ofgem Making a positive difference for energy consumers

The revenues, costs and profits of the large energy companies in 2013

Information

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Overview:

As part of our work to make energy company profitability more transparent, we require the largest companies to publish annual statements showing their revenues, costs and profits. Separate figures must be presented for their generation and supply businesses.

This document summarises the results of the six largest energy companies in 2013 and compares them across companies and over time. It also assesses the estimates of our Supply Market Indicator against 2013 outturns.

The statements show that total profits across supply and generation fell to their lowest level since 2009. This was largely as a result of falls in generation profits, which were also at their lowest level in the last five years. Profits also fell slightly in the domestic supply market, resulting in an average profit margin of 3.9%.

Context

Ofgem's principal objective is to protect the interests of present and future consumers. As part of this objective, we aim to improve transparency of energy company profitability. This is important for consumer confidence, and for new firms thinking to enter the energy market. Robust data also helps us to monitor and assess how well the market is working for consumers.

In the interest of transparency, we require the large, vertically-integrated energy companies to annually publish Consolidated Segmental Statements (statements). In them, the companies report the profitability of their generation and supply businesses separately.

We are currently consulting on our proposals to put into effect the improvements in transparency we and the companies have worked on over the last year.

This report is our annual summary of the information contained in the statements that we require the large energy companies to publish. Profit levels are one of a number of useful indicators of how well the market is functioning. Therefore, they should be assessed alongside broader analysis of other aspects of the market.

We referred the market to the CMA earlier this year for a comprehensive investigation. We expect the CMA to conduct a detailed analysis of profitability. The investigation should identify and address any potential barriers to competition. It should also help rebuild consumer trust.

Associated documents

Actions to improve the transparency of energy company profits (10 October 2014)

Energy companies' Consolidated Segmental Statements for 2013 (1 August 2014)

Actions to improve the transparency of energy company profits (26 February 2014)

The revenues, costs and profits of the large energy companies in 2012 (25 November 2013)

Rebuilding consumer confidence: Improving the transparency of energy company profits (31 October 2013)

Financial Information Reporting: 2011 Results (11 April 2013)

Financial Information Reporting: 2010 Results (31 January 2012)

Financial Information Reporting: 2009 Results (24 March 2011)

Contents

Executive Summary

We make the largest energy companies, which generate power and supply power and gas to customers, publish annual statements of their revenues, costs and profits. These include separate figures for generation and supply. We do this to improve transparency of the energy market. This document summarises and analyses those statements.

Profit information is only one of many indicators to assess how well the energy market is working for consumers. We referred the market to the Competition and Markets Authority (CMA) for a comprehensive investigation, which will potentially consider the profitability of energy companies. Our 2015 State of the Market Assessment will also consider profitability in the wider context of market functioning.

Combined profits were the lowest since statements began

The companies have now all published their 2013 statements, the fifth annual instalment. These show that the combined earnings before interest and taxes (EBIT) – a measure of profit – for supply and generation have fallen compared to 2012, and stood at their lowest level since 2009. This fall was largely caused by lower profits in electricity generation, which were half their 2011 level, and also at their lowest since 2009.

EBIT (£m)	**2013**	**2012**	**2011**	**2010**	**2009**
Generation and supply	2,797	3,551	3,656	3,633	3,102
Generation	1,240	1,951	2,408	2,010	2,311
Supply	1,557	1,600	1,249	1,623	790
Domestic supply	*1,133*	*1,190*	*681*	*769*	*221*
Non-domestic supply	*423*	*410*	*568*	*854*	*569*

- **Electricity generation** profits have been on a downward trend, with the exception of 2011. They reached a low of £1.2bn in 2013. The large fall in 2013 was largely caused by substantially higher direct fuel costs. Higher depreciation and amortisation charges, likely driven by the closure of previously profitable power plants, have also been increasing over the period, depressing profits. EDF revenues and profits accounted for 35% and 62% of the total in 2013.

- **Domestic supply** profits have tended to increase, mainly as a result of loss-making suppliers becoming more profitable. In 2009, three of the six large suppliers made losses in this segment of the market. In 2013, only EDF continued to make a loss in domestic supply. Centrica's revenues and profits in domestic gas supply account for 42% and 89% of the total.

  Domestic supply profits have tended to increase despite declining gas and electricity consumption. This is because, while prices and costs have both risen, prices have done so more than costs have. This effect has outweighed the impact of lower consumption, which tends to depress profits.

  In 2013, average domestic supplier EBIT was £48 per customer, or 3.9% EBIT margin. This compared to 4.3% in 2012. This slight fall was caused by higher costs.

- **Non-domestic supply** profits have tended to fall over the five year period, but by a lower amount than domestic profits have increased. There was a moderate increase in 2013 profits, compared to 2012.

The 2013 statements are the most transparent yet
Over the last year, we and the companies have implemented a range of improvements to the statements, including greater auditor scrutiny and an independent, in-depth review of the transfer pricing methodologies that companies use. As a result, the 2013 statements provide greater transparency than in the past, and we are even more confident that they present an accurate picture of generation and supply profitability.

We are now consulting on proposals to embed these improvements into licence conditions. We have published this consultation as a separate document.

This year's changes made our SMI more robust
Our Supply Market Indicator (SMI) offers a forward look at trends in costs. In doing so, it complements the statements, which are necessarily backward looking (eg the most recent statements are for 2013). We updated our SMI methodology earlier this year following an extensive review.

We assessed the estimates of our SMI for 2013 under old and updated methodologies against statement's data. Our assessment suggests that the updated methodology performed better than the old one. The cost and revenue estimates were all within 5% of actuals. Our 'snapshot' EBIT margin estimate was 4.5%, while the actual margin was 3.9%.

This gives us more confidence that the updated SMI methodology provides more robust estimates. We plan to do this exercise annually, to continue improving SMI estimates.

1. Introduction

1.1. Large energy companies' profits continue to attract significant public interest, and can be a source of confusion and mistrust. We see an important role for us in promoting transparency of information on company profits.

1.2. The Consolidated Segmental Statements are one of our most important initiatives for making energy company profitability more transparent. We require the six largest energy companies to publish these statements annually. They show the revenues, costs and profits of each company's generation and supply arms.

1.3. The statements provide a backward look at company profitability. Our SMI complements them by offering a forward look at cost trends in the domestic supply market. In this document we present the results of an assessment of the SMI estimates against outturn results contained in the statements.

1.4. Through the statements, information is available on the companies' generation and supply profits separately – the main liberalised segments of the energy market – on a largely comparable basis. This level of transparency was not available before we introduced this obligation in 2009.

1.5. However, profit information is only one of many indicators to assess how well the market is working for consumers. We referred the market to the CMA for a comprehensive investigation, which will potentially consider the profitability of energy companies. Our 2015 State of the Market Assessment will also consider profitability in the wider context of market functioning.

Purpose and scope of the Consolidated Segmental Statements

1.6. We introduced the obligation to produce Consolidated Segmental Statements in 2009 to improve transparency of the profitability of electricity generation and supply, and the relationship between them. The aim was to improve consumer and other stakeholders' understanding of company profitability, and in doing so, give them more confidence in the market.

1.7. We also wanted to signal to potential new suppliers or generators that it may be profitable to enter the market, or segments of it, increasing competition and benefiting consumers. Finally, the statements make it easier to compare key financial data for different companies over time, allowing us and others to monitor and analyse trends in the market.

1.8. The obligation is targeted at large, vertically-integrated companies (ie those that both generate power and supply power and gas to customers). It is given effect by licence conditions. It requires disclosure, in a standardised format, of financial information on their licensed activities in electricity generation, and electricity and gas supply to domestic and non-domestic customers.

2. Results

Chapter summary

This chapter presents the results for the five years that companies have published statements. It has two sections. The first presents profits trends from 2009 to 2013 and the second focuses on supplier-specific results for 2013.

2.1. In 2013, the six largest energy companies published their fifth set of annual Consolidated Segmental Statements. The first section of this chapter mainly looks at trends in profits from 2009 to 2013 aggregated across suppliers. The second one provides more detail about revenues, costs and profits for the different companies in 2013.

2.2. In this document, we use the word 'profit' to refer to earnings before interest and tax (EBIT), which is one of the measures of profit we currently require companies to report.

Evolution of aggregate profitability from 2009 to 2013

2.3. This section presents the aggregate results of the large energy companies from 2009 to 2013. Here is what the profit data shows in the four areas of focus:

- **Combined generation and supply:** profits across generation and supply rose in 2010 and 2011 but fell by larger amounts in 2012 and 2013. Profits in 2013 were £2.8bn, the lowest since the statements began. This was mainly due to a fall in generation profits.

- **Generation:** Generation profits are on a downward trend, with the exception of 2011. They reached a low of £1.2bn in 2013. The large fall in 2013 was largely caused by substantially higher direct fuel costs. Higher depreciation and amortisation charges, likely driven by the closure of power plants, have also been increasing over the period, depressing profits.

- **Domestic supply:** Domestic supply profits have tended to increase since 2009, although they fell slightly in 2013. Gas profits have fluctuated, partly due to weather, but with an upward trend. Electricity profits have increased every year from 2010 to 2013. This increasing profit trend has happened despite declining gas and electricity consumption. This is because, while prices and costs have both risen, prices increased more than costs. This effect has outweighed the impact of lower consumption, which tends to depress profits.

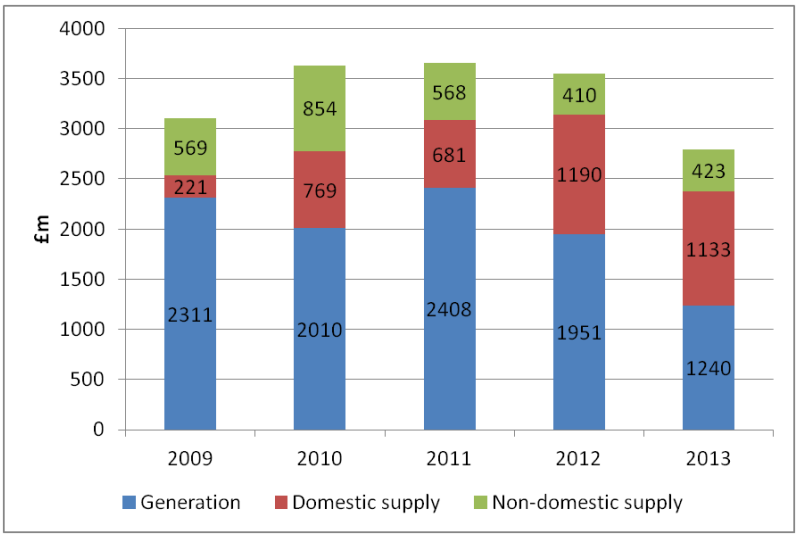
- **Non-domestic supply:** Profits have fluctuated over the period. They rose significantly in 2010, and have mainly fallen since then, except for a slight increase in 2013.

2.4. We now look at each of these areas in turn.

Combined generation and supply

2.5. Combined generation and supply profits rose in 2010 and 2011 and then fell by larger amounts in 2012 and 2013. Profits in 2013 were at their lowest over the period. The 2013 fall of £754m was largely driven by a £711m fall in generation profits. Profits for domestic supply fell by £57m, while those for non-domestic supply rose by £13m.

Figure 1: Profits of the large energy companies split by generation and supply



2.6. Figure 1 above shows that combined generation and supply profits are more stable than individual components. So there appears to be an inverse relationship between generation and supply profitability, as we have noted in the past.

Generation

2.7. Generation profits were broadly stable from 2009 to 2011, ranging between £2bn and £2.4bn. They have subsequently fallen, reaching a low of £1.2bn in 2013. The fall of £711m in 2013 was largely caused by substantially higher direct fuel costs.

2.8. Depreciation and amortisation charges have been increasing year- on-year, likely driven by events such as the closure of previously profitable coal power plants. This has also increasingly depressed generation profitability over the four years.

2.9. Other direct costs, which include the costs of environmental policies and network costs, have also been increasing markedly, more than doubling from 2010 to 2013. This has also lowered profits.

Table 1: Aggregate generation revenues, costs and profits over time

£m	2010	2011	2012	2013
Revenues	9,270	10,241	10,102	10,149[1]
Total costs	7,260	7,833	8,150	8,909[1]
Direct fuel costs	3,857	3,667	3,292	3,743
Other direct costs	702	936	1,152	1,494
Indirect costs	1,824	2,076	2,156	1,931
Depreciation and amortisation	878[2]	1,154	1,550	1,741
Profits	2,010	2,408	1,951	1,240

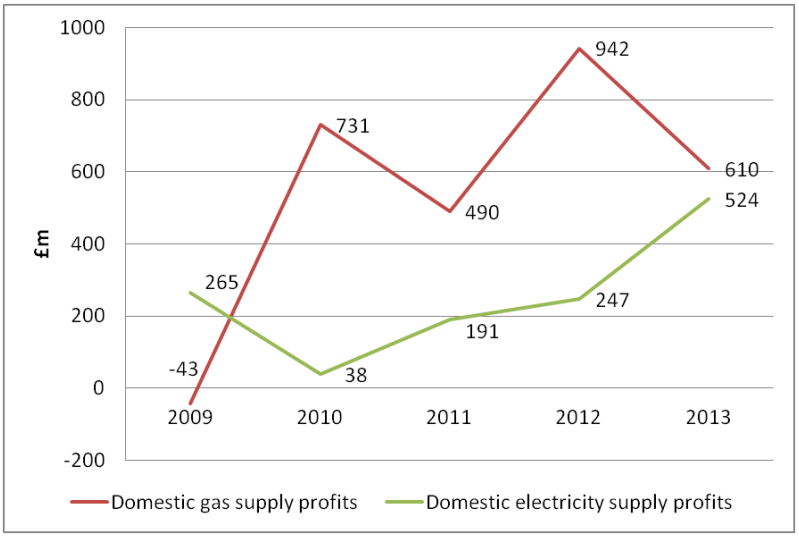
Notes: (1) We increased 2013 revenues and direct fuel costs by £1,520m[1]. (2) We decreased 2010 depreciation and amortisation by £779m[2].

Domestic supply

2.10. Domestic supply profits have tended to increase since 2009, although they fell slightly in 2013. The increase is less pronounced if we exclude 2009, a year where companies reported atypically low profits in the first ever set of statements.

2.11. Gas profits have fluctuated over the period, trending upward if we include 2009. As explained below, the fluctuation is largely explained by swings in consumption due to weather changes between the years. Electricity profits have increased every year from 2010 to 2013.

Figure 2: Domestic gas and electricity supply profits



[1] RWE adjusted its revenues and direct fuel costs to make its statement more comparable with those of the large energy companies. For more information, see page 10 of RWE's 2013 CSS.
[2] For more information, see page 21 of Ofgem's document, Financial Information Reporting: 2010 results.

2.12. The statements contain revenues, costs and profits in £m for the large energy companies. However, in the domestic supply market, it is more informative to present this information in £ per customer. To derive amounts per customer per year, we add up the £m figures for the large energy companies and divide by the total number of customers (not currently provided in the statements).

Domestic supply profitability per customer

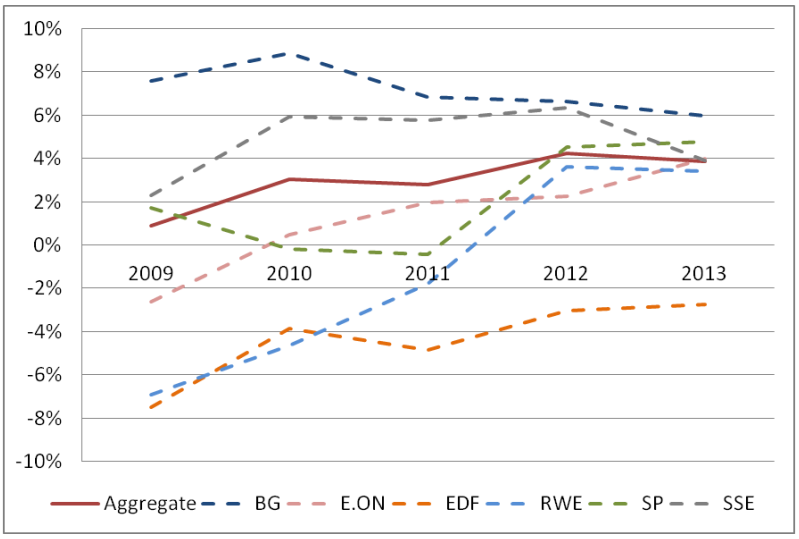
2.13. Table 2 shows these figures from 2009 to 2013. We asked the companies to further break down "Other direct costs" in 2013 to increase transparency. This means that this level of detail is not available for previous years.

Table 2: Average revenue, costs and profit per customer over time

£/customer/year	**2009**	**2010**	**2011**	**2012**	**2013**
Average revenue	£1,043	£1,063	£1,006	£1,174	£1,225
Wholesale costs	£621	£588	£537	£612	£628
Other direct costs (total)	£291	£288	£294	£354	£392
Network costs	*N/A*	*N/A*	*N/A*	*N/A*	*£276*
Environmental/social costs	*N/A*	*N/A*	*N/A*	*N/A*	*£109*
Depreciation and amortisation	*£9*	*£8*	*£7*	*£7*	*£7*
Supplier operating costs	£123	£152	£146	£154	£157
Profit	£8	£35	£30	£53	£48

2.14. The table shows that both revenues and all costs (except wholesale in 2009-2012 and depreciation and amortisation charges) have increased over the last five years. However, revenue has risen faster, therefore profit has increased.

Figure 3: Domestic supply profit margins



2.15. Figure 3 shows that much of the profit increase since 2010 can be explained by Scottish Power, RWE and, to a lesser extent, E.ON becoming profitable. Margins for British Gas and SSE, which are the highest of the large energy companies, have fallen since 2010. The result is that most of the large energy companies' domestic supply margins are tending to converge. EDF is the notable exception, as it continues to make a loss on domestic gas and electricity supply. Box 1 below looks at EDF in more detail.

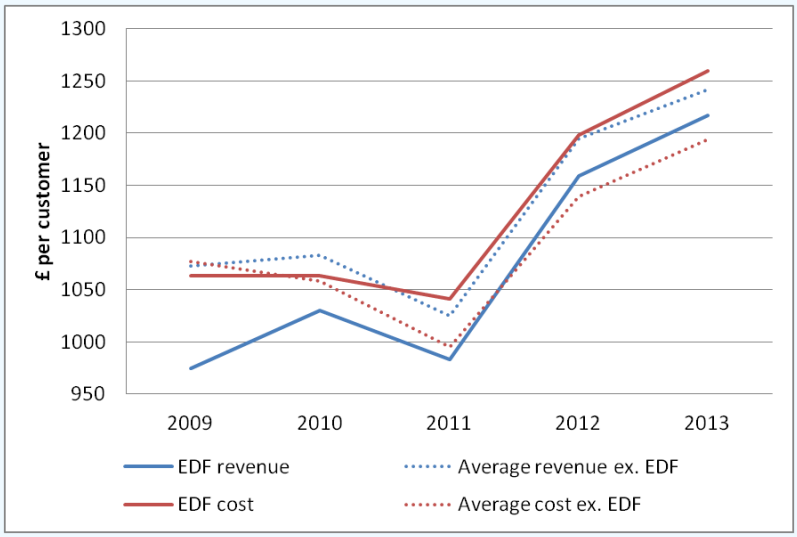
Box 1: Why does EDF make losses in domestic supply?

Figure 3 shows that EDF made losses in overall domestic supply in each year from 2009 to 2013. This is true for both gas and electricity supply. Why?

Figure 4 below shows EDF's dual fuel revenues and costs compared to the average of the other large energy companies (ie excluding EDF). For four of the five years, EDF's cost per customer was above average and their revenue per customer was consistently below average. The result of relatively low revenues and high costs is that EDF has made losses each year.

EDF had the cheapest standard tariff of the large energy companies for some time 2013, which can at least partly explain their relatively low revenues. In addition, as we found in our joint State of the Market Assessment with the CMA, EDF had high operating costs due to challenges related to the roll out of new customer information systems[3].

Figure 4: EDF's dual fuel revenue and costs compared to other large energy suppliers



[3] Paragraph 6.32 here: https://www.ofgem.gov.uk/ofgem-publications/86804/assessmentdocumentpublished.pdf

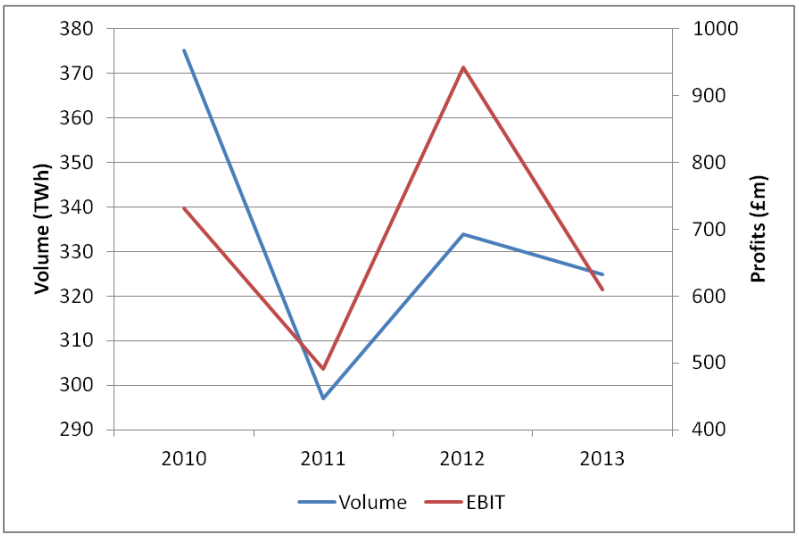
Unit revenues, costs and profits

2.16. Domestic supply profits have been increasing in aggregate, except in 2013, when they fell slightly. In this section we look at unit revenues, costs and profits (ie per megawatt hour – MWh) to disentangle the effect of consumption on profits.

2.17. We show that this profit rise has happened despite declining gas and electricity consumption. Prices have increased faster than costs have. They have done so to a large enough degree to offset the negative impact on profits from falls in energy consumption.

2.18. The amount of energy consumed has a significant effect on domestic supply profits, especially for gas supply. Figure 5 shows how gas consumption is related to domestic gas supply profits.

Figure 5: Relationship between gas consumption and profits



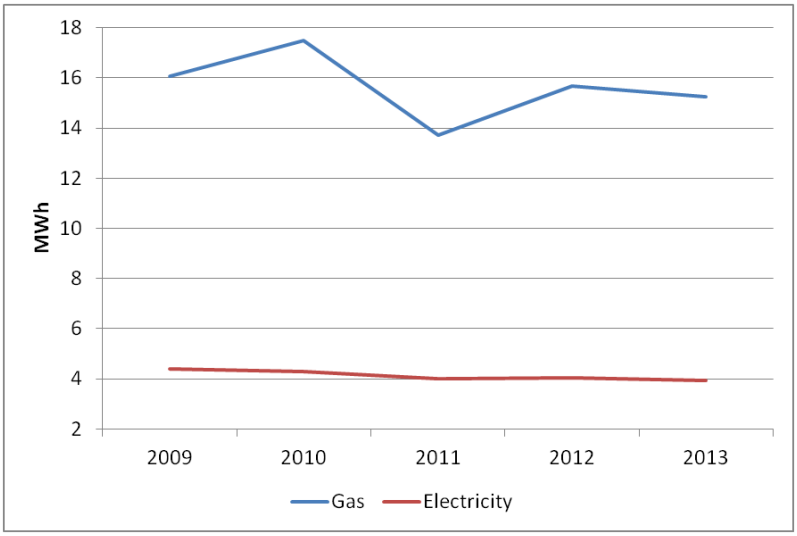
2.19. Furthermore, energy consumption is closely related to temperature changes. Average temperature in the UK during 2011 was the second highest since 1910, which explains low domestic gas consumption that year[4]. In contrast, 2012 and 2013 were both colder than average and recorded equal average temperature[5], which explains higher consumption. Therefore, temperature affects consumption, which in turn affects profits.

2.20. Domestic gas profits fell in 2013, despite similar temperature to 2012. This is largely explained by higher gas wholesale costs as figure 20 illustrates.

[4] https://www.ofgem.gov.uk/ofgem-publications/84640/css2012summarydocument.pdf
[5] http://www.metoffice.gov.uk/climate/uk/summaries/2013/annual

2.21. The statements also show that that the large energy companies have been supplying less energy since 2009, as shown in figure 6. Other things equal, this should result in lower profits. But profits have actually been rising. We explain why below.

Figure 6: Domestic gas and electricity consumption per customer (MWh)



2.22. Figures 7 and 8 show that since 2010, unit revenues and costs have been rising for gas and electricity. However, revenues have tended to do so faster than costs. Since unit revenues are a good proxy for prices[6], this means that prices have been rising faster than costs.

[6] In general terms, revenue = price*quantity. So, the revenue you make equals the price at which you sell a good multiplied by the numbers of units that you sell (quantity). Since unit revenue is defined as revenue divided by quantity, it follows that it equals price. In reality, unit revenue will be lower than price due to things like VAT and electricity/gas theft.

Figure 7: Domestic gas unit revenues, costs and profits

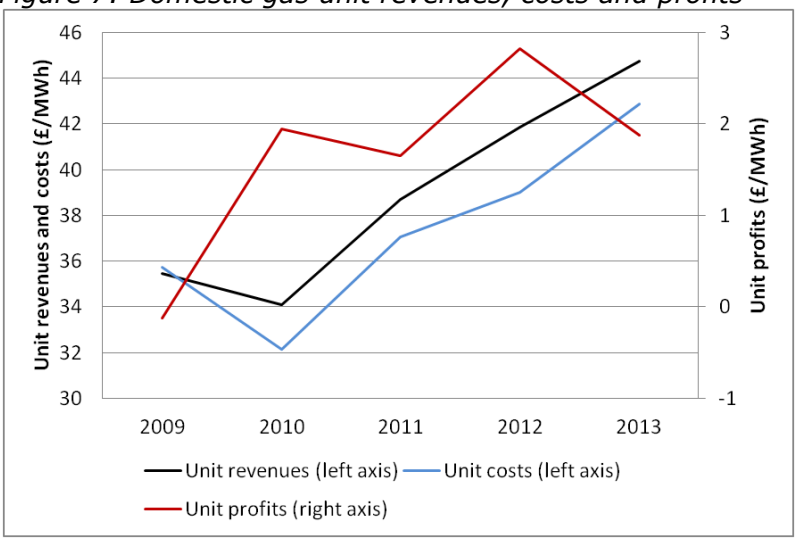
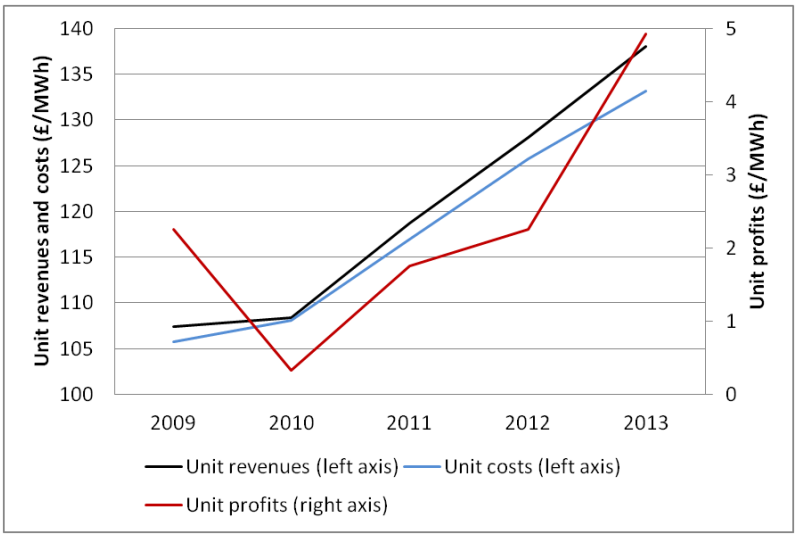


Figure 8: Domestic electricity unit revenues, costs and profits



2.23. As a result, unit profits have also tended to increase, especially for electricity. So the large energy companies have tended to make more profit for every unit of energy they sell to domestic customers.

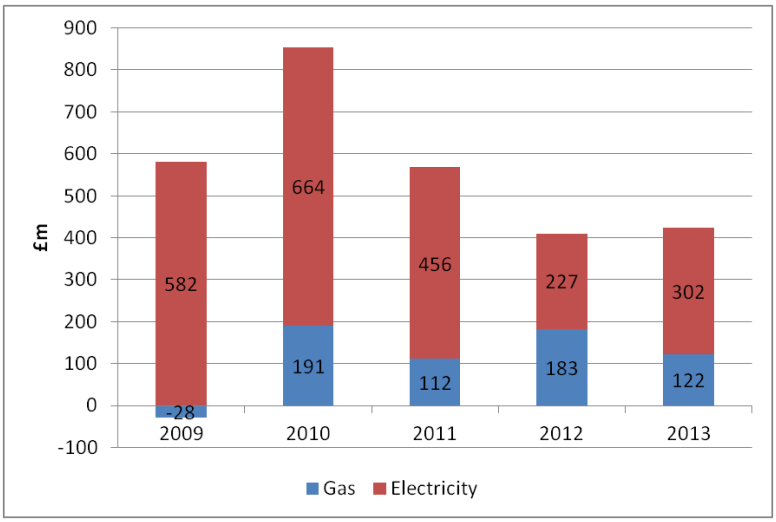
2.24. Since aggregate profits have tended to increase over this period, this means that the rise in unit profits has outweighed the fall in consumption.

2.25. To conclude, the data shows that prices in the domestic supply market have increased faster than costs have. They have done so to a large enough degree to offset the negative effect on profits from falls in energy consumption.

Non-domestic supply

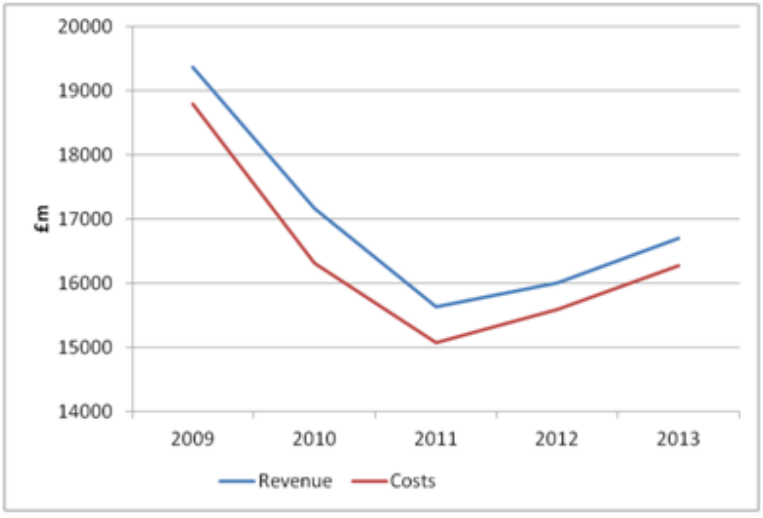
2.26. In the non-domestic supply market, profits have fluctuated over the period 2009 to 2013. They rose significantly in 2010, and have mainly fallen since then, except for a slight increase in 2013. The fall in profits over time is largely driven by electricity profits. Gas profits have fluctuated in a similar way to domestic gas supply profits, increasing in 2010 and 2012 but falling in 2011 and 2013, partly due to weather. The companies reported losses for gas in 2009.

Figure 9: Non-domestic gas and electricity supply profits



2.27. Non-domestic supply revenues and costs fell from 2009 to 2011 and then rose in 2012 and 2013. In 2010, costs fell more than revenues, causing the increase in profits. From 2011 onwards, revenues and costs both grew, but cost increases outweighed revenue increases.

Figure 10: Non-domestic dual fuel supply revenues and costs



Supplier-specific results for 2013

2.28. This section provides more detail about revenues, costs and profits for the different companies in 2013. This shows how company-specific results differ. Here's what the data shows:

- **Generation:** EDF made the largest revenues and profits. It accounted for 35% of total revenues, and 62% of total profits. The rest of the companies all made profits except E.ON who made a £165m loss.

- **Domestic supply:** Centrica (trading as British Gas for supply) earned higher revenues than the other companies in gas and electricity supply. In gas supply, it earned 42% of total revenues and 89% of the profits. Its profit margin was 8.9%, about twice as high as SSE, who earned the second highest gas supply margin. In electricity supply, Centrica still earned the largest revenues, but earned the lowest profit margin after EDF, who made a loss. EDF was the only large energy company which made losses in domestic supply, as described in box 1.

- **Non-domestic supply:** For gas, Centrica earned the highest revenues and profit margin, as in domestic gas supply. Its non-domestic gas supply margin of 11% is more than double that of E.ON's 4.7% margin. Non-domestic electricity supply is the only one of the four supply segments in which all of the large energy companies made profits. The range of profit margins in non-domestic electricity supply is smaller than in the other supply segments, with companies earning a profit margin between 1% and 3%.

Comparison across generation and supply

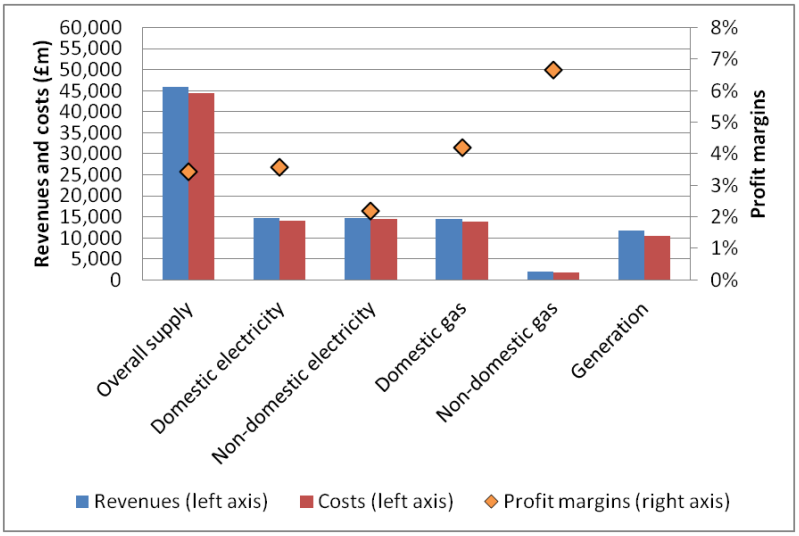
2.29. Figure 11 shows the revenues and costs for the four supply segments and generation, and also the profit margins for the supply segments. Generation profit margins (calculated as profits divided by revenues) are not shown because it is not an appropriate profit measure for generation[7].

2.30. Within supply, the revenues from domestic electricity, non-domestic electricity and domestic gas were very similar: all were between £14.5bn and £14.8bn. Non-domestic gas revenues were significantly lower than those in the other supply segments.

[7] This is because generation revenues, which are needed to calculate margins, are not directly comparable between companies without taking into account the difference in company structure and operation, as explained in chapter 4. In addition, the electricity generation business requires large sums of capital to build power plants. Since a profit margin does not take into account capital employed, it is not too meaningful in representing the economic profitability of the sector.

2.31. The overall supply margin was 3.5%. The non-domestic gas supply margin was 6.7% and the domestic gas supply margin was 4.2%. The equivalent margins in electricity supply were lower: 2.2% for non-domestic supply and 3.6% for domestic supply.

Figure 11: Aggregate industry revenues, costs and margins for each segment



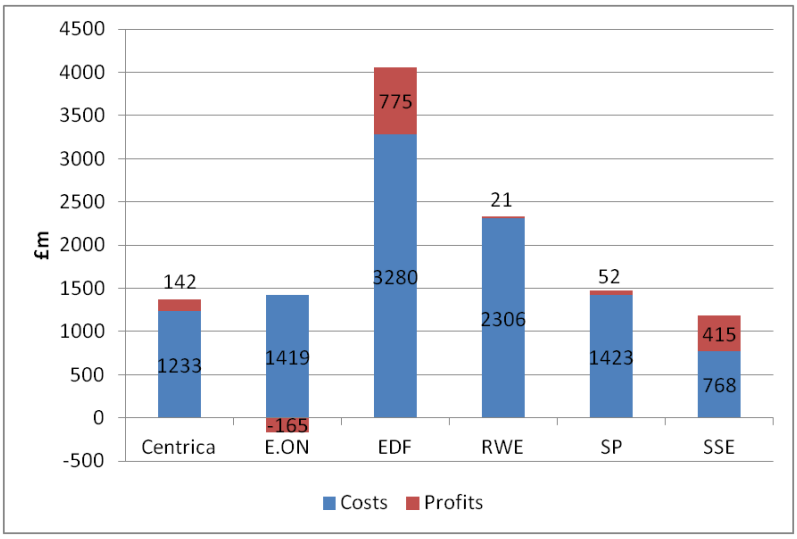
Electricity generation

2.32. Figure 12 shows generation costs and profits for 2013. The total height of the stacked bars is equal to revenues. Readers should read chapter 4 for how to interpret this information appropriately.

2.33. EDF earned significantly higher revenues (35% of the total) than the others and earned the largest profits of £775m (or 62% of the total). The second most profitable company was SSE with profits of £415m.

2.34. Centrica, E.ON and Scottish Power earned similar generation revenues of £1.25bn to £1.5bn, but earned different profits. Centrica and Scottish Power earned profits of £142m and £52m, respectively, but E.ON made losses of £165m. RWE was the second least profitable company, with profits of £21m, despite having the second highest revenues of £2.3bn (see box 3 for an explanation of RWE's reporting change), considerably higher than Centrica, E.ON, Scottish Power and SSE.

Figure 12: Electricity generation costs and profits (£m)



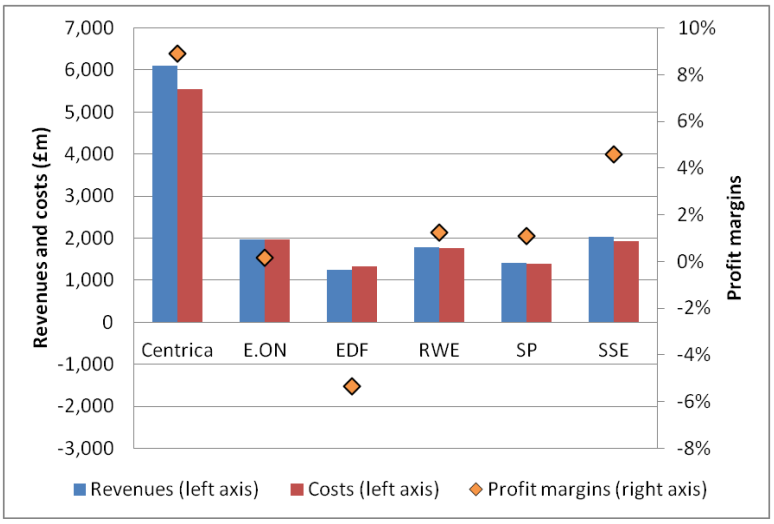
Domestic supply

2.35. Figure 13 shows revenues, costs and profit margins for domestic gas supply for each of the large energy companies.

2.36. Centrica earned substantially higher revenues than the other large energy companies, in line with its large market share in the domestic gas supply market. Centrica earned 42% of total revenues; triple those of SSE, who earned the second highest revenues. E.ON, RWE and SSE earned similar revenues of £1.8bn to £2bn, with EDF and Scottish Power earning the lowest revenues of £1.25bn and £1.4bn, respectively.

2.37. As well as having the highest revenues, Centrica earned 89% of total profits. They and SSE earned the highest profit margins of 8.9% and 4.6%, respectively. RWE and Scottish Power earned margins between 1.1% and 1.2% and E.ON earned a 0.2% margin. EDF was the only company to make a loss in domestic gas supply.

Figure 13: Domestic gas supply revenues, costs and profit margins

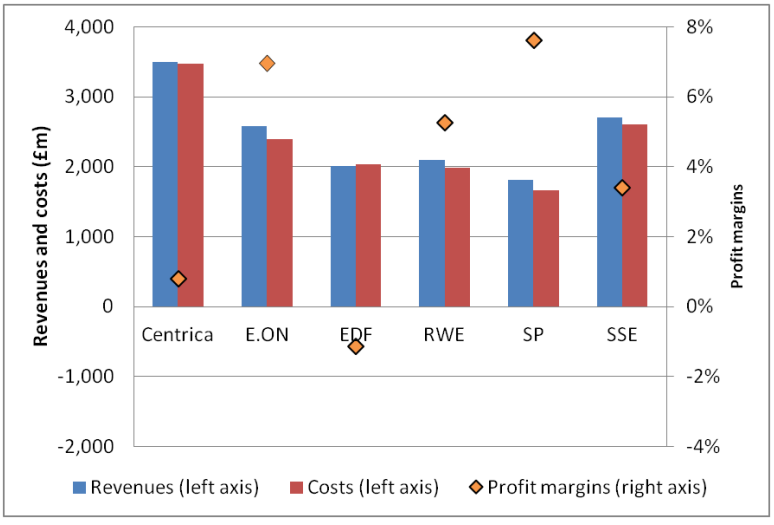


2.38. Figure 14 shows revenues, costs and profit margins for domestic electricity supply for each of the large energy companies.

2.39. It shows that, as with gas, Centrica and SSE earned the highest revenues – £3.5bn and £2.7bn, respectively. However, the share of electricity revenues among the large energy companies is more even than for gas. For electricity, Centrica earned 24% of total revenues, while the other companies made between 12% and 18% each.

2.40. Centrica and SSE earned the lowest profit margins in electricity (except for EDF). This is in sharp contrast to gas, where they earned the highest profit margins. E.ON and Scottish Power earned the largest profit margins of 7% and 7.7%, respectively.

Figure 14: Domestic electricity supply revenues, costs and profit margins



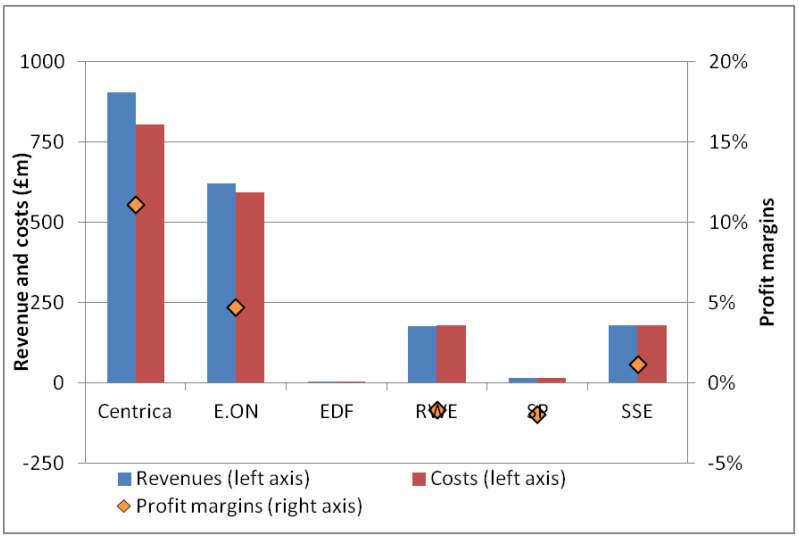
Non-domestic supply

2.41. Figure 15 shows revenues, costs and profit margins for non-domestic gas supply for each of the large energy companies. These six companies earned much lower revenues in this segment compared to domestic supply.

2.42. It shows that Centrica earned the highest revenues, as in domestic gas supply. RWE and SSE earned very similar revenues of £117m and £180m, respectively. Scottish Power and EDF earned relatively low revenues of £15m and £1m, respectively.

2.43. As with domestic gas supply, Centrica earned the highest profit margin of 11% in non-domestic gas supply, more than double E.ON's 4.7% margin. Except for SSE's 1.1% profit margin, the other three companies made losses (note that EDF's margin is -100%) and so is not shown on the graph).

Figure 15: Non-domestic gas supply



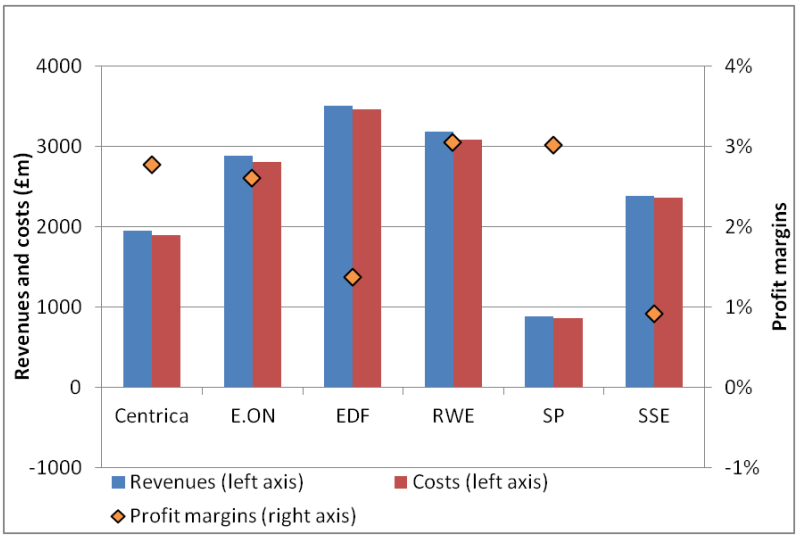
Note: EDF's profit margin is -100% due to revenue of £1m and costs of £2m.

2.44. Figure 16 shows revenues, costs and profit margins for non-domestic electricity supply for each of the large energy companies.

2.45. It shows that EDF earned the largest revenues of £3.5bn, £326m higher than RWE's revenues. Scottish Power earned significantly lower revenues than the other large energy companies.

2.46. Non-domestic electricity supply is the only one of the four supply segments in which all of the large energy companies made profits. Unlike domestic electricity supply, in which Centrica earned the second lowest profit margin, Centrica earned a similar profit margin to E.ON, RWE and Scottish Power. SSE earned the lowest margin of 0.9%.

Figure 16: Non-domestic electricity supply



Box 2: Wholesale costs

Figures 17 and 18 show the weighted average cost of electricity (WACOE) and gas (WACOG) for domestic and non-domestic consumers. These correspond to the costs the companies incur in purchasing electricity and gas for their customers. See the glossary for an explanation of the specific items we ask companies to include when calculating WACOE and WACOG.

They show that WACOEs for non-domestic supply are consistently lower than for domestic supply. This is true for every company. A key likely reason for this is that non-domestic consumers use less energy at peak times, so a higher proportion of their energy requirements can be supplied by purchasing baseload (off-peak) electricity, which is cheaper. Another factor that may explain this is more certainty over demand variation for non-domestic consumers, which allows suppliers to reduce the costs associated with adjusting their contractual positions when swings in demand occur. Also, differences in how suppliers hedge domestic and non-domestic supply requirements may play a role.

Figure 17 shows that SSE had the highest WACOE in both the domestic and non-domestic markets by a considerable amount. Centrica had the next highest WACOEs for both supply segments. This probably reflects differences in hedging strategies.

Figure 17: Companies' 2013 WACOEs

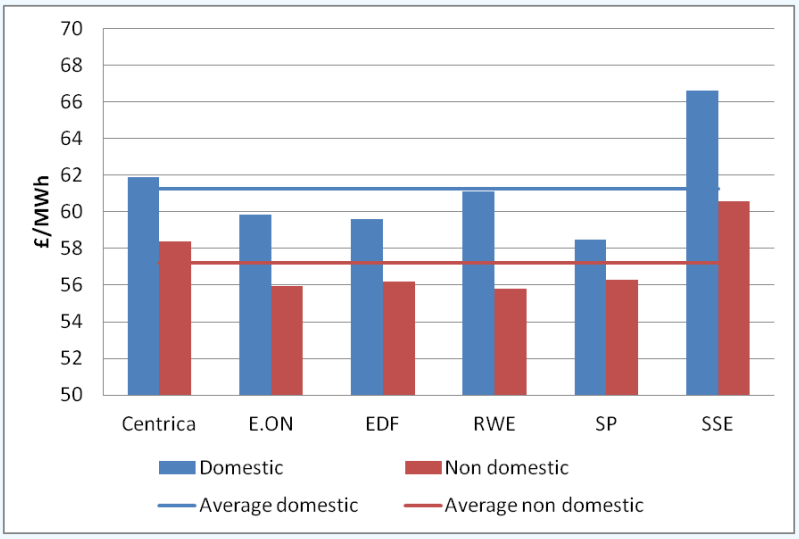
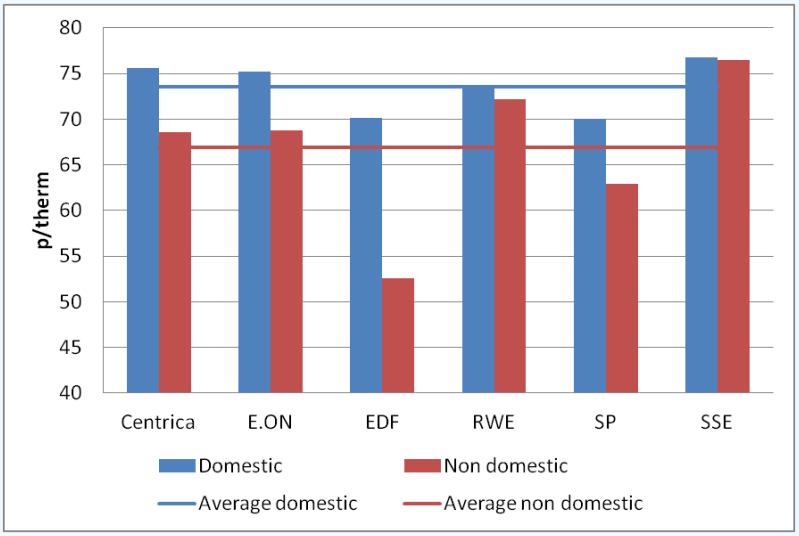


Figure 18 shows that, as with electricity, SSE had the highest WACOG for both supply segments. There is more variation in WACOG than there was for WACOE. In particular, EDF and Scottish Power had much lower WACOGs than the other suppliers.

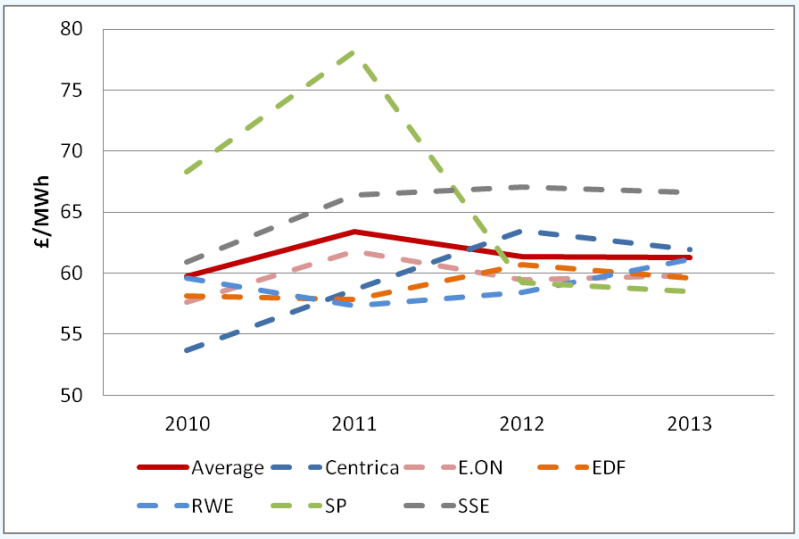
Figure 18: Companies' 2013 WACOGs



Figures 19 and 20 show the large energy companies' WACOEs and WACOGs over time.

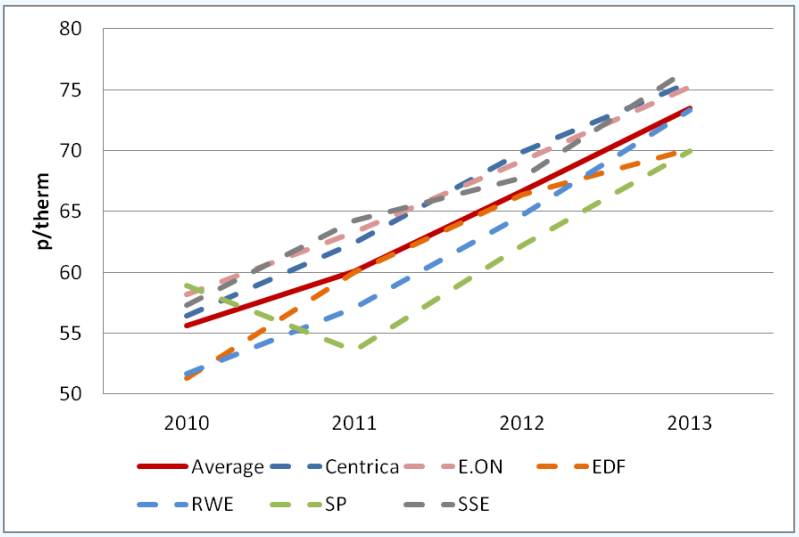
The trend for WACOEs is quite flat: the average WACOE of the large energy companies was between £60/MWh and £63/MWh from 2009 to 2013. It appears that WACOEs differed more in 2010 and 2011, and have tended to converge in 2012 and 2013.

Figure 19: Companies WACOEs over time



WACOGs have been clearly increasing over time for every company, with the exception of Scottish Power, whose WACOG fell in 2011.

Figure 20: Companies' WACOGs over time



3. Assessment of SMI performance

Chapter summary

Comparing the 2013 Consolidated Segmental Statements (CSS) results with the equivalent Supply Market Indicator (SMI) estimates is an important exercise to test the performance of the SMI. This enables us to make continual improvements to our methodology.

We updated our methodology in March 2014 following an extensive review. Our assessment suggests that the updated methodology performed better than the old one, with cost and revenue estimates within 5% of actuals. Our EBIT margin estimate was 4.5%, while the actual margin was 3.7% (as a proportion of revenue including VAT). The 2013 estimate we made in January 2013 under the old methodology was significantly further from the outturns – cost and revenue estimates within 20% of actuals, with a margin estimate of 7.5%.

This gives us more confidence that the updated SMI methodology provides a robust estimate of costs. We plan to do this exercise annually, to continue improving SMI estimates, which stakeholders other than the big energy companies find valuable.

Testing the SMI

What is the SMI?

3.1. The Supply Market Indicator (SMI)[8] is designed to improve the transparency of the energy market. We introduced the SMI to complement the CSS and it is used by a wide range of stakeholders.

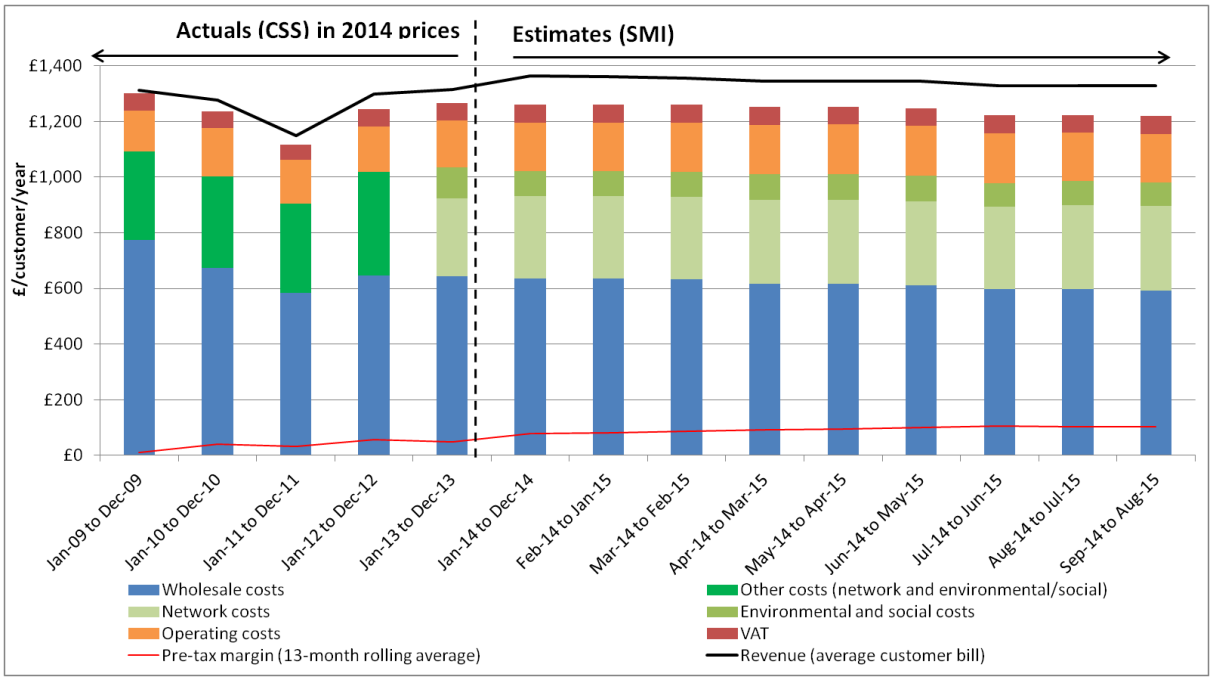
3.2. The SMI provides estimates of the costs and profit margin (proxy for EBIT margin) that a large energy supplier would make for an average gas, electricity and dual fuel customer over the following 12 months, if average revenues (proxy for bills) remained unchanged.

3.3. Late last year we undertook an extensive review of the SMI methodology. We then relaunched the SMI in March 2014 having made some substantial changes to the methodology to improve the robustness and comparability of our estimates. For example, we made our revenue estimates more representative of the types of tariffs customers are on and we further aligned the cost categories with the way companies report costs in their Consolidated Segmental Statements (CSS).

[8] SMI webpage: https://www.ofgem.gov.uk/gas/retail-market/monitoring-data-and-statistics/understanding-energy-prices-great-britain/supply-market-indicator

3.4. The SMI is only an estimate. We don't try to forecast changes in retail prices, and we assume seasonally normal weather. If there is a particularly warm or cold year, actual consumption would vary significantly compared to seasonal normal demand. In turn, this would affect suppliers' outturn revenues, variable costs and the resulting pre-tax margins.

Figure 21: September 2014 dual fuel SMI chart



Testing performance

3.5. Understanding how well the SMI has performed will provide useful evidence to improve the methodology. The publication of the 2013 Summary Document of the CSS is an ideal opportunity to test how well the SMI performs.

3.6. Some responses to our 2013 transparency consultation suggested that the SMI should be reviewed each year and tested against outturn data from the CSS.[9] We plan to make a review of the SMI a regular feature of the annual CSS summary.

3.7. The comparison of the SMI with CSS outturns relates only to domestic supply data provided as part of the CSS. Each of the six largest suppliers provide aggregate cost and revenue information in £m. To produce figures per customer and per year we add costs and revenues across the these suppliers and divide by total customer numbers.

[9] *Rebuilding consumer confidence: Improving the transparency of energy company profits*, Ofgem, December 2013.

3.8. There are a number of different ways to assess margin estimates. The direct output of the SMI model is the *snapshot* margin, which is the simple difference between total revenue and cost estimates for the following 12 months. Therefore, we focus our comparison on the January 2013 *snapshot* margin, which includes underlying cost data for 2013. We discuss in more detail the purpose of the rolling margin later in this document.

Summary

3.9. Tables 3 to 5 compare the revenue and cost estimates for the 2013 CSS and the SMI using the current methodology for dual fuel, gas and electricity customers. Figures have been rounded to the nearest whole number.

Table 3: 2013 CSS and SMI comparison (dual fuel)[10]

	SMI Jan 13-Dec 13 (£/ customer/ year)	**2013 CSS (£/ customer/ year)**	**Difference (£)**
Revenue (VAT added to CSS for comparison)	1,304	1,286	19
Wholesale	621	628	-7
Networks	288	276	13
Env/Soc	105	109	-4
Operating costs	162	157	5
Depreciation and Amortisation (DA)	7	7	0
VAT	62	61	1

3.10. The SMI estimate of the EBIT margin per dual fuel customer was £59 (4.5%). The comparable outturn margin from the CSS was £48 or 3.7% as a proportion of revenue including VAT.

[10] Please note that costs for a dual fuel customer are produced by summing the respective gas and electricity costs. This is because we ask companies to report gas and electricity costs separately in the CSS. We do not ask specifically for dual fuel costs.

Table 4: 2013 CSS and SMI comparison (gas)

	SMI Jan 13-Dec 13 (£/ customer/ year)	2013 CSS (£/ customer/ year)	Difference (£)
Revenue (VAT added to CSS for comparison)	738	717	21
Wholesale	390	387	3
Networks	148	141	7
Env/Soc	33	37	-4
Operating costs	89	86	3
Depreciation and Amortisation (DA)	4	4	0
VAT	35	34	1

3.11. The SMI estimate of the EBIT margin per gas customer was £38 or 5.2%. The comparable outturn margin from the CSS was £29 or 4% as a proportion of revenue including VAT.

Table 5: 2013 CSS and SMI comparison (electricity)

	SMI Jan 13-Dec 13 (£/ customer/ year)	2013 CSS (£/ customer/ year)	Difference (£)
Revenue (VAT added to CSS for comparison)	590	569	22
Wholesale	231	241	-10
Networks	140	135	5
Env/Soc	72	72	0
Operating costs	73	71	2
Depreciation and Amortisation (DA)	4	3	0
VAT	28	27	1

3.12. The SMI estimate of the EBIT margin per electricity customer was £43 or 7.3%. The comparable outturn margin from the CSS was £19 or 3.4% as a proportion of revenue including VAT.

3.13. The remainder of the chapter focuses on the dual fuel comparison only, and explains what accounts for the differences between the SMI and CSS for 2013.

Comparing SMI 2013 estimates and CSS 2013 outturns

Revenue

3.14. SMI 2013 revenue was £1,304 per customer; CSS outturn revenue was £1,286. There are several reasons for the difference between them.

- Gas consumption: the average domestic gas consumption from the 2013 CSS is slightly lower than the consumption level used to calculate our 2013 SMI bills. As a result, we overestimated revenue in the SMI by around £2 per customer. Our consumption estimate will often differ from outturns because we cannot perfectly forecast consumption. So, while in 2013 consumption did not materially affect our revenue estimate, this may not be the case in future years.

- Time of use (ToU) consumers: similarly to gas, the electricity consumption level we use for our SMI estimates will likely differ to the outturn consumption. Accounting for domestic electricity consumption is not straightforward because the CSS revenue includes ToU consumers, but we exclude them from our SMI estimates[11]. These customers are on specific ToU tariffs and they typically use significantly more electricity than standard electricity consumers –they use it for cooking and heating instead of gas.

  We estimate that our SMI revenue was around £10 higher per customer than if ToU tariffs were considered[12]. We will consider how best to incorporate the ToU tariffs into the SMI methodology.

- Non-energy revenue: the CSS revenue includes "non-energy revenues", such as those from energy-saving products, insurance, new connections and smart meter installations. These add around £4 per customer, so all else being equal, our SMI underestimates revenue by that amount. We will consider how best to incorporate non-energy revenue into the SMI methodology.

- Warm Home Discount (WHD): the SMI includes the WHD as a cost, but some suppliers account for this in the CSS with lower revenue (we are clarifying the guidelines on how they should report this). As a result, we overestimate SMI revenues by around £3 per customer (once we weight the £12 discount by the suppliers that show lower revenue in the CSS).

[11] Customers with meters which allow for separate recording of off-peak electricity consumption. These types of meters include Economy 7 and Dynamically teleswitched (DTS).
[12] Approximately 5 million ToU meters, out of 21 million gas meters and 27 million electricity meters. We compare ToU electricity bills to dual fuel bills, rather than standard electricity bills, because the dual fuel bill captures a household's entire energy needs, as does a ToU bill. We find that, on average, ToU bills are £100 a year cheaper than dual fuel bills (source).

- Residual (unbilled): Their impact is to reduce CSS revenue; therefore we overestimate SMI revenue by around £20. This combines two factors that account for the remaining difference between CSS and SMI revenue. The first is that CSS revenue is affected by unbilled volumes. Unbilled volumes arise when suppliers cannot bill consumers for all their consumption, eg due to energy theft or inaccurate meter readings. We will consider how best to update our current SMI estimate of the unbilled residual.

  The second is that we use some data to produce our SMI estimates that is subject to a lag of a few months. For our SMI estimates, we use three parameters to estimate bills: 1) the market shares of each Big 6 supplier, 2) the proportion of consumers on each payment method and 3) the proportion of consumers on standard tariffs. Given the lag in the data, these parameters cannot perfectly represent how the market is at the time of reporting.

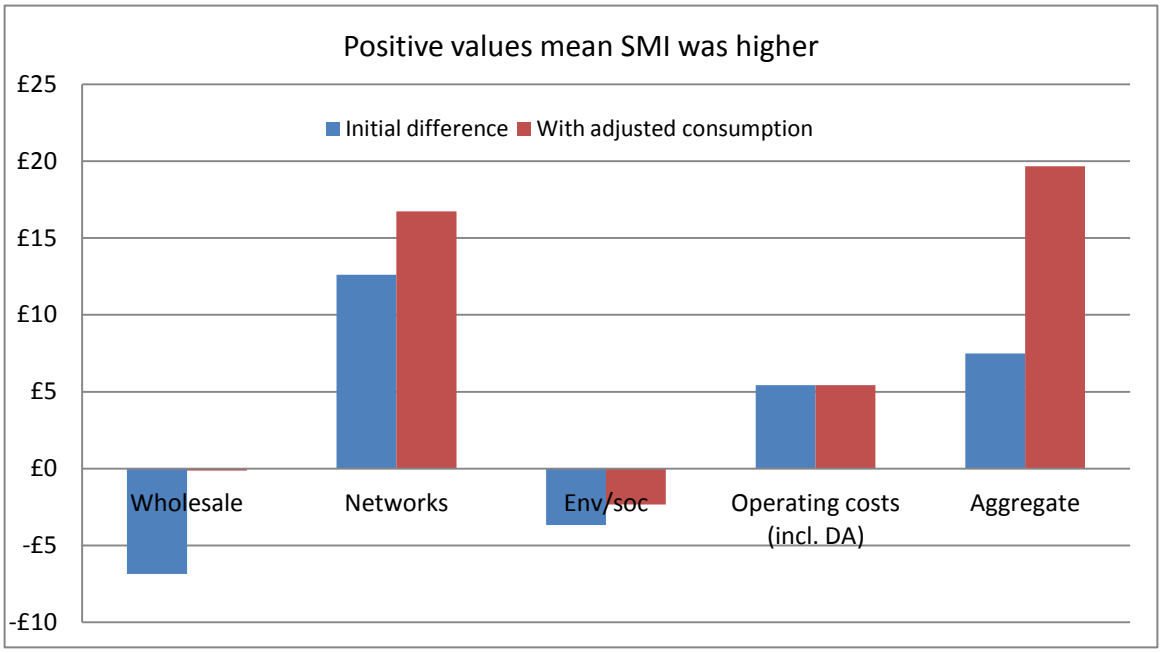
Costs

3.15. Overall, the SMI cost estimates for 2013 were each within 5% of the CSS. The remainder of this section examines the reasons for these differences for dual fuel customers.

3.16. Figure 22 shows in blue the £ differences between the published value for the January 2013 SMI and the CSS for each cost category. The red bars are the differences after we adjust for the different consumption levels in the SMI and CSS for 2013. We make this adjustment by recalculating the variable cost components of each category using the CSS consumption levels.[13] For the 2013 SMI we assumed consumption of 15,300 kWh for gas and 3,800 kWh for electricity. Actual 2013 consumption as reported by the CSS was 15,263kWh for gas and 3,923kWh for electricity.

[13] There are variable cost components within wholesale costs, networks, and environmental and social obligations. Operating costs and DA are fixed, so don't change when we vary consumption. The SMI methodology note has more information on how we calculate the various costs.

Figure 22: Difference between SMI and CSS costs (£/customer/year)



Wholesale

3.17. The wholesale cost from the SMI is £6.86 (1%) lower than in the CSS. However, once we account for higher electricity consumption in the CSS, the error is almost completely removed (£0.14 underestimate).

3.18. The wholesale cost category in the SMI includes costs that aren't in the CSS direct energy cost category, such as unbilled volumes and gas demand forecast error. Excluding these costs and comparing the weighted average cost of gas and electricity (WACOE and WACOG) as reported in the CSS with the equivalent in the SMI provides a stronger assessment of our hedging assumptions. Our current hedging model underestimates the direct fuel cost component of the bill by around 5% across both fuels.

Table 6: SMI and CSS WACO E/G comparison

	SMI Jan 13-Dec 13	**2013 CSS**	**Difference %**
WACO Gas (p/therm) incl. Reconciliation by Difference	70.1	74.3	-6%
WACO Electricity (£/MWh) incl. shaping costs, losses and imbalance costs	59	61.5	-4%

3.19. The model we use to estimate direct energy costs is based on an 18-month hedging strategy. We recognise that this may not provide a fully representative view of how the large suppliers purchase wholesale energy. However, it would be impossible for us to replicate this perfectly. This may account for the difference between our SMI estimate and the actual costs shown in the CSS. While our approach still provides a reasonable estimate of wholesale costs, we will continue to keep it under review.

Networks

3.20. Based on 2013 data, our approach for estimating network costs in the SMI overestimates the network costs for gas and electricity by £13 or 5%. Adjusting for CSS consumption increases the difference to £17, or 6%.

3.21. We use publicly-available charging data, as published by the network companies, to estimate the proportion of domestic customers' bills that is taken up by network costs.[14] The overestimation might be because:

- We estimate the average charge across the regions using a simple average for gas and a weighted average based on the number of domestic customer sites per region for electricity.[15] This method will not account for differences in regional domestic consumption.

- We estimate the domestic charges received by suppliers from network companies and assume that these charges are directly passed on to customers through bills. However, in practice, suppliers may choose to allocate these costs across their customer base in a different way.

3.22. As the regulator, we set the revenue that network companies are allowed to recover from suppliers and ultimately customers. We do not set the exact charges that each network company demands from different groups of customers. Network companies can decide this for themselves within charging methodology rules. For this reason, we do not have certainty over domestic network charges and cannot perfectly predict their proportion of the bill.

Environmental and social obligation costs

3.23. The SMI underestimated environmental and social obligation costs by £3.67 or 3% for dual fuel. Accounting for actual consumption reduces this difference to £2.33 per dual fuel consumer, a 2% underestimation.

[14] The SMI methodology note has more information on how we calculate the various costs.
[15] Note we do not have access to regional domestic site numbers for gas hence we are only able to calculate a simple average charge across the regions.

3.24. We mostly estimate the environmental and social obligation costs in the SMI using publicly-available information from government impact assessments for individual schemes.[16] We do not source cost information directly from individual suppliers for the SMI, so we would expect some discrepancy. Scheme costs are likely to vary significantly across the large suppliers depending on their scheme roll-out strategies.

Operating costs including depreciation and amortisation

3.25. We estimate operating costs and depreciation and amortisation (DA) by inflating the most recent CSS data and including an estimate of future smart meter costs. For our 2013 estimate of operating costs and DA we used outturn costs from the 2012 CSS, inflated the costs to 2013 prices and included an estimate of future smart meter costs based on the government impact assessment.

3.26. The SMI overestimated the 2013 CSS operating costs and DA for the dual fuel bill by £5.40 or 3%. This is because operating costs and DA actually fell in real terms from 2012 to 2013.

Pre-tax margin

3.27. The purpose of the SMI is to provide a 12-month forward look at cost trends. We also publish an estimate of the EBIT margin that a typical large supplier could make over the next 12 months if prices remain unchanged and consumption is at 'normal' levels.

3.28. The direct output of the SMI model is the *snapshot* margin, which is the simple difference between total revenue and cost estimates for the following 12 months. In addition, we calculate a *rolling* margin, which is the one we report each month. This is a 13-month rolling average of the *snapshot* margins for the current month, six months back and six months forward.

3.29. We consider that, for the prupose of testing against CSS data, the January 2013 *snapshot* margins is a more appropriate estimate than the *rolling* margin. This is mainly because it relates the period January to December 2013, which is the period covered by the 2013 CSS.

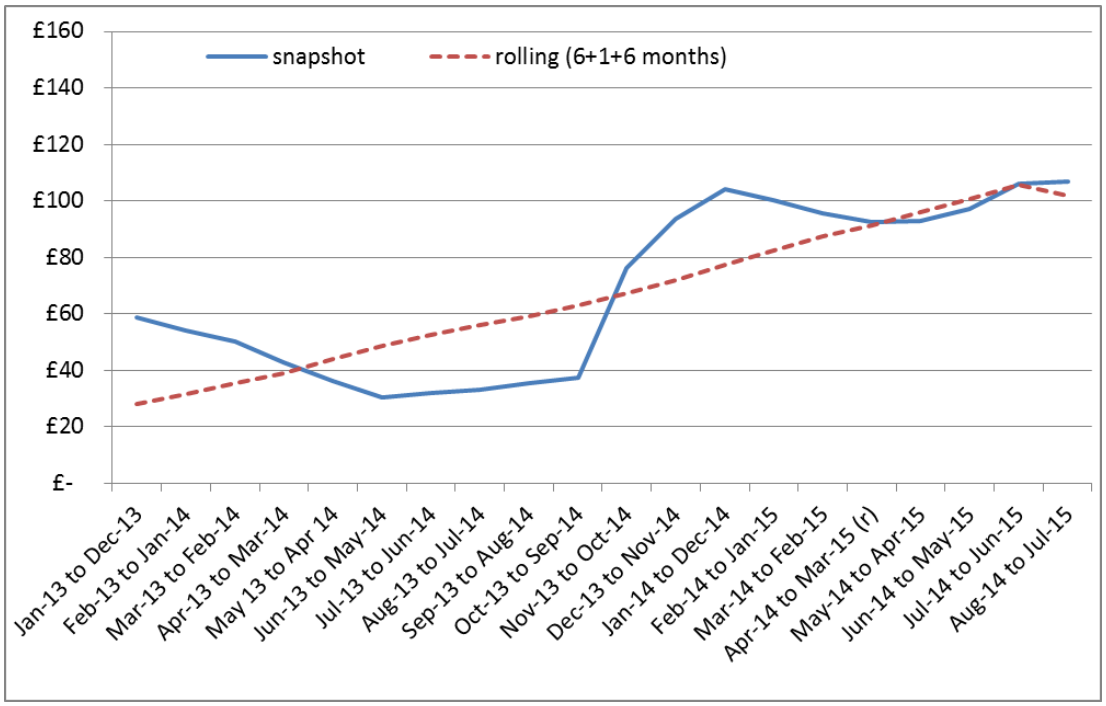
3.30. The *rolling* margin serves to smooth the fluctuations of the snapshot margin, especially after suppliers change prices, which cause 'cliff-edge' effects on the *snapshot* margin (remember that the SMI does not forecast prices).

3.31. We previously reported both *snapshot* and *rolling* margins in the SMI. However, we consider that the *rolling* margin illustrates trends in margins better, and is more accessible to consumers, than the volatile *snapshot* margin. That is why we

[16] Please see the latest SMI methodology note for sources.

report the *rolling* margin. We stopped explicitly publishing the *snapshot* margins as part of the SMI earlier this year, after our review. Figure 23 shows the relationship between the two margin estimates.

Figure 23: Snapshot and rolling margins



3.32. The January 2013 *snapshot* margin was £59, £11 higher than the CSS margin which can be explained by the SMI overestimating revenue by £18 and costs by £8.

Table 7: SMI and CSS margins[17]

CSS 2013 margin (%)	**SMI *snapshot* margin for Jan-13 (%)**
£48 (3.7%)	£59 (4.5%)

[17] The rolling and snapshot margins adjusted for CSS consumption are £31 and £62 respectively. The margin increases with consumption because the revenue calculation is entirely variable, whereas there are some fixed cost components.

Improving the SMI

Improvements on previous SMI methodology

3.33. We have compared the 2013 SMI based on the current methodology. However, at the time of reporting in January 2013 the figures were based on a different methodology[18]. The table below shows the larger differences under the previous methodology compared with the differences when using the new methodology.

Table 8: SMI 2013 (previous methodology) vs. CSS 2013

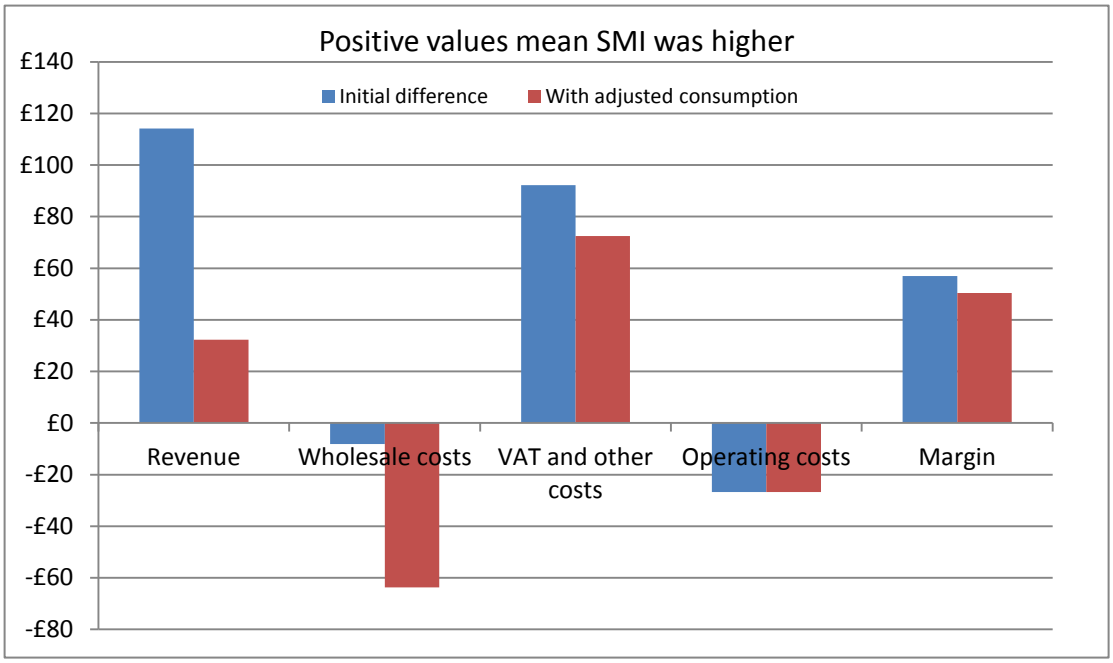
	SMI Jan-Dec 2013 (old methodology - as reported)	**CSS 2013**	**Difference £**	**Difference (*current* methodology for comparison)£**
Revenue	£1,400	£1,286	114	19
Wholesale costs	£620	£628	-8	-7
VAT and other costs (including network and environmental and social obligation costs)	£545	£453	92	9
Operating costs	£130	£157	-27	5

3.34. Under the previous methodology, the January 2013 SMI estimate of the *snapshot* margin was £105 (7.5%). These measures of the margin at the time overestimated outturn figures by £57, significantly more than under our revised methodology.

3.35. In January 2013, under the previous methodology, we assumed a consumption level of 16,900 kWh for gas and 4,000 kWh for electricity. By contrast, the respective average consumption levels reported in the CSS were 15,263 kWh and 3,924kWh. Even after adjusting for consumption, the SMI under the previous methodology still resulted in larger errors than the new methodology.

[18] As reported 10 January 2013: https://www.ofgem.gov.uk/publications-and-updates/electricity-and-gas-supply-market-indicators-10-january-2013

Figure 24: SMI 2013 (previous methodology) vs. CSS 2013 (£/customer/ year)



3.36. We recognise that the methodology used at that time was overly-simplistic, which led to us taking the SMI offline, reviewing our approach and engaging closely with industry and other interested parties. The latest methodology note describes how we improved the SMI methodology to align better with the CSS.[19] Comparing the accuracy of the estimates under both the old and new methodology gives us more confidence that the new methodology is a significant improvement.

Next steps

3.37. To make sure the SMI continues to be of value we constantly review its methodology. This is especially important in a market where tariffs, prices and costs are always changing. Through the comparison explained in this chapter, we have pinpointed which cost estimates deliver the greatest forecasting errors and now have a greater understanding of how to improve our estimates under our current methodology.

3.38. Engagement with our stakeholders will be crucial in further refining the SMI. We want to make our estimates as robust as possible, though we recognise that there are things we can never know for sure, such as the weather or future price changes. Therefore, as always, we welcome feedback and suggestions.

[19] https://www.ofgem.gov.uk/publications-and-updates/methodology-supply-market-indicator

4. Comparability of the statements

Chapter summary

There are limitations to comparing the statements between companies and across time. The main challenge to comparability is differences in company structures and operation. Other factors include differences in reporting periods and use of accounting adjustments. We have reduced these limitations by:

- introducing a table where companies show how they split key energy market functions, and their profit or losses, across different business segments
- requiring companies to calculate the weighted average cost of electricity and gas in the same way.

4.1. Here we examine how accurately the statements can be compared between companies and over time. There are some limitations that readers should be aware of.

Differences in business structure and operation

4.2. The most significant limitation is the difference in business structures and operation between the companies.

4.3. The companies are able to structure and run their businesses as they see fit. Differences in structure and operation can be a positive sign that companies are looking for ways to run their businesses more efficiently. However, this makes it difficult to compare them – a challenge that will often exist in liberalised competitive markets.

4.4. In the GB energy market, there are important differences in how the companies structure and run their businesses, and therefore how they report their results. They all have a trading arm that interacts with the market on behalf of their generation and supply segments. However, the relationship between generation and trading varies (unlike supply, which has a more similar relationship with trading at all six companies). Two models best characterise this relationship:

- Central broker model: where the generation arm sells electricity and is responsible for its hedging policy and all other activities associated with generation, such as fuel procurement and operating decisions. In this model, the generation arm incurs the costs and receives the revenue related to whichever of these activities it carries out. It also bears the risk (and potential reward) of price movements in the energy market. The trading arm acts as a broker, providing access to the market in exchange for a service fee.

- Toll generation model: where the generation arm sells capacity (ie the right to use power plants to generate electricity, as opposed to selling the electricity itself) in advance to the trading arm, which then hedges and optimises these capacity options. In this model, the generation segment receives payments for

maintaining, running and maximising reliability its power plants, when instructed by the trading arm. Conversely, the trading arm is responsible for all other activities associated with generation, such as fuel procurement and operating decisions. Therefore the trading arm, not the generation arm, incurs the costs and receives the revenue for whichever activities it carries out. It also bears the risk (and potential reward) of price movements in the energy market.

4.5. Therefore, a key distinction between these two models is the allocation of energy market risk between the generation arm and the trading arm:

- Central broker model – the generation arm bears more risk.
- Tolling generation model – the trading arm bears more risk.

Impact on comparability

4.6. These models affect the comparability of the statements because the companies need to estimate what proportion of their trading arm's results to allocate to each of the supply and generation segments. To do this, the companies use a transfer price.

4.7. An appropriate transfer pricing methodology should be sufficient to attribute the revenues and costs between the companies' generation, supply and trading arms. We require a clear and full explanation of the transfer pricing methodology each company uses. BDO reviewed these methodologies in 2011 and concluded that they were "fit for purpose and transparent".[20] Its in-depth follow-up review in summer 2014 found that the methodologies continue to be appropriate. BDO concluded that: "the current transfer pricing policies of the Big Six are not considered to have a material impact on the effectiveness of the CSS".[21] This reassures us that the statements present an accurate picture of the companies' generation and supply profitability.

4.8. However, in this context, an appropriate transfer pricing policy that results in an accurate picture of profitability means the generation revenues, costs and profits reflect the functions that the generation arms perform, and the risks they bear. As described above, the functions and risks for generation arms differ between companies. As a result, the revenues, costs and profits will also differ. We expect companies that use a central broker model to report higher and more volatile revenues and costs in generation, and more volatile profits than those closer to a toll generation model. This is because the generation arms of these companies receive the revenue (and incur the cost) from a greater number of activities, but also bear the risk (and potential reward) of price movements in the energy market.

[20] Page 56, *Ofgem Segmental Statements Review*, BDO LLP Final Report, 16 January 2012
[21] https://www.ofgem.gov.uk/publications-and-updates/improving-transparency-energy-company-profits-0

4.9. This means comparing generation revenues, costs and profits between different generation arms is not strictly appropriate without an appreciation of the differences.

Box 3: RWE's reporting change – case study

RWE changed the basis for reporting generation revenue and fuel costs in 2013. It did this to aid comparability with other companies. This provides a useful example of some of the challenges to comparability that arise from differences in company structure and operation.

RWE operates a toll generation model where the generation arm sells capacity (the option to deliver fuel to the power stations and have it converted to electricity) to RWEST – the trading arm. As a result, RWE reports the revenues from the sale of capacity in its statement's generation column. However, the revenues from the sale of electricity and the associated fuel costs are reported in RWEST accounts. This reflects their contractual arrangements.

In its 2013 statement, RWE made a notional (ie does not reflect contractual arrangements), profit-neutral adjustment to the revenues and fuel costs in the generation arm. It included the revenues from the sale of electricity and the fuel costs that are reported in RWEST. This increases generation revenues and fuel costs by £1.5bn.

Bear this adjustment in mind when comparing RWE's generation revenues and fuel costs over time.

How we improve comparability

Business functions table

4.10. We require each company to include a checklist of business functions to show which of a number of predefined functions are being performed in the generation, supply or other segments. The table also shows where the profit or loss associated with different functions is recorded. It therefore provides extra information on how companies are structured and operated. It should be read alongside the statements.

4.11. For example, SSE and Centrica's latest statements show the value of the business function tables (copied below) in interpreting the statements. From its table, it is clear that Centrica performs a greater number of functions (and allocates the corresponding profits or losses) in its generation arm, while SSE does so in its trading arm (called "Energy Portfolio Management"). This suggests that Centrica is closer to a central broker model, while SSE is closer to a toll generation model.

Figure 25: Centrica's business functions table

BUSINESS FUNCTIONS TABLE

Year ended 31 December 2013 – analysis of business function's performance [i]

The table below illustrates where the business functions reside.

	Generation	Supply	Another part of business
Operates and maintains generation assets	✓	-	-
Responsible for scheduling decisions	✓	-	-
Responsible for interactions with the Balancing Market	✓	✓	-
Responsible for determining hedging policy	✓ (output)	✓ (demand)	-
Responsible for implementing hedging policy/makes decision to buy and sell energy	✓ (output)	✓ (demand)	-
Interacts with wider market participants to buy/sell energy	✓ (bilateral)	✓ (market and bilateral)	✓ (market and bilateral)[ii]
Holds unhedged positions (either short or long)	✓	✓	✓[ii]
Procures fuel for generation	✓	-	-
Procures allowances for generation	✓	-	-
Holds volume risk on positions sold (either internal or external)	✓	✓	-
Matches own generation with own supply	-	✓[ii]	✓[ii][iii]
Forecasts total system demand	-	✓	-
Forecasts wholesale price	✓[iv]	✓[iv]	✓[iv]
Forecasts customer demand	-	✓	-
Determines retail pricing and marketing strategies	-	✓	-
Bears shape risk after initial hedge until market allows full hedge	✓	✓	-
Bears short term risk for variance between demand and forecast	-	✓	-

Figure 26: SSE's business functions table

Business Functions

The business functions in SSE have been described already in this document. The column headed 'another part of the business' principally relates to EPM.

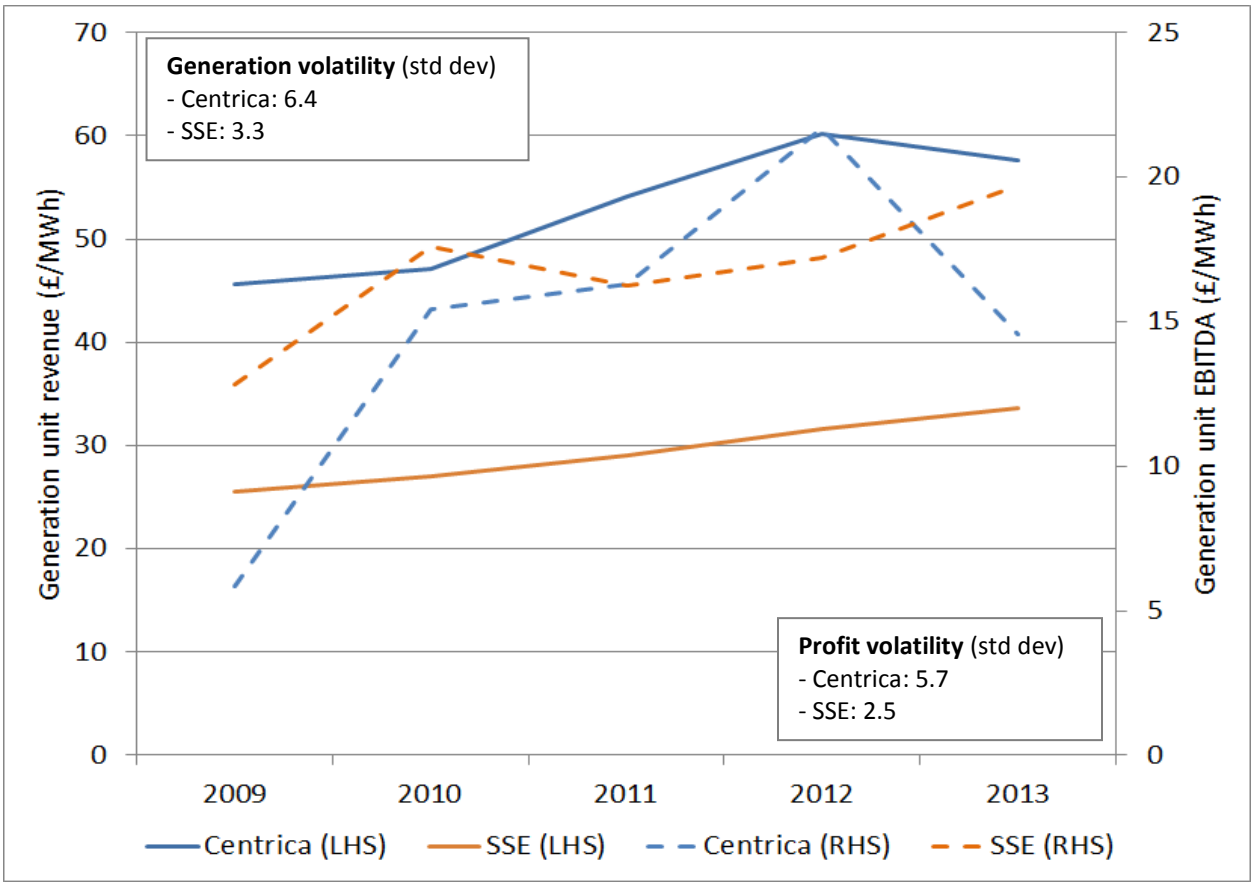
Business Function	Generation	Supply	Another part of the business
Operates and maintains generation assets	✓		
Responsible for scheduling decisions	P/L	P/L	P/L F
Responsible for interactions with the Balancing Market			P/L F
Responsible for determining hedging policy	P/L F	P/L	P/L F
Responsible for implementing hedging policy/makes decisions to buy or sell energy	P/L F	P/L F	P/L F
Interacts with wider market participants to buy/sell energy		P/L	P/L F
Holds un-hedged positions (either long or short)		P/L	P/L F
Procures fuel for generation		P/L	P/L F
Procures allowances for generation		P/L	P/L F
Holds volume risk on positions sold (either internal or external)		P/L	P/L F
Matches own generation with own supply		P/L	P/L F
Forecasts total system demand		P/L	P/L F
Forecasts wholesale price		P/L	P/L F
Forecasts customer demand		P/L	P/L F
Determines retail pricing and marketing strategies		✓	
Bears shape risk after initial hedge until market allows full hedge		P/L	P/L F
Bears short term risk for variance between demand and forecast		P/L	P/L F

Key:
✓ function and P&L impacting that area;
P/L Profit/losses of function recorded in that area;
F function performed in that area.

4.12. We would therefore expect Centrica's generation arm to have higher and more volatile revenues (and costs), and more volatile profits, than SSE's. This is because

Centrica's generation arm receives the revenue (and incurs the cost) from a greater number of activities, but also bears the risk (and potentially reward) of price movements in the energy market.

Figure 27: Centrica vs SSE – generation unit revenues and profits



4.13. Figure 28 shows that, as expected, Centrica's generation unit revenues are significantly and consistently higher than SSE's (the same applies for costs). Its profits are also more than twice as volatile (measured by the standard deviation of unit profits), reflecting greater risk exposure.

Weighted average cost of electricity and gas

4.14. Electricity and gas purchases are the largest contributing element to bills and so have a major effect on profitability. To establish how much this costs them, suppliers use the transfer prices to calculate the weighted average cost of electricity (WACOE) and the weighted average cost of gas (WACOG). These represent the average cost that the supply segments pay for these two fuels. We ask the companies to calculate WACOE and WACOG in a specific way. This makes it possible to compare these values between companies to show how much the supply segments of the separate companies have paid for their electricity and gas.

Box 4: Trading in the energy market

There has been increasing interest in understanding the trading activities and results of the large energy companies. To address this, we encouraged the companies to provide more insight into their trading activities in their 2013 statements.

Response ranged from full disclosure of trading financial results to enhanced descriptions of trading activities.

Some basics on energy trading
All of the large energy companies trade to various degrees. Most have a trading arm that sits outside their generation and supply businesses, and sometimes outside Great Britain. The trading arms for each of the companies perform different functions, as evident in each statement's business functions table, but most perform two activities: hedging and proprietary trading. Proprietary trading involves taking a position purely for the pursuit of profit. It is not central to the management of cost-effective supply for customers. Therefore, it is not central to the standard energy supply chain.

Trading for the purposes of hedging, however, is relevant, as it affects the wholesale cost suppliers face, and therefore it is likely to affect consumer bills.

The extent to which profits associated with hedging are reflected in the statements varies according to companies' operational model (ie central broker or tolling generation). However, an appropriate transfer pricing methodology should be sufficient to correctly attribute these profits between the generation and trading arm of the companies.

The key finding from our independent review of transfer pricing published alongside this document was that companies' transfer pricing methodologies are appropriate.

How companies responded
Two companies fully disclosed their financial results together with enhanced descriptions of the role of their trading arms:

- Centrica (Midstream): £111m revenue and £29m profit. Trading profits were around 3% of generation and supply profits. It performs proprietary trading.

- SP (Energy Management): £6.4bn revenue and £13m profit. Trading profits were around 6% of generation and supply profits. It performs proprietary trading.

SSE partially disclosed the results of its trading arm results (called Energy Portfolio Management), including revenue and profit information: £24.7bn revenue and £14m profit. Trading profits were around 2% of generation and supply profits. It did not specify whether it performs proprietary trading.

The remaining three companies (E.ON, RWE and EDF) provided enhanced descriptions of the role of their trading arms, but did not provide financial results for their GB-related activities. These three companies' trading arms operate at an EU-

wide (or global) level. In their responses to our transparency consultation,[22] they noted that it would be difficult, unduly costly, or even impossible to isolate the trading data relevant to the GB power and gas market. Financial information on the performance of these companies' trading arms can be found in their groups' annual reports and accounts.

Our conclusions
This trading information provides greater context on the operations of these companies, and gives a sense of how trading profits compare to those earned in generation and supply (ie they are small, between 2% and 6%) this year.

However, it sheds limited light (if any) on the profitability of the generation and supply arms, and on between the relationship between wholesale and retail prices and profits. This is mainly because:

- we are confident that the transfer pricing policies are appropriate
- these trading results at least partly reflect speculative trading activity, which is not central to the energy supply chain.

In addition, some of the information disclosed is irrelevant to the GB market. For example, some figures include elements of overseas generation.

Differences in reporting periods

4.15. Five of the six companies have a financial year-end in December, while SSE has a financial year-end in March. SSE's results therefore relate to a slightly different time period. While there is still a 75% overlap, this difference affects the comparability of the statements for a given year.

4.16. However, this becomes less important over time, as the focus is on distinguishing and understanding trends, which will be revealed in the statements from one year to the next.

Differences between the years

4.17. In 2009 and 2010, companies used notable accounting adjustments in their statements, which significantly affected their reported profit.[23] In 2011 we saw less of these adjustments. For the 2012 statements, BDO found that companies used

[22] https://www.ofgem.gov.uk/publications-and-updates/improving-transparency-energy-company-profits
[23] Accounting adjustments refer to items that occur outside the companies' normal operation for a particular year, but have been included in the segmental statements, eg the revaluation of a power plant.

more adjustments again, although it noted that companies were careful to exclude major ones such as impairments and restructuring costs. It found little consistency in how companies presented notable items. This may affect the comparability of the statements between companies.

4.18. To address this, and in response to feedback, we propose to include an additional "exceptional items" line on the statements' main template. This will allow companies to disclose any exceptional accounting adjustments connected to the operation of their generation and supply activities. This should result in more consistent reporting, and allow users of the statements to get more transparent information.

4.19. Finally, since 2009 we have made various improvements to the rules for preparing the statements since 2009. This means the statements in each year have been compiled on a slightly different basis. This reduces year-to-year comparisons between 2009 and 2010, 2011 and 2012, and to a lesser extent, 2013. This is likely to affect the 2014 statements too, as a result of this year's changes.

5. Reliability of the statements

Chapter summary

We and the companies are working to improve the statements. The 2013 statements are more robust, useful and accessible than in the past, as they were subject to auditor scrutiny and contain greater cost breakdown. This summer's independent review of the companies' transfer pricing policies found them to be appropriate. This gives us even more confidence that the statements present an accurate picture of segmental profitability. The 2014 statements will further improve on this year's. They will be fully audited and available earlier.

5.1. We routinely monitor the effectiveness of the statements and try to improve the transparency they bring to consumers and the market.

5.2. In February 2014, we published a letter[24] outlining our and the companies' actions to improve profit transparency. Since then, we and the companies have been working on implementing this plan throughout 2014. Compared to previous years, all the six companies published their statements earlier, subjected them to greater auditor scrutiny, provided more insight into their trading activities, and broke down their costs into more meaningful categories.

5.3. We launched and concluded an independent, in-depth review of the transfer pricing methodologies that companies use.

5.4. As a result, the 2013 are more robust, useful and accessible. We are now consulting[25] to embed these improvements into licence conditions.

5.5. Our intention is that from next year, the statements will be:

- More robust – companies will have to get a full external audit on their statements.
- More useful – companies will have to publish them earlier, within four months of the end of their financial year.
- More accessible – companies will have to break down their cost data further, and report it consistently in more meaningful categories. This

[24] https://www.ofgem.gov.uk/ofgem-publications/86388/actionstoimprovethetransparencyofenergycompanyprofits.pdf
[25] https://www.ofgem.gov.uk/publications-and-updates/improving-transparency-energy-company-profits-0

will shed light into certain costs, like environmental obligations or network costs.

Transfer pricing review

What did the transfer pricing review conclude?

5.6. This summer's independent, in-depth review of companies' transfer pricing methodologies found them to be appropriate.[26] This gives us even greater assurance that the statements present an accurate picture of generation and supply profitability.

5.7. It confirmed that the large energy companies, like any other business with internal transactions at different segments of the value chain, are constrained by transfer pricing rules. The use of transfer pricing is widespread in the economy, and is governed by an established set of legislation, guidelines and best practice.

5.8. The key finding is that the business models used by the large energy companies, and their current transfer pricing policies, reflect the arm's length standard. This means that they adhere to the key requirement of transfer pricing rules. Therefore, we are even more confident that the profits companies declare are the ones they actually make, from their activities in generation and supply. As a result, the CSS present an accurate picture of segmental profitability.

5.9. Furthermore, there appears to be no material tax, commercial or managerial incentive to shift profit from reported to unreported segments through transfer pricing.

5.10. This gives more assurance that under current transfer pricing policies, the companies' statements provide a reliable picture of where their profits fall between their generation, trading and supply arms.

What is transfer pricing?

5.11. A transfer price is the price at which different segments of the same company, or different legal entities commonly owned in a corporate group, transact with each other.

5.12. Transfer pricing rules seek to prevent the misallocation of profit to lower tax territories, and to enable management to get a more reliable view of the performance of each part of the business.

[26] https://www.ofgem.gov.uk/publications-and-updates/improving-transparency-energy-company-profits-0

5.13. They do this by requiring the application of a third party price (ie the arm's length standard). As a result, the allocation of income and costs from transactions between connected parties corresponds to one that would result if unconnected parties were doing these transactions instead. Therefore, by applying a third party price at each stage of the value chain, transfer pricing rewards each segment for its activity and the value it adds, rather than allowing the business to manipulate where its profit falls.

5.14. Different jurisdictions implement and give force to transfer pricing rules through tax legislation. In the UK, the relevant legislation is the Taxation (International and Other Provisions) Act 2010, and HM Revenue & Customs is the tax authority responsible for enforcing it.

Why is transfer pricing relevant in the energy market?

5.15. The largest energy companies operating in the GB energy market are complex businesses, operating at various segments of the energy supply chain. Specifically, they are all active in the main competitive segments – electricity generation (upstream), and gas and energy supply to end customers (downstream).

5.16. All the companies use transfer prices for their internal transactions. So transfer prices underpin the financial information they report in the statements. Therefore, confidence in transfer pricing policies is necessary to get reliable segmental profitability information.

Why did we review transfer pricing policies?

5.17. The review was a response to public concern that, even after successive rounds of improvements to the statements, the companies could use their transfer pricing policies to unduly influence the profit figures they report for their supply and generation businesses. It built on the previous 2012 review which also covered transfer pricing, among other things.

What did the review assess?

5.18. The review assessed whether, from a transfer pricing perspective, the policies that companies use are appropriate. This included an assessment of the business models used (the economic angle), the adherence to the arm's length standard (the legal angle), and whether the financial data reflect the transfer pricing policy (the accounting angle).

Increasing auditor scrutiny

5.19. Since the introduction of the statements in 2009, we have worked to improve their transparency and comparability. As part of this work, we have in the past commissioned three independent reviews, in addition to the most recent transfer

pricing review, from a specialised accounting firm. The findings of these reviews have helped us improve them.

5.20. Nevertheless, it became clear from these exercises and the recommendations we received, including from the Energy and Climate Change Select Committee, that the statements were not fully delivering the confidence some stakeholders expected.

5.21. This led us to consult in late 2013 on whether a full financial audit completed before publication of the statements would deliver the desired level of confidence. We concluded that it would, and the majority of respondents agreed.

5.22. For the 2013 statements, we asked each company to get their external auditors to perform an agreed-upon detailed series of checks on their statements. They did.

5.23. These checks improve confidence that the companies have prepared their 2013 statements appropriately. They also laid the groundwork to allow the companies and their auditors to develop the frameworks and processes they will need to provide a full audit from the 2014 statements onwards.

5.24. We are now consulting on the detail of this requirement to provide a full audit. Importantly, our requirement to annually audit the statements will tighten the scrutiny of transfer pricing policies. This addresses the observation in the transfer pricing review that these policies should be kept under review.

5.25. So, the transfer pricing review found the policies that companies use are appropriate. The requirement to provide a full audit will ensure that they are well implemented, and kept under review.

Appendix 1 – Glossary

Average revenue

The average revenue in table 2 includes all tariffs and is after companies have transferred VAT to the government. It is calculated as realised revenue divided by customer numbers.

Baseload electricity

Electricity supplied to meet normal (off-peak) demand.

CMA

The Competition and Markets Authority.

Demand profiles

Describe the proportion of energy consumption over a period of time, eg a day.

Depreciation and amortisation

Relates to spreading the cost of an asset over its useful life.

EBIT

Earnings before interest and tax are deducted. We use the word 'profit(s)' to refer to EBIT in this document.

Environmental and social obligation costs

Costs involved in encouraging energy efficiency, low-carbon energy and reducing fuel poverty.

Hedging

Buying or selling energy ahead of the time the energy is actually delivered to reduce the risks associated with price movements.

Profit margins

Equal to EBIT (earnings before interest and tax) divided by revenue, expressed as a percentage.

Network costs

Include the cost of building, maintaining and operating the gas pipes and electricity wires which deliver energy directly to your home.

Operating costs

Operating costs in table 1 include the suppliers' own internal costs like sales and marketing costs, bad debt, costs to serve, IT, staff costs, billing and all meter costs.

Other costs

Other costs in table 1 include network costs, balancing costs (BSUoS), environmental and social policy costs, transport element of the reconciliation by difference costs, depreciation and amortisation.

Peak electricity

Electricity supplied during the period of the day when demand is typically highest.

Reconciliation by difference (RbD)

RbD is a method to allocate the costs of supplying gas between consumers without having to take the actual meter readings daily from all domestic consumers. It takes total supply minus the actual (metered) volumes of large industrial and commercial customers to give an estimate of the quantity of gas used by smaller gas consumers, such as domestic households.

Time-of-use (ToU) consumers

Consumers on time-of-use electricity tariffs, which have different unit rates for peak and off-peak electricity consumption. Time-of-use tariffs do not exist for gas.

Transfer pricing

Refers to the attribution of a price to internal transactions in the same organisation.

VAT

Value Added Tax.

Vertical integration

An energy supplier is vertically integrated if it both generates and supplies energy to consumers.

WACOE

Weighted average cost of electricity. It is likely to include wholesale electricity costs, losses, the energy element of the reconciliation by difference (RbD) costs, and balancing and shaping costs.

WACOG

Weighted average cost of gas. It is likely to include wholesale gas cost, losses, the energy element of the reconciliation by difference (RbD) costs, and balancing and shaping costs.

Wholesale costs

Wholesale costs in table 2 include wholesale energy cost (ie the cost of buying electricity and gas in the wholesale market), losses, the energy element of reconciliation by difference costs, balancing and shaping costs.