Quarterly Wholesale/Retail Price Report

May 2009

This is the second edition of the quarterly report. It provides information on the relationship between wholesale and retail energy prices, in response to concerns that suppliers are quick to raise prices and slow to cut prices relative to costs. It is not intended to be used as a guide to customers as to which supplier, payment method, product or tariff they should choose. A range of information is available for this, from switching sites, Consumer Focus and suppliers themselves.

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1. Overview

1.1 In October 2008 Ofgem published the *Energy Supply Probe – Initial Findings Report* which included analysis on the relationship between the wholesale energy costs faced by suppliers and retail prices faced by customers.[1] This was partly in response to concerns that falls in wholesale energy prices were not leading to lower retail prices as quickly as increases were leading to higher retail prices.

1.2 To provide ongoing information on the relationship between retail energy prices and wholesale costs Ofgem is publishing quarterly reports. This second report updates the analysis in the February report, having made changes in response to comments on that report.[2]

1.3 Wholesale energy costs account for the largest share of customers' bills – around 60%. Wholesale energy prices are also very volatile, which if fed through immediately to customers would mean volatile bills. However, firms incur costs when they change prices and customers are likely to have a preference for some stability. In order to reduce the risk of large and frequent changes in suppliers' costs and consumers' bills, suppliers buy a large proportion of their energy requirement in advance of use (generally referred to as hedging). This means suppliers can set much more stable retail prices.

1.4 Suppliers also face a wide range of other costs, not related to wholesale cost. Many of these, such as the cost of environmental commitments and network charges, are beyond their control and are passed on directly to consumers' bills. Many other cost increases are putting upward pressure on domestic energy bills. These include environmental costs, such as the Renewables Obligation (RO), the cost of which increases each year, and the Carbon Emissions Reduction Target (CERT). In addition, the government recently announced in the 2009 Budget its intention to increase the banding of offshore generation which could increase the cost of the Renewables Obligation further. The intended introduction of the Community Energy Saving Programme (CESP) in September 2009 will also put some upward pressure on bills when it is introduced.

1.5 The cost to suppliers of providing social tariffs has been increasing over time. There is also evidence that an increasing number of customers are paying their bills late as a result of the current economic climate. The costs to suppliers of servicing and recovering bad debt may therefore increase, which could put further upward pressure on bills in the future.

[1] Chapter 7 "Company behaviour", Appendix 5 "Wholesale costs and retail prices" http://www.ofgem.gov.uk/Markets/RetMkts/ensuppro/Documents1/Wholesale%20retail%20price%20link%20report%20-%20February09.pdf

[2] The previous quarterly wholesale/domestic retail price report is available on the Ofgem website: http://www.ofgem.gov.uk/MARKETS/RETMKTS/ENSUPPRO/Documents1/Energy%20Supply%20Probe%20-%20Initial%20Findings%20Report.pdf.

Summary of analysis

1.6 We are grateful for responses to our first report. Based on feedback and discussions with interested parties we have made some changes to the presentation and methodology of the first report. We have included a chart comparing dual fuel prices with wholesale costs. We have also taken into account market share in our estimate of average customer bills and have changed the annual profile of other costs. We have also now included VAT in 'other supply costs', a change from the last report in which gross margin included VAT. See section 5 (methodology) for further details. As with the previous edition, our analysis looks at the relationship between wholesale and retail prices for industry as a whole, rather than particular firms or individual customers.

1.7 Based on an 18 month hedging strategy for wholesale energy buying and on current retail prices, our estimates of suppliers' expected gross margin on supplying a customer over the next year are £67, £75 and £119 per customer per year for electricity, gas and dual fuel respectively.[3] Sections 2 and 3 show that estimated industry gross margins in electricity and dual fuel have fallen since February and gross margin in gas is at the same level, based on an 18 month hedging strategy. These margins reflect the price cuts between mid February and mid May, including the recent cut in electricity prices by British Gas.

1.8 Gross margin includes profit and supplier operating costs such as staffing, sales, marketing, IT costs, which are within a supplier's control. It excludes costs which are beyond suppliers' control (and are therefore passed on directly to customers) such as environmental charges and network costs. These are referred to as 'other supply costs' in our methodology.

1.9 Other factors can also affect gross margin. As noted, the cost of social tariffs may be increasing and bad debt costs may rise in the future. These components are included within gross margin, which could therefore increase even with no increase in profit.

1.10 The aim of the report is not to forecast when or by how much retail prices may change. These competitive decisions are for individual suppliers to make based on a wide range of competitive factors.

Notes

1.11 Ofgem is intending to publish the report on a quarterly basis. In addition, when appropriate, we may publish the report and related information outside of this time scale.

1.12 Whilst every effort has been made to ensure the accuracy of the data contained within this report, Ofgem does not provide any warranty regarding, or accept any responsibility for, the accuracy, completeness or otherwise of the information contained within this report. Furthermore Ofgem does not accept any liability for any loss or damage, howsoever caused, arising from the use of or reliance on any information or opinion

[3] Average gross margin is likely to vary by region.

contained within this report, including but not limited to any possible errors, omissions or misleading or inaccurate statements.

Contact

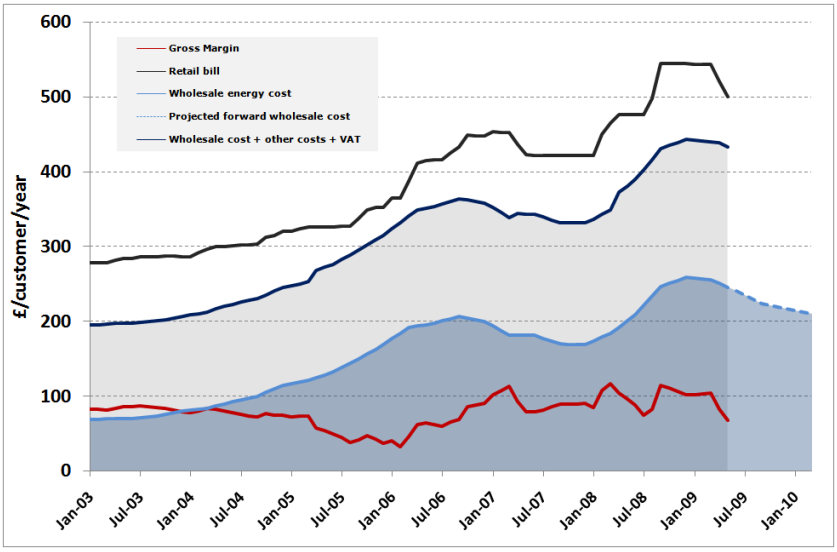
1.13 We welcome any suggestions on how this report could be improved or comments on our methodology. Please contact Chris Lock on x7225 for press enquires, or for all other enquiries, Ben Smithers at ben.smithers@ofgem.gov.uk or Ed Harris at ed.harris@ofgem.gov.uk.

2. Customer bills, wholesale energy costs and margins

This section estimates the relationship between customer bills and wholesale energy costs (assuming suppliers start buying wholesale energy 18 months ahead). Please refer to section 5 for an explanation of the methodology.

2.1 In figures 2.1-3 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 remaining 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.[4]

Fig 2.1: Electricity customer bill, wholesale cost and margin



Electricity

Figure 2.1 illustrates that based on an 18 month hedging strategy, the gross margin has fallen in the last 3 months from £103 in February to £67 per customer per year.[5]

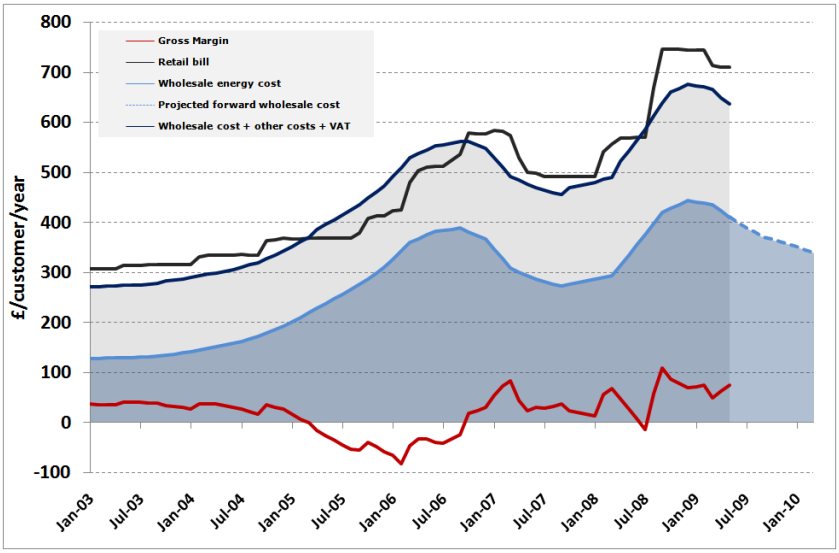
This reflects retail price cuts which have been implemented between mid February and early May.

Since February estimated wholesale costs have fallen, other costs such as environmental costs and network charges have risen slightly (around £4 per customer per year).

There may have also have been upward pressure on the operating cost component of gross margins, for example from increasing cost of social tariffs.

[4] Figures 2.1-3 have been rolled over to May based on data available on 12 May 2009.
[5] Changes to the methodology mean that these figures are not directly comparable to the last report.

Fig 2.2: Gas customer bill, wholesale cost and margin

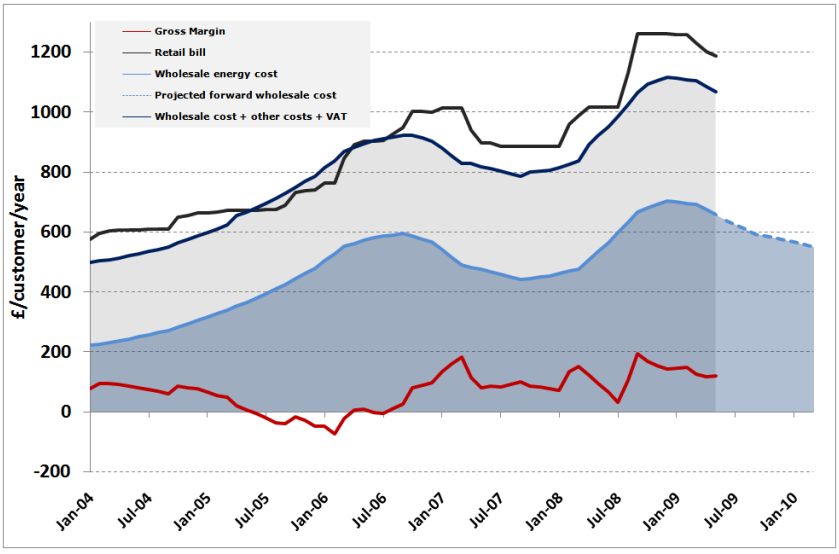


Gas

Figure 2.2 shows that based on our assumed 18 month hedging strategy, the gross margin is £75 per customer per year, the same as in February.[6]

As in electricity, this reflects retail price cuts and decreasing wholesale costs. Other costs have fallen slightly since February, however the trend in these costs is upwards.[7]

Fig 2.3: Dual fuel customer bill, wholesale cost and margin [8]



Dual Fuel

Figure 2.3 shows that based on our assumed 18 month heading strategy, margins in dual fuel have fallen from £148 to £119 per dual fuel customer per year.[9]

Margins are lower in dual fuel compared to combined single fuels, because some suppliers give discounts to dual fuel customers.

2.2 The current estimated average retail bill, costs and gross margins in the above figures are set out in table 2.1 below:

[6] Changes to the methodology mean that these figures are not directly comparable to the last report.
[7] Other costs have fallen by £4 since the last report, due to within-year profiling of gas network charges. However, gas network charges are £10 higher than this time last year, reflecting the upward trend.
[8] Note that our dual fuel series begins in May 2004 due to data availability.
[9] As above, changes to the methodology mean that these figures are not directly comparable to the last report.

Table 2.1: May 2009 figures (£/customer/year)

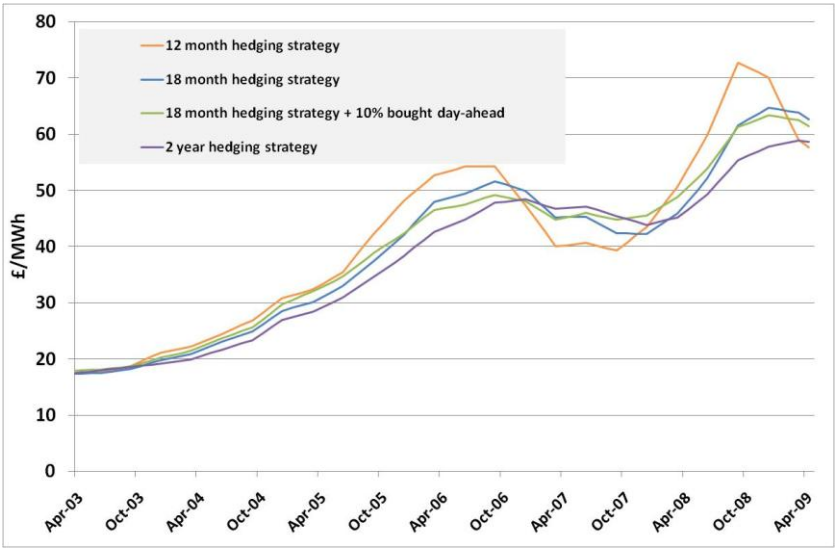
	Average bill	Wholesale costs	VAT and other costs	Gross margin
Electricity	500	246	187	67
Gas	710	411	225	75
Dual Fuel	1186	656	410	119

Notes: Average bill is weighted by payment method and market share.
All figures calculated for electricity consumption of 4MWh/yr, gas consumption of 18.2MWh/yr of gas.

3. Hedging strategies

This section compares the cost to a supplier of adopting different wholesale energy hedging strategies. Please refer to section 5 for an explanation of the methodology.

Fig 3.1: Electricity costs under different hedging strategies



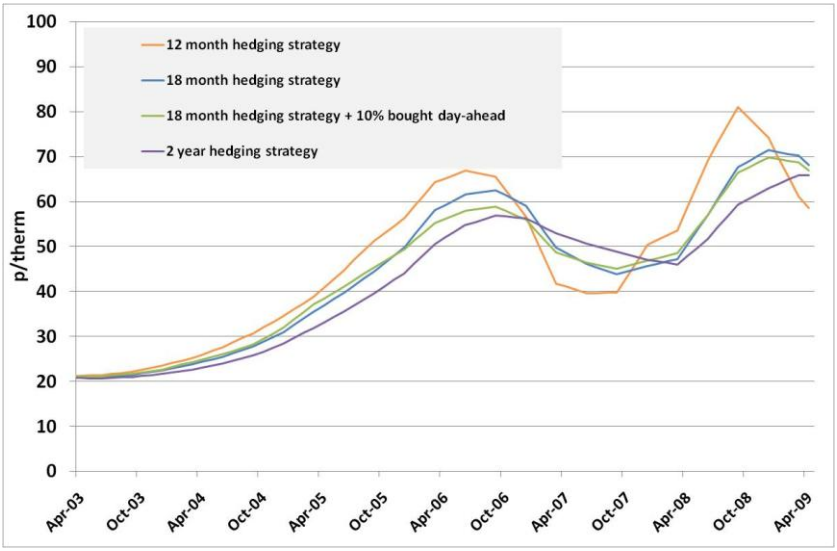
Electricity

Figure 3.1 compares a range of wholesale cost hedging strategies that a supplier may adopt.

The analysis shows that each of the hedging strategies presented was the most costly to suppliers at some point over the period (January 2003 to May 2009).

This highlights the likelihood that suppliers may change their hedging strategies over time.

Fig 3.2: Gas costs under different hedging strategies



Gas

Figure 3.2 compares a range of wholesale cost hedging strategies that a supplier may adopt.

Of the four strategies presented, hedging wholesale costs on a 12 month basis would have cost suppliers most in 2008 but would now cost the least.

4. Wholesale prices and wholesale costs

This section illustrates the difference between the price of wholesale products and estimated wholesale costs.[10] We compare day-ahead and annual forward products with our wholesale cost estimate based on an 18 month hedging strategy. Please refer to section 5 for an explanation of the methodology.

Fig 4.1: Wholesale electricity forward prices vs 18mth hedge

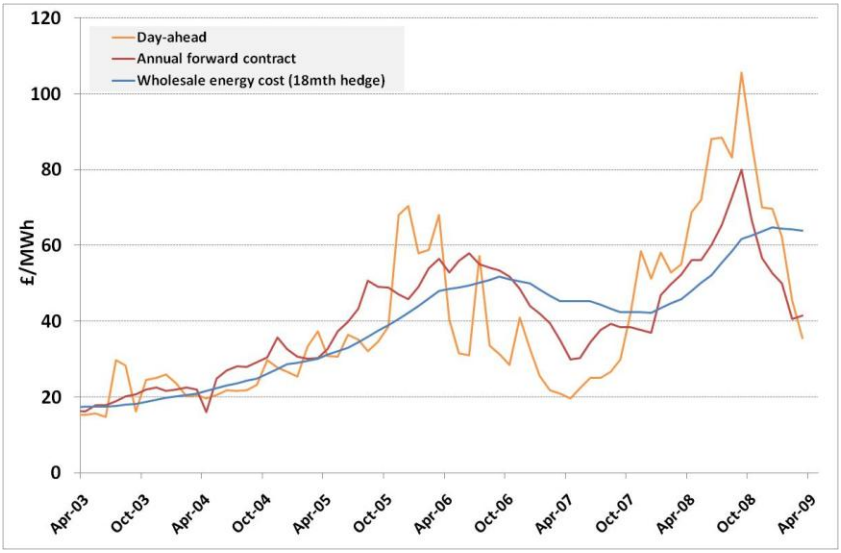
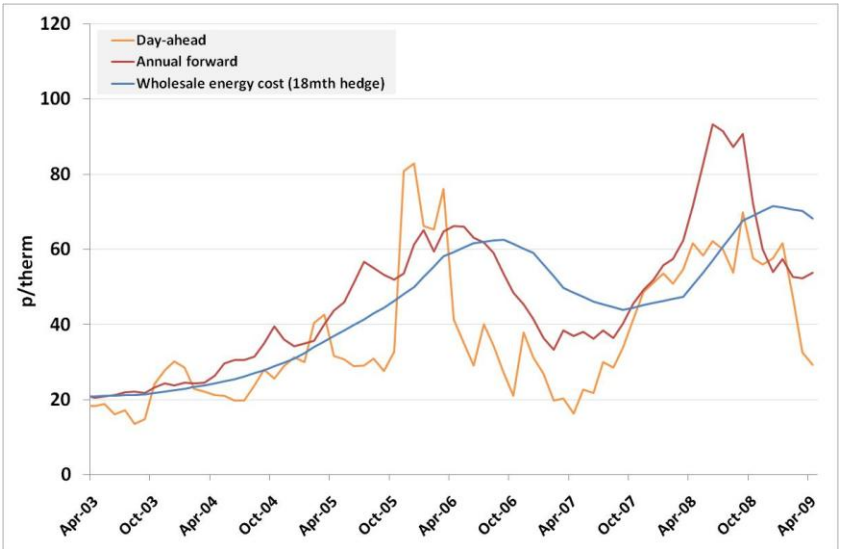


Fig 4.2: Wholesale gas forward prices vs 18mth hedge



Electricity and gas

Figures 4.1-2 illustrate the relationship between wholesale prices (wholesale prompt and annual forward prices) from April 2003 to May 2009, and hedged wholesale cost based on an 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.

We also show that there can be times when hedged costs are rising while wholesale prices are falling and times when suppliers' hedged costs are falling while wholesale prices are rising.

Figures 4.1 and 4.2 also illustrate the lag between wholesale price changes and changes in suppliers' costs.

[10] Wholesale product prices are based on quoted prices in Heren's EDEM and ESGM reports.

5. Methodology

This section provides a detailed description of the methodology Ofgem has used in the analysis contained within this report. This methodology is very similar to that used to examine the relationship between wholesale and retail prices in the *Energy Supply Probe – Initial Finding Report* published in October 2008.

Methodology

5.1 This section describes the following data series used in this report and how they have been constructed:

- average customer bill,
- wholesale energy cost,
- other supply costs (which includes network, environmental and some meter costs),
- gross margin (which includes profits and operating costs).

5.2 For this report prices and costs are calculated at an average consumption of 4MWh of electricity per annum and 18.2MWh of gas per annum. While these differ from the figures Ofgem currently uses, this does not represent a change in Ofgem's standard consumption figures. 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

5.3 The average customer bill is an estimate of the average cost paid by UK retail energy customers. All price changes up to 12th May 2009 have been included.

5.4 The average customer bill in the report is constructed using monthly prices charged by the 'big 6' companies and those of suppliers since bought by, or merged with, the big 6.[11] Each supplier's regional prices are averaged to give a national average price for each payment method. These national averages are weighted by proportion of customers on each payment method and weighted by market share of each company.

Wholesale energy costs

5.5 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.

[11] The 'big 6' are E.ON, RWE npower, SSE, ScottishPower, British Gas, EDF

On average across the industry wholesale costs account for around 60 per cent of a customer's energy bill.[12]

5.6 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.

5.7 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 ahead of each point in time, based on pricing information available at that time. Costs are based on buying quarterly and seasonal products in gas and electricity respectively.

5.8 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.

5.9 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 market.[13]

5.10 Actual weighted average cost of gas and electricity could be different from this if companies purchase energy internally from their upstream generation businesses 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. Ofgem is consulting on proposals to publish information on margins in retail supply businesses and generation business separately and this report does not intend to estimate suppliers' allocation of margins between the retail and wholesale markets. [14]

5.11 In response to our first report, some commentators raised concerns relating to liquidity in the electricity forward market and therefore with the use of forward prices to construct wholesale costs. Ofgem is publishing a document shortly setting out the level of liquidity in the market and potential drivers of liquidity. Although low liquidity may have an impact on the forward price, it is not clear that it would lead to bias in any particular direction.

[12] This varies by fuel, supplier, hedge strategy, region, consumption and other factors.
[13] Formally this is known as an opportunity cost methodology.
[14] *Energy Supply Probe – Proposed Retail Market Remedies*
http://www.ofgem.gov.uk/Markets/RetMkts/ensuppro/Documents1/Energy%20Supply%20Probe%20-%20proposed%20retail%20market%20remedies.pdf

5.12 In the report we present costs based on 4 different hedging strategies. Section one shows costs based on a hedging strategy where firms start purchasing energy 18 months ahead of time *t*, and have bought all their energy requirements for the year ahead at time *t* (figures 1.1 and 1.2). Section three shows how wholesale costs vary with alternative hedging strategies (figures 3.1 and 3.2). 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
- Firms starting to purchase energy 18 months ahead of time t, but only hedging 90% with the remaining 10% purchased day-ahead.

5.13 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.

5.14 Since the wholesale cost model requires up to 2 years of pricing data prior to each point estimate, our price data, beginning in Q3 2000, limits the wholesale cost series to starting in Q3 2002. In addition, price controls were not fully removed until 2002, which means market conditions were likely to be different prior to this date.

5.15 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.

5.16 Finally, projected wholesale energy costs in figures 2.1-3 have been calculated using the same methodology, assuming current forward prices do not change. This is to provide an indication of how wholesale costs faced by suppliers may change over the coming year.

Other supply costs

5.17 Since the last report we have improved our modelling of other costs. We now estimate these on a monthly (rather than annual basis), which allows for more precise targeting of changes in costs.[15]

5.18 The components of other costs are network charges (transmission and distribution), balancing, environmental costs (Energy Efficiency Commitment – EEC, Carbon Emissions Reduction Target – CERT, and Renewable Obligation Certificates – ROCs), some cost to serve and some meter costs and VAT. With the exception of VAT, these components are the same as in the last report.[16]

[15] In gas, the profile of other supply costs has changed, while the level is generally consistent with our last report. In electricity both the profile and the level are affected. From 2008 our new methodology estimates other supply costs in electricity to be slightly lower than the previous methodology.
[16] The inclusion of VAT in other supply costs has the effect of reducing the gross margin (which is now

5.19 Many components of other costs are likely to increase in the future. The cost of meeting environmental obligations such as ROC requirements is set to increase. Network charges could also increase significantly. For example, current Distribution Network Operator proposals for the next Distribution Price Control Review Methodology would lead to increases in the average of around 12 per cent of the distribution element of customers' electricity bills, which could increase network costs by around £10 per customer per year.[17]

Gross Margin

5.20 The gross margin is calculated as the difference between the average customer bill and the sum of wholesale costs and other costs. In addition to operating profit, gross margin includes suppliers' operating costs such as customer service staffing, IT, marketing, billing and bad debt costs.[18]

5.21 The dual fuel analysis in section 2 assumes the same wholesale energy and other costs for dual fuel customers as for single fuel customers. Suppliers may make savings by having dual fuel customers, but these are likely to be operational cost savings and therefore contained within gross margin.

Key differences between our approach in the *Quarterly Report* and the *Energy Supply Probe Report*

5.22 We use a similar methodology to that used in the *Energy Supply Probe – Initial Findings Report*[19], but there is one key difference. The analysis presented in the probe document 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. However, in producing this report we have not deducted supplier's own internal operating costs in the margin calculation. We take this approach because of the difficulty obtaining data on a consistent basis across all suppliers. Given that fuel costs account for the majority of suppliers' total costs we do not believe this change will materially alter conclusions that can be drawn from the analysis.

calculated after VAT has been accounted for).

[17] See 'Electricity Distribution Price Control Review Methodology and Initial Results Paper', Ofgem, 8 May 2009 (Ref 47/09).
http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?file=Methodology%20and%20Initial%20Results%20document.pdf&refer=Networks/ElecDist/PriceCntrls/DPCR5

[18] This list is not exhaustive.

[19] Chapter Seven "Company behaviour", pages 74 to 78 and Appendix five "Wholesale costs and retail prices"