

Quarterly Price Report

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Wholesale energy prices (both spot and forward) have fallen in 2009, driving up margins in energy supply to a five-year high. But for the Big 6 energy companies who are vertically-integrated in electricity, this increase in retail profits has been offset by lower generation profitability.

These companies have chosen through their pricing to smooth profits over the last 10 years, which sometimes benefits consumers and sometimes disadvantages them. Since the start of 2004, our analysis shows the net effect of this is now close to neutral.

For dual fuel customers, gross margins (which include suppliers' operating costs and profits) reached £210 in November, up from £160 in August. If prices remain unchanged, these margins will rise further.

In response to feedback to the last quarterly report we have also included analysis of the net margins (or profitability of suppliers) per customer. Deducting estimated running costs of just over £120, implies that companies make a profit of around £85 per dual fuel customer, a net margin of about 7%. However, during 2006-8, a time of rising wholesale costs - net margins averaged close to zero and were sometimes negative.

There are increasing opportunities for consumers to reduce their bills substantially by switching to lower priced deals, through fixed price and on-line offerings, particularly from two companies that have recently entered the market.

The vertically integrated, dual-fuel characteristics of the energy markets have influenced pricing behaviour. Although there is not yet evidence that customers have lost out from this, we are looking at whether the current market rules and structures make it harder for new entrants to compete through our work on liquidity and in Project Discovery. We aim to publish our findings and recommendations ahead of the next Quarterly Price Report.

Summary

This report examines the relationship between wholesale energy costs and retail energy prices. Our indicator of gross margin for dual fuel customers¹ has now reached a five year high and may rise further next year. We estimate that gross margin for a standard tariff dual fuel customer has now risen to around £210 per customer per year in November 2009, up from £160 in August. In the absence of any changes to retail and wholesale prices, these margins will rise further into next year before levelling off.

Against this backdrop of increasing gross margins, we have undertaken additional analysis in this report. Specifically, we have estimated company operating costs to derive net margins and also provided an estimate of margins across the value chain (i.e. in both supply and generation).

Our estimates of net margins show energy retail businesses have moved into profit this year, following low or negative margins in the preceding 3-4 years. Based on projections from data collected in the 2008 Energy Supply Probe, we estimate that the net margin earned on a dual fuel customer is around 7%, but has averaged close to zero over the preceding three years.

Dual fuel summary table (£/customer/year)

	Feb-09	May-09	Aug-09	Nov-09
Customer bill	£ 1,255	£ 1,205	£ 1,185	£ 1,185
Wholesale costs	£ 710	£ 670	£ 610	£ 555
VAT and other costs	£ 410	£ 410	£ 420	£ 420
Gross margin	£ 135	£ 120	£ 160	£ 210
Operating costs	£ 120	£ 120	£ 120	£ 120
Implied net margin	£ 15	£ -	£ 35	£ 85
<i>Notes:</i>	<i>Customer bill is weighted by payment method and market share. Average figures assume electricity consumption of 4MWh/yr, gas consumption of 18.2MWh/yr. Figures rounded to nearest 5 & may not sum due to rounding.</i>			

Our analysis of margins across the value chain shows that profits shift between generation and supply as wholesale prices rise and fall. This is a feature of the vertically-integrated and dual-fuel structure of the market. The low average net margins in supply in the preceding 4-5 years (with the exception of 2009) have been compensated for by higher margins in generation, compared to the first half of the

¹ Our indicator of gross margins is the gross margin a supply business can expect to make by selling energy to a customer over the next year based on current retail prices and wholesale costs as modelled by our 18 month hedging strategy. This is explained in chapter 1 and appendix 4.

decade when margins were higher in supply and low in generation. Broadly speaking the profits in generation and supply businesses move in opposite directions in response to wholesale price movements.

Since the start of 2004, our analysis shows this smoothing of prices has left customers broadly neutral compared to a hypothetical tariff that tracks wholesale costs.

In recent months, we have seen evidence of more competitive offerings in the market in response to lower wholesale prices. This provides an opportunity for customers to realise substantial savings of up to £200 a year by switching supplier or tariff. At present, these deals are restricted to fixed price and online offers, as well as small-scale new entrant suppliers. The vast majority of customers remain on higher priced standard tariffs

This report shows the strong influence of the vertically integrated, dual fuel structure of the electricity and gas industry on prices to consumers. This sometimes works in favour of consumers and sometimes against and usually acts to reduce volatility of end prices. There are other consequences of the integrated structure of the industry, which are being explored in our work on liquidity and in Project Discovery. We expect these to report next year, around the same time as the next quarterly price report or earlier.

In the meantime, we continue to work to improve the effectiveness of retail energy markets. We have recently enacted the remedies identified through the Energy Supply Probe, which focus on improving transparency and the quality of information available to customers and preventing harmful selling practices and unjustified price differentials.

The analysis in this report has been carried out by Ofgem based on information from publicly available sources as well as information gathered as part of the Energy Supply Probe in 2008. It is not based on accounting information provided to us by companies about their margins. In particular, we have projected our estimates of operating costs and made adjustments where we believe key cost components may have changed, such as bad debt cost. The assumptions underlying our analysis are outlined in appendix 4 and we welcome feedback on our methodology assumptions as well as our findings.

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1. Customer bills, wholesale energy costs and gross margin

Gross margins in dual fuel and gas supply are at a five year high and they may rise further. Dual fuel gross margins for November are an estimated £210, up from £160 in August.

Wholesale electricity and gas costs are projected to fall further over the next 6, based on the forward curve and an 18 month hedging strategy.

1.1. This section shows the relationship between energy supply costs, customer bills and gross margin. Each point on the chart represents the expected cost, revenue or margin for the next year for an average dual fuel customer on a £/year basis. Wholesale costs are estimated using an 18 month hedging strategy. Appendix 4 explains how the lines in the charts are derived.

1.2. In each of the charts in this section, the average customer bill is represented by the black line. Wholesale costs are represented by the blue shaded area. 'Other costs', such as network costs and environmental charges, and VAT, are represented by the grey shaded area. The area between the customer bill and combined wholesale and other costs represents gross margin (which includes profits and operating costs). Gross margin is also represented by the red line.

1.3. Figure 1.1 shows that the estimated gross margin for the year from November 2009 has risen to £210 from £160 in August, for the average dual fuel customer - its highest level since 2004.

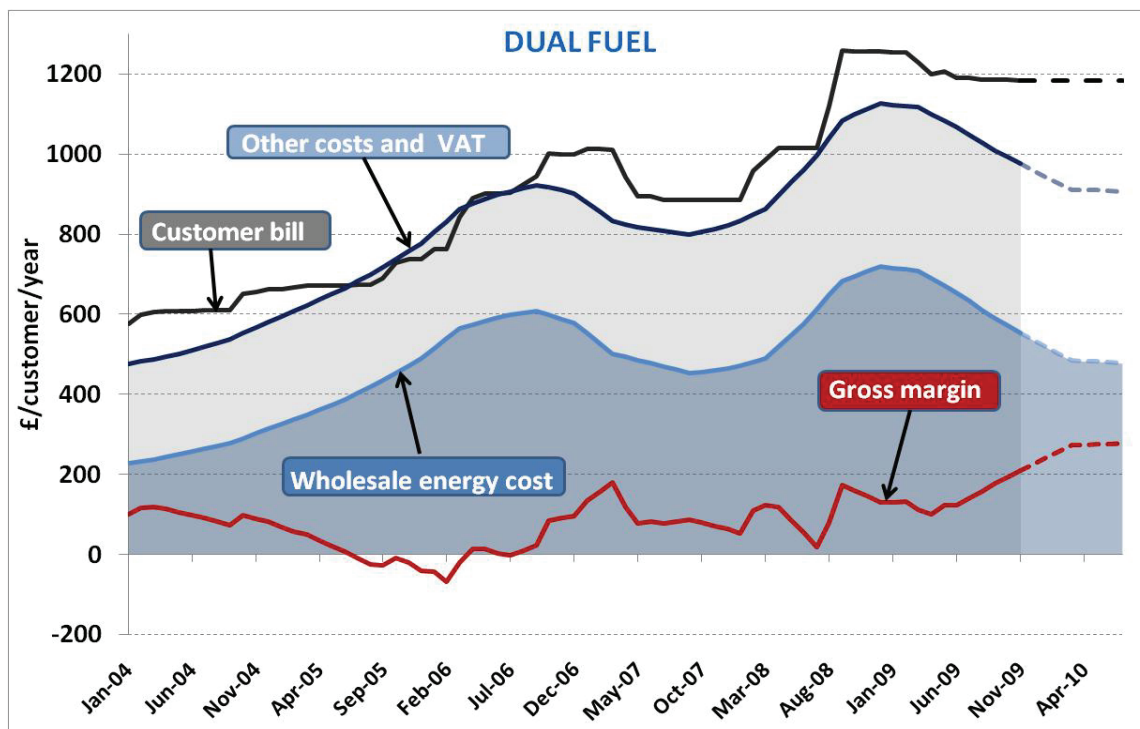
1.4. If retail prices remain unchanged - gross margin looks set to increase further, as, based on the forward curve, wholesale costs are projected to continue to fall through early 2010 before levelling off later in the year. This decrease occurs as the electricity and gas purchased in advance during more expensive months is gradually reduced. If retail prices do not fall, these lower costs will be reflected in higher gross margin.

1.5. This analysis assumes a constant level of domestic gas consumption since 2003. Evidence from DECC² and Centrica indicate a downward trend in domestic annual gas consumption. If we factor this in, gross margin for dual fuel and gas is estimated to be nearly £20 lower in the year from November 2009. There may also be additional costs to suppliers, because if this lower consumption is unanticipated they may have to sell back any surplus energy at a loss on the wholesale markets.

² DECC Energy Trends: September 2009.

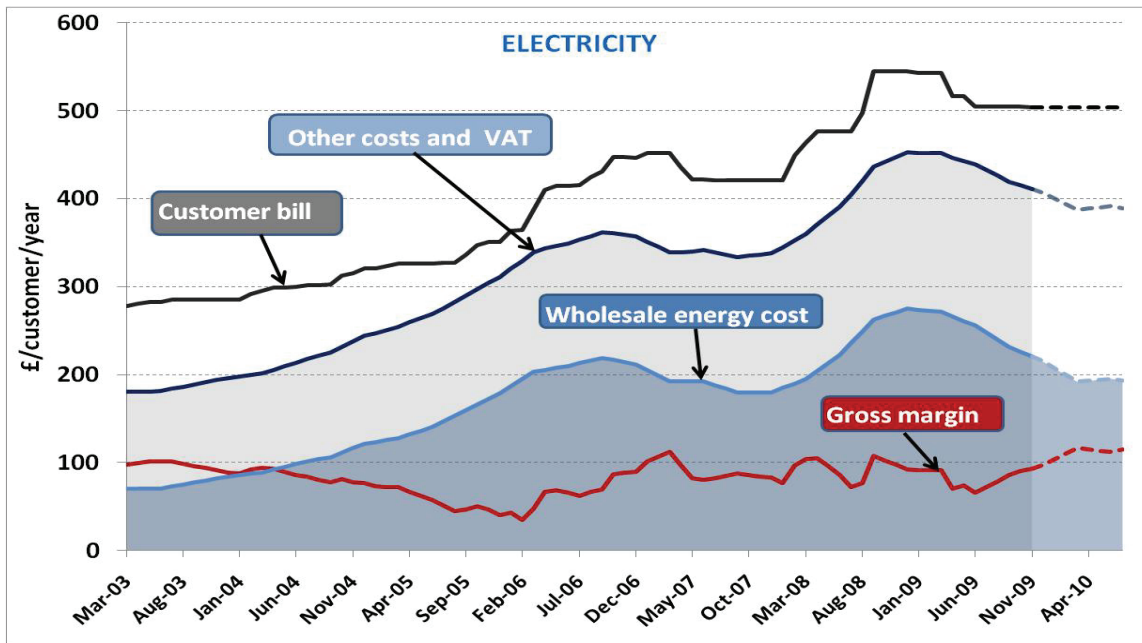
1.6. The chart shows that the wholesale costs suppliers face for electricity and gas are projected to decrease by approximately £70 over the next 6 months. If retail prices do not fall, these lower costs will be reflected in higher gross margin.

Figure 1.1: Dual fuel customer bill, cost and gross margin



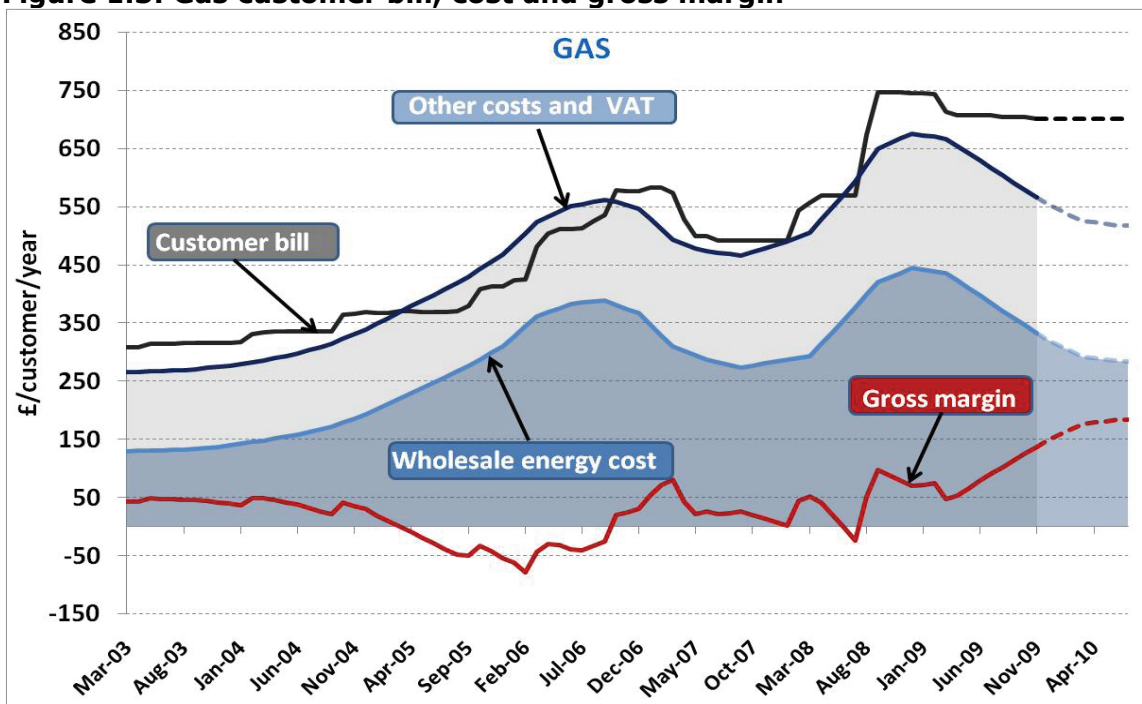
1.7. Figure 1.2 shows the same chart for a typical stand-alone electricity account. Wholesale energy costs have fallen, which has led to a rise in gross margin over the last quarter to almost £95 per customer per year. Electricity supply costs are projected to rise in spring next year, due to increased network costs (particularly in distribution as a result of the periodic price review) as well as higher projected wholesale energy and environmental costs.

Figure 1.2: Electricity customer bill, cost and gross margin



1.8. Figure 1.3 below shows our analysis for a standalone gas account. It shows that gross margin for the year from November is estimated to be £135 per customer. This has increased over the course of 2009 to a record high level, which partly reflects falling costs and partly a rebalancing between gas and electricity in response to the Energy Supply Probe.

Figure 1.3: Gas customer bill, cost and gross margin



2. Additional analysis: Operating costs, net margin and wholesale costs

Our analysis of net margins shows companies make an estimated profit of about £85 for a typical dual fuel customer. However, over the last three years, net margins have averaged close to zero and were sometimes negative.

Since the start of 2004, our analysis shows this smoothing of prices has left customers broadly neutral compared to a hypothetical tariff that tracks wholesale costs.

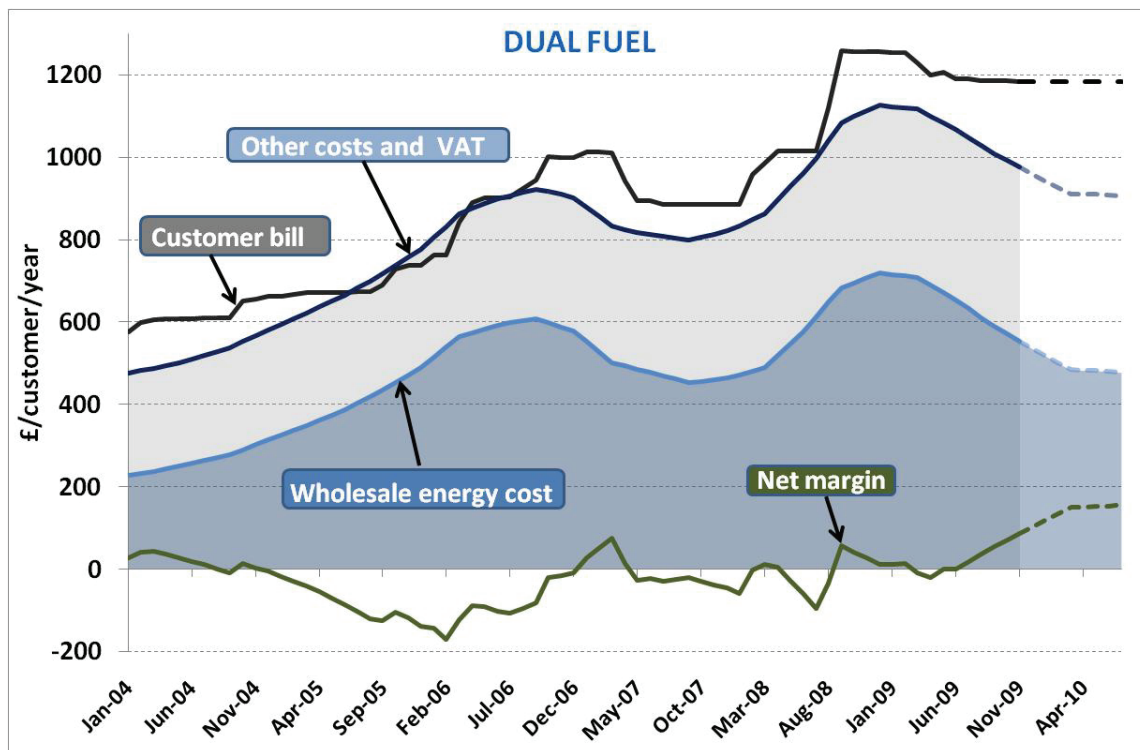
The recent increase in retail profits has been offset by a fall in generation profits, reflecting a pattern that has been consistent over the last decade.

2.1. In response to feedback on the previous quarterly report, we have included analysis of operating costs and net margins. Supplier operating cost estimates are based on information gathered through the Energy Supply Probe for 2005-2007. These are average figures and there is uncertainty around how these figures have subsequently changed. Operating costs include discretionary elements (such as marketing) and bad debts costs, which we expect to have increased with the onset of the recession. Operating costs also include staff costs, IT costs and overheads.

2.2. Note that the estimate of net margin is based on our own analysis as explained above, rather than company accounts data provided by the Big 6³. To improve transparency on margins, the Big 6 companies will be providing accounts setting out net margins in supply business from autumn 2010. Please refer to appendix 4 for further details on how net margin has been calculated.

³ The 'Big 6' are British Gas, EDF, E.ON, RWE npower, SSE, Scottish Power.

Figure 2.1: Dual fuel customer bill, cost and net margin



2.3. Figure 2.1 estimates the relationship between energy supply costs, customer bills and energy supply company net margin for the average dual fuel customer. We estimate that net margin for the average dual fuel customer for the year from November 2009 is approximately £85. This has risen from approximately zero over the first half of 2009. If retail prices remain unchanged, then net margin looks set to increase further, as we project wholesale costs to continue to fall through early 2010.

2.4. The following tables provide a summary of the data in figures 1.1-1.3, with the addition of operating cost estimates to give an implied net margin. Based on feedback, we have updated our methodology and assumptions, which means that figures may differ slightly from those published in the previous quarterly reports.

Figure 2.2: Dual fuel summary table (£/customer/year)

	Feb-09	May-09	Aug-09	Nov-09
Customer bill	£ 1,255	£ 1,205	£ 1,185	£ 1,185
Wholesale costs	£ 710	£ 670	£ 610	£ 555
VAT and other costs	£ 410	£ 410	£ 420	£ 420
Gross margin	£ 135	£ 120	£ 160	£ 210
Operating costs	£ 120	£ 120	£ 120	£ 120
Implied net margin	£ 15	£ -	£ 35	£ 85
<i>Notes:</i>	<i>Customer bill is weighted by payment method and market share. Average figures assume electricity consumption of 4MWh/yr, gas consumption of 18.2MWh/yr. Figures rounded to nearest 5 & may not sum due to rounding.</i>			

Figure 2.3: Electricity summary table (£/customer/year)

	Feb-09	May-09	Aug-09	Nov-09
Customer bill	£ 545	£ 515	£ 505	£ 505
Wholesale costs	£ 275	£ 260	£ 240	£ 220
VAT and other costs	£ 180	£ 180	£ 185	£ 190
Gross margin	£ 90	£ 75	£ 80	£ 95
Operating costs	£ 70	£ 70	£ 70	£ 70
Implied net margin	£ 25	£ 5	£ 10	£ 25
<i>Notes:</i>	<i>Customer bill is weighted by payment method and market share. Average figures assume consumption of 4MWh/yr. Figures rounded to nearest 5 & may not sum due to rounding.</i>			

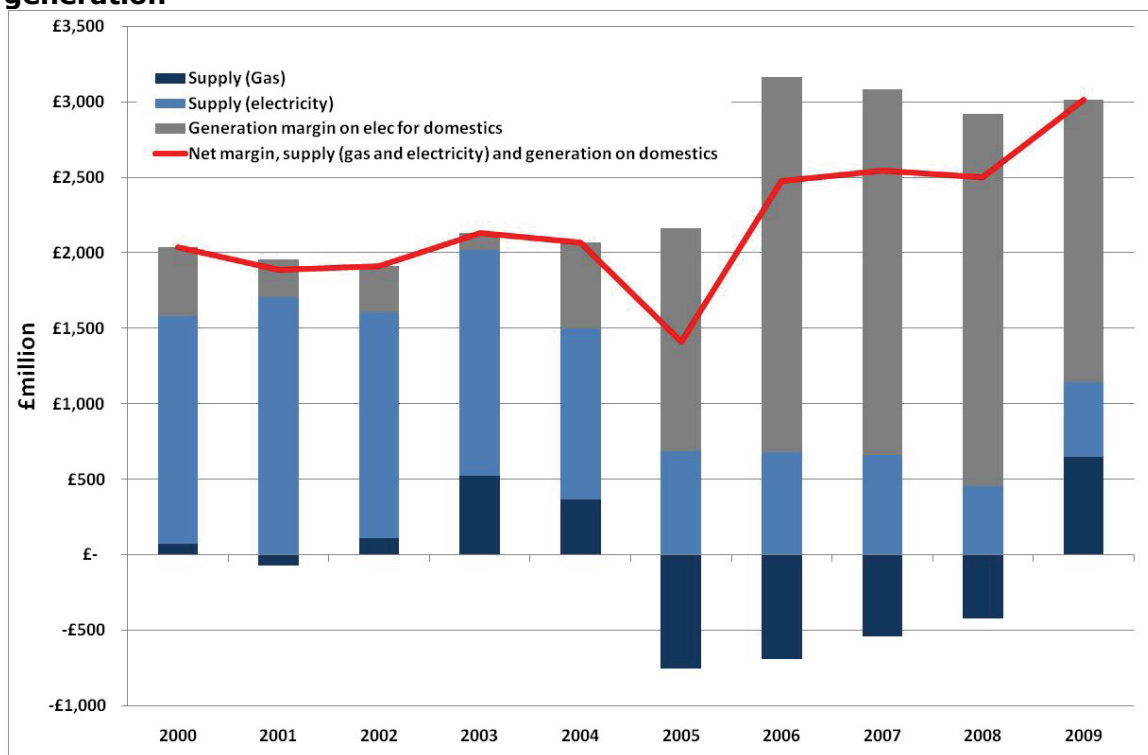
Figure 2.4: Gas summary table (£/customer/year)

	Feb-09	May-09	Aug-09	Nov-09
Customer bill	£ 745	£ 705	£ 705	£ 700
Wholesale costs	£ 440	£ 410	£ 370	£ 335
VAT and other costs	£ 230	£ 230	£ 230	£ 235
Gross margin	£ 75	£ 65	£ 100	£ 135
Operating costs	£ 50	£ 50	£ 55	£ 55
Implied net margin	£ 20	£ 15	£ 50	£ 85
<i>Notes:</i>	<i>Customer bill is weighted by payment method and market share. Average figures assume consumption of 18.2MWh/yr. Figures rounded to nearest 5 & may not sum due to rounding.</i>			

Value chain analysis

2.6. Figure 2.5 below illustrates how profitability has changed through the value chain for the supply of electricity and gas to the domestic sector. It updates the analysis presented in the Energy Supply Probe. The analysis is based largely on publically available data supplemented with information received during the Energy Supply Probe from the Big 6 and our own assumptions (please refer to appendix 4 for further details).

Figure 2.5: Value chain profitability in domestic energy supply and power generation



2.7. The chart highlights an important dynamic within the vertically integrated supply businesses: it shows that during times of sharply rising wholesale prices, retail businesses tend to make lower margins while generation businesses make higher margins. This implies that the generation business offers a degree of internal hedging against the supply business for vertically integrated companies. The effectiveness of this insurance depends on the different hedging strategies of the generation and supply business, as well as the speed with which higher wholesale energy costs can be passed through to customers.

2.8. The chart shows that estimated retail margins were materially higher during the period 2000-2004. This was due to a period of lower and more stable wholesale prices, and had the effect of reducing generation profits. As wholesale electricity and gas prices increased, supply margins were squeezed with negative net margins in gas and significantly reduced electricity margins although this was more than offset

by higher margins in generation. The negative margins observed in the gas market may have been due to suppliers seeking to acquire customers and recovering margins from their generation business and electricity customers.

2.9. Figure 2.5 shows that overall net margin (as shown by the red line) is estimated to be the highest since the start of the decade in 2009. It also shows the significant increase in gas profitability in 2009 consistent with the analysis presented above. Although overall profit levels have increased over the period, this is against the background of a significant investment in the capital base of the sector, particularly in renewable energy, but also in new gas generation and the refurbishment and clean-up of older coal capacity.

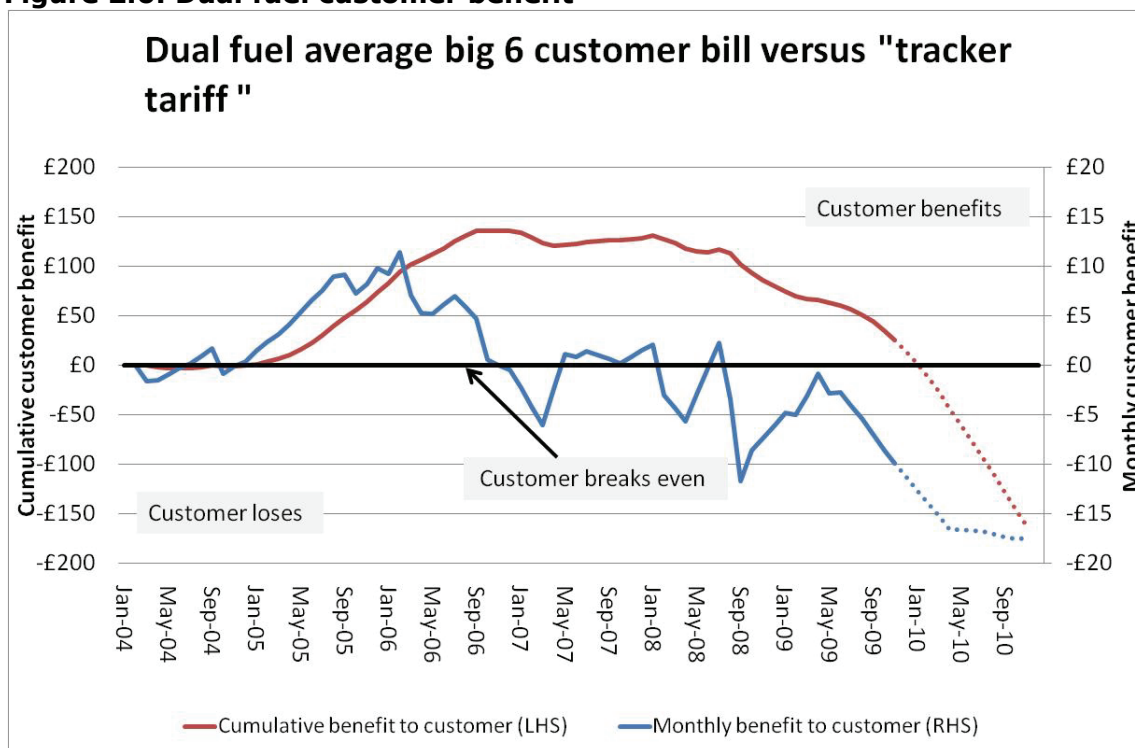
2.10. It is important to note that the generation margins are based on the average for all generators in the industry (rather than just for integrated generators), scaled to meet the requirement of the residential sector. In addition, generators' revenue is based on prices they would be expected to earn in the market given typical observed forward selling behaviour.

Have customers benefited or lost from supplier pricing behaviour?

2.11. As we have seen above, retail prices do not always track wholesale costs closely, partly because retail margins act as an internal hedge for generation profits. But have customers benefited or lost from this smoothing of prices?

2.12. Figure 2.6 shows the net gain or loss, on a monthly or cumulative basis for a customer on an average tariff of the Big 6 compared to a hypothetical tariff that tracks the costs faced by the Big 6 energy suppliers. If the chart is positive (above the line), the customer is benefiting. Below the line, the customer is losing. Please see appendix 4 for an explanation of this data.

Figure 2.6: Dual fuel customer benefit



2.13. Figure 2.6 shows that customer bill increases have consistently outweighed cost increases since July 2008, as shown by the negative blue line. However, in the years prior to that, the opposite was true. As a result, customers have been left broadly neutral from this pricing behaviour since 2004, as shown by the red line.

2.14. Of course, this analysis depends strongly on the starting point from which the net benefit is calculated and the point in the cycle. However, this analysis suggests that there is no evidence a customer either systematically benefits or loses on average through the cycle. Both supplier and customer will experience lower volatility as a consequence.

3. Developments in the wider competitive retail market

There are increasing opportunities for customers to reduce their bills by switching to lower priced deals, although these are largely limited to fixed price and online offers.

Alternative tariff forms, such as fixed tariffs, have continued to grow in popularity, and we have seen new entry into the domestic market.

3.1. Ofgem's principal objective is to protect the interests of consumers, present and future, wherever appropriate by promoting effective competition. In keeping with this objective, we launched a study into GB energy supply markets (Energy Supply Probe) in February 2008. In October 2008, we set out our initial findings on the operation of the GB retail energy markets and in April 2009 we consulted on a detailed package of remedies to promote competition in the retail energy supply market. These measures have been approved by our Authority and licensees, with implementation dates ranging from 1 September 2009 to July 2010.

3.2. These measures are aimed at promoting competition through encouraging increased consumer engagement, improving consumers' access to clear and transparent information about their energy options, and setting new standards for how suppliers should interact with consumers. This includes mandating the provision of additional information on energy bills, providing clear details that allow consumers to make better decisions about which offer is right for them and requiring clearer communication about customers' rights and responsibilities.

3.3. Some measures will have a more immediate impact on the market while others, particularly those aimed at encouraging consumer engagement, may require more time to take effect. In order to protect consumers while other measures take time to impact the market, two new domestic supply licence conditions were introduced with effect from 1 September 2009. These require prices to reflect costs between payment methods and prohibit undue discrimination in terms and conditions offered to customers.

3.4. Following our work on the Energy Supply Probe, we have stepped up our ongoing monitoring of the retail market. This includes gathering additional data from suppliers and conducting analysis that will allow us to monitor the impacts of the new regulations as well as improve our general understanding of how well the market is functioning. Amongst this work is our analysis of undue discrimination, the findings of which are outlined below.

3.5. During the Energy Supply Probe, Ofgem uncovered some unfair differentials in the retail market. One type of unfair differential was related to the practice of charging in area customers more than out of area customers. For example, the five former incumbent electricity suppliers charged electricity customers in their former monopoly areas an average of £31 more than comparable "out-of-area" customers.

3.6. Unfair differentials were also examined in relation to fuel type. The five former incumbent electricity suppliers consistently earned significantly higher margins on

electricity supply than on gas. Higher prices were 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.

3.7. At the time of the Energy Supply Probe, a number of the price differentials between payment types appeared not to have a cost justification - particularly for those customers who pay by standard credit. Recent price changes have reduced the average tariff differential for pre-payment meter (PPM) customers. These now, on average, reflect cost differences.

3.8. Since the introduction, in September 2009, of two new licence conditions which outlaw undue discrimination, we have witnessed a reduction in each of these differentials. Each of the Big 6 suppliers' in area and out of area differentials have on average been reduced to £18⁴.

3.9. The average PPM customer now pays £4 less than the average standard credit customer compared to a premium of £41 in July 2008; representing a reduction of 110%. The PPM premium over that paid by direct debit customers has also fallen by 22%, and at a consumption level which is reflective of most PPM customers⁵ it is now £86, compared with £109 in July 2008.

3.10. Suppliers have made concerted efforts to bring single fuel prices in line with dual fuel prices. Recent analysis shows that the sum of average (across all Big 6 suppliers and all regions) best-offer single fuels is now only £0.40 less than the average best-offer dual fuel bills. It is therefore possible to infer from our observations that harm to off-grid customers has been reduced since we conducted our analysis in the Energy Supply Probe, where we saw that electricity-only customers were paying higher rates than customers taking both fuels from the same supplier.

New Products and New Entry in the Competitive Market

New entrants and small suppliers

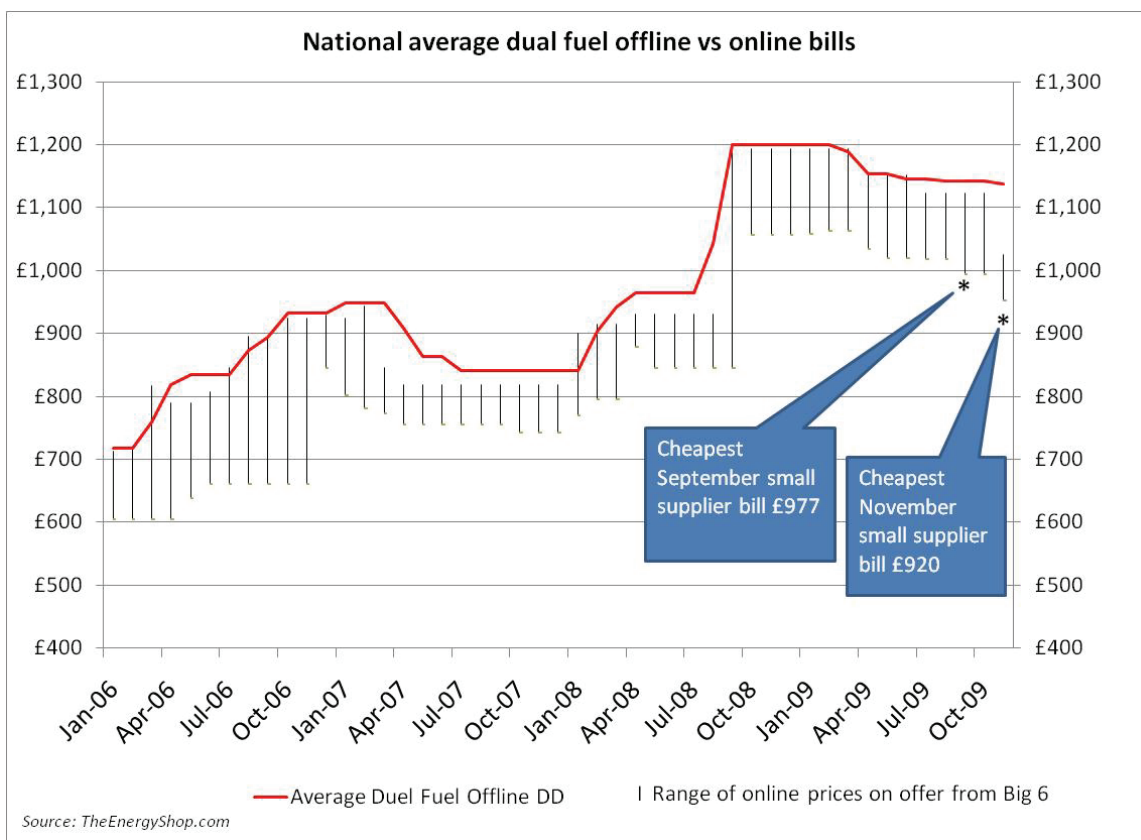
3.11. In September, we saw a new energy supplier enter the domestic market. Their first tariff offering was the cheapest in the market and sparked a round of price competition. During this time, we have seen similar aggressive price moves from other large and small suppliers in the market, and there has been some growth in market share among small suppliers.

⁴ Comparing November 2009 data with Jan 2008

⁵ 20% less gas and 8% less electricity than average, based on findings during the Probe

3.12. In November, the top three cheapest offerings in the market were offered by smaller suppliers. In July, the market share for non Big 6 suppliers grew by 8% compared to January 2009⁶, albeit from a small customer base of less than 1% of the market. The addition of a new supplier into the market since July, and the fact that small suppliers are currently offering some of the most competitively priced offers in the market, may see this market share for non Big 6 increase further by the end of the year.

Figure 3.1: Average DD dual fuel tariff versus online tariffs⁷



3.13. Figure 3.1 above compares the annual direct debit dual fuel bills for the average customer against online deals. The red line shows the bill for the average customer, with the grey vertical spread indicating the range of prices for online deals offered by the Big 6. The red line is consistently above the range of online prices, which shows that online deals offer cost savings relative to the bills faced by the average customer.

⁶ Source: Datamonitor

⁷ Note: the graph assumes constant annual electricity and gas consumption of 3.3MWh and 20.5MWh respectively

Product innovation

3.14. Smart meter and energy saving offers are the latest trend in energy deals. Services include free smart meters, energy monitors, accurate readings, monthly billing, energy efficiency advice and rewards for reducing consumption. As discussed above, price guarantee tariffs are now offered by most suppliers in the market place, without the premium previously applied to these tariffs, and are often cheaper than standard offerings.

Product offerings

3.15. While our analysis in previous chapters is based on standard tariffs for Big 6 suppliers (see appendix 4 for details), there is evidence of suppliers competing to acquire customers through discounted offers, particularly online, as well as lower priced fixed offers. The best priced 'fixed discount' online bill is now around £215 cheaper than average standard tariff offerings. The offers typically revert to standard terms after a fixed period (such as one year).

3.16. Similarly, many fixed tariffs that do not require on-line registration or account management are currently cheaper, or are equal to, standard tariffs. Where customers pay for energy by cash or check on receipt of their bills, these non-online fixed tariffs are up to £40 per year cheaper than a supplier's standard tariff; and even greater savings are available if customers chose non-online fixed offers where they pay their bills via direct debit. Historically non-online fixed tariffs have been offered at a premium to standard tariffs, so this marks a departure from previous trends. However, we note that exit penalties may apply to current offers if a consumer wishes to leave before the end of the agreed fixed term period.

3.17. Customers are able to benefit from a range of non-standard offers within the market. It is difficult to make precise estimates regarding the number of customers who are currently on these fixed and online offers. However, we recognise that some customers may not be able to access all of these alternative deals, some of which are only available on-line or with the use of direct debit arrangements.

Appendices

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Appendix 1 - Discussion Feedback and Questions

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

1.2. We would especially welcome responses to the specific questions which we have set out.

1.3. Responses should be received by 19 January 2010 and should be sent to:

Ed Harris
Energy Economics
9 Millbank
London
SW1P 3GE
020 7901 7348
Ed.Harris@ofgem.gov.uk

1.4. 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.

1.5. 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.

1.6. Next steps: Having considered the responses to this consultation, Ofgem intends to incorporate them in its next edition of this report. Any questions on this document should, in the first instance, be directed to Ed Harris, whose contact details are given above.

CHAPTER: One

Question 1: Have we used an appropriate level of aggregation for customer bills, i.e. wholesale energy cost, other costs and VAT? If not, what other splits would you suggest?

Question 2: Do you think the 18 month hedging model provides a reasonable indication of suppliers' wholesale energy costs?

Question 3: Do you have any comments on the assumptions and methodology outlined in appendix 4 of the document?

CHAPTER: Two

Question 1: Is the level of net margin presented in the value chain analysis reflective of actual industry margins?

Question 2: Are there any other costs we should be including?

CHAPTER: Three

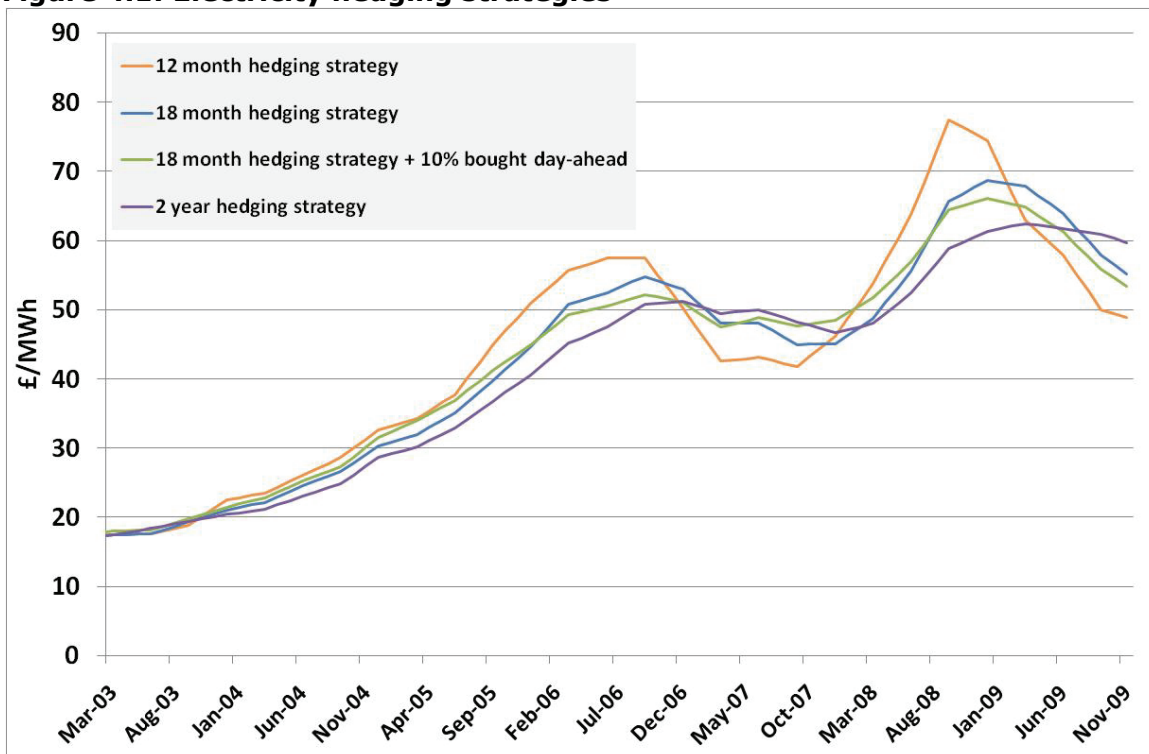
Question 1: do you agree with the data presented in this chapter on choice in the market?

Question 2: can you provide any extra information about choices available to consumers?

Appendix 2 – Hedging strategies

1.1. Suppliers use a range of hedging strategies and can change their approach through time. This section compares the cost to a supplier of adopting different wholesale energy hedging strategies. The strategies are informed by information collected in the Energy Supply Probe. Note these strategies are representative for industry as a whole rather than particular firms. Please refer to appendix 4 for an explanation of the methodology.

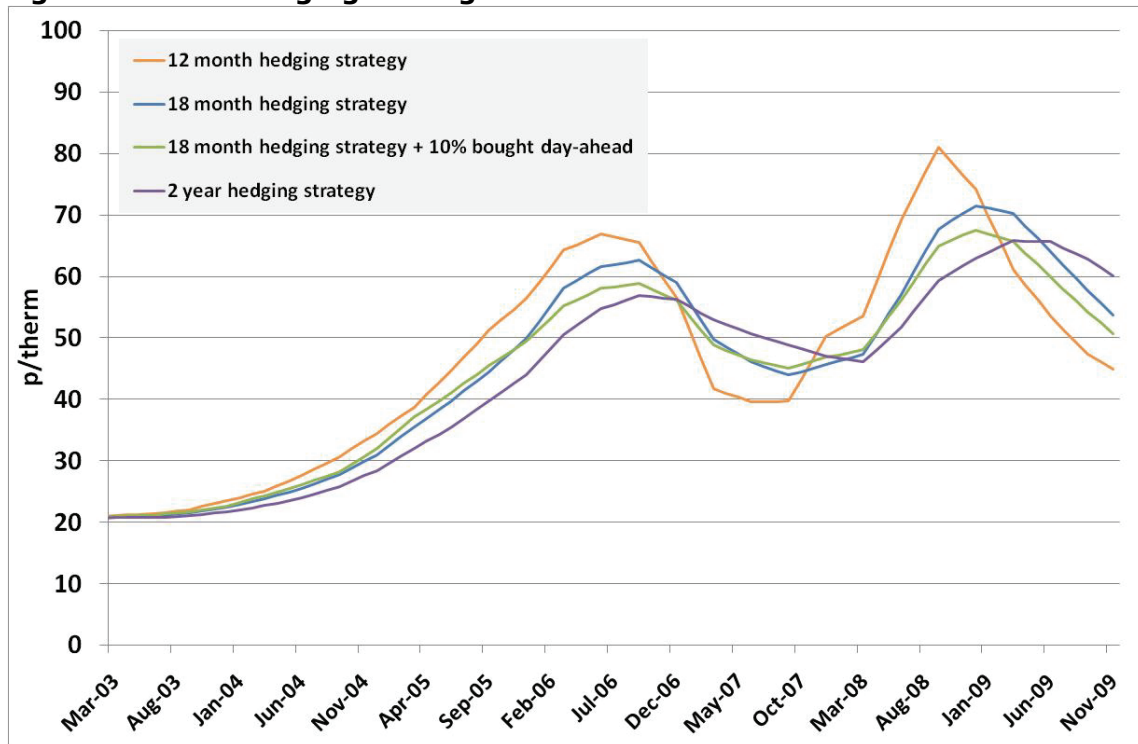
Figure 4.1: Electricity hedging strategies



1.2. Figure 4.1 shows that wholesale costs have come down over the last 6 months, as measured by all four of the hedging strategies analysed. The average decrease has been over £8/MWh, or just over £30 per customer bill.

1.3. The largest fall in the last 6 months is with a 12 month hedging strategy, where wholesale costs have fallen by over 18%. In the 2 year hedging strategy wholesale costs have fallen by less than 4% in the last 6 months. This is because more electricity was purchased at times of high prices.

Figure 4.2: Gas hedging strategies



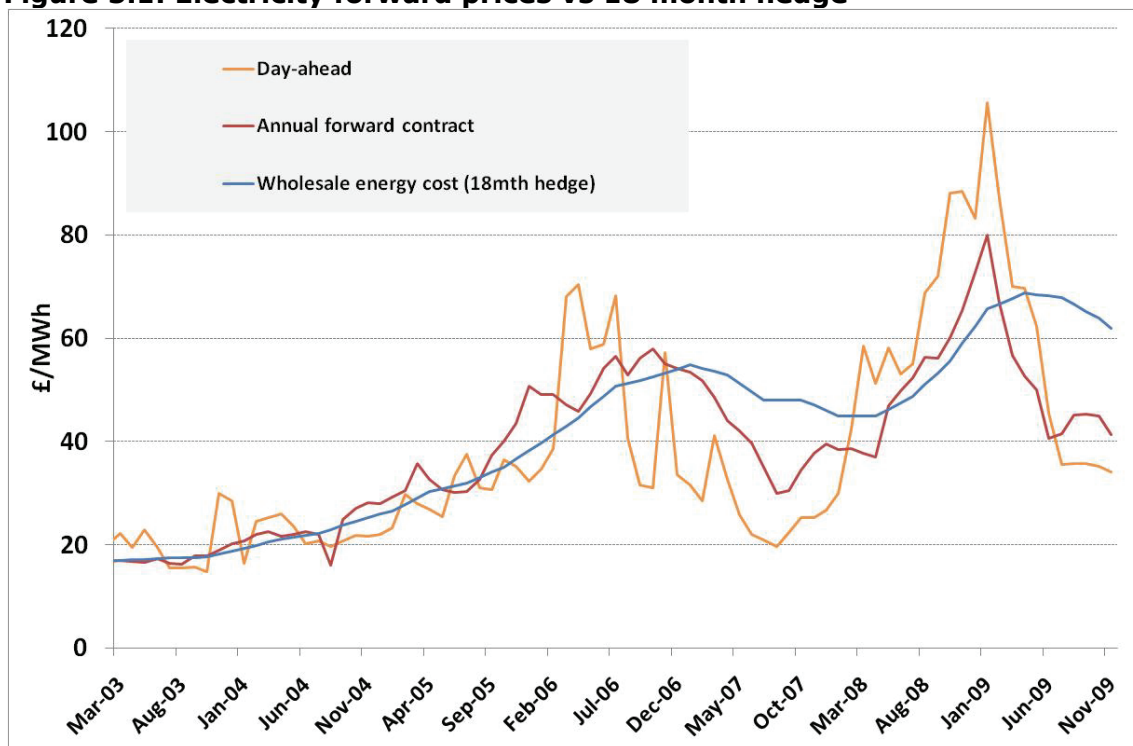
1.4. Figure 4.2 shows that wholesale costs have come down over the last 6 months, as measured by all four of the hedging strategies. The average decrease has been nearly 10p/th, or £60 per customer bill.

1.5. The 12 month hedged cost has shown the largest decrease with costs falling 20% in the last 6 months, compared against a 2 year strategy where wholesale costs have fallen by less than 9% over the same period.

Appendix 3 – Wholesale prices and wholesale costs

1.1. This section illustrates the relationship between the price of wholesale products and estimated wholesale costs⁸. It shows the extent of variation in wholesale prices and how suppliers can smooth costs by hedging. The charts compare day-ahead and annual forward products with our wholesale cost estimate based on an 18 month hedging strategy. Please refer to appendix 4 for an explanation of the methodology.

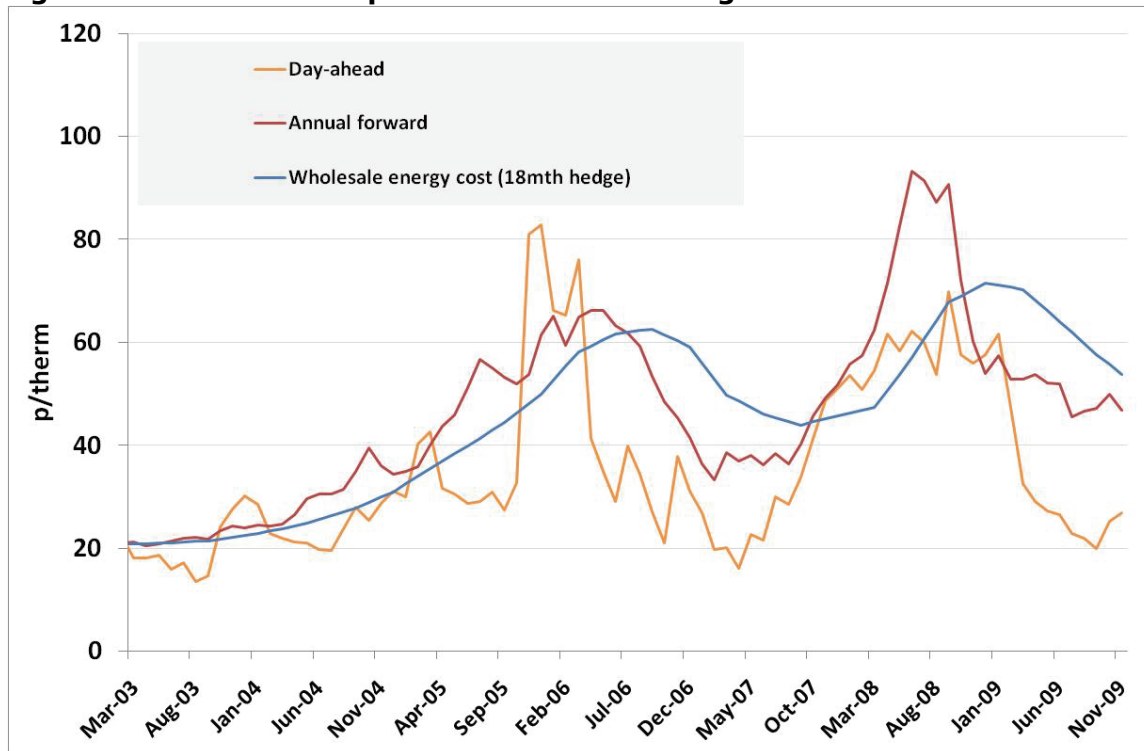
Figure 5.1: Electricity forward prices vs 18 month hedge



1.2. Figures 5.1-5.2 illustrate the relationship between wholesale prices (wholesale prompt and annual forward prices) from January 2003 to November 2009, and hedged wholesale cost based on an 18 month hedging strategy.

⁸ Wholesale product prices are based on quoted prices in Heren’s EDEM and ESGM reports.

Figure 5.2: Gas forward prices vs 18 month hedge



1.3. Hedged wholesale costs are much less volatile than wholesale prices, illustrating the reduction in risk to which suppliers are exposed when they hedge through purchasing their energy requirement in advance.

1.4. Figures 5.1 - 5.2 also illustrate the lag between wholesale price changes and changes in suppliers' forward energy costs. A longer hedging period leads to a greater lag between wholesale market prices and supplier energy costs.

Appendix 4 – Methodology

1.1. This section provides a detailed description of the methodology Ofgem has used for the analysis in this report. It describes the following data used in this report:

- Consumption levels;
- Average customer bill;
- Wholesale energy cost;
- Other supply costs (including network, environmental and some meter costs);
- Gross margin (which includes profits and operating costs); and
- Net margin.

1.2. Prices and costs are calculated at an average consumption of 4MWh of electricity per annum and 18.2MWh of gas per annum for this report. While these differ from the figures Ofgem currently uses, this does not represent a change in Ofgem's standard consumption figures (used in our 'Energy bills explained' factsheets). Ofgem is currently undertaking a review of these standard consumption levels and will consult on any proposed changes before they are implemented.

Average customer bill

1.3. The average customer bill is an estimate of the average cost paid by UK retail energy customers. All price changes up to 30th November 2009 have been included.

1.4. The average customer bill in the report is constructed using monthly prices charged by the Big 6 companies and those of suppliers bought by, or merged with, the Big 6⁹. Each supplier's standard regional tariffs are averaged to give a national average price for each payment method. These national averages are weighted by the proportion of customers on each payment method and weighted by the market share of each company.

Wholesale energy costs

1.5. The proportion of a customer's final energy bill which is accounted for by wholesale costs varies between suppliers and over time with changing wholesale costs and other costs. On average across the industry wholesale costs account for around 60 per cent of a customer's energy bill.¹⁰

⁹ Source: TheEnergyShop.com

¹⁰ This varies by fuel, supplier, hedge strategy, region, consumption and other factors.

1.6. Wholesale prices can be volatile. Suppliers therefore buy much of their energy requirement ahead of delivery (hedging), to reduce the effect of large changes in wholesale price. This helps suppliers to smooth costs and provides them with more certainty over future costs. Wholesale prices on any given day are therefore not a good indicator of suppliers' wholesale costs, nor are short term products such as within-day or day-ahead products. Note that we use wholesale energy price data up until 30th November 2009.

1.7. We therefore estimate the relationship between wholesale prices and suppliers' wholesale energy costs. Our analysis is based on forward looking wholesale cost; in other words it estimates the expected cost of supplying energy to a customer for the next year at each point in time, based on pricing information available at that time. Costs are based on buying seasonal and quarterly products in electricity and gas respectively.

1.8. We have estimated costs based on a range of different hedging strategies. These strategies draw on information provided to us as part of the Energy Supply Probe. Our model shows what we believe are generally representative wholesale costs across the industry. However, it is important to note that hedging strategies vary between suppliers and suppliers may change their strategies over time in reaction to market conditions.

1.9. Firms operate a range of trading strategies, including purchasing energy internally and on long-term contracts. By using market-based prices to estimate wholesale costs, we are pricing energy at the price which firms are able to sell the energy at on the wholesale market¹¹.

1.10. Actual weighted average cost of electricity and gas could be different from this if companies purchase energy internally from their upstream generation business at a price different from the prevailing market price. Any margins made on energy bought below market prices would mean equivalently lower margins in the generation business. To improve transparency on margins, the Big 6 companies will be providing accounts setting out net margins in supply business from autumn 2010.

1.11. In appendix 2 we present costs based on four different hedging strategies. In the report we choose a central hedging strategy where costs are based on firms starting to purchase energy 18 months ahead of time t , and have bought all their energy requirements for the year ahead at time t . Figures 4.1 and 4.2 show how wholesale costs vary with alternative hedging strategies. The alternative hedging strategies are:

- Firms starting to purchase energy 12 months ahead of time t ;
- Firms starting to purchase energy 2 years ahead of time t ; and

¹¹ Formally this is known as an opportunity cost methodology.

-
- Firms starting to purchase energy 18 months ahead of time t , but only hedging 90% with the remaining 10% purchased day-ahead.

1.12. Prices are weighted to take account of seasonal consumption trends (by quarter for gas and by season for electricity) and the electricity requirement is shaped for baseload and peak products. Wholesale energy cost is calculated by averaging forward electricity and gas product prices over the buying period, assuming a constant rate of purchase.

1.13. The wholesale cost model calculates wholesale costs on a quarterly basis, which are then converted into a monthly series by taking a straight line average between quarterly points.

Other supply costs

1.14. The components of other supply costs are network charges (transmission and distribution), balancing, gas storage costs, environmental costs (Energy Efficiency Commitment – EEC, Carbon Emissions Reduction Target – CERT, and Renewable Obligation Certificates – ROCs), other direct costs such as social tariffs and VAT. Note that electricity losses are included within the wholesale cost.

1.15. Based on feedback from previous quarterly reports, we now calculate other costs as the expected costs over the next year. This means for example, that suppliers' costs for the year from November 2009 take into account the DCPR5 distribution charge changes introduced from April 2010.

Gross Margin

1.16. The gross margin is calculated as the difference between the average customer bill and the sum of wholesale costs and other supply costs. In addition to operating profit, gross margin includes suppliers' operating costs such as customer service staffing, IT, marketing, billing and bad debt costs.

1.17. The analysis in the Energy Supply Probe – Initial Findings Report is at a net margin level i.e. supplier's own internal operating costs were deducted and the net margin therefore equated to supplier profit.

Net margin

1.18. The net margin is calculated as the difference between the average customer bill and the sum of wholesale costs, other supply costs (as defined above) and operating costs. Operating costs include customer service staffing, IT, marketing, billing and bad debt costs.

1.19. Detailed operating cost data were collected from the Big 6 as part of the Energy Supply Probe for the period 2005 to 2007. The data has been updated based on a range of sources including publically available information and data provided to

Ofgem on a bilateral basis by the companies. This includes updated information on the evolution of bad debt costs.

1.20. It is important to recognise that the net margin calculations are inherently more uncertain than the gross margin calculations where network, fuel and environmental costs account for the majority of total suppliers' costs. We have had to use a range of assumptions to derive the figures for recent years where certain cost data items are not available to us. The key assumption here is that where updated operating cost information is not available, it is assumed that costs increase in line with changes in previous years.

Value chain analysis

1.21. The value chain analysis uses data from a number of sources to estimate retail and generation margin for the Big 6 suppliers.

1.22. Generation and retail consumption data is based on DUKES, National Grid, company sources and data collected during the Energy Supply Probe. The generation profits are based on the average for all generation in the industry, scaled to meet the requirement of the residential sector. It is not intended to be an accurate reflection of the profitability of generation owned by the Big 6 or total profitability in the GB generation market.

1.23. Generation input pricing data is based on data from DUKES, whilst generation revenue data is based on prices generators would be expected to earn in the market given typical observed forward selling behaviour. Carbon costs are calculated based on market data whilst operating costs are based on internal data and our own calculations.

1.24. Supplier wholesale energy costs are based on data from publically available sources and our 18 month hedging model with costs, adjusted using data obtained during the Energy Supply Probe.

1.25. Supply revenue is calculated by using the average price of standard tariffs offered by the Big 6, weighted by both the market share of the Big 6 and the number of customers on each payment method (DD, SC, PPM). Revenue is calculated for gas, electricity, electricity (economy 7) and dual fuel based on customer number and consumption data from publically available sources, Ofgem data and data obtained during the Energy Supply Probe.

1.26. Network, metering and environmental costs are based on publically available data and data obtained during the Energy Supply Probe. Operating cost data is based on information obtained during the probe for the period 2005 - 2007. Where possible the key cost components have been updated based on a range of assumptions and sources including publically available information and data provided to Ofgem on a bilateral basis by the companies.

Appendix 5 – 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 Acts.¹²

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 accordingly¹³.

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 existing and future consumers, 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 them¹⁴;
- the need to contribute to the achievement of sustainable development; and
- the interests of individuals who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas.¹⁵

¹² Entitled “Gas Supply” and “Electricity Supply” respectively.

¹³ 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.

¹⁴ 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.

¹⁵ The Authority may have regard to other descriptions of consumers.

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 licensed¹⁶ 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; 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 Regulation¹⁷ and therefore part of the European Competition Network. The Authority also has concurrent powers with the Office of Fair Trading in respect of market investigation references to the Competition Commission.

¹⁶ or persons authorised by exemptions to carry on any activity.

¹⁷ Council Regulation (EC) 1/2003

Appendix 6 - Feedback Questionnaire

1.1. We are keen to consider any comments or complaints. In particular, we would be keen to get your answers to the following questions:

1. Do you have any comments about the overall process?
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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