

## Electricity and Gas Supply Market Report



**Document type:** Report

**Ref:** 73/10

**Date of publication:** 16 June 2010

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Our indicator of energy supply net profit margins has fallen since our previous report in February. This is partly due to further gas price cuts from the major suppliers, and also because our measure of wholesale energy costs has stabilised after a period of sustained decline since 2008. We estimate that the net margin for supplying a typical, standard tariff, dual fuel customer is now approximately £70 per customer for the year from May 2010, down from £95 in February.

To further promote market transparency, in October of last year, Ofgem introduced a new licence condition on energy suppliers to report separate summary accounts for gas supply, electricity supply and electricity generation. This will provide greater clarity on the relationship between supply and generation activities. We expect five of the Big 6 major energy suppliers to publish their reports before the end of June and we will provide links on our website.

Our last report was published shortly after the British Gas price cut. Since then we have seen price reductions from the other five, major energy suppliers.

Ofgem continues to monitor the market closely, both in terms of the pricing behaviour of suppliers and the effectiveness of our market reforms. If we feel that the current arrangements and our proposed reforms are insufficient to protect consumers, we will not hesitate to consider further action.

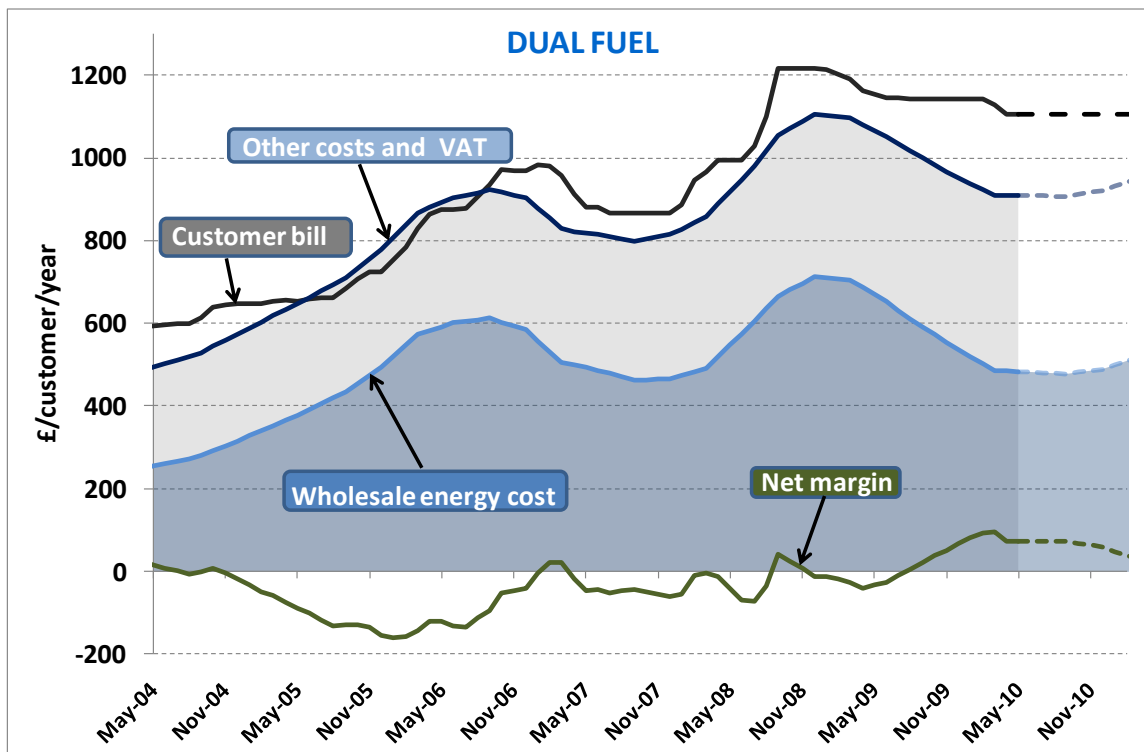
## Associated documents

- Energy Supply Probe — Intial Findings Report. October 2008. Reference number 140/08  
<http://www.ofgem.gov.uk/MARKETS/RETMKTS/ENSUPPRO/Documents1/Energy%20Supply%20Probe%20-%20Initial%20Findings%20Report.pdf>
- Quarterly Wholesale/Retail Price Report. February 2009. Reference number 15/09  
<http://www.ofgem.gov.uk/MARKETS/RETMKTS/ENSUPPRO/Documents1/Wholesale%20retail%20price%20link%20report%20-%20February09.pdf>
- Quarterly Wholesale/Retail Price Report. May 2009. Reference number 57/09  
<http://www.ofgem.gov.uk/MARKETS/RETMKTS/ENSUPPRO/Documents1/Wholesale%20retail%20report%20-%20May.pdf>
- Quarterly Wholesale/Retail Price Report. August 2009. Reference number 111/09  
<http://www.ofgem.gov.uk/MARKETS/RETMKTS/ENSUPPRO/Documents1/August%20quarterly%20price%20report.pdf>
- Quarterly Wholesale/Retail Price Report. December 2009. Reference number 150/09  
<http://www.ofgem.gov.uk/MARKETS/RETMKTS/ENSUPPRO/Documents1/Quarterly%20Wholesale%20Retail%20Price%20Report%20November%202009.pdf>
- Electricity and Gas Supply Market Report. February 2010. Reference number 23/10  
<http://www.ofgem.gov.uk/Markets/RetMkts/ensuppro/Documents1/QPR%20final%20feb.pdf>

## Summary

Our indicator of energy supply margins has decreased over the past quarter. The net margin for supplying a standard tariff, dual fuel customer is £70 per customer for the year from May 2010. This is down from £95 in our February report<sup>1</sup>. This is lower than the historically high figures seen earlier this year, but still above the average level since 2004. However, we estimate that the dual fuel net margin has been low or negative for much of this period.

### Typical dual fuel customer bill, costs and net margin



<sup>1</sup> Since the February report we have updated elements of our assumptions on other costs over the year, as well as our assumptions on how we allocate consumption between seasons. See table 4.2 in Appendix 4 for a summary of the changes since the previous report. Applying these changes to our analysis in February has the effect of reducing our estimate of net margin in February from £105 to £95.

**Dual fuel summary table (£/customer/year)**

	May-2006	May-2007	May-2008	May-2009	May-2010
<b>Customer bill</b>	£875	£880	£995	£1155	£1105
<b>Wholesale costs</b>	£590	£495	£545	£670	£485
<b>VAT and other costs</b>	£300	£325	£370	£395	£425
<b>Gross margins</b>	-£15	£65	£75	£90	£195
<b>Operating costs</b>	£105	£110	£115	£120	£125
<b>Implied net margins</b>	-£120	-£45	-£40	-£35	£70
<i>Notes:</i>	<i>Customer bill is for standard tariffs, weighted by payment method and market share. Average figures assume electricity consumption of 4MWh/yr, gas consumption of 16.9MWh/yr. Figures rounded to nearest 5 &amp; may not sum due to rounding.</i>				

Our estimate of hedged wholesale energy costs has levelled off recently after falling steadily from 2008. This is because electricity and gas purchased by suppliers at times of high prices has gradually fallen out of our wholesale costs estimate. Since our February report, wholesale electricity and gas prices have increased in the market, but our projection indicates that the wholesale energy costs suppliers face only look to rise slightly over the remainder of 2010. As this is a projection changes in market prices will impact future changes in the net margin.

Our previous Electricity and Gas Supply Market Report was published shortly after British Gas reduced their gas and dual fuel prices. Following this, there have been reductions in gas and dual fuel prices by all the other major suppliers, worth an average of £44<sup>2</sup> off a total dual fuel bill. We have incorporated these reductions into our estimate of the average gas and dual fuel customer bill, which results in a lower indicator of net margin for these tariffs.

In this report we have also updated our value chain analysis that looks at margins in generation as well as in supply. As in February, this shows that our estimate of overall net margins for 2009 are higher than at any time in the last decade. Although the analysis suggests overall profit levels have increased over this period, this is set 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.

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<sup>2</sup> Figure weighted by payment method and customer numbers.

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## 1. Customer bills, wholesale energy costs and net margin

Our indicator of energy supply business net margins have come down from the historically high levels seen earlier this year to £70 on a typical, dual fuel customer per year, but they remain above their historic average. Wholesale energy costs have levelled off after falling from their peak in 2008 and our projection shows them remaining broadly stable over the remainder of 2010.

1.1. This section shows the relationship between energy supply costs, customer bills and net margin. Each point on the charts represents the expected cost, revenue or margin for the following year, for an average customer on a £/year basis. Wholesale costs are estimated using our 18-month hedging strategy.

1.2. This report examines the relationship between wholesale energy costs and standard tariff energy bills for a typical customer. It provides an indicator of margins from supplying energy to a typical customer, rather than an estimate of energy supply company profits. The analysis in this section is not based on accounting information provided to us by companies about their margins. It 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. Suppliers use different hedging strategies and their operating costs will vary, so the actual margins for individual suppliers will differ from our indicator.

1.3. To further promote market transparency, we have introduced a new licence condition on energy suppliers to report segmental accounts for gas supply, electricity supply and electricity generation. This will provide greater clarity on the relationship between supply and generation activities. We expect five of the Big 6 major energy suppliers to publish their reports before the end of June and we will provide links on our website<sup>3</sup>.

1.4. We welcome feedback on our methodology as well as our findings. In particular, we have welcomed the responses to our previous reports. Please see Appendix 4 for more details about our assumptions, including figure 4.2 for a summary of the changes since the previous report.

1.5. In the charts in this section, we represent the cost of the average customer bill by the black line. Wholesale costs are represented by the blue shaded area. Other costs, such as network costs, environmental charges, and VAT, are represented by the grey shaded area. The area between the customer bill and the combined wholesale and other costs lines, represents gross margin (which includes profits and

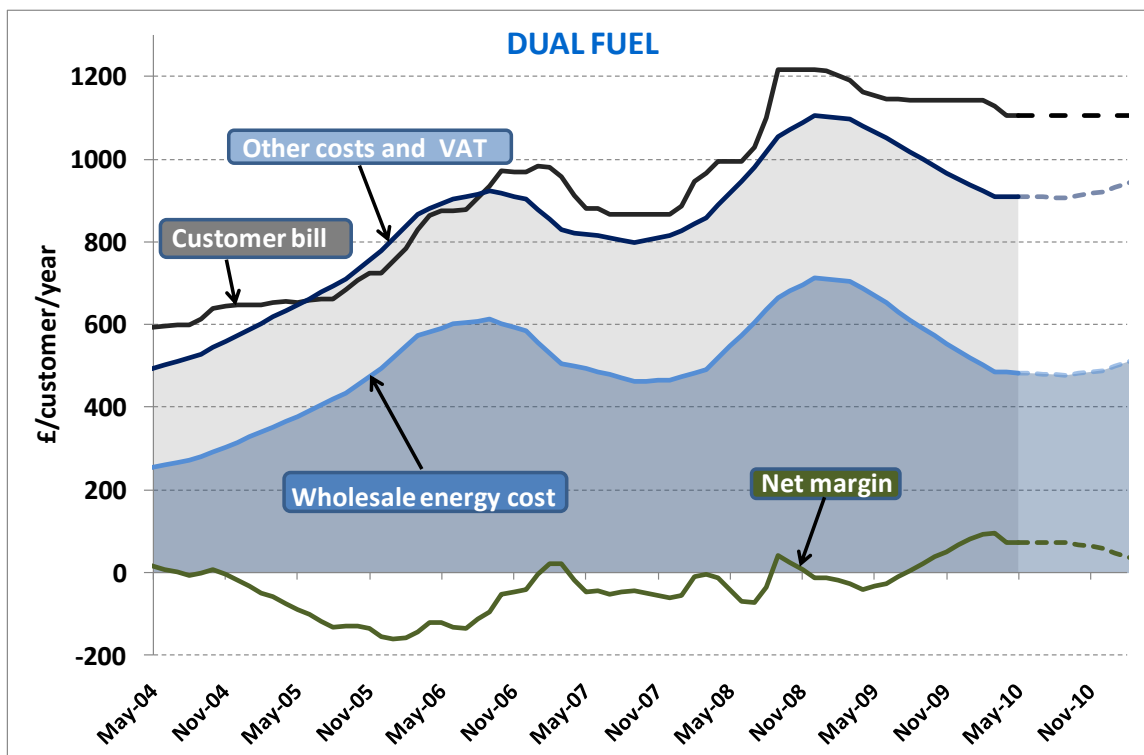
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<sup>3</sup> Suppliers are required to publish no later than 6 months after their financial reporting year end. As SSE report according to the financial calendar (April to the end of March), they are not required to publish until the end of September.

operating costs). Subtracting operating costs from the gross margin gives the net margin, represented by the green line.

1.6. The supplier operating costs estimates are based on information on operating costs for 2005-2007 gathered as part of the Energy Supply Probe. We have applied our own assumptions on how these costs may have changed since 2007 and we have not received updated information from suppliers on this. Operating costs include staff costs, IT costs and overheads. They also include discretionary elements (such as marketing) and bad debts costs, and we have made assumptions about how these have been affected by the current economic downturn, although there is uncertainty around how these costs have changed. Please refer to Appendix 4 for further details on how we calculate net margin.

**Figure 1.1: Typical dual fuel customer bill, costs and net margin**



1.7. Figure 1.1 shows that the estimated net margin on supplying a typical dual fuel customer for the year from May 2010 has declined to £70. This is down from £95 in February 2010<sup>4</sup>. This fall can be attributed to the recent move by the major suppliers to cut retail gas prices, which feeds through into dual fuel bills.

1.8. If retail prices remain unchanged, the net margin looks set to remain at around this level throughout most of 2010, with a further reduction observed near the end of the year. This reduction is primarily due to the effect of increases in our projection of wholesale costs coming towards the end of the year.

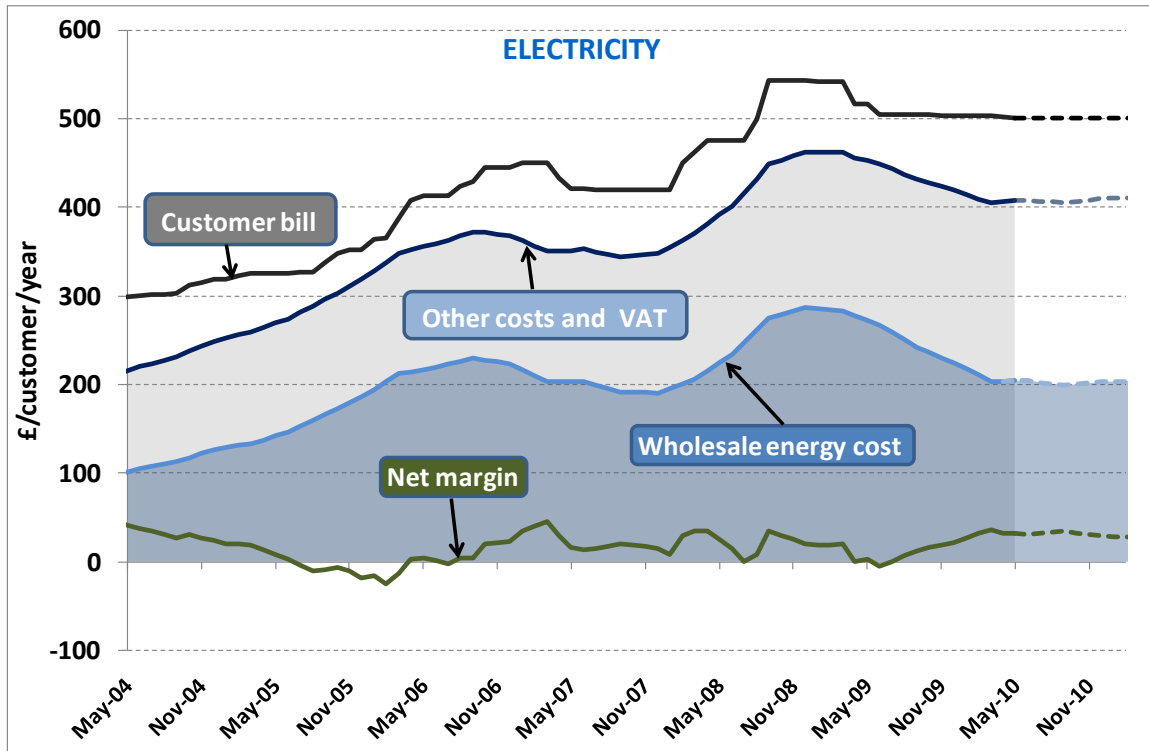
1.9. Wholesale energy costs, are estimated using our assumed 18-month hedging strategy. These costs have fallen over the past year, stabilising in May at around £480 per annum. This is a result of falling wholesale electricity and gas forward prices over 2009. Contracts signed at these lower prices replace older, more expensive contract purchases, which fall out of our wholesale costs calculation. However, as wholesale electricity and gas forward prices have increased in recent months, our simulated hedging strategy indicates that our estimate of wholesale costs will begin to increase again by the end of this year.

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<sup>4</sup> Since the February report we have updated elements of our assumptions on other costs over the year, as well as our assumptions on how we allocate consumption between seasons. See table 4.2 in Appendix 4 for a summary of the changes since the previous report. Applying these changes to our analysis in February has the effect of reducing our estimate of net margin in February from £105 to £95.

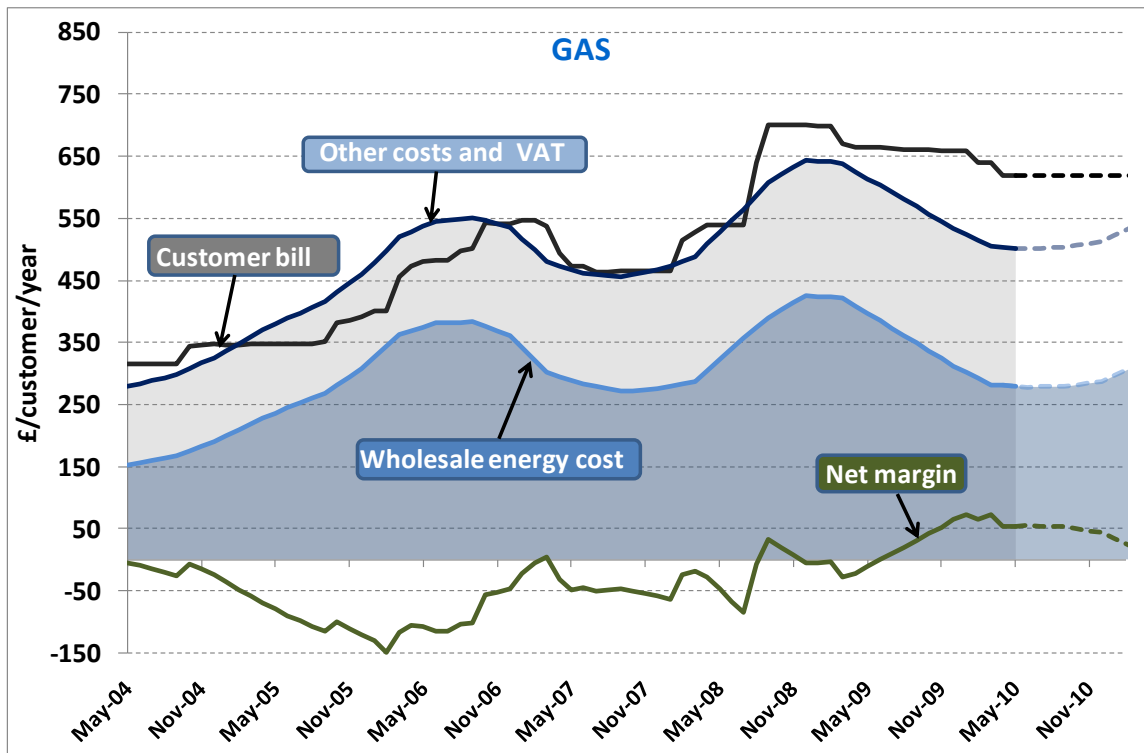


**Figure 1.2: Typical electricity customer bill, costs and net margin**



1.10. Figure 1.2 replicates figure 1.1 for a typical, stand-alone electricity customer account. The figure shows that wholesale electricity costs, as estimated by our 18-month hedging strategy, have stabilised in May, at around £200 per year for a typical customer, after falling for a 15 month period. Since the February report, network charges have been adjusted, which has led to a slight increase in other costs. Environmental costs resulting from the Renewables Obligation have also become more expensive due to an increase in both ROC requirements and the price of ROCs themselves. Since electricity bills are unchanged from our last report, the net margin has stabilised at around £30 per customer account for the year from May 2010.

**Figure 1.3: Typical gas customer bill, costs and net margin**



1.11. Figure 1.3 shows our analysis for a typical stand-alone gas customer account. In February, British Gas cut its gas (and dual fuel) price, a move which was subsequently followed by all five of the other major suppliers. This took place at a time when our estimate of wholesale gas costs was on a steady decline. While net margin reached a historic high in March of this year, estimated to be £70 per customer, the April bill cuts have brought net margins down to an estimated £55 per customer. They are set to remain at around this level through most of 2010 and then decline towards the end of the year if customer bills remain unchanged.

1.12. Although net margins are still greater on a typical gas customer than on a typical electricity customer, the recent gas price cuts have almost halved the gap between the two since the February report, to around £25. Rising gas forward prices are likely to further narrow this gap by the end of this year.

1.13. Evidence from DECC indicates a downward trend in domestic gas consumption in recent years<sup>5</sup>. We recognised this trend in our last report, in which we reduced our domestic gas consumption assumption from 18.2MWh to 16.9MWh. This reduction more closely aligned our consumption assumption with those published by DECC in

<sup>5</sup> DECC Energy Trends, Table 7, p. 51, March 2010

December 2009. DECC did not update their consumption figure in the subsequent Energy Trends publication in March, and so we have held this value constant in this report. Ofgem is currently undertaking a review of these standard consumption levels and will consult on any proposed changes.

1.14. To enable comparison of customer bills and supplier costs over time, we assume a constant level of consumption. A declining consumption trend impacts on net margin as a substantial proportion of supplier costs are fixed. Holding consumption constant over time means we may have overstated margins in recent years, but understated margins in even earlier periods. Moreover, there may also be additional costs to suppliers, because if this lower consumption is unanticipated they may have to sell back surplus energy at a loss on the wholesale markets.

**Figure 1.4: Dual fuel summary table (£/customer/year)**

	May-2006	May-2007	May-2008	May-2009	May-2010
Customer bill	£875	£880	£995	£1155	£1105
Wholesale costs	£590	£495	£545	£670	£485
VAT and other costs	£300	£325	£370	£395	£425
Gross margins	-£15	£65	£75	£90	£195
Operating costs	£105	£110	£115	£120	£125
Implied net margins	-£120	-£45	-£40	-£35	£70
Notes:	Customer bill is for standard tariffs, weighted by payment method and market share. Average figures assume electricity consumption of 4MWh/yr, gas consumption of 16.9MWh/yr. Figures rounded to nearest 5 & may not sum due to rounding.				

**Figure 1.5: Electricity summary table (£/customer/year)**

	May-2006	May-2007	May-2008	May-2009	May-2010
Customer bill	£415	£420	£475	£515	£500
Wholesale costs	£215	£205	£225	£270	£205
VAT and other costs	£140	£145	£165	£180	£205
Gross margins	£55	£70	£85	£65	£95
Operating costs	£55	£55	£60	£60	£60
Implied net margins	£5	£15	£25	£5	£30
Notes:	Customer bill is for standard tariffs, weighted by payment method and market share. Average figures assume electricity consumption of 4MWh/yr. Figures rounded to nearest 5 & may not sum due to rounding.				

**Figure 1.6: Gas summary table (£/customer/year)**

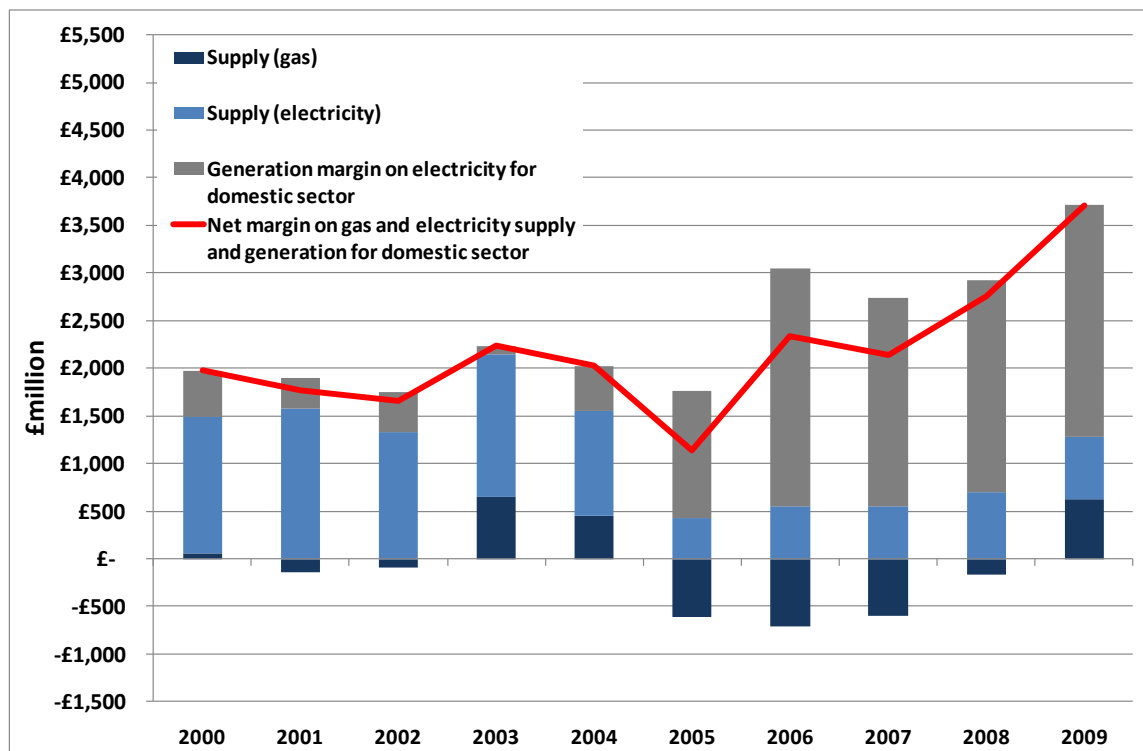
	May-2006	May-2007	May-2008	May-2009	May-2010
Customer bill	£480	£475	£540	£665	£620
Wholesale costs	£375	£290	£320	£395	£280
VAT and other costs	£160	£180	£205	£215	£220
Gross margins	-£55	£5	£10	£50	£115
Operating costs	£50	£55	£60	£60	£60
Implied net margins	-£110	-£50	-£50	-£10	£55
Notes:	Customer bill is for standard tariffs, weighted by payment method and market share. Average figures assume gas consumption of 16.9MWh/yr. Figures rounded to nearest 5 & may not sum due to rounding.				

## 2. Additional analysis

This section provides additional analysis on profitability across the value chain for energy suppliers.

2.1. Figure 2.1 provides an estimate of 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 and in our last report. 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. It is not based on accounting information provided to us by companies about their margins (please refer to appendix 4 for further details).

**Figure 2.1: Value chain profitability in domestic energy supply and power generation**



2.2. The value chain analysis published in the last report has been updated to include feedback from industry participants, new updated information including fuel costs and output figures, and general improvements to the analysis, such as the calculation of network costs allowing for annual changes in energy consumption. The updated analysis indicates that electricity and gas supply and generation margins for 2009 are now slightly higher than we estimated in the last report, but are lower than forecast in previous years.

2.3. Figure 2.1 shows that our estimate of overall net margins for 2009 (as shown by the red line) are higher than at any time in the last decade. Although this analysis suggests overall profit levels have increased over this period, this is set 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. The chart also shows an increase in gas supply profitability in 2009 compared with previous years. This can be attributed to the increase in suppliers' gas prices seen in 2008 and 2009.

2.4. It is important to note that 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, the revenue calculated for generators are based on the prices they would be expected to earn in the market given typically observed forward selling behaviour. For ease of comparison with supplier margins, estimated margins in generation are calculated on a basis equivalent to EBITDA. However, we recognise that using this metric may substantially overstate the margins being earned in generation, due to the capital intensive nature of the businesses.

## Appendices

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## Appendix 1 – 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. Feedback should be received by 29 July 2010 and should be sent to:

Giorgio Ballardin  
GB Markets  
9 Millbank  
London  
SW1P 3GE  
020 7901 1888  
[giorgio.ballardin@ofgem.gov.uk](mailto:giorgio.ballardin@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](http://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.

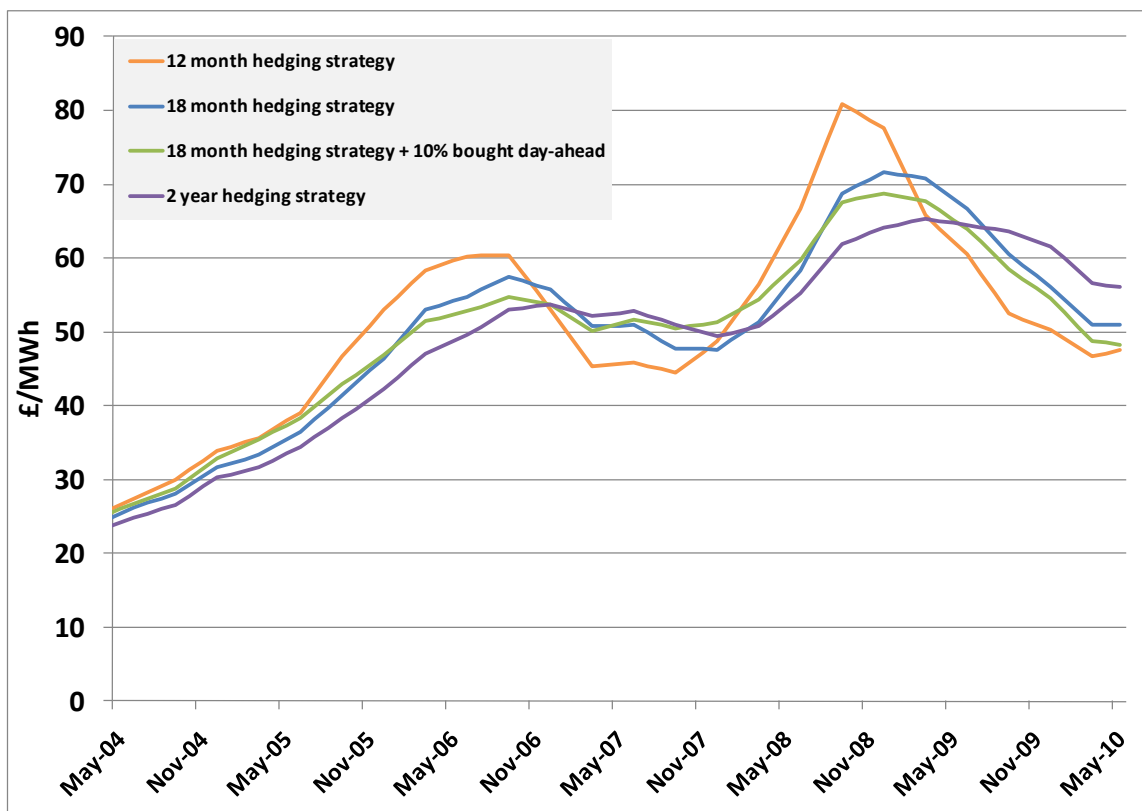
1.4. Respondents who wish to have their responses remain confidential should clearly mark the document/s to that effect and include the reasons for confidentiality. It would be helpful if responses could be submitted both electronically and in writing. Respondents are asked to put any confidential material in the appendices to their responses. Having considered the responses to this consultation, Ofgem intends to incorporate them in the next edition of this report.

1.5. Any questions on this document should, in the first instance, be directed to Giorgio Ballardin, whose contact details are given above.

**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 four strategies are inferred by information collected in the Energy Supply Probe. Note these strategies are intended to represent the industry as a whole rather than any particular firm. Please refer to Appendix 4 for an explanation of the methodology.

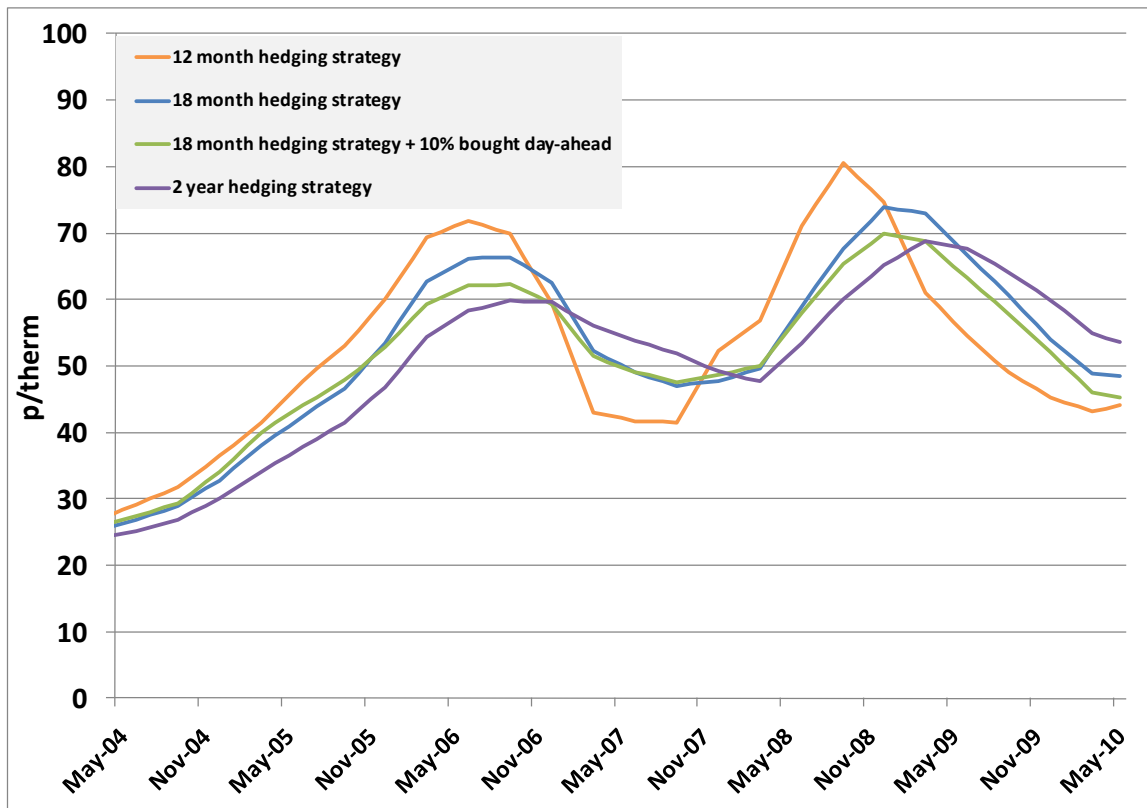
**Figure 2.1: Electricity hedging strategies**



1.2. Figure 2.1 shows that the downward trend in wholesale electricity costs seems to have stabilised across all four of the hedging strategies presented. Depending on the hedging strategy, the current average value of the contracted position has stabilised in the range £47-56 MWh.



**Figure 2.2: Gas hedging strategies**

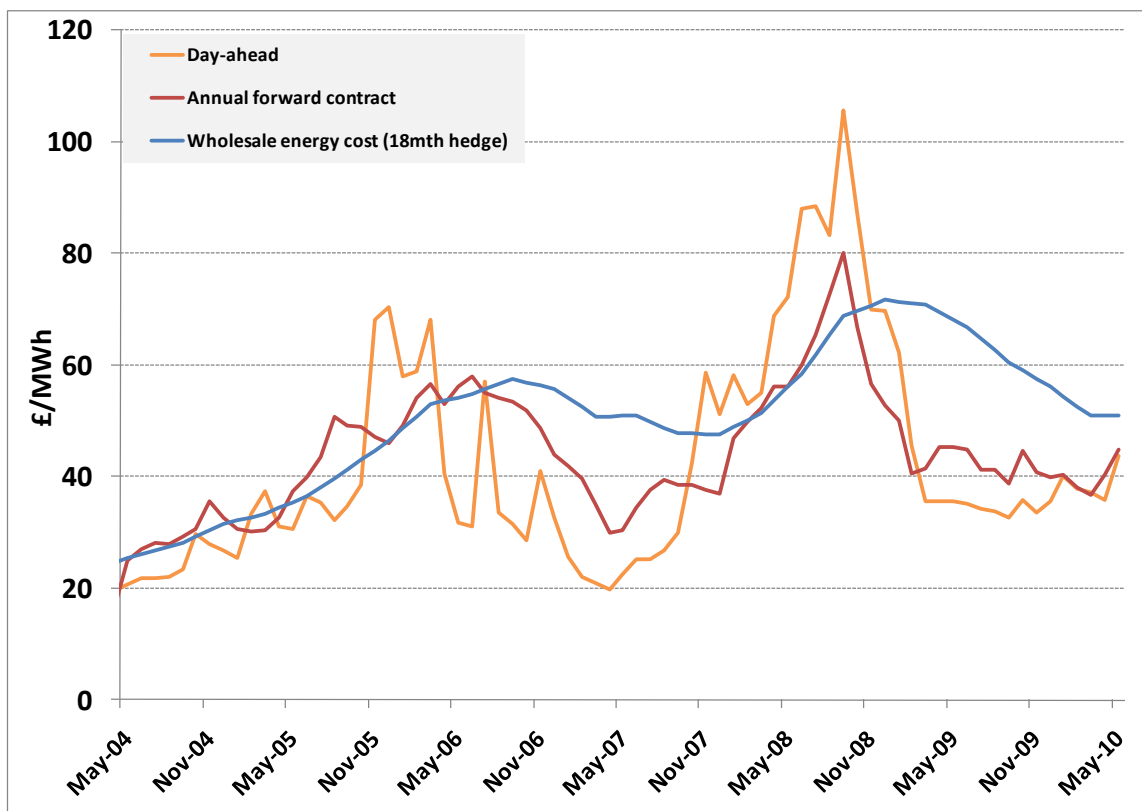


1.3. Figure 2.2 indicates that the downward trend in wholesale gas costs has also slowed across all four of the hedging strategies and started to rise for the 12-month hedging strategy. Depending on the strategy, the current average value of the contracted position has stabilised in the range 45-55p/therm.

**Appendix 3 – Wholesale prices and wholesale costs**

1.1. This section illustrates the relationship between the price of wholesale products and our estimate of wholesale costs<sup>6</sup>. 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.

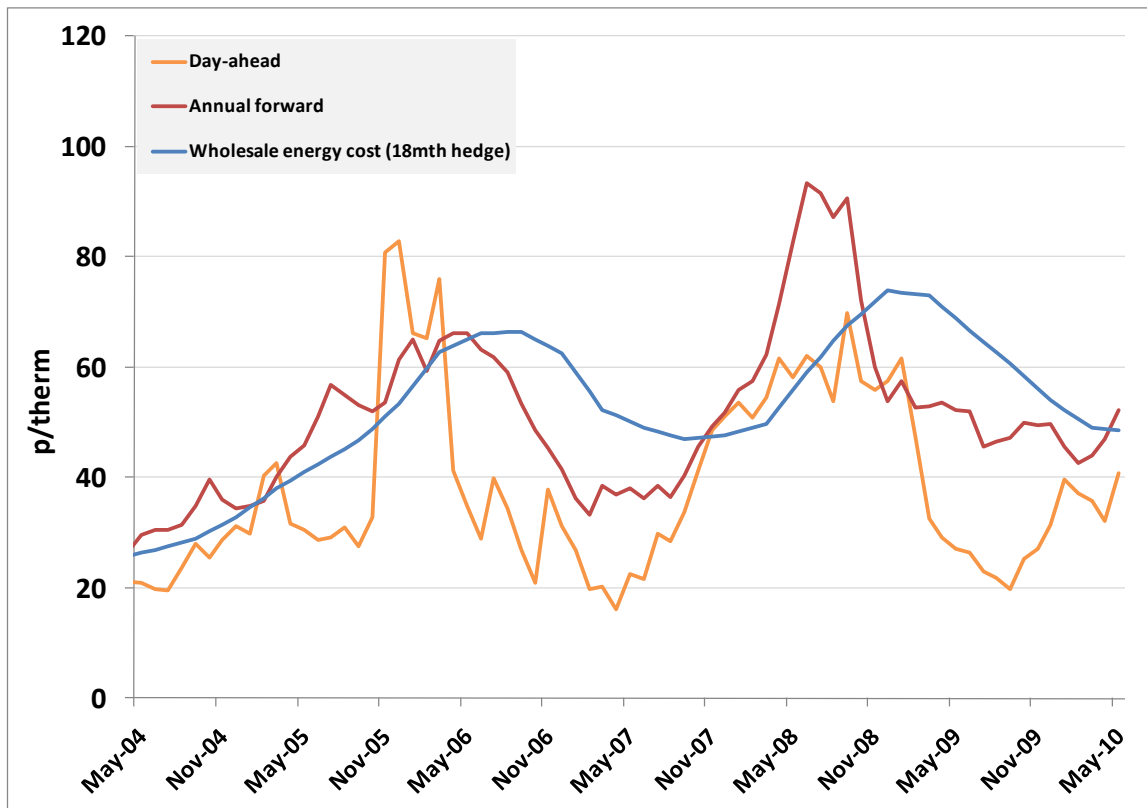
**Figure 3.1: Electricity forward prices vs. 18-month hedge**



1.2. Figures 3.1 and 3.2 illustrate the relationship between wholesale electricity and gas prices (wholesale prompt and annual forward prices) with the wholesale cost based on our 18-month hedging strategy. 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.

<sup>6</sup> Wholesale product prices are based on quoted prices in Heren’s EDEM and ESGM reports.

**Figure 3.2: Gas forward prices vs. 18-month hedge**



1.3. Figures 3.1 and 3.2 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 but also to smoother price variations on average.

## Appendix 4 – Methodology

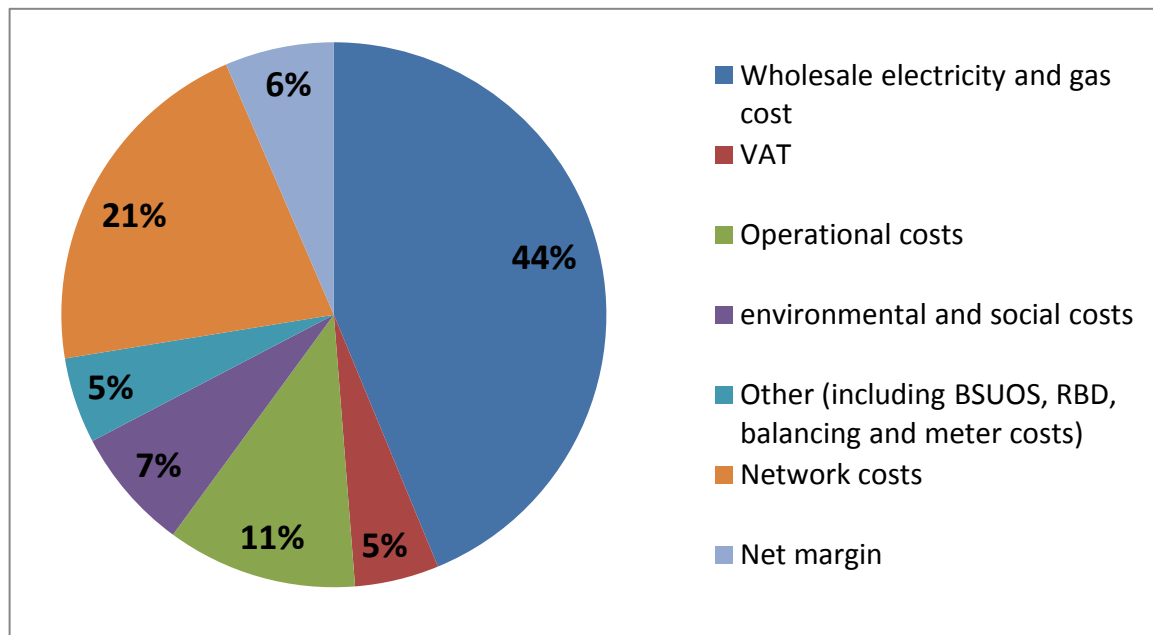
1.1. This section provides a detailed description of the methodology Ofgem has used behind the following data used in this report:

- Consumption levels;
- Average customer bill;
- Wholesale energy costs;
- 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 per annum of 4MWh of electricity and 16.9MWh of gas and are held constant over time in the analysis presented in the text. This reflects data from DECC's *Energy Trends*, December 2009 publication. These values differ from the consumption figures we currently use in average bill calculations in other Ofgem publications, and does not represent a change in Ofgem's standard consumption figures (used for example in our 'Energy bills explained' factsheets). Ofgem is currently undertaking a review of these standard consumption levels and will consult on any proposed changes.

1.3. All cost items are expressed in nominal terms.

**Figure 4.1: Illustrative breakdown of a typical dual fuel customer bill**



### **Average customer bill**

1.4. The average customer bill is an estimate of the average cost paid by UK retail energy customers on standard tariffs. All price changes up to Friday 28<sup>th</sup> May have been included.

1.5. The average customer bill in the report is constructed using monthly prices charged by the Big 6 companies and those charged by suppliers bought by, or merged with, the Big 6<sup>7</sup>. 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.

1.6. We have not taken into account the impact of discounted and fixed price tariffs as we are carrying out the analysis from the perspective of a typical customer and standard tariffs remain the most popular tariff form. We are not trying to model supply business profits.

### **Wholesale energy costs**

1.7. 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.

1.8. 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. We use wholesale energy price data up to Friday 28<sup>th</sup> May.

1.9. We estimate the relationship between wholesale prices and suppliers' wholesale energy costs. Our analysis is based on forward looking wholesale costs; 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.

1.10. 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 of wholesale

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<sup>7</sup> Source: [www.TheEnergyShop.com](http://www.TheEnergyShop.com)

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.

1.11. 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 market<sup>8</sup>.

1.12. The 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 margin made on energy bought below market prices would mean an equivalently lower margin in the generation business.

1.13. In October 2009 we introduced a license condition on large vertically integrated suppliers requiring them to publish a weighted average cost of gas and electricity six months after their financial reporting year end. We expect five of the Big 6 major energy suppliers' to publish their reports before the end of June and we will provide links on our website.

1.14. 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 2.1 and 2.2 in Appendix 2 show how wholesale costs vary with alternative hedging strategies. The alternative hedging strategies are:

- Firms start to purchase energy 12 months ahead of time  $t$ ;
- Firms start to purchase energy 2 years ahead of time  $t$ ; and
- Firms start to purchase energy 18 months ahead of time  $t$ , but only hedge 90% with the remaining 10% purchased day-ahead.

1.15. Prices are weighted to take account of seasonal consumption trends (by quarter for gas and by season for electricity). For electricity, wholesale costs include both losses and our proxy for shaping costs. Wholesale energy cost is calculated by averaging forward electricity and gas product prices over the buying period, assuming a constant rate of purchase.

1.16. 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.

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<sup>8</sup> Formally this is known as an opportunity cost methodology.

**Other supply costs**

1.17. The components of other supply costs are network charges (transmission and distribution), balancing costs, meter costs, RBD costs, environmental costs (Energy Efficiency Commitment – EEC, Community Energy Savings Programme -CESP, Carbon Emissions Reduction Target – CERT, and Renewables Obligation Certificates – ROCs), other direct costs such as social tariffs and VAT. Note that electricity losses and shaping costs are included within the wholesale cost.

1.18. Other costs are the expected costs over the next year. This means for example, that suppliers' costs for the year from May 2010 also take into account the extended CERT scheme introduced from April 2011.

**Gross Margin**

1.19. 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.

1.20. 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**

1.21. 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.

1.22. Detailed operating cost data was 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.

1.23. 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. We have also equalised the operating cost data between electricity and gas.

## Value chain analysis

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

1.25. 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.

1.26. 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 typically observed forward selling behaviour. Carbon costs are calculated based on market data whilst operating costs are based on internal data and our own calculations.

1.27. 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.

1.28. 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. Analysis does not include non-standard tariffs such as fixed price, online or green tariffs.

1.29. 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.

**Figure 4.2: Summary of changes since the last report**

Updates	Source
Gas consumption by quarter averages	DECC's DUKES
ROC assumptions updated	Ofgem
Network prices updated	National Grid, DNOs
Customer numbers updated	Datamonitor
Operating cost data now expected costs over next 12 months	Ofgem



## 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 (such as the Gas Act 1986, the Electricity Act 1989, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002 and the Energy Acts of 2004, 2008 and 2010) as well as arising from directly effective European Community legislation.

1.3. References to the Gas Act and the Electricity Act in this appendix are to Part 1 of those Acts.<sup>9</sup> 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 accordingly.<sup>10</sup>

1.4. The Authority’s principal objective is to protect the interests of existing and future consumers in relation to gas conveyed through pipes and electricity conveyed by distribution or transmission systems. The interests of such consumers are their interests taken as a whole, including their interests in the reduction of greenhouse gases and in the security of the supply of gas and electricity to them.

1.5. The Authority is generally required to carry out its functions in the manner it considers is best calculated to further the principal objective, wherever appropriate by promoting effective competition between persons engaged in, or commercial activities connected with,

- the shipping, transportation or supply of gas conveyed through pipes;
- the generation, transmission, distribution or supply of electricity;
- the provision or use of electricity interconnectors.

1.6. Before deciding to carry out its functions in a particular manner with a view to promoting competition, the Authority will have to consider the extent to which the interests of consumers would be protected by that manner of carrying out those functions and whether there is any other manner (whether or not it would promote competition) in which the Authority could carry out those functions which would better protect those interests.

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<sup>9</sup> Entitled “Gas Supply” and “Electricity Supply” respectively.

<sup>10</sup> 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.

1.7. In performing these duties, the Authority must 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 them<sup>11</sup>; and
- the need to contribute to the achievement of sustainable development.

1.8. In performing these duties, the Authority must have regard to the interests of individuals who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas.<sup>12</sup>

1.9. 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 licensed<sup>13</sup> 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, and shall, in carrying out those functions, have regard to the effect on the environment.

1.10. In carrying out these functions the Authority must also have regard to:

- 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.

1.11. The Authority may, in carrying out a function under the Gas Act and the Electricity Act, have regard to any interests of consumers in relation to communications services and electronic communications apparatus or to water or

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<sup>11</sup> 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 Acts in the case of Electricity Act functions.

<sup>12</sup> The Authority may have regard to other descriptions of consumers.

<sup>13</sup> Or persons authorised by exemptions to carry on any activity.

sewerage services (within the meaning of the Water Industry Act 1991), which are affected by the carrying out of that function.

1.12. 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 Regulation<sup>14</sup> 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.

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<sup>14</sup> 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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