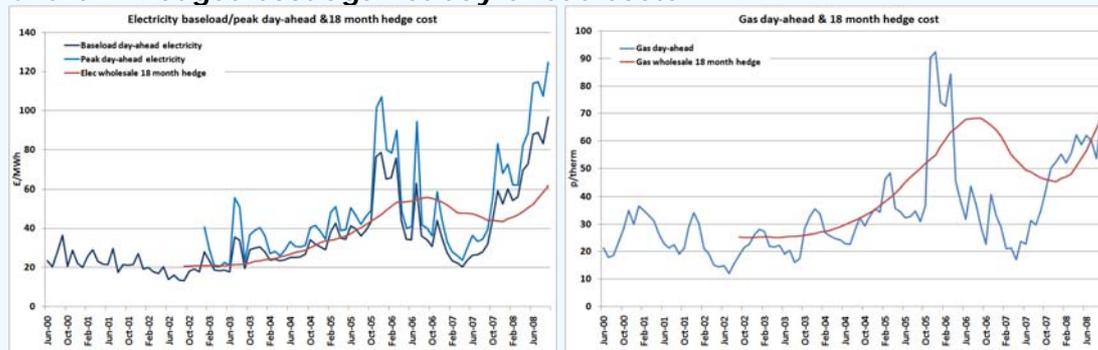
Data

Retail prices

1.4. Average retail prices are constructed using monthly 'Big 6' prices and, earlier in the series, those of suppliers since bought by, or merged with, the Big 6. A national average price by payment method is constructed by averaging prices in each region, then nationally. Finally, these averages are weighted according to the proportion of customers in the UK on each payment method. We also calculate separate series, for in-area and out-of-area retail prices. Dual fuel retail price data are available from January 2004.

Wholesale costs

1.5. In order to reduce their exposure to potentially large changes in wholesale energy prices, firms buy much of their energy on forward markets. This helps to smooth suppliers' costs and provides a degree of certainty over future costs. The following charts illustrate the smoothing and delaying effect of hedging (based on the strategy explained below) when comparing wholesale prices against costs.

Chart 2: Hedged cost against day-ahead costs

Source: Heren, Ofgem analysis

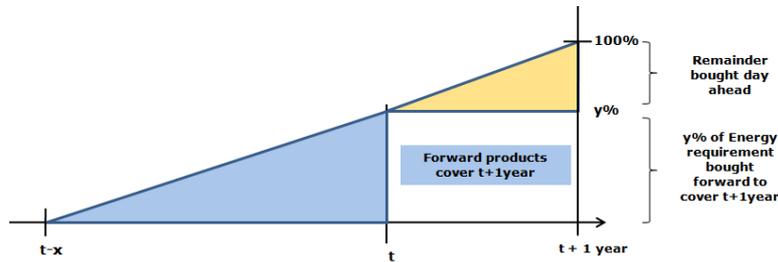
1.6. Current wholesale prices are, therefore, not an accurate indication of suppliers' current wholesale costs. Consequently, there is not likely to be a strong relationship between current wholesale and retail prices. As a result, analysis of pass-through requires estimating suppliers' forward purchasing strategies (though in the long-run hedging should not affect how much consumers pay for their energy, other than reducing the cost of risk associated with wholesale price volatility).

1.7. Our approach to investigate pass-through is based on two key stages; the first involves estimating the relationship between wholesale prices and wholesale costs, while the second isolates the pass-through of wholesale costs from other effects.

1.8. Our wholesale cost model estimates the expected cost at time t of supplying energy for the next year¹¹⁸. We use prices for seasonal and quarterly electricity and gas products respectively. Though arbitrage between long and short term products is not perfect, we trade this off against model complexity. y per cent of energy is bought forward, with the remaining $(100-y)$ per cent bought in the day-ahead market over the year. Consumption is weighted by quarter and electricity shaped for peak/baseload use. Losses are included in suppliers' energy requirements. Product prices are averaged over the buying period, from $t-x$ to x , assuming a constant rate of buying. Products are bought on a rolling basis, each beginning x days before delivery¹¹⁹. The diagram below illustrates this approach:

¹¹⁸ This cost estimate is based on traded prices for quarterly and seasonal forward products which cover the relevant period, t to $t+1$ year.

¹¹⁹ Though in the longer wholesale cost series (to December 08) the model assumes buying starts x days before t rather than x days before delivery.



1.9. Since the wholesale cost model requires up to 2 years of pricing data prior to each point estimate, our price data beginning in Q3 2000 limits the wholesale cost series to starting in Q3 2002. Liquidity was less well established before this, meaning prices are a less reliable indicator of suppliers' costs. In addition, price controls were not fully removed until 2002, clouding any retail/wholesale comparisons prior to this date. The wholesale cost model calculates quarterly wholesale cost, while quarterly cost values are converted to a monthly series by taking a straight line average between quarterly points. Wholesale prices are sourced from ICIS Heren's price reporting services.

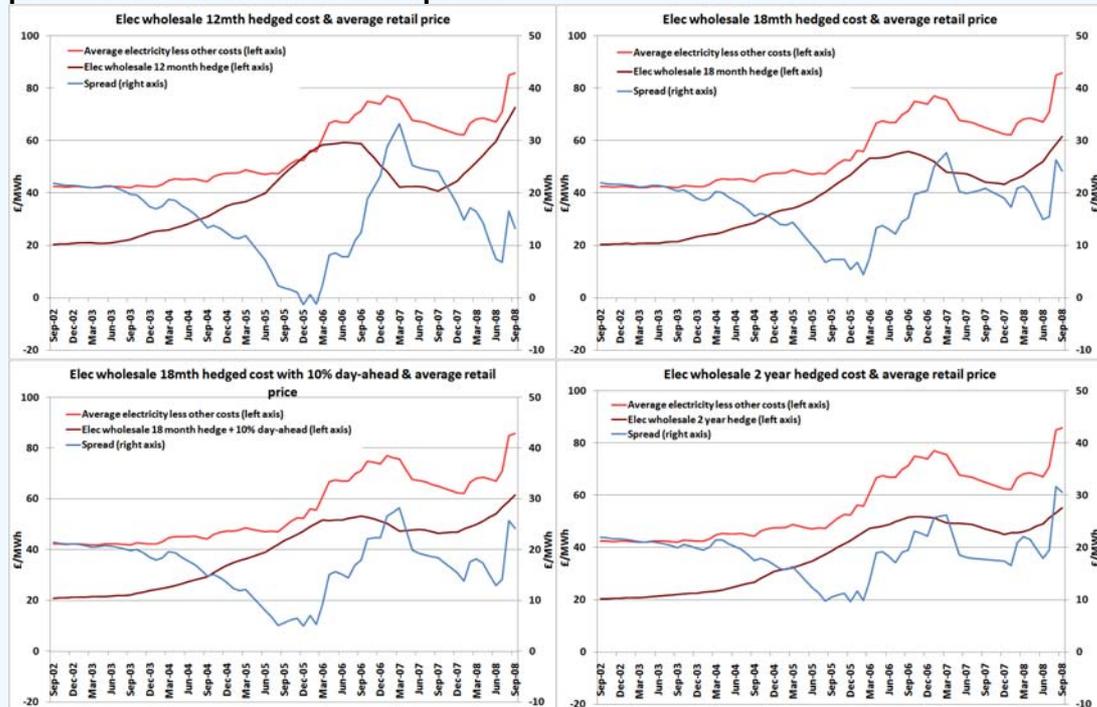
1.10. We estimate wholesale cost for the market as a whole. Hedging strategies vary across suppliers and individual suppliers may change their strategies through time in reaction to market conditions. Estimating aggregate cost allows for individual variations around an average market value. Nonetheless, we estimate a variety of wholesale strategies to test the sensitivity of this analysis to different hedging assumptions. The range of strategies is based on information made available to us in responses to our Call for Evidence.

Table 1: Summary of hedging strategies

(y)% of energy requirement bought forward	Period over which product is bought before delivery (months)	(1-y)% of energy requirement bought on day-ahead market
100%	24	0%
100%	18	0%
90%	18	10%
75%	18	25%
100%	12	0%

1.11. The following charts illustrate the effect of these assumptions on wholesale costs and on 'spread' (light blue line) between retail prices less other costs (light red line) and wholesale costs (dark red).

Chart 3: Electricity wholesale costs (various hedge models), average retail prices less other costs and spread



Source: Heren, Ofgem analysis

1.12. These charts illustrate that different hedge cost assumptions do alter the timing and extent of implied pass-through. However, the general pattern of wholesale costs remains similar.

Other costs

1.13. We estimate the following other costs on an annual basis. A monthly series is constructed by taking straight line averages between each point.

- network charges,
- cost to serve,
- environmental costs: EEC, CERT, ROCs¹²⁰,

¹²⁰ Energy Efficiency Commitment (EEC) which was replaced by the Carbon Emissions Reduction Target (CERT).

- metering,
- balancing,
- electricity losses,
- gas storage, and
- cost of churn.

Modelling pass-through

1.14. To analyse pass-through, we are seeking to find a relationship between wholesale costs and retail prices. We therefore specify a simple model pass-through with a linear functional form:

$$R_t = \alpha_1 + \beta_1 W_t + \beta_2 C_t + gt + e_t \quad (1)$$

Where:

- R_t is national average retail price
- α_1 is a constant
- W_t is hedged wholesale cost variable
- C_t is other costs variable
- t is a linear time trend
- $\beta_{1,2}$ are coefficients on wholesale costs and other costs
- e_t is the residual or unexplained effect

1.15. Economic intuition tells us that upstream costs faced by the whole industry will be fully passed through to retail prices. We therefore also estimate the relationship between retail prices less other costs and wholesale costs (which effectively assumes a coefficient of 1 on other costs):

$$R_t = \alpha_1 + \beta_1 W_t + 1C_t + gt + e_t \quad (2)$$

therefore $r_t = R_t - C_t = \alpha_1 + \beta_1 W_t + gt + e_t \quad (3)$

Where: r_t is national average retail price less other costs

1.16. We also take a third approach, assuming no relationship between retail prices and other costs, comparing these results for consistency with (3):

$$R_t = \alpha_1 + \beta_1 W_t + gt + e_t \quad (4)$$

Series properties

1.17. Regressions based on variable levels return meaningful, non-spurious estimates if all variables are stationary, or form a 'cointegrating relationship'. We therefore firstly test our series for stationarity¹²¹ and, failing this condition, look for evidence of cointegration. Cointegration is present only when variables are integrated of the same order and a combination of these integrated of an order lower. Both conditions are necessary.

1.18. We test for stationarity using a number of tests¹²²: the Augmented Dickey Fuller test (ADF); the Generalised-Least-Squares Dickey-Fuller test (GLS-DF); and the Kwiatowski-Phillips-Schmidt-Shin test (KPSS)¹²³. In doing so we follow standard practice, given that no one test is unambiguously preferential. Given these tests do not always provide consistent results, we use the majority result.

1.19. The results of our tests for stationarity suggest most series are nonstationary and integrated of order 1, $I(1)$. Notably, however, gas and electricity other costs are not $I(1)$ and cannot be included in our specifications above. We therefore discard specification (1) in favour of (3) and (4). Further, average gas retail prices are not $I(1)$ according to the ADF and GLS-DF, though the KPSS indicates that they are. We do test specifications which include these prices, but expect these not to return a significant result.

Cointegration

1.20. Having found most of the series to be $I(1)$, we look at the second condition for cointegration. We test the residuals of the estimated model are an order lower; in this instance stationary. Before testing residuals we ensure that our preferred specification is purged of heteroskedasticity and autocorrelation. These can both lead to incorrect statistical inference.

1.21. Heteroskedasticity relates to error terms presenting non-constant variance. To test for its presence, we use the White test in preference to the Durbin-Watson statistic. Where applicable we then correct using White's standard procedure.

1.22. Autocorrelation occurs when the error terms is correlated to itself over time. We test for autocorrelation using the Lagrange-Multiplier (LM) residuals test¹²⁴ and

¹²¹ A variable is loosely said to be stationary if the mean of the variable is invariant over time.

¹²² All three account for autocorrelation.

¹²³ The tests for stationarity require the stipulation of lagged variables included within the test. We have chosen these lags based on the Schwartz Information Criterion and a 5% p-value.

¹²⁴ When using the LM test we begun with 12 lags (a maximum plausible figure) and removed lags to reach the optimum specification according to the SIC. H_0 in the LM test is that the residuals are linear, so

re-specify our model as necessary by including autoregressive terms in preference to moving average terms. We use the Schwarz Information Criterion (SIC) to select our model and use the LM test to ensure the final specification is not affected by autocorrelation. For example, (3) can be re-specified as follows:

$$r_t = \alpha_1 + \beta_1 W_t + \phi_1 AR_1 + \dots + \phi_m AR_m + \phi_1 MA_1 + \dots + \phi_n MA_n + gt + e_t \quad (5)$$

Where:

- AR_{1-m} are autoregressive terms of order 1 to m
- MA_{1-n} are moving average terms of order 1 to n
- ϕ_{1-m} are coefficients on autoregressive terms
- ϕ_{1-n} are coefficients on moving average terms

1.23. We then use the ADF to test for stationarity in the residuals of (5), as it is the weakest of our panel and least likely to return a false positive. Specifications on I(1) variables with stationary variables describe a cointegrating long-run equilibrium.

Test for asymmetry

1.24. Suppliers are frequently accused of passing through wholesale cost changes differently for increases and decreases. By adding an interacting dummy variable to (5) we test whether there is a significant difference between β_1 when costs are increasing and decreasing. In all other respects the model is tested and selected according to the methodology described above. Our interacting dummy is 0 if wholesale costs are decreasing and equal to wholesale costs if they are increasing:

$$\begin{aligned} \text{If } W_t > W_{t-1} \text{ then } D_t &= W_t \\ \text{If } W_t < W_{t-1} \text{ then } D_t &= 0 \end{aligned}$$

1.25. We therefore estimate the following long-run specification;

$$r_t = \alpha_1 + \gamma D_t + \beta_1 W_t + \phi_1 AR_1 + \dots + \phi_m AR_m + \phi_1 MA_1 + \dots + \phi_n MA_n + gt + e_t \quad (6)$$

Therefore, when $W_t > W_{t-1}$ pass-through is equal to $(\gamma + \beta)$, when $W_t < W_{t-1}$ pass-through is equal to β .

a p-value > 0 indicates that autocorrelation is not a significant problem for the specification estimated.

Illustrative result

1.26. The following example illustrates how our approach has been deployed. It shows electricity retail price against wholesale costs based on an 18 month hedge. The final preferred specifications are shown below and Table 2 summarises the results.

$$r_t = \alpha_1 + \beta_1 + \phi_1 AR_1 + gt + e_t \quad (7)$$

$$r_t = \alpha_1 + \gamma D_t + \beta_1 W_t + \phi_1 AR_1 + \phi_1 MA_1 + gt + e_t \quad (8)$$

Table 2: Results for average electricity retail, 18 month hedge cost preferred specification

Dependent variable: Electricity average retail price		Coefficient	T-value	P-value	Lower Bound (95%)	Upper Bound (95%)
Excluding Dummy	Constant	18.557	1.12	0.26	-	-
	Electricity wholesale cost (18 month hedge)	1.002	2.30	0.02	0.136	1.869
	Autoregressive variable order 1	0.938	12.13	0.00	-	-
	Number of observations	73				
	R - squared	0.972				
	Adjusted R - squared	0.971				
	Lagrange Multiplier test on final specification (p-value)			0.08		
Engel-Granger (p-value)		-7.07(-2.90)	0.00			
Including Dummy	Constant	16.491	1.06	0.29	-	-
	Electricity wholesale cost (18 month hedge)	1.104	2.60	0.01	0.257	1.952
	Electricity wholesale cost dummy	-0.076	-2.65	0.01	-0.134	-0.019
	Autoregressive variable order 1	0.908	7.53	0.00	-	-
	Moving average variable order 1	0.392	2.35	0.02	-	-
	Number of observations	72				
	R - squared	0.981				
Adjusted R - squared	0.980					
Lagrange Multiplier test on final specification (p-value)			0.48			
Engel-Granger (p-value)		-8.09(-2.90)	0.00			

OLS estimation, models selected using SIC. Serial correlation modelled and standard errors estimated using White's procedure

1.27. In electricity there is a significant relationship between wholesale costs estimated by an 18 month hedging strategy and average retail prices. Pass-through is estimated at a £1.00/MWh change in retail prices for every £1/MWh change in wholesale costs, but at a 95 per cent confidence level there is a change in retail prices of between £0.14-1.87/MWh for every £1/MWh change in wholesale cost.

1.28. The evidence on whether firms tend to pass through wholesale costs to a greater extent when prices rise as compared to when they fall is inconclusive. The pass-through coefficient is significantly different when costs are increasing, being £0.08/Mwh less for every £1/MWh increase compared to wholesale cost decreases. However, the 95 per cent confidence interval is wide; we can be 95 per cent certain that pass-through differs by between £0.02-0.13/MWh when costs are decreasing. And, importantly, as discussed above, the majority of the period is characterised by increasing costs and prices. This makes it difficult to determine the significance of

the results in periods of falling prices. In this case wholesale costs are decreasing for only 18 of 73 observations.

Results

1.29. We tested average retail prices as well as, in-area and out-of-area retail prices against each of the four hedging strategies above, both including and excluding an interacting dummy variable. We did not test variables which were not integrated of the same order, with the exception of average gas retail prices. This accounts for the different number of estimations per fuel outlined in Table 3, which provides a summary of results from all tested specifications.

Table 3: Summary of results

Summary of Results based on hedged cost - all retail price variations		Electricity	Gas	Dual Fuel
	Number of estimations	18	24	6
	Significant estimations	13	6	3
Models excluding dummy	Minimum significant wholesale coefficient	0.82	1.08	0.67
	Maximum significant wholesale coefficient	1.59	1.54	0.85
	Minimum significant lower bound on 95% confidence interval	0.07	0.00	0.02
	Maximum significant lower bound on 95% confidence interval	3.07	2.93	1.69
<hr/>				
	Number of estimations	18	24	6
	Significant estimations	13	7	4
Models including dummy	Minimum significant wholesale coefficient (decreases)	1.01	1.38	0.64
	Maximum significant wholesale coefficient (decreases)	1.57	1.31	1.3
	Minimum significant lower bound on 95% confidence interval	0.26	0.26	0.03
	Maximum significant lower bound on 95% confidence interval	2.81	2.71	2.55
	Minimum significant dummy coefficient	-0.08	-0.16	-0.07
	Maximum significant dummy coefficient	-0.06	-0.11	-0.05
	Minimum significant lower bound on 95% confidence interval	-0.17	-0.30	-0.12
	Maximum significant lower bound on 95% confidence interval	-0.02	-0.01	0.00

Reported coefficients and confidence intervals based on significant models.

R-squared values

1.30. R-squared values are very high across all tested specifications. Such high values can be indicative of spurious regressions. However, given cointegration has been proven, the high R-squared can reliably be taken to suggest good model fit.

Equilibrium relationships

1.31. In gas all hedge models were the same order of integration meaning the second condition for cointegration could be tested, though in electricity the 12 month hedge cost series was not I(1), nor the dual fuel 2 year hedge cost. These variables could, therefore, not be tested.

1.32. In electricity and dual fuel the majority of specifications tested indicate that there is an equilibrium relationship between wholesale costs and both incumbent and non-incumbent retail prices, regardless of whether costs are removed from retail price or excluded - (3) and (4). Gas specifications based on in-area retail price do consistently indicate a significant relationship. However, specifications based on average and average out-of-area gas retail prices do not exhibit a long-run relationship. This was expected as the ADF and GLS-DF indicated that average gas prices are not integrated of the same order as costs.

1.33. According to the methodology outlined above we also tested a longer series, beginning in January 2000, based on average retail prices (and average retail prices less other costs) and monthly average one year ahead wholesale prices (rather than estimated wholesale costs), excluding and including an interacting dummy. We found no significant relationship in any of these estimations¹²⁵. This may be because year-ahead forward prices are not an accurate representation of suppliers' costs.

Pass-through coefficients

1.34. Pass-through coefficients range widely across specifications. This may in part be due to correlation with the time trend. Confidence intervals on pass-through coefficients are also very wide.

1.35. Magnitude of pass-through is systematically variant on which wholesale cost model is used. Cost models based on shorter hedges exhibit lower pass-through, because shorter hedges produce more volatile costs than longer hedges.

Asymmetry

1.36. As mentioned above the characteristics of our wholesale cost curve may affect tests for asymmetry, as the number of observations where costs are decreasing is limited (13 of 73 or 26 of 76, depending on hedging strategy). Furthermore, the effect of wholesale cost changes on retail prices is delayed. Isolated periods of wholesale cost decreases amongst long term rises may have only a limited effect. Consecutive periods of falling wholesale costs are even fewer.

1.37. Our results are therefore inconclusive in determining whether retail prices respond asymmetrically to changes in retail prices. Most models which are valid without a dummy did reveal a significant dummy when included and some models which were insignificant without a dummy were significant when a dummy was included. In all cases the dummy coefficient was negative. However, the validity of

¹²⁵ This despite testing for structural breaks using a Chow test and where found, testing separate estimations either side of the significant structural break.

the negative coefficient is questionable given the very wide 95 per cent confidence intervals; in many cases very close to 0. It is hard therefore rule out the effect of other factors on this dummy, such as our analysis beginning in a period where spread was high. To robustly estimate this coefficient we require a longer sample period including a greater prevalence of downward wholesale price movements.

Further work

1.38. The following further work could provide further insight into the relationship between wholesale costs and retail prices. In particular:

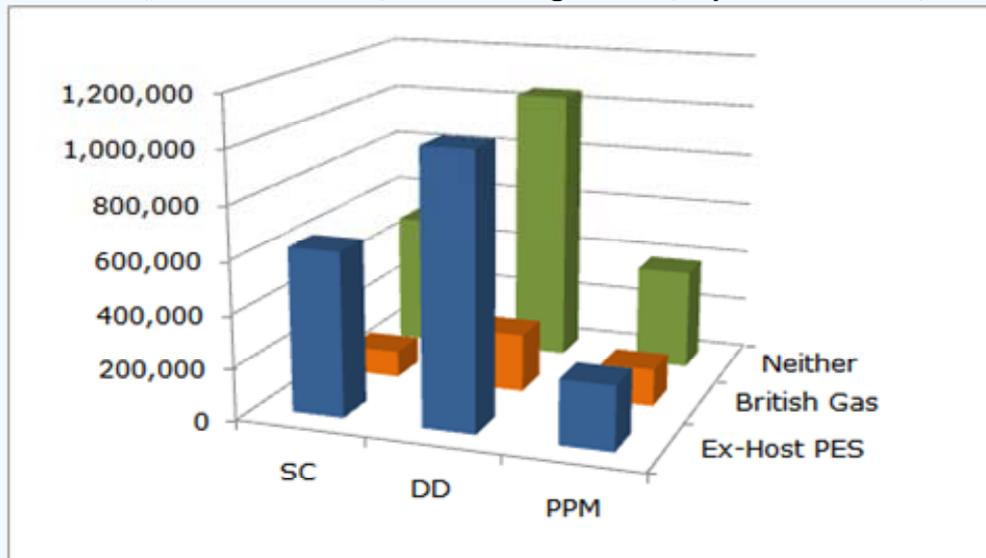
- We only estimate the long-run element of an equilibrium relationship. Estimating the error-correction element of the relationship could in particular reveal the speed of retail price response and whether this is symmetric;
- Further testing for structural breaks would reveal whether our coefficient estimates are biased by structural breaks in the underlying series;
- Although our linear specification displays a very good model fit, testing models in log form would provide further ratification of our results; and
- 'Other costs' are highly averaged in this model, a probable reason for their insignificance in testing. The effect of other costs on pass-through could be more accurately estimated by estimating other costs to a higher granularity.

1.39. Further details of the econometric results are available on request.

Appendix 6 - Consumer segmentation

1.1. This Appendix provides, in graphical format, the data on the number of customer accounts and average annual bills used to derive the estimates of consumer impact presented in Chapter 8.

Figure 1: Electricity-only (i.e. off the gas grid) - Consumer segmentation, accounts (December 2007) and average bills (September 2008)

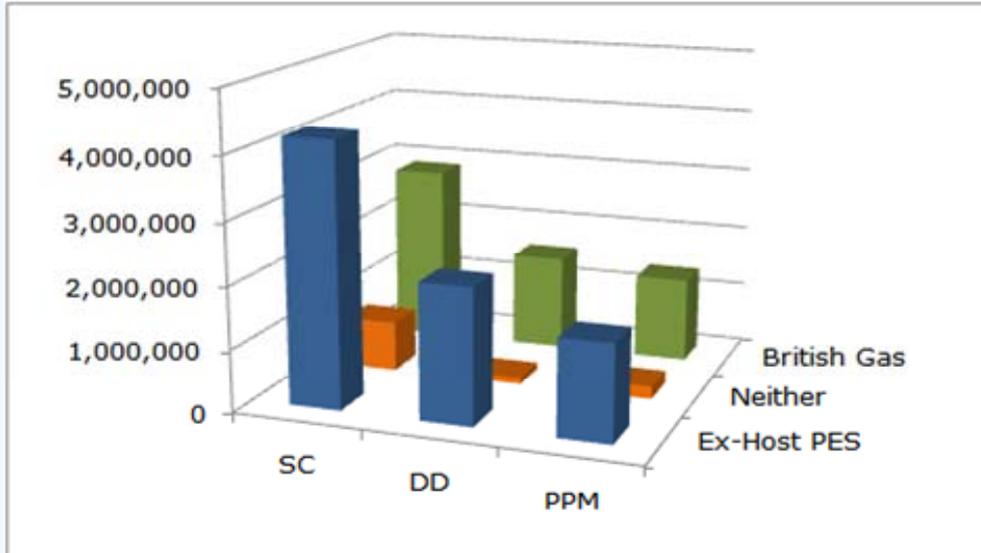


Economy 7 (6600 kWh pa)	SC	DD	PPM
Ex-host PES	703	670	713
Neither	665	638	676
British Gas	709	669	720

Source: Ofgem

Note: Average bills based on annual consumption of 6,600 kWh of electricity per year

Figure 2: Non-dual fuel - Consumer segmentation, accounts (December 2007) and average bills (September 2008)

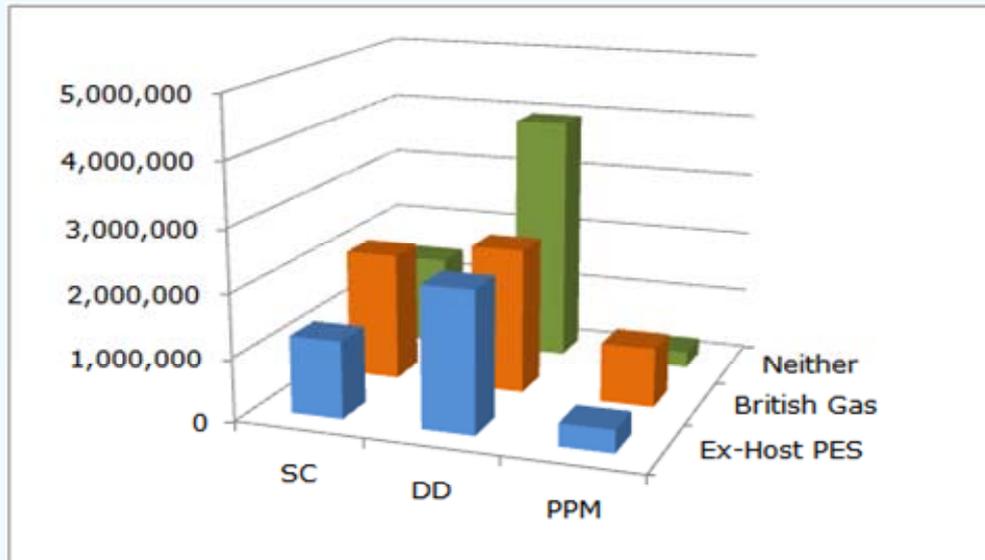


Elec only (with and without gas)		SC	DD	PPM
Ex-host PES		487	471	494
Neither		462	444	469
British Gas		461	421	476
Gas only		SC	DD	PPM
Ex-host PES		793	765	827
Neither		813	781	830
British Gas		882	834	923

Source: Ofgem

Note: Average bills based on annual consumption of 3,300 kWh of electricity and 20,500 kWh of gas per year.

Figure 3: Dual fuel - Consumer segmentation, accounts (December 2007) and average bills (September 2008)



Dual fuel	SC	DD	PPM
Ex-host PES	1265	1197	1317
Neither	1260	1190	1297
British Gas	1328	1240	1399

Source: Ofgem

Note: Average bills based on annual consumption of 3,300 kWh of electricity and 20,500 kWh of gas per year.

Appendix 7 - Non-domestic qualitative research

This Appendix is a summary of the non-domestic qualitative research. It was prepared by FDS International Ltd.

1.1. In February 2008 Ofgem announced it would be launching an investigation into the electricity and gas markets for households and small businesses.

1.2. As part of the broader investigation FDS conducted qualitative research among seventy small businesses (1-30 employees) spread across England, Wales and Scotland to explore:

- how they engage with the energy market;
- their understanding of suppliers' offerings and contracts;
- ease of switching and the impact of a supplier's ability to object to a customer switching; and
- the role and impact of Third Party Intermediaries.

1.3. This qualitative study highlighted a number of possible areas of concern arising from:

- small businesses, often on their own admission, paying too little attention to their energy supply;
- energy companies taking advantage of this passivity and lack of interest;
- confusion on the part of some of these businesses as to where to go to get independent advice on tariffs;
- lack of clarity regarding tariffs and contract terms and conditions; and
- with the problem compounded by there being no rules in regard to issues such as no cooling-off period for verbal contracts, and short windows to switch.

1.4. For most small businesses, energy accounts for a low, though rising, proportion of their total business expenses. As such it is a relatively low priority and for some business owners especially, it is not seen as core to their business and is of limited interest to them.

1.5. Some said spontaneously that they expected energy prices to rise over the next 2-3 years and, when prompted, many more expected rises than reductions. Some expected substantial price rises.

1.6. This did not lead to many customers wanting to arrange long-term deals at current prices, although some recognised that if prices were rising energy companies may be more reluctant to allow long deals.

1.7. A few businesses claimed that they would monitor prices more closely and seek out cheaper suppliers if prices rose.

1.8. Most customers admitted to, or displayed, a limited understanding of how their energy bills were made up, and some confessed that they would not necessarily know if they were being charged the correct amount.

1.9. Few are both willing and able to seek out better deals proactively. Some who attempt to do so struggle to compare prices easily on price comparison sites. Price comparison may also be complicated by issues such as length of contracts.

1.10. Many businesses report receiving calls offering them better deals on energy every few weeks, and, for some, the expectation that they would continue to have such opportunities, was a deterrent to making the effort to switch proactively.

1.11. Most of those switching do so reactively in response to contact with sales reps or agents with the switchers often failing to ascertain whether they were speaking to a rep or agent. Decisions frequently appeared to be hurried (especially where customers subsequently regretted their choice), although customers usually made savings, even if only for the first year, as a result of switching.

1.12. Agents were seen as pushy salespeople, only interested in quick sales and rarely did small businesses develop beneficial long-term relationships with Third Party Intermediaries.

1.13. In some respects, the small business market was similar to the domestic market and, as with residential customers, companies had mixed experiences of switching – usually hassle free but sometimes problematic. Difficulties occasionally occurred during the switching process, for example, continuing to receive bills from the previous supplier, or afterwards, for example receiving a large bill months later because the new supplier did not send regular bills straightaway.

1.14. Customers tended not to study their written contracts and often claimed never to have received a contract. This was especially true where contracts were agreed over the phone – a fairly common occurrence. Customers often had a poor understanding of crucial elements such as length of contract, whether price fixed for full duration and indeed, whether they had a contract at all.

1.15. More than one in ten of the businesses surveyed had tried to switch or investigated switching only to find their contract did not allow a get out.

1.16. A few had to pay substantial fees to escape from their contract – or decided not to switch when they discovered these fees were payable.

1.17. This was particularly galling for those who claimed not to have known they were in a contract or who said their contracts had been rolled over automatically without the supplier flagging to the customer that this would happen unless they opted out. The automatic roll-over of contracts was a particular issue for some small businesses, although some recognised they could have done more to check what was happening regarding their contract and supply.

1.18. Business customers were at best fairly satisfied with their energy supplier and often disappointed. They felt that energy companies deliver, at best, moderate standards of service with no attempt to offer value-added services such as energy efficiency advice.

1.19. On the evidence of this study it is common for energy companies to:

- win business through dubious sales practices;
- keep customers through one-sided contracts, with verbal contracts a particular source of confusion;
- exploit the passivity of customers and the fact they have other priorities; and
- appear to make very little effort to retain customers through quality of service.

1.20. The regulations for the energy market tend to assume people running small businesses do not need the same level of protection as vulnerable residential customers. While there is a clear logic for this view our study suggests current regulations may favour energy companies over hard-pressed small businesses, whose owners are not necessarily sharp and astute business people. This study suggests tighter regulation of TPIs and energy companies may be desirable.

1.21. The competitive energy market does not appear to have resulted in:

- companies seeking to deliver high levels of service; and
- small businesses comparing prices easily, and being confident that they are comparing on a like for like basis

1.22. With energy prices rising, more businesses are likely to take an interest in the market, reducing the risk of their passivity being exploited, but the consequences for those who fail to obtain good deals will become more severe.

POSTSCRIPT

1.23. A few days after interviewing was completed the British Chamber of Commerce issued a report claiming that energy suppliers were not giving businesses the same "fair and transparent" service as that received by domestic users.

1.24. BCC argued that, compared to domestic users, businesses were "significantly more vulnerable" to exploitation and unfair practice, partly because:

- domestic suppliers are required to publish their tariffs but there is no regulatory requirement covering business suppliers; and
- domestic contracts allow people to switch every 28 days, but businesses have to sign up to long-term deals.

1.25. David Frost, director general of the BCC said:

"with the economy slowing and energy bills on the rise it is totally unacceptable that hard-pressed businesses are left so open to exploitation by energy suppliers."

1.26. This study provides strong evidence in support of BCC's arguments.

August 2008

Appendix 8 - The Authority's powers and duties

1.1. Ofgem is the Office of Gas and Electricity Markets which supports the Gas and Electricity Markets Authority ("the Authority"), the regulator of the gas and electricity industries in Great Britain. This Appendix summarises the primary powers and duties of the Authority. It is not comprehensive and is not a substitute to reference to the relevant legal instruments (including, but not limited to, those referred to below).

1.2. The Authority's powers and duties are largely provided for in statute, principally the Gas Act 1986, the Electricity Act 1989, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002 and the Energy Act 2004, as well as arising from directly effective European Community legislation. References to the Gas Act and the Electricity Act in this Appendix are to Part 1 of each of those Acts¹²⁶.

1.3. Duties and functions relating to gas are set out in the Gas Act and those relating to electricity are set out in the Electricity Act. This Appendix must be read accordingly¹²⁷.

1.4. The Authority's principal objective when carrying out certain of its functions under each of the Gas Act and the Electricity Act is to protect the interests of consumers, present and future, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the shipping, transportation or supply of gas conveyed through pipes, and the generation, transmission, distribution or supply of electricity or the provision or use of electricity interconnectors.

1.5. The Authority must when carrying out those functions have regard to:

- The need to secure that, so far as it is economical to meet them, all reasonable demands in Great Britain for gas conveyed through pipes are met;
- The need to secure that all reasonable demands for electricity are met;
- The need to secure that licence holders are able to finance the activities which are the subject of obligations on them¹²⁸; and
- The interests of individuals who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas.¹²⁹

¹²⁶ entitled "Gas Supply" and "Electricity Supply" respectively.

¹²⁷ However, in exercising a function under the Electricity Act the Authority may have regard to the interests of consumers in relation to gas conveyed through pipes and vice versa in the case of it exercising a function under the Gas Act.

¹²⁸ under the Gas Act and the Utilities Act, in the case of Gas Act functions, or the Electricity Act, the Utilities Act and certain parts of the Energy Act in the case of Electricity Act functions.

1.6. Subject to the above, the Authority is required to carry out the functions referred to in the manner which it considers is best calculated to:

- Promote efficiency and economy on the part of those licensed¹³⁰ under the relevant Act and the efficient use of gas conveyed through pipes and electricity conveyed by distribution systems or transmission systems;
- Protect the public from dangers arising from the conveyance of gas through pipes or the use of gas conveyed through pipes and from the generation, transmission, distribution or supply of electricity;
- Contribute to the achievement of sustainable development; and
- Secure a diverse and viable long-term energy supply.

1.7. In carrying out the functions referred to, the Authority must also have regard, to:

- The effect on the environment of activities connected with the conveyance of gas through pipes or with the generation, transmission, distribution or supply of electricity;
- The principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed and any other principles that appear to it to represent the best regulatory practice; and
- Certain statutory guidance on social and environmental matters issued by the Secretary of State.

1.8. The Authority has powers under the Competition Act to investigate suspected anti-competitive activity and take action for breaches of the prohibitions in the legislation in respect of the gas and electricity sectors in Great Britain and is a designated National Competition Authority under the EC Modernisation Regulation¹³¹ and therefore part of the European Competition Network.

1.9. The Authority also has concurrent powers with the Office of Fair Trading in respect of market investigation references to the Competition Commission. Under the Enterprise Act, the Authority may make a market investigation reference where it has reasonable grounds for suspecting that any feature, or combination of features, of a market for goods and services in the gas and electricity sectors in Great Britain prevents, restricts or distorts competition.

¹²⁹ The Authority may have regard to other descriptions of consumers.

¹³⁰ or persons authorised by exemptions to carry on any activity.

¹³¹ Council Regulation (EC) 1/2003

Appendix 9 - Glossary

A

Active suppliers

Gas or electricity suppliers that supply customers and compete to acquire and retain customers on a price and non-price basis.

Annual bill

The amount that a customer would have to pay for gas and/or electricity over one whole year.

Account closure costs

Suppliers' administrative costs attributable to closing accounts, including any associated costs of resolving queries and issues relating directly to the loss of domestic customers.

Acquisition costs

Suppliers' costs attributable to the marketing and sales activities to attract new domestic customer accounts, and costs associated with influencing existing customers to change tariffs.

B

Barrier to entry

A factor that may limit a firm's ability to enter the market.

Barrier to expansion

A factor that may limit a firm's ability to increase in size.

BERR

The Department for Business, Enterprise & Regulatory Reform.

Big 6

The name collectively given to the six companies that supply most of the energy to domestic households in the GB market. They are: Centrica plc (three retail brands, British Gas, Scottish Gas and Nwy Prydain in England, Scotland and Wales respectively), E.ON UK, Scottish and Southern Energy (SSE), RWE npower, EDF Energy and ScottishPower.

Balancing and Settlement Code (BSC)

The BSC contains the rules and governance arrangements for the electricity balancing and settlement in Great Britain. All licensed electricity suppliers must be party to it.

C

Capped price tariffs

Guarantees that the price paid per kWh for gas or electricity will not rise beyond a set level for a given period of time.

CEER

The Council of European Energy Regulators.

Churn

In this report churn represents the number of customers moving away from a supplier to a new supplier (suppliers' customer losses) as a per cent of the total number of that class of customer.

Cost of competition

In this document this means the customer-specific marketing and sales costs incurred by suppliers in winning a new customer.

Concentration ratio

In this report, this is defined as the sum of the shares of the six largest firms in the market.

Cost to serve

These are the supplier costs attributable to providing services to customers. They include billing and payment processing, cost of call centres relating to answering and resolving customer issues, debt management costs and recovery of debts, bad debt write offs and provision for bad debts. In this document we sometimes present these costs excluding overheads and bad debt costs.

Cross subsidise

The part financing of one product or activity by another.

Customer retention costs

Suppliers' marketing and sales costs attributable to retaining existing customers.

D

Debt blocking

This is when the transfer of a customer to a new supplier is prevented because of outstanding debt with the existing supplier.

Direct costs

In this document, wholesale energy purchase costs, network access and environmental costs.

Direct debit (DD)

A method of payment where a fixed or variable amount is taken from a bank account each month, quarter or year.

Distribution Use of System (DUoS) charges

The charges paid by electricity suppliers to distribution companies for use of the electricity distribution system.

Distributor Network Operators (DNO)

DNOs came into existence on 1 October 2001 when the ex-Public Electricity Suppliers were separated into supply and distribution businesses. There are 14 DNOs covering discrete geographical regions of Britain. They take electricity off the high voltage transmission system and distribute this over low voltage networks to industrial complexes, offices and homes. DNOs must hold a licence and comply with all distribution licence conditions for networks which they own and operate within their own distribution services area. DNOs are obliged to provide electricity meters at the request of a supplier.

Domestic energy suppliers

Companies who sell energy to and bill residential customers in Great Britain.

Dynamic Teleswitching (DTS)

A particular type of electricity meter where the tariffs have a control unit that allows the supplier (or distribution company) to switch the metered supply remotely by radio teleswitch. The Radio Teleswitching Access Provider controls the radio switches, and therefore heating load, following instructions from the supplier.

Dual Fuel (DF)

A type of energy contract where a customer takes gas and electricity from the same supplier.

E**Economies of scale**

Where the average costs of producing a good or providing a service falls as output increases.

Economies of scope

Where the average costs are lower if two or more products are produced jointly (e.g. by the same firm) as opposed to separately (e.g. by two separate firms).

Elexon

The Balancing and Settlement Code Company (BSCCo) created by the Balancing and Settlement Code (BSC). Elexon procures, manages and operates services and systems which enable the balancing and imbalance settlement of the wholesale electricity market.

Energy Retail Association (ERA)

The ERA is the body that represents the Big 6 domestic electricity and gas suppliers in Great Britain.

energywatch

The independent gas and electricity watchdog, set up in November 2000 through the Utility Act, to protect and promote the interests of all gas and electricity consumers. From the 1 October 2008, energywatch merged with Postwatch and the National Consumer Council (including the Scottish and Welsh Consumer Councils) to form Consumer Focus, the new champion for consumers' interests in England, Scotland, Wales and, for post, Northern Ireland.

ERGEG

The European Regulators' Group for Electricity and Gas.

Evergreen offers

These are tariffs where prices may fluctuate but a customer can switch supplier at any time.

Ex-PES

The previous Public Electricity Supplier for one of the 14 electricity regions in England, Wales and Scotland. From privatisation in 1990 until 1998 the ex-PES had a monopoly of electricity supply and distribution in their designated areas. Local distribution is still a monopoly regulated by Ofgem, however, competition has been introduced in supply, and so these 14 suppliers (consolidated now into 5) are known as ex-PES suppliers. The 14 regions are detailed below, together with the name of today's ex-PES company for each region.

REGION	SUPPLIER GROUP
London	EDF Energy
Seaboard	
SWEB	
East Midlands	E.ON UK
Eastern	
Norweb	
Midlands	RWE npower
Northern	
Yorkshire	
Scottish Hydro	Scottish and Southern Energy
Southern	
Swalec	
Manweb	ScottishPower
Scottish Power	

F

Financial Services Authority (FSA)

The FSA regulates the financial services industry. It is an independent non-governmental body, given statutory powers by the Financial Services and Markets Act 2000. It is a company limited by guarantee and financed by the financial services industry.

Fixed price tariff

A tariff that guarantees that the price paid per unit of gas or electricity used will not change for a given period of time.

Forward market

The trading of commodities to be delivered at a future date. Contracts for forward delivery are personalised as the amount and price are determined by the individual buyer and seller.

Former electricity incumbent

The previous Public Electricity Supplier for one of the 14 electricity regions in England, Wales and Scotland (see Ex-PES).

Fuel poor

Those households who need to spend more than 10% of their annual income on fuel to maintain an adequately heated home.

G

Gains and losses

When a customer completes a switch to (from) a supplier, a gain (loss) is recorded for that supplier. Over a period of time, the result of these customer flows to (from) a supplier is a net fall (rise) in a supplier's customer numbers.

Gas transporter (GT)

A company, licensed by Ofgem, which transports gas through its network on behalf of a gas shipper.

Gas shipper

A company licensed by Ofgem, which arranges with a Gas Transporter for gas to be introduced into, conveyed and taken out of the pipeline system. Shippers must balance their input to and customer off take from the National Transmission System (NTS) each day. Ofgem licences all shippers.

Green tariffs

An energy tariff which is marketed as having environmental credentials.

H

Herfindahl Hirschman Index (HHI)

A measure of market concentration calculated by adding up the squared values of market shares for each firm in the market. It is influenced both by the number of firms in the market and differences in their relative sizes. The value of the HHI decreases as the number of firms in a market rises. Similarly the value of the HHI will be greater the larger the degree of inequality in firm size.

Hedging

Deals based on the future price of a good or service instead of dealings based on the daily price of a good or service. This enables those purchasing a good or service to reduce the risk of short term price movements.

High consumption customer

For the purposes of this report, this is assumed to be a customer with an annual demand of 4,600 kWh in electricity and 28,000 kWh in gas.

I

Industrial and Commercial (I&C) sector

The non-domestic sector in general rather than any specific group of customers

In-area customers

Customers of an electricity supplier who are located within the supplier's original ex-PES region.

Inactive consumers

Consumers who have either never switched or have done so only once, and say that they will not switch again in the future.

Inbound sales activity

A sales channel used by suppliers to access the market that requires proactive engagement by the consumer. These include online (e.g. switching sites), supply companies' own websites, and direct calls to suppliers.

Incumbent

An incumbent is the company of the former monopoly supplier in a particular region. The incumbent in each region for electricity is known as the ex-PES. British Gas (Centrica) is the incumbent in the gas market.

Interconnector

Gas interconnectors connect gas transmission systems in other jurisdictions to the gas National Transmission System (NTS) in England, Scotland and Wales. There are currently four gas interconnectors connecting the NTS to Belgium, the Netherlands, Northern Ireland and the Republic of Ireland.

Electricity interconnectors are electric lines or other electrical plants based within the jurisdiction of Great Britain and convey electricity (whether in both directions or in only one) between Great Britain and another country or territory. There is currently one interconnector connecting Great Britain to France.

K

kWh

Kilowatt-hour is a unit used to measure energy consumption in both electricity and gas.

L

Liquefied Natural Gas (LNG)

LNG consists mainly of methane gas liquefied at around -160 degrees centigrade. Cooling and liquefying the gas reduces its volume by 600 times such that a tonne of LNG corresponds to about 1,400 standard cubic meters of methane in its gaseous state. LNG may be stored in tanks or transported by tanker ships or in small quantities by road tankers.

Low consumption customer

For the purposes of this report, this is assumed to be a customer with an annual demand of 1,650 kWh in electricity and 10,000 kWh in gas.

M**Market share**

In this report, this refers to the proportion of total customers (usually as proxied by the number of meter points) within a market that are registered to a particular supply group.

Market liquidity

The ease with which new entrants or small suppliers are able to secure wholesale gas and electricity supplies, for on-sale to retail customers

Market power

The ability of a company to influence (for example) prices in the market.

Medium consumption customer

For the purpose of this report, a consumer with medium consumption has an annual demand of 3,300 kWh in electricity and 20,500 kWh in gas.

Monopoly

The only provider of a product or service.

Monthly Direct Debit (MDD)

A method of payment where a fixed amount is taken from a bank account each month. In this report, direct debit prices refer to monthly direct debit (MDD) only.

Master Registration Agreement (MRA)

Along with its supporting documentation, the MRA provides a governance mechanism to manage the processes established between electricity suppliers and distribution companies to enable electricity suppliers to transfer customers.

Multiple switching

Refers to the practice of changing supplier more than once.

N**National Balancing Point (NBP)**

This is a virtual trading location used as a point of reference for the sale and purchase of gas. In the case of natural gas the NBP is the National Transmission System (NTS). This price is therefore inclusive of entry terminal charges.

New entrant

An entrant that does not have an incumbent customer base.

Non-incumbent

A Big 6 supplier that does not have an incumbent customer base.

Non-switcher

A customer who has never switched from their incumbent supplier.

O**Out-of-area customers**

Customers of an electricity supplier who are located outside of the supplier's original ex-PES region.

Objection clauses

These are specific clauses within a contract between a customer and their energy supplier that legally allow a customer's current supplier to object and block the transfer of a customer to another supplier.

Outbound sales activity

A sales channel used by suppliers to access the market that generally requires no active engagement by consumers, although they have to be receptive to selling by suppliers. This includes doorstep selling, telemarketing and direct mail activity.

P**Perfect competition**

A market outcome where there are a large number of buyers and sellers, where firms sell homogenous goods and there are no barriers to entry or exit.

Prepayment meter (PPM)

These are meters that require payment for energy to be made in advance of use or they will prevent the supply of gas or electricity. A PPM customer pays for energy by inserting electronic tokens, keys or cards into the meter.

Preserved tariff

A tariff that remains open for existing customers. However, new customers are unable to gain access to it.

Price guarantee tariff

A tariff that provides customers with a degree of price certainty.

Price differential

The difference between two sets of prices. For example, the difference in the price charged by one electricity supplier to customers using different payment methods.

Price discrimination

Occurs when different prices are set for different consumers or groups of consumers for the same good or service for reasons not associated with the costs of production.

Proactive customers

Consumers who have either switched supplier as a result of their own enquiries during the last twelve months or who regularly check relative prices.

R**Reactive customers**

Consumers who have switched supplier at least once, but do not regularly research the market and typically only switch in response to a call from a sales person.

Regional tariff

The tariff applicable in an electricity region. Tariffs may vary across regions, reflecting differences in distribution charges, among others.

S**Search costs**

A type of switching cost involved in finding an appropriate product from an alternative supplier, and in the case of energy might include the time and effort incurred in collecting and assessing information regarding the different tariffs, rates and contracts offered by competing suppliers.

Small suppliers

Suppliers which operate in the gas and electricity market but do not hold significant market share.

Small and Medium Enterprises (SME) sector

The SME sector includes a wide range of non-domestic consumers, from relatively large businesses for whom energy is a major cost to much smaller businesses that may closely resemble domestic consumers in their approach to energy procurement.

Smart meter

A generic term for innovative forms of metering that provide increased levels of functionality above that of a basic meter. It usually includes at a minimum the ability to read the meter remotely via a communication channel.

Social groups DE

DE is a reference to the ABC1C2DE system of socio-economic classification. DE groups two categories that include partly skilled or unskilled people as well as the unemployed and can be viewed as the most vulnerable groups in this classification system.

Spot price

The price for the immediate delivery of a commodity.

Standard Credit (SC)

A payment method where customers pay on receipt of the bill. This typically covers a wide range of payment mechanisms, including cash, cheque, credit card and standing order.

Switching costs

The costs incurred by customers in finding and switching supplier. Switching costs are classified into a variety of categories, including: transaction costs, contractual costs, uncertainty costs, psychological costs, shopping costs and search costs. In addition to the above, firms can also incur costs when customers switch supplier.

T

Termination fees

The contractually agreed price a customer must pay (where part of their contract) if they terminate their contract before the agreed contract end date.

Tracker tariffs

Guarantees that the price paid per kWh will track the wholesale cost of gas and electricity.

Transmission Network Use of System (TNUoS) charges

The charges paid by electricity suppliers to the System Operator for use of the transmission system. The System Operator is National Grid Electricity Transmission plc.

Transmission

The movement of electricity at high voltage from a generator to a substation. High voltage cables are normally suspended from pylons.

Two-tier pricing

The setting of different prices within one company for the same product, for example to different geographical areas.

U

Unbundling

Disaggregating a utility service into its basic components and offering each component separately for sale with separate rates for each component. For example, generation, transmission and distribution could be unbundled and offered as discrete services.

V

Variable costs

Costs which vary with output.

Vertical integration

Where one supply group owns two or more parts of the energy supply chain. For example, where the same supply group owns generation capacity and also supplies energy to the retail market.

Appendix 10 - Feedback questionnaire

1.1. Ofgem considers that consultation is at the heart of good policy development. We are keen to consider any comments or complaints about the manner in which this consultation has been conducted. In any case we would be keen to get your answers to the following questions:

1. Do you have any comments about the overall process, which was adopted for this consultation?
2. Do you have any comments about the overall tone and content of the report?
3. Was the report easy to read and understand, could it have been better written?
4. To what extent did the report's conclusions provide a balanced view?
5. To what extent did the report make reasoned recommendations for improvement?
6. Please add any further comments.

1.2. Please send your comments to:

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