

Appendix 3.3: Benchmark analysis of domestic energy bills

Contents

	<i>Page</i>
Introduction	1
Description of the data	2
Methodology.....	3
Results	5
Annex A: Further details on data sources and data processing	10

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), 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 a benchmark bill 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 bill 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 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 Mid-tier Suppliers 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 family¹ we have data on consumption at the 10th, 25th, 50th (median), 75th, and 90th 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)² to provide results standardised by consumption.³
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 3.6: 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.

¹ See Appendix 3.2: The analysis of the potential gains from switching

² 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. We have used for both standard meters and Economy 7 Ofgem's TDCV profile 1. 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.

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

12. A number of tariffs used by domestic customers have been excluded.⁴ 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;
 - (e) fixed-term tariffs that would have expired in the relevant quarter; and
 - (f) tariffs for which suppliers provided us with incomplete or corrupt data.
13. Please see the gains from switching analysis for further information on the data.

Methodology

Bills comparison

14. As explained in Section 3 to the provisional decision on remedies, we have compared the bills at Ofgem's medium TDCV.
15. 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 subtract from the computed bills the corresponding network costs.⁵
 - (c) We compute the weighted average direct debit bill for each tariff type⁶ for each of Ovo Energy and First Utility (weighted by the number of direct debit customer accounts for each entry).
 - (d) 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.

⁴ See Appendix 3.2: Analysis of the potential gains from switching.

⁵ We do not adjust for payment type differentials since those adjustments are only applicable to standard credit and prepayment.

⁶ 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).

- (e) We compute the benchmark by averaging across average bills computed in (c) using as weights the proportions computed in (d).
16. 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 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 15.
17. Bill comparisons were performed by averaging bills across the whole period Q1 2012 to Q2 2015.
18. As a robustness check, we have also carried out the comparison of bills using Ofgem's low and high TDCV.

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 quarter. We consider that this provides a more accurate estimate of the detriment 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 15 and 16 above but applying actual median consumption separately by Economy 7 and standard meters.⁷

⁷ The reason for this is that standard meters' consumption levels cannot be directly translated into Economy 7 consumption levels.

(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 (unweighted) 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.

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
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[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	857	874	908	870	775	82	99	132	94	10	11	15	11

Ofgem low TDCV

Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All		DD	DD	SC	PP	All	DD	SC	PP
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[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	607	601	628	609	547	60	54	82	62	10	9	13	10

Ofgem high TDCV

Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All		DD	DD	SC	PP	All	DD	SC	PP
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[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	1,190	1,234	1,273	1,213	1,075	114	158	198	138	10	13	16	11

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 10 to 11% 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, after allowing for cost differentials, bills for prepayment are higher than those with other payment methods.

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
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[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	369	378	389	376	338	31	40	52	39	9	11	13	10

Ofgem low TDCV

Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All		All	DD	SC	PP	All	DD	SC	PP
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[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	250	248	261	252	237	14	12	25	15	5	5	9	6

Ofgem high TDCV

Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All		All	DD	SC	PP	All	DD	SC	PP
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[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	539	562	571	554	481	58	80	90	73	11	14	16	13

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 suppliers on average tend to price higher relative to the benchmark at higher and 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
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[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	540	533	534	536	445	95	88	89	91	18	16	17	17

Ofgem low TDCV

Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All		All	DD	SC	PP	All	DD	SC	PP
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[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	394	375	380	383	327	67	47	53	56	17	13	14	15

Ofgem high TDCV

Supplier	Average bill				Benchmark	Average difference (£)				Average difference (%)			
	DD	SC	PP	All		All	DD	SC	PP	All	DD	SC	PP
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]	[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	718	726	722	722	589	129	137	133	133	18	19	18	18

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 17% 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 DD higher PP 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 consumption			
		DD	SC	PP	All
2012	Dual fuel	106	37	72	212
	Electricity (single fuel)	119	94	72	285
	Gas (single fuel)	52	3	-7	48
	Overall	277	133	137	544
2013	Dual fuel	733	262	228	1,223
	Electricity (single fuel)	120	96	75	291
	Gas (single fuel)	97	55	17	169
	Overall	949	414	319	1,683
2014	Dual fuel	941	310	299	1,550
	Electricity (single fuel)	133	108	90	331
	Gas (single fuel)	136	118	49	303
	Overall	1,210	536	438	2,184
2015*	Dual fuel	1,077	345	334	1,756
	Electricity (single fuel)	158	125	103	386
	Gas (single fuel)	141	120	49	310
	Overall	1,376	590	486	2,452
All years	Dual fuel	2,857	954	933	4,741
	Electricity (single fuel)	530	423	339	1,292
	Gas (single fuel)	425	297	108	829
	Overall	3,812	1,673	1,380	6,862

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 2015⁸ was £115 for dual fuel, £57 for single fuel electricity and £90 for single fuel gas. With the exception of single fuel gas, detriment was larger for prepayment than other payment types and amounted to 17% of the average bill in 2015.⁹

⁸ Based on information for the first two quarters of 2015 only.

⁹ Based on information for the first two quarters of 2015 only.

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

Dual fuel																
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	871	747	753	819	860	736	724	805	11	11	29	14	0	1	3	1
2013	913	773	776	858	837	701	690	781	76	72	86	77	8	9	11	9
2014	905	769	773	854	809	675	660	756	96	93	114	98	10	12	15	11
2015*	858	732	745	813	745	623	613	698	113	110	131	115	12	15	17	14

Single fuel electricity																
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	406	342	392	378	366	309	336	337	41	33	56	40	8	7	13	9
2013	434	365	416	404	393	330	362	363	41	36	54	42	9	9	13	9
2014	433	366	420	406	388	324	357	358	45	42	62	47	10	11	15	11
2015*	430	364	417	404	377	312	343	347	54	51	74	57	11	13	17	13

Single fuel gas																
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	545	440	381	472	510	439	390	459	34	1	-9	13	6	0	-3	2
2013	560	449	387	479	489	414	363	433	71	35	24	46	12	7	6	9
2014	551	454	388	476	448	375	322	391	104	79	65	85	18	17	17	18
2015*	513	423	362	444	404	341	294	355	109	82	68	90	21	19	19	20

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) tariff 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).

Tariff data

2. Appendix 3.2 to the provisional decision on remedies report on the analysis of the potential gains from switching has a detailed description of the data set. In short, this data is a list of all tariffs 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 10th, 25th, 50th, 75th and 90th percentiles and the mean within each supplier, region, year, payment and tariff type. Only the 50th consumption percentile is used in the analysis.
3. The data includes the white label tariffs of Centrica, SSE and Ovo Energy which are pooled together with the 'parent' firms in the analysis.

Survey data

4. 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.¹⁰

¹⁰ See [GfK technical report](#).

Network cost data

5. 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.
6. 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.
7. 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.
8. We did this as follows:
 - (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 LDZs¹¹ and gas exit points to determine the overlap in LDZ and PES regions.¹² 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.
 - (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.
9. To compute the value of network charges for electricity, gas and dual fuel customers, network cost components are combined with actual consumption data.

Payment type cost differentials

10. Appendix 3.6 on the analysis of costs by payment method provides a detailed description of how the CMA estimated suppliers' payment methods costs

¹¹ See [Xoserve: Postcode - Exit Zone Matching Search Logic](#).

¹² Survey design weights are used to adjust proportions as appropriate.

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.