

## Appendix 10.2: Benchmark analysis of domestic energy bills

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### Introduction

1. This appendix provides further details on our analysis of domestic energy bills which compares average bills charged by the Six Large Energy Firms to a 'competitive benchmark bill', and calculates detriment arising from prices being set above the competitive level.
2. Our hypothetical benchmark is an average of First Utility and Ovo Energy direct debit tariffs (see paragraph 12), adjusted to achieve a 1.25% EBIT margin and weighted by the respective number of accounts within each of First Utility and Ovo Energy. The approach consists of computing average bills for each supplier and payment type and comparing this to the average bills that fall within our benchmark, while controlling for network costs and costs associated with different payment methods.
3. We first carry out an analysis of how average bills have compared with the competitive benchmark bill calculated at typical consumption values, which allows us to comment on how suppliers have compared on price. We then perform the same analysis using actual consumption values to estimate the detriment arising from prices exceeding the competitive benchmark.
4. The structure of this appendix is as follows:
  - (a) We describe the data we have used in the analysis.
  - (b) We discuss the methodology we have used in the analysis.
  - (c) We present the results of bills comparison analysis and the calculation of detriment.
5. We provide further details on the data sources and data processing in the annex.

## Description of the data

6. The data used for the purpose of this analysis is tariff data from the gains from switching analysis combined with estimates of network costs and estimates of costs differentials by payment type. As with the gains from switching analysis, we have separate data sets and analysis for single fuel gas, single fuel electricity and dual fuel tariffs.
7. The tariff data includes tariffs subscribed to by domestic customers of the Six Large Energy Firms and the two Mid-tier Suppliers - Ovo Energy and First Utility - between Q1 2012 and Q2 2015 (end-of-quarter snapshots). The data set contains information on the supplier, region, year, quarter, payment type, tariff type and other tariff characteristics. For each tariff family<sup>1</sup> we have data on consumption at the 10<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup> (median), 75<sup>th</sup>, and 90<sup>th</sup> percentiles and mean consumption. In this analysis we focus on the median consumption level.
8. As explained above (see paragraph 3), we also use Ofgem's typical domestic consumption values (TDCV)<sup>2</sup> to provide results standardised by consumption.<sup>3</sup>
9. Each tariff may have multiple entries in the data set where each entry represents a different customer group defined by payment method, fuel type, and/or discounts received. For each of these we know the total number of customers who subscribed.
10. Our network cost data is derived from Ofgem SMI data, submitted to us by Ofgem, and published statements of charges for the transmission and distribution of gas and electricity, submitted to us by network operators. Our data on cost differential by payment type is discussed in Appendix 9.8: Analysis of costs by payment method.
11. Based on tariff rates and network costs, we have estimated annualised bills for the tariffs in the dataset at each corresponding consumption level with and without network costs. We have also generated bills which are adjusted for cost differences by payment type.

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<sup>1</sup> See Appendix 9.2: The analysis of the potential gains from switching.

<sup>2</sup> Ofgem uses the first, second and third quartiles (the median being the second quartile) to represent the consumption of a low, medium and high typical domestic customer, respectively. For simplicity, in the bill comparison presented in this appendix we have used for both standard meters and Economy 7 Ofgem's TDCV profile 1. However, in the computation of the price cap we have used profile 2 for Economy 7, as explained in Section 14. For Economy 7, we have computed the split between day and night consumption using a weighted average of the split in the consumption data submitted by the suppliers.

<sup>3</sup> Using values applying from 1 January 2014 to 31 August 2015. Ofgem (2013), [Decision: New typical domestic consumption values](#).

12. A number of tariffs used by domestic customers have been excluded from our analysis as is the case with the gains from switching analysis.<sup>4</sup> These excluded tariffs include:
  - (a) green tariffs;
  - (b) social tariffs;
  - (c) tariffs that are included as part of a bundle with other services;
  - (d) tariffs with a very low number of customers; and
  - (e) tariffs for which suppliers provided us with incomplete or corrupt data.
13. The data used in this analysis includes two groups of tariffs that are excluded from the gains from switching analysis:
  - (a) fixed-term tariffs that would have expired in the relevant quarter; and
  - (b) E.ON's Age UK tariffs.<sup>5</sup>
14. The gains from switching analysis contains further information on the tariffs and customers data used in this analysis.

## **Methodology**

### ***Bills comparison***

15. As explained in Section 10, we have compared the bills at Ofgem's medium TDCV.
16. We first compute the benchmark using the following steps:
  - (a) We compute the annual bill for each entry of Ovo Energy and First Utility's direct debit tariffs at Ofgem's medium TDCV.
  - (b) We adjust Ovo Energy and First Utility's bills to achieve a 1.25% EBIT margin in the corresponding financial year.<sup>6</sup>

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<sup>4</sup> See Appendix 9.2: Analysis of the potential gains from switching.

<sup>5</sup> Following the publication of the provisional decision on remedies report, [X] raised concerns regarding the differences in the proportion of tariffs excluded across suppliers. We reviewed all exclusions that were performed in the gains from switching analysis and evaluated whether it was possible to reintroduce them for the benchmark analysis. We concluded that the tariffs that expire within three months and E.ON's Age UK tariffs could be included as the reasons for exclusion to the gains from switching analysis did not apply to the benchmark analysis. The remaining exclusions were maintained due to poor quality of the data or because the nature of those tariffs implied they were not directly comparable to the benchmark bills.

<sup>6</sup> The adjustments applied by supplier and year are presented in Table 1 in Annex A.

- (c) We subtract from the computed bills the corresponding network costs.<sup>7</sup>
  - (d) We compute the weighted average direct debit bill for each tariff type<sup>8</sup> for each of Ovo Energy and First Utility (weighted by the number of direct debit customer accounts for each entry).
  - (e) We calculate the proportion of Ovo Energy and First Utility total customer accounts that fall within each tariff type (including all payment methods, Economy 7 and standard meters), these provide the weights for each tariff type within the benchmark.
  - (f) We compute the benchmark by averaging across average bills computed in (d) using as weights the proportions computed in (e).
17. We next compare suppliers' bills to the benchmark as follows:
- (a) We compute the annual bill for each entry for Six Large Energy Firms and payment type tariffs at Ofgem's medium TDCV.
  - (b) We subtract from the computed annual bills the corresponding network costs, and adjust standard credit and prepayment tariffs for cost differentials with respect to direct debit (in particular, we subtract from bills for standard credit and prepayment customers our estimates of cost differentials).
  - (c) We compute the weighted average of the bills computed in (b) for each supplier/payment type weighted by the number of account for each entry.
  - (d) We calculate the difference between the average bill for each supplier/payment type and the benchmark as computed in paragraph 16.
18. Bill comparisons were performed by averaging bills across the whole period Q1 2012 to Q2 2015.<sup>9</sup>

### ***Detriment figure***

19. For the calculation of the detriment figure we use information on actual median consumption by supplier, region, payment type, tariff type and year. We consider that this provides a more accurate estimate of the detriment

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<sup>7</sup> We do not adjust for payment type cost differentials since those adjustments are only applicable to standard credit and prepayment.

<sup>8</sup> We define tariff type depending on whether a tariff is variable-rate, fixed-rate or capped and, for fixed-term tariffs, whether it is short-term (two years or less) or long-term (more than two years).

<sup>9</sup> We average across the whole period for simplicity. Table 5 of this appendix presents the bill comparison (per customer detriment) performed on a quarter-by-quarter basis using actual median consumption.

since it provides a better approximation to the actual level of customers' consumption on each tariff and by supplier than Ofgem's medium TDCV.

20. We compute the detriment figure using the actual median consumption for each tariff family as follows:
  - (a) We repeat the same steps as in paragraphs 16 and 17 above but applying actual median consumption separately by Economy 7 and standard meters.<sup>10</sup>
  - (b) We multiply this difference by the number of accounts for each tariff and then aggregate across supplier/payment type to obtain the overall detriment figures.
21. We make all calculations on a quarter-by-quarter basis and then compute the weighted average across quarters to obtain the detriment figures by year. The reason for this is that, although our data is quarterly, the bills and corresponding detriment figures provide annual estimates. We then aggregate across years to obtain the overall detriment figures for the entire period.

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<sup>10</sup> The reason for this is that standard meters' consumption levels cannot be directly translated into Economy 7 consumption levels.

## Results

### Bills comparison

**Table 1: Comparison of dual fuel bills by supplier and payment type (excluding network costs and adjusting for payment method cost differentials, calculated at Ofgem 2014 medium, low and high TDCV, weighted by account numbers)**

Ofgem medium TDCV													
Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All	All	DD	SC	PP	All	DD	SC	PP	All
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
SLEFs	808	805	848	814	744	64	60	103	69	8	7	12	9

  

Ofgem low TDCV													
Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All	DD	DD	SC	PP	All	DD	SC	PP	All
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
SLEFs	573	546	584	568	525	48	21	58	43	8	4	10	8

  

Ofgem high TDCV													
Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All	DD	DD	SC	PP	All	DD	SC	PP	All
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
SLEFs	1,121	1,145	1,194	1,138	1,033	88	112	161	105	8	10	14	9

Source: CMA analysis.

Note: SLEFs = Six Large Energy Firms, DD = direct debit, SC = standard credit and PP = prepayment.

22. Table 1 presents the comparison of dual fuel bills by supplier and payment type at medium, low and high levels of Ofgem's TDCV. Overall, suppliers are found to price 8 to 9% above the benchmark, and this holds for all levels of consumption considered. There is considerable variation in the extent to which different suppliers price above the benchmark. [X] in general have the highest prices, particularly at medium and high TDCV. On average across the suppliers, after allowing for cost differentials, bills for prepayment are higher than those on other payment methods irrespective of the consumption level.

**Table 2: Comparison of single fuel electricity bills by supplier and payment type (excluding network costs and adjusting for payment method cost differentials, calculated at Ofgem 2014 median, low and high TDCV, weighted by account numbers)**

**Ofgem medium TDCV**

Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All	All	DD	SC	PP	All	DD	SC	PP	All
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
SLEFs	349	345	366	351	327	22	18	40	24	6	5	11	7

**Ofgem low TDCV**

Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All	All	DD	SC	PP	All	DD	SC	PP	All
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
SLEFs	237	222	245	232	229	8	-7	16	4	3	-3	7	2

**Ofgem high TDCV**

Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All	All	DD	SC	PP	All	DD	SC	PP	All
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
SLEFs	510	519	539	519	466	44	53	73	53	9	10	14	10

Source: CMA analysis.

Note: SLEFs = Six Large Energy Firms, DD = direct debit, SC = standard credit and PP = prepayment.

23. Table 2 is equivalent to Table 1 but for single fuel electricity. We find that the Six Large Energy Suppliers on average tend to price lower in the standard credit space relative to the benchmark at lower levels of consumption. This is consistent with the Six Large Energy Firms having on average higher unit rates compared to the benchmark suppliers. [X] have the highest prices across suppliers at medium TDCV. However, [X] is among the cheapest at low TDCV and the most expensive at high TDCV. As with dual fuel, bills for prepayment are higher than those with other payment methods.

**Table 3: Comparison of single fuel gas bills by supplier and payment type (excluding network costs and adjusting for payment method cost differentials, calculated at Ofgem 2014 medium, low and high TDCV, weighted by account numbers)**

Ofgem medium TDCV													
Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All	All	DD	SC	PP	All	DD	SC	PP	All
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
SLEFs	511	496	497	502	432	80	64	66	70	16	13	13	14

  

Ofgem low TDCV													
Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All	All	DD	SC	PP	All	DD	SC	PP	All
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
SLEFs	373	346	352	358	317	56	29	35	41	15	8	10	11

  

Ofgem high TDCV													
Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All	All	DD	SC	PP	All	DD	SC	PP	All
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
SLEFs	680	679	675	678	571	108	107	104	107	16	16	15	16

Source: CMA analysis.

Note: SLEFs = Six Large Energy Firms, DD = direct debit, SC = standard credit and PP = prepayment.

24. Table 3 is equivalent to Tables 1 and 2 but for single fuel gas. On average, suppliers price 14% above the benchmark at medium TDCV, and this percentage tends to increase (decrease) slightly at higher (lower) levels of consumption. As in the case of electricity, this is consistent with the Six Large Energy Firms having on average higher unit rates compared to the benchmark suppliers. [X] has the highest average bills across all three levels of consumption considered.

### **Detriment figure**

25. Table 4 presents detriment figures by payment type using actual median consumption for each tariff family as discussed above. The largest volume of detriment is associated with direct debit customers. This is expected due to the larger proportion of accounts with this payment method.



**Table 4: Detriment figures by payment type (million £)**

Year	Fuel type	Actual median consumption			
		DD	SC	PP	All
2012	Dual fuel	368	44	102	511
	Electricity (single fuel)	129	63	70	262
	Gas (single fuel)	76	10	-4	82
	Overall	573	117	169	855
2013	Dual fuel	680	162	184	1,026
	Electricity (single fuel)	106	50	64	220
	Gas (single fuel)	88	34	9	130
	Overall	874	245	257	1,376
2014	Dual fuel	586	137	189	913
	Electricity (single fuel)	62	23	53	138
	Gas (single fuel)	105	75	30	209
	Overall	753	235	272	1,260
2015*	Dual fuel	948	231	265	1,444
	Electricity (single fuel)	137	76	87	300
	Gas (single fuel)	124	90	36	250
	Overall	1,209	397	388	1,994
All years	Dual fuel	2,583	573	741	3,894
	Electricity (single fuel)	435	211	274	920
	Gas (single fuel)	392	209	70	671
	Overall	3,410	994	1,086	5,485

Source: CMA analysis.

\*Based on information for the first two quarters.

Notes: DD = direct debit, SC = standard credit and PP = prepayment. The sum of detriment for each payment types does not match exactly the overall figures due to the fact that annual figures are obtained for each category by averaging across quarters.

26. Table 5 below presents detriment figures per customer. The average detriment per customer in 2015<sup>11</sup> was £91 for dual fuel, £44 for single fuel electricity and £72 for single fuel gas. With the exception of single fuel gas, detriment was larger for prepayment than other payment types and amounted to 15 to 16% of the average bill in 2015.<sup>12</sup>

<sup>11</sup> Based on information for the first two quarters of 2015 only.

<sup>12</sup> Based on information for the first two quarters of 2015 only.

**Table 5: Per customer detriment figures by payment type (actual median consumption)**

<b>Dual fuel</b>																
Year	Average bill				Benchmark				Average difference (£)				Average difference (%)			
	DD	SC	PP	All	DD	SC	PP	All	DD	SC	PP	All	DD	SC	PP	All
2012	831	690	709	774	793	679	668	743	38	12	41	31	4	1	5	3
2013	858	707	721	801	791	664	652	739	67	43	69	62	7	6	9	7
2014	851	703	719	799	795	663	647	744	56	40	72	55	6	5	10	7
2015*	811	670	692	763	718	599	588	673	93	72	104	91	11	10	15	11

  

<b>Single fuel electricity</b>																
Year	Average bill				Benchmark				Average difference (£)				Average difference (%)			
	DD	SC	PP	All	DD	SC	PP	All	DD	SC	PP	All	DD	SC	PP	All
2012	394	318	377	360	351	296	322	324	43	22	55	36	9	4	14	8
2013	410	332	391	377	375	314	344	346	35	18	46	31	8	4	11	7
2014	408	332	393	377	388	323	357	358	20	9	37	19	5	2	9	5
2015*	406	329	390	375	361	298	327	332	45	31	63	44	10	8	16	10

  

<b>Single fuel gas</b>																
Year	Average bill				Benchmark				Average difference (£)				Average difference (%)			
	DD	SC	PP	All	DD	SC	PP	All	DD	SC	PP	All	DD	SC	PP	All
2012	516	408	353	443	468	403	358	421	48	6	-5	22	9	1	-2	4
2013	528	415	358	447	465	394	346	412	64	21	12	35	12	5	3	7
2014	522	421	359	445	443	371	319	387	79	49	40	58	15	12	11	13
2015*	488	393	336	417	393	332	286	346	94	61	50	72	19	15	15	17

Source: CMA analysis.

\*Based on information for the first two quarters.

Notes: DD = direct debit, SC = standard credit and PP = prepayment. Bills are computed at actual consumption levels, therefore annual bills and benchmark levels are not directly comparable across payment types.

## Annex A: Further details on data sources and data processing

### Sources

1. The data used for the analysis combine four sets of information:
  - (a) tariffs data from the analysis of the potential gains from switching;
  - (b) customer information and sampling weights used in the CMA survey of domestic energy customers carried out by GfK;
  - (c) data on gas and electricity network costs provided by Ofgem, National Grid and regional distribution network operators; and
  - (d) CMA data on the costs to suppliers associated with supplying customers on different payment methods (ie direct debit, standard credit and prepayment).

### Tariffs data

2. Appendix 9.2 contains a detailed description of the data set. In short, this data is a list of all tariffs to which customers of the ten largest energy firms (ie the Six Large Energy Firms plus the four Mid-tier Suppliers) were subscribing to at end-of-quarter snapshots between Q1 2012 and Q2 2015 and the consumption distribution calculated at the 10<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup> and 90<sup>th</sup> percentiles and the mean within each supplier, region, year, payment and tariff type.
3. In this analysis we used tariff information excluding VAT and only the 50<sup>th</sup> consumption percentile.
4. The data includes the white label tariffs of Centrica, SSE and Ovo Energy which are pooled together with the 'parent' firms in the analysis.
5. Following the analysis presented in Appendix 10.1, we adjusted each bill of the two benchmark suppliers by a common amount so the aggregate of the bills were at a level that would have been necessary to achieve a 1.25% EBIT margin for each supplier's domestic retail supply business in each year. Table 1 below presents the adjustments applied to each supplier and year. The first part of the table reproduced the adjusted EBIT margins reported in Table 7 of Appendix 10.1. The second part presents the revenue adjustment necessary to take all EBIT margins to 1.25%. These adjustments were computed as follows:

$$Adjustment (\%) = \frac{1 - EBIT(\%)}{(1 - 1.25\%)} - 1$$

**Table 1: Benchmark bills adjustment**

Supplier	Adjusted EBIT margins (%)				Bills adjustment (%)			
	FY12	FY13	FY14	FY15	FY12	FY13	FY14	FY15
First Utility	[x]	[x]	[x]	[x]	[x]	[x]	[x]	[x]
Ovo Energy	[x]	[x]	[x]	[x]	[x]	[x]	[x]	[x]

Source: CMA Analysis.

## Survey data

6. We used information on customers' postcodes and region provided by suppliers and sample weights and stratification provided by GfK. Section 1 of the energy customer survey technical report provides details on the sampling methodology.<sup>13</sup>

## Network cost data

7. We used Ofgem SMI information for compiling data on the network cost components per energy bill. The level of disaggregation of Ofgem data allowed us to extract the rates for single components of transmission and distribution network charges for both electricity and gas.<sup>14</sup>
8. Ofgem data was cross-checked with the annual 'statement of charges' of UK transmission and distribution companies. Whenever discrepancies were found, we used these documents to either correct or supplement Ofgem data.
9. In the computation of electricity network costs (both transmission and distribution), we used information on peak share for both profile class 1 and profile class 2 meters provided by Ofgem, which reflects the different rates suppliers pay to serve customers on restricted and unrestricted meters.<sup>15</sup>
10. Our analysis is conducted for Public Electricity Suppliers (PES) regions. However, PES regions and gas local distribution zones (LDZs) do not correspond exactly. We therefore needed to calculate gas network costs at PES level.
11. We did this as follows:

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<sup>13</sup> See [GfK technical report](#).

<sup>14</sup> Following the comments received from parties after the publication of the provisional decision on remedies report, we obtained from Ofgem an update of the SMI data. This data had been originally provided in January 2015 and therefore included forecast of network charges for 2015. Our new estimation of network costs includes actual charges for 2015 and does not rely on forecasts.

<sup>15</sup> This aspect of our methodology was modified following comments received from parties after the publication of the provisional decision on remedies report.

- (a) We compiled two data sets on transmission and distribution network charges for each fuel (with electricity costs based on PES regions and gas costs based on LDZ).
  - (b) We used a list of postcodes available in the GfK survey data and the Xoserve mapping of postcodes to LDZs<sup>16</sup> and gas exit points to determine the overlap in LDZ and PES regions.<sup>17</sup> This provided us with the proportion of customers of each PES region that belong to each LDZ.
  - (c) For each entry in our data set, we computed the gas network cost for all relevant LDZs at the corresponding consumption level.<sup>18</sup>
  - (d) We computed gas distribution cost for each entry as the weighted averages of the cost computed in (c), using the proportions computed in (b) as weights.
12. To compute the value of network charges for electricity, gas and dual fuel customers, network cost components are combined with actual median consumption data.

### **Payment type cost differentials**

13. Appendix 9.8 provides a detailed description of how the CMA estimated suppliers' payment methods costs differentials. In short, the difference in the cost of serving customers on different payment methods is mainly due to the cost of bad debt and the cost of working capital. The allocation of these costs differs across payment types. The CMA used suppliers' data to calculate per fuel cost differentials of prepayment and standard credit customers compared to direct debit customers.
14. As an illustration, Table 2 presents a summary of the structure of the underlying tariff data for Q2 2015 and the adjustments applied for payment type cost differentials for each payment and fuel type. The table first presents the weighted average standing charge and unit rate of the benchmark and the SLEFs bills. In general, the benchmark suppliers present both lower standing charge and unit rates than the SLEFs, with the exception of direct debit which presents lower average standing charges for SLEFs than for the benchmark suppliers.

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<sup>16</sup> See [Xoserve: Postcode - Exit Zone Matching Search Logic](#).

<sup>17</sup> Survey design weights are used to adjust proportions as appropriate.

<sup>18</sup> Following the comments received from parties after the publication of the provisional decision on remedies report, we modified the way we compute the network costs for each LDZ. Instead of selecting one gas exit point per LDZ, we now take the average of all gas exit charges within each LDZ. We also corrected minor errors in the Stata working files identified by parties during the confidentiality ring.

**Table 2: Tariff structure and adjustment for payment cost price differentials, Q2 2015**

**Electricity standard meters**

Fuel type	Supplier	Payment type	Tariff structure		Payment type adjustments		
			Standing charge (£)	Unit rate (£)	Annual (£)	Per day (£)	As share of standing charge (%)
Dual fuel	Benchmark SLEFs	DD	0.192	0.118			
		DD	0.190	0.126			
		PP	0.233	0.136	24	0.066	28
		SC	0.233	0.135	47	0.129	55
Single fuel	Benchmark SLEFs	DD	0.208	0.118			
		DD	0.164	0.133			
		PP	0.225	0.140	24	0.066	29
		SC	0.216	0.141	47	0.129	60

**Electricity economy 7**

Fuel type	Supplier	Payment type	Tariff structure			Payment type adjustments		
			Standing charge (£)	Unit rate day (£)	Unit rate night (£)	Annual (£)	Per day (£)	As share of standing charge (%)
Dual fuel	Benchmark SLEFs	DD	0.230	0.119	0.072			
		DD	0.210	0.155	0.062			
		PP	0.240	0.172	0.069	24	0.066	27
		SC	0.242	0.169	0.069	47	0.129	53
Single	Benchmark SLEFs	DD	0.235	0.120	0.071			
		DD	0.188	0.158	0.065			
		PP	0.237	0.170	0.070	24	0.066	28
		SC	0.237	0.170	0.070	47	0.129	54

**Gas**

Fuel type	Supplier	Payment type	Tariff structure		Payment type adjustments		
			Standing charge (£)	Unit rate (£)	Annual (£)	Per day (£)	As share of standing charge (%)
Dual fuel	Benchmark SLEFs	DD	0.209	0.032			
		DD	0.215	0.038			
		PP	0.260	0.042	39	0.107	41
		SC	0.260	0.042	54	0.148	57
Single	Benchmark SLEFs	DD	0.254	0.033			
		DD	0.235	0.040			
		PP	0.258	0.042	39	0.107	41
		SC	0.252	0.043	54	0.148	59

Source: CMA analysis.

Notes: DD = direct debit, SC = standard credit and PP = prepayment. Standing charges and unit rates are computed as the average of the benchmark suppliers and SLEFs weighted by the number of accounts. The numbers in this table are presented for illustrative purposes only and do not include network costs adjustments and the uplift applied to the benchmark suppliers' bills.

- The payment type cost differential adjustments consist of subtracting a fixed amount from the annual bill. Therefore, in practice they only affect the SLEFs standing charge and not the unit rates. The last three columns of the table present the annual and per day adjustment for payment type cost differentials applied in each case and the percentage it represent of the corresponding average standing charge. We note that the adjustment have a larger impact in gas than electricity. For example, for pre-payment they represent a reduction of 41% in the SLEFs standing charge compared to only 27 to 29% for electricity.