Decision Appendix

Default Tariff Cap: Decision

Appendix 6 — Operating costs

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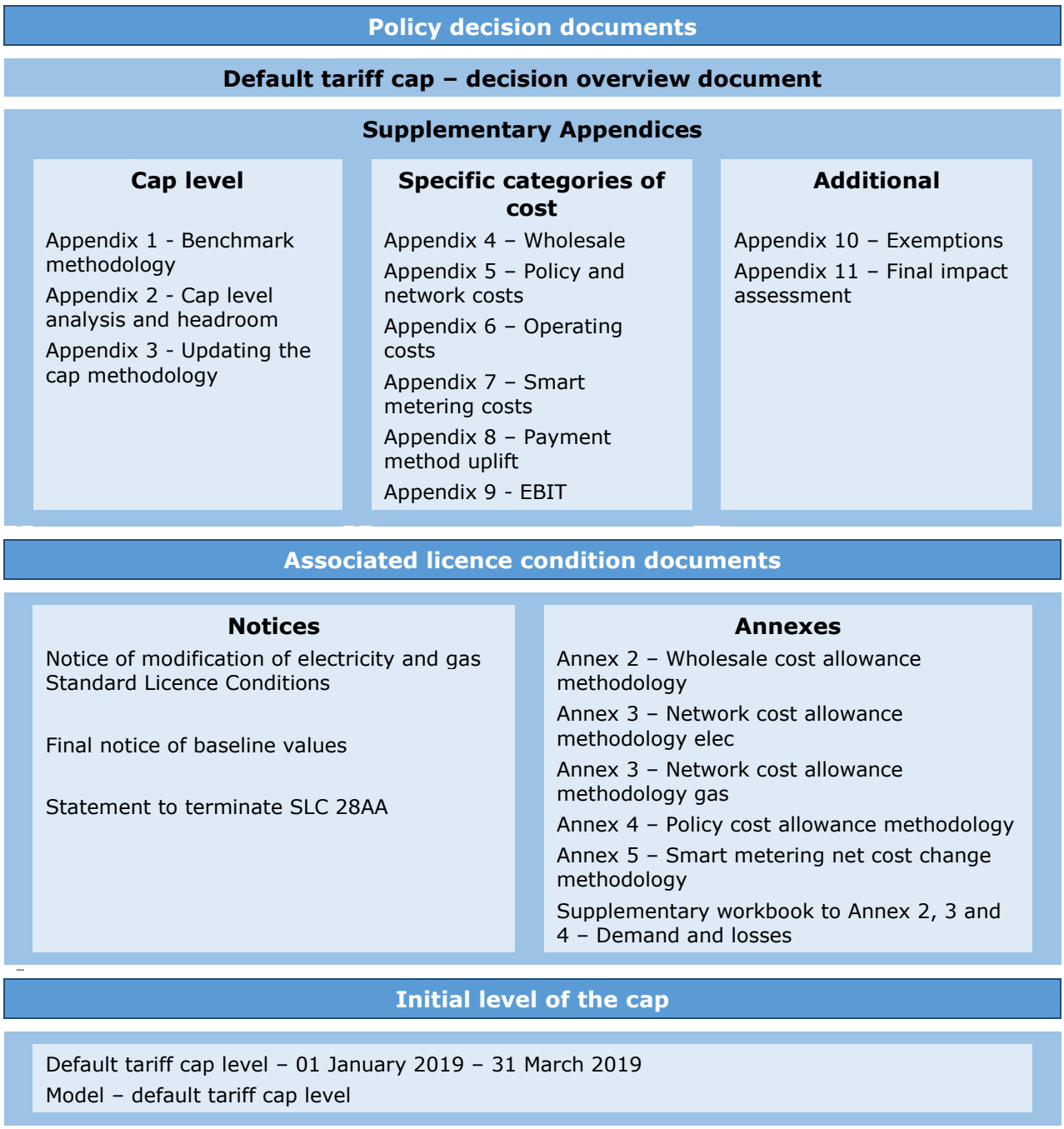
In accordance with the Domestic Gas and Electricity (Tariff Cap) Act 2018, we are implementing the default tariff cap to come into effect from 1 January 2019. This supplementary appendix sets out our decision and the detailed methodology in relation to operating costs.

Please see the default tariff cap – decision overview document for an accessible summary of the complete methodology.

Document map

Figure 1 below provides a map of the documents published as part of the decision on the implementation of the default tariff cap.

Figure 1: Default tariff cap – decision document map



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Overview

1.1. Operating costs are a significant component of suppliers' cost base, and so estimating the appropriate level of these costs to include in the default tariff cap is a key part of our assessment of the efficient benchmark.

1.2. We define operating costs as a supplier's own costs of retailing energy, excluding the costs of purchasing energy; the cost of meeting environmental and social obligations; and network charges. We have summarised the main types of expenditure we include within our definition of operating costs in Table A6.1 below. In many cases these costs are indirect, in the sense that they are shared across the customer base, rather than being attributable to any single account.

Table A6.1: Key elements of operating costs

Cost	Description
Customer contact	Costs associated with operation of contact centres and other customer relations
Billing and payment collections	Billing, collections and bad debt costs
Metering	Meter rental, installation, maintenance, reading (including smart metering)
Sales and marketing	Sales activities, advertising and branding, third party commissions
Central overhead	Telecoms, IT, property, HR, regulation, corporate recharges
Depreciation and amortisation	Depreciation and amortisation, largely relating to investment in metering, IT and billing systems, and property
Industry charges	Charges from Elexon, Xoserve, and the smart metering industry bodies

1.3. Operating costs are the component of an energy bill over which suppliers have greatest control. Variation in these costs between suppliers is the key source of the inefficiency in the retail market that was identified by the CMA following its detailed investigation.[1]

Chapter 2 — Methodology

1.4. In Chapter 2, we provide details of how we have calculated the allowance to be included in the default tariff cap for operating costs, and how this will be updated over time. Further details of our approach and the evidence underpinning it can be found in Appendix 6 of our statutory consultation.[2]

1.5. We begin by describing how we have estimated historical operating costs for each supplier, for the purposes of benchmarking costs between companies. We discuss what we have included in our definition of operating costs; our approach to different fuels;

[1] CMA Energy Market Investigation Final report, June 2016
https://assets.publishing.service.gov.uk/media/5773de34e5274a0da3000113/final-report-energy-market-investigation.pdf
[2] https://www.ofgem.gov.uk/system/files/docs/2018/09/appendix_6_-_operating_costs.pdf

the time period covered; which suppliers have been included in our sample; and the adjustments we have made to suppliers' data to increase comparability.

1.6. We then describe the distribution of operating costs across suppliers in 2017, and how we have selected the level of the efficient benchmark within this distribution, based on our expectation of the extent to which factors other than efficiency are likely to be driving the variation in costs. The operating cost benchmark we have chosen based on this assessment (in £ per direct debit customer[3] per year) is set out in Table A6.2.

Table A6.2: Operating cost benchmark, £ per direct debit customer per year, 2017

Electricity	Gas
£78.26	£89.20

Source: Ofgem
Note: These costs relate to the base line period April 2017 to September 2017

1.7. Finally, we discuss how we propose to update the operating cost allowance over time to reflect trends in efficient costs. We discuss the inflation index we intend to use to update the level of the allowance, and summarise our approach to allowing for the costs associated with the smart meter rollout (although the details of the smart adjustment are provided in Appendix 7 – Smart metering costs).

Chapter 3 — Key issues raised in response to our consultation

1.8. In Chapter 3, we summarise the key issues that were raised in response to the proposed approach to calculating the operating costs allowance which was set out in our statutory consultation, and our views on the points raised.

1.9. First, we discuss submissions relating to our estimate of an efficient level of operating costs in 2017. Among the key points that we address are questions about the rationale for setting the benchmark £5 below the lower quartile supplier and the relevance of the CMA's findings to our benchmark; as well as whether adequate reflection has been given to unobserved variation in suppliers' operating conditions.

1.10. Second, we discuss submissions relating to our proposed approach to updating the cap over time to reflect trends in an efficient level of operating costs. We discuss historic trends in costs – and whether the evidence suggests that efficient costs have increased more quickly than inflation in the past. We then describe the expected future impact of regulatory changes (such as the new switching arrangements) on operating costs, and what this means for the cap.

[3] To this benchmark we add a further amount to reflect the additional costs associated with supplying customers paying by standard credit. This payment method adjustment is discussed in Appendix 8 – Payment method uplift.

Context and related publications

1.11. Ofgem (2018), Default tariff cap working paper – setting the level of the cap. https://www.ofgem.gov.uk/publications-and-updates/default-tariff-cap-working-paper-setting-level-cap

1.12. Ofgem (2018), Default tariff cap: policy consultation. Appendix 8 – Operating costs. https://www.ofgem.gov.uk/system/files/docs/2018/05/appendix_8_-_operating_costs.pdf

1.13. Ofgem (2018), Default tariff cap: statutory consultation. Appendix 6 – Operating costs. https://www.ofgem.gov.uk/system/files/docs/2018/09/appendix_6_-_operating_costs.pdf

2. Methodology

In this chapter, we describe how we have calculated the allowance to be included in the default tariff cap for operating costs, and how this will be updated over time.

Defining suppliers' operating costs

2.1. We define operating costs as a supplier's own costs of retailing energy, excluding the costs of purchasing energy; the cost of meeting environmental and social obligations; and network charges.

2.2. In calculating operating costs for each supplier, we use as our starting point the main categories of indirect costs as defined within the guidance that the large suppliers are required to follow when preparing their Consolidated Segmental Statements (CSS)[4], and then make a series of adjustments to increase comparability and ensure all relevant costs are captured. This includes adding third party commissions and depreciation and amortisation; and removing wholesale energy transaction costs. The cost lines we have added and removed are summarised in Table A6.3.

Table A6.3: Defining operating costs

Added to CSS indirect costs (where not already included):	Removed from CSS indirect costs (where these costs can be identified[5]):
• **Third party commissions** (sales and marketing only) • **Depreciation and amortisation** • **Standardised element to reflect charges for smart metering industry bodies** • **Standardised element to reflect Elexon/Xoserve charges** • **Warm Home Discount (WHD) administration costs** (which are not captured in target spending used to calculate the WHD allowance)[6] • **Other obligatory industry charges, where these have been separated and are not captured elsewhere in our methodology** (eg charges associated with Supply Point Administration Agreement)	• **Energy Company Obligation/Feed in Tariffs administration costs** (which are captured in policy costs allowance) • **Exceptional restructuring costs** (where these were not included in published financial statements) • **Any charges from smart metering industry bodies that are already included in indirect costs** • **Any charges from Elexon/Xoserve that are already included in indirect costs** • **Costs associated with activities other than energy supply** (where these can be identified) • **Fines for non-compliance** (although note that no fines were identified affecting costs reported in financial year 2017) • **Wholesale energy transaction costs** (which are captured in our wholesale cost allowance)

[4] We require the large energy suppliers to produce audited annual CSS to show the costs, revenues and profits for the different segments of their generation and supply businesses. The CSS guidelines are published on our website: https://www.ofgem.gov.uk/sites/default/files/docs/2015/05/css_guidelines_jan_2015.pdf

[5] There are some costs that in some cases we have not been able to identify and remove in the accounting data collected – for example some costs associated with industry initiative expenditure under the WHD, some costs associated with activities other than gas and electricity sales, and some administration costs associated with the ECO and FiT schemes. While this could cause our estimates to overstate an efficient level of operating costs, we expect the impact to be small.

[6] For those suppliers in the sample which were not obligated under the WHD scheme in a given year covered by our data, we have added to their costs our estimate of the average cost per customer account associated with WHD administration costs, looking across the other suppliers in our sample.

2.3. As shown in Table A6.3, in some instances we have replaced the costs reported by suppliers with standardised allowances, to ensure these are fully comparable across suppliers. These allowances have been calculated as follows:

- We calculate an allowance for Elexon charges based on its forecast total budget for 2017/18.[7] We divide this by forecast total system volumes, giving an estimated charge of £0.23 per electricity customer.

- We calculate an allowance for Xoserve charges based on its grand total of data services charges for 2017/18, as published in its charging statement.[8] We divide this by the number of gas supply points (24 million) giving estimated costs of £0.69 per gas customer.

- We also add a standardised component to reflect smart metering industry costs, including charges from the Data Communications Company (DCC), and the costs of Smart Energy GB (SEGB) and the Smart Meter Installation Code of Practice (SMICoP). A description of how these charges are calculated is provided in Appendix 7 – Smart metering costs, and the methodology is shown in full in Annex 5 to licence condition 28AD.

Adjustments

2.4. To increase comparability between companies, we also make an adjustment to the data of those companies that have not capitalised sales and marketing costs, to reflect an estimate of the level these costs would have been had they been capitalised using an assumed customer tenure of five years (reflecting current average domestic switching rates).[9] For those suppliers where adjustments were required, the impact on reported operating costs typically amounted to between -£1 and £1 per customer account – although the required adjustment was larger for one supplier.

2.5. Similarly, because customers paying via standard credit or prepayment are, on average, more expensive to serve than those paying via direct debit, the proportion of a supplier's customer base using different payment methods is likely to have a material impact on their reported operating costs per customer in 2017. To account for this and increase comparability, we have therefore adjusted suppliers' operating costs per customer to the level that we would expect were they to only supply direct debit customers, using estimates of the additional cost of supplying a standard credit and the additional cost of supplying a prepayment customer.

2.6. Specifically, we have subtracted:

1. **All costs associated with bad debt charges reported by suppliers in 2017 from our estimates, with the exception of the bad debt costs specifically reported for direct debit customers**. For two suppliers in our sample, we do not have information on the reported bad debt charge per direct debit customer – and

[7] See Tables 12 and 13 of this document: https://www.elexon.co.uk/wp-content/uploads/2018/03/BSCCoBusinessPlan2018_19_final.pdf
[8] See Table 5 of this document: https://www.gasgovernance.co.uk/sites/default/files/ggf/page/2017-11/CDSP%20Annual%20Charging%20Statement%202017-18.pdf
[9] For further details of the adjustments, see paragraphs 2.814 to 2.84 of Appendix 6 to our September consultation: https://www.ofgem.gov.uk/system/files/docs/2018/09/appendix_6_-_operating_costs.pdf

so we have estimated this using the average across the other suppliers in our sample (£0.84 per direct debit customer for electricity, and £0.46 for gas).

2. **An estimate of the additional costs associated with standard credit customers (other than the bad debt charge).** This is calculated using suppliers' own estimates of the additional costs they face of supplying a standard credit customer, including the costs of debt collection and contact centre costs, which are combined with the proportion of each supplier's domestic gas and electricity customers that pay via standard credit.

3. **A standardised estimate of the additional costs of supplying prepayment customers.** This is calculated by combining the CMA's estimate of the prepayment uplift, as calculated for inclusion in the prepayment meter price cap as of 1 April 2017 (£24.41 for electricity, £39.66 for gas), with the proportion of each supplier's domestic gas and electricity customers that pay via prepayment.

2.7. On average, looking across the sample, the adjustments reduce our estimates of suppliers' operating costs per customer account by £15 for electricity, and £15 for gas. Adjustments are larger for companies with more standard credit and prepayment customers; for companies with larger reported bad debt charges; and for companies with larger reported additional costs of supplying standard credit customers.

2.8. Note that in setting the final level of the cap, we combine our direct debit benchmark with an additional 'payment method adjustment', reflecting the additional debt and administrative costs of supplying standard credit customers (see Appendix 8 – Payment method uplift).

The benchmarking sample

2.9. We set our operating cost allowance by comparing suppliers' reported costs in financial year 2017 – the most recent year for which information is available — and choosing the level which we consider to reflect the costs of a supplier operating efficiently.[10]

2.10. When benchmarking operating costs, we do not break our estimate down between different types of expenditure (eg metering, customer service etc), instead focusing on a comparison of total operating costs. We also compare operating costs across suppliers' entire domestic customer base, rather than attempting to separately estimate operating costs for customers in different regions, customers with different types of electricity meter or customers on default and fixed tariffs. The reason for this is to take into account the possible substitutability between different categories of expenditure, and to reduce the risk of a lack of comparability if operating costs were not allocated to individual categories on a consistent basis by different suppliers.

2.11. To ensure that our benchmark reflects the costs of a supplier that is operating at scale, we focused our analysis on companies with more than 250,000 customers as of April 2017. This meant that we collected information from 15 suppliers.

[10] Different companies have different reporting years. In referring to "financial year 2017" or "2017", we refer to the period Jan 2017 – Dec 2017 for a company with a reporting year ending in December (the majority of suppliers in our sample), and the period Apr 2017 – Mar 2018 for companies with a reporting year ending in March.

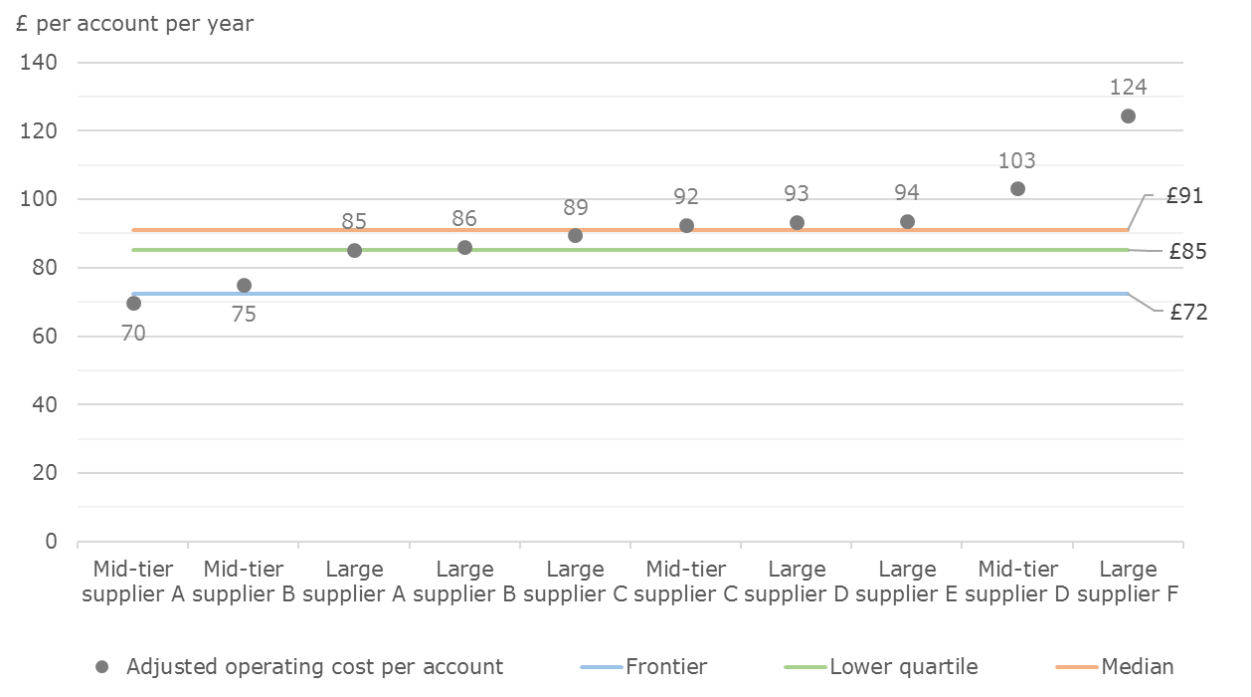
2.12. We excluded five of these suppliers when choosing the final sample used to set our benchmark level of operating costs. We excluded one supplier from which information was collected but which had fallen below 250,000 customers at the end of 2017. We excluded four suppliers because they had atypical customer bases (due to their business strategy). This left us with a sample of ten suppliers which we used to carry out our benchmarking analysis of operating costs (our 'benchmarking sample').

2.13. We chose our benchmark by comparing suppliers' total operating costs per customer account (counting dual fuel twice), rather than benchmarking gas and electricity separately. This avoids the risk that our benchmark is affected by differences in how suppliers have allocated costs between fuels, which might have otherwise caused us to set a benchmark that was artificially low for gas. Having chosen the benchmark level of operating costs on this basis, we set the individual allowances for gas and electricity using the ratio of costs between fuels of the company closest to the benchmark.

Variation in suppliers' operating costs in 2017

2.14. The distribution of the operating costs per account of suppliers in our benchmarking sample is shown in Figure A6.1. There were material differences in operating costs between suppliers in 2017, even after we have controlled for differences in the payment method used by their customer base.

Figure A6.1: Operating costs per customer account, 2017 (direct debit)



Notes:
1. Operating costs reflect an average across gas and electricity, and are calculated according to the methodology described above (and in Appendix 6 – Operating costs to our statutory consultation).
2. The "*Frontier benchmark*" is calculated as a simple average of the operating costs of the two lowest cost suppliers in the benchmarking sample (we use an average, in order to reduce the impact of selecting a single outlying supplier, whose costs could be affected by their specific operating conditions). The "*Lower quartile*" of the benchmarking sample reflects the operating costs of the third lowest cost supplier in the sample. This supplier is also the lowest cost large supplier. The "*Median*" cost lies between the two suppliers in the middle of our sample.
3. Estimates have changed by a very small amount compared to those published in our statutory consultation due to minor revisions to our estimates of Smart Energy GB charges in 2017.

2.15. Our expectation – drawing on the conclusions of the CMA – is that much of the variation in operating costs that we observe is likely to reflect differences in suppliers' relative efficiency. We consider that the Act requires that the default tariff cap should be set with reference to an efficient level of costs. By this we mean that the benchmark should not be affected by instances where suppliers have incurred higher costs in the past, and this was a result of factors within their control (ie a result of management decisions).

2.16. If we knew the variation in historical costs was *only* due to companies' relative efficiency or inefficiency, we would therefore set the allowance for operating costs included within the benchmark at or close to the level of the lowest cost supplier in our sample.

2.17. However, we consider that there is likely to be some variation in suppliers' operating costs that is driven by aspects of the companies' operating environments or customer bases, or the limitations of the operating costs data we have used, and which does not relate to the efficiency of the supplier. We expect this to be the case even after the adjustments we have made to reflect differences in payment method and to increase comparability of the treatment of sales and marketing costs. We also expect it to be the case subsequent to the adjustments we make when updating the level of the cap to reflect a level of smart metering costs that is representative across the market.

2.18. Specifically, we have identified a number of factors that are not related to efficiency and which may have an impact on a supplier's operating costs:

- **Company size:** we found some evidence that supported the existence of scale economies among companies in our benchmarking sample. For example, when we reviewed the cost forecasts of a number of medium and smaller suppliers, most envisaged some cost savings related to expected growth. At the same time, there were examples of smaller companies with higher costs and larger companies with lower costs, suggesting that the relationship between customer numbers and costs was not straightforward. Given the mixed evidence, we did not seek to make a specific adjustment in our analysis to control for the impact of suppliers' size on costs (eg to reduce smaller suppliers' costs to reflect the level of overheads that might be expected were they operating at a larger scale). However, we have considered the possibility that the operating costs of the small and medium sized suppliers in our sample could be higher in financial year 2017 than would be expected were they operating at a larger scale when choosing the overall level of the benchmark.

- **Legacy pension arrangements**: we found some evidence that ex-incumbent supplier's costs are higher as a result of final-salary schemes inherited at privatisation. These costs are outside of suppliers' control given the protections that are in place. For those suppliers that provided estimates of the total costs associated with legacy pension schemes in 2017 specific to their domestic supply businesses, the reported costs amounted to a *total* cost of legacy pension schemes of less than £1 per customer account for all companies except one. We would expect the *incremental* cost, compared to equivalent pension costs for non-legacy schemes, to be significantly lower than this. Given this, while we have taken these costs into account when choosing our overall benchmark, we consider the overall materiality of these costs is likely to be limited.

- **Proportion of vulnerable customers**: customers with lower incomes or otherwise in vulnerable circumstances may be more costly to serve, eg due to potentially higher customer contact costs and higher risk of debt. The proportion

of a supplier's customers in vulnerable situations – which will be outside of their control — could therefore have an impact on their reported operating costs. We collected estimates from suppliers of the additional costs of serving vulnerable customers (proxied by whether or not a customer was on the Priority Service Register or PSR). The median reported additional operating cost to serve a dual fuel PSR customer paying by direct debit was material, at around £10 per customer account in 2017 — although we noted that producing these estimates requires significant judgement in order to allocate costs, and is therefore subject to significant uncertainty (as illustrated by the wide range of estimates received from suppliers).

- **Proportion of single fuel customers:** dual fuel customers are likely to be cheaper to serve, due to — for example — the economics of only having to send a single bill. Because the former incumbent suppliers started with a single fuel customer base at privatisation, they tend to have a greater proportion of single fuel customers for reasons that are to a significant extent outside of their control. The median reported additional operating cost to serve a single fuel customer paying by direct debit was around £9 per customer account in 2017. As with the estimates for vulnerable customers, these estimates are subject to significant uncertainty, nevertheless, on balance we concluded that the distribution of single fuel customers across suppliers could have a material impact on operating costs.

- **Proportion of offline customers:** customers that administer their accounts offline may be more costly to serve, due to reduced costs of issuing bills and statements (eg avoiding postage costs). Dealing with customer service queries online may also be cheaper. While we were not able to derive a reliable estimate of the additional costs of serving an offline customer (due to the difficulty of isolating the additional costs to serve specifically associated with offline account management, separate from the impact of other, correlated, cost drivers) we considered that these customers were likely to be higher cost. However, compared to the other factors listed above, in our view suppliers will have greater influence over the proportion of their customers that administer their accounts online. We noted in particular the evidence that we have seen of some suppliers focusing on increasing digitalisation in their business plans, and the paperless incentives offered by many suppliers.

Choosing the efficient benchmark

2.19. We considered whether, given these possible drivers of variation in operating costs, the 'frontier' level of operating costs per customer account would reflect an efficient level. We defined the frontier as an average of the two lowest cost suppliers in the sample. Taking an average in this way — rather than the lowest cost supplier in the sample —reduces the risk that our frontier benchmark is distorted by specific aspects of a single outlying supplier's customer base or data.

2.20. We found that the lowest cost suppliers have significantly fewer customers on the PSR and significantly fewer single fuel customers than the average across suppliers in our benchmarking sample. We also expect them to have a high proportion of online customers (although note that reliable information on the proportion of customers that administer their accounts online is not available). They will not be subject to legacy pension costs.

2.21. Given this, and the risk that other (unknown) differences in suppliers' operating conditions or the data that we have used could be driving variation in costs, we

considered that setting the benchmark at the frontier would be unlikely to be sufficient to cover the costs of an efficient supplier with a normal customer base. This is despite the possibility that these companies might have higher costs than we would expect were they operating at a larger scale.

2.22. We next considered whether the costs of the lower quartile supplier would likely be above or below an efficient level of costs. We began by noting that using the company with the lowest quartile costs (ie the upper quartile in terms of efficiency) was an approach commonly used in benchmarking analysis, which avoided outlying companies driving the benchmark.

2.23. We found that – compared to the frontier suppliers — the company closest to the lower quartile has proportions of PSR and single fuel customers that are much closer to the market average. As an ex-incumbent supplier, it is also subject to many of the same potential cost disadvantages that it has been argued affect the legacy companies.

2.24. We compared the operating costs and customer base of the lower quartile company to that of the supplier with the lowest proportion of single fuel and PSR customers in our sample (one of the frontier suppliers).

2.25. While our estimates of the additional costs of supplying PSR and single fuel customers are subject to significant uncertainty, the evidence we collected suggested that observed differences in proportions of these customers are very unlikely to account for all of the difference in costs between the lower quartile supplier and the frontier. In particular, the difference in costs between the lower quartile supplier and the frontier was equal to around £13 per account, compared to estimated impact of the difference in customer base of £2-4 per account.[11]

2.26. We noted that there may be other (non-efficiency) differences in suppliers' customer bases or operating conditions, in addition to the proportion of vulnerable and single fuel customers, which could in principle explain part of the difference in costs we observe between the lower quartile and the frontier. However, we considered that the role of other factors in explaining variation in efficient costs is likely to be limited, given:

- the materiality of legacy pension costs – which in any event will be included in the costs of the lower quartile supplier
- that the proportion of offline customers is in our view likely to be a material extent within suppliers' control and
- that, working in the other direction, is the possibility that the costs of the frontier suppliers are higher than would be expected if they were operating at a larger scale – suggesting that our analysis could be understating the extent to which the

[11] This was calculated by comparing our median estimate of the additional costs of supplying a PSR and single fuel customer (as described in paragraph 2.18) with the difference in the proportion of these customers supplied by the lower quartile and frontier suppliers. We consider the comparison we have carried out us is likely to cause us to overstate the impact of differences in customer base in driving variation in efficient costs, in that it assumes no overlap between cost estimates for PSR and single fuel customers, and ignores potential inefficiency in supplying these customer groups. It also focuses on the difference in customer base of the lower quartile supplier compared to the frontier supplier with the lowest proportion of these customers (ignoring the customer base of the other frontier supplier).

costs of the lower quartile supplier are above the efficient frontier (ignoring any customer base differences).

2.27. We also had regard to the benchmark implicitly included in the CMA's direct analysis of detriment, which we considered implied a significantly tighter view on efficiency than the lower quartile in our sample.

2.28. Given this evidence, we concluded that setting the efficient benchmark at or above the level of the supplier closest to the lower quartile would likely lead to an operating cost allowance *above* an efficient level of costs. Ie setting the benchmark 18% above the frontier, or around £27 per dual fuel customer (£13 per customer account), would overstate an efficient level of operating costs.

2.29. We therefore considered how much below the lower quartile the benchmark should be set. Despite the evidence that we had found suggesting that differences in suppliers' customer bases would explain only a small part of the difference in costs between the frontier and the lower quartile, we considered there to be a material degree of uncertainty affecting our estimates. We concluded that the benchmark should be set only a relatively small amount beneath the lower quartile, ie that it should be set closer to the lower quartile than the frontier.

2.30. In our judgement, setting a benchmark £5 beneath the lower quartile for a dual fuel customer – amounting to around a fifth of the difference between the costs of the lower quartile and the frontier supplier – appropriately reflects both the uncertainty affecting our estimates, and the role of non-efficiency factors in driving variation in costs. We pro-rated this deduction between fuels, applying it as an equal percentage reduction to both, equal to £2 per electricity account and £3 per gas account.

2.31. This equals a benchmark of £78.26 per electricity customer and £89.20 per gas customer. It reflects a level of operating costs that is approximately 15% higher than the costs of the frontier suppliers (a difference of around £10 per customer account). Note this benchmark relates to the cap period April 2017 to September 2017.

Updating the allowance for operating costs over time

2.32. To reflect the changes in efficient operating costs that we expect to take place over time, we update the operating costs component of the default tariff cap using the most recent value of CPIH (ie the Consumer Prices Index, including owner occupiers' housing costs), as observed prior to the level of the cap being set.

2.33. Specifically, for a price cap period starting on 1 October, the level of the cap is updated using CPIH for the month of June preceding the start of this price cap period. For a price cap period starting on 1 April, the level of the cap is updated using the CPIH for the month of December preceding the start of this price cap period.

2.34. We also added a component to reflect the trend in net industry costs associated with the smart metering rollout (the Smart Metering Net Cost Change, SMNCC). This reflects both trends in the direct charges to suppliers from industry bodies such as DCC and Smart Energy GB, as well as the expected impact of the rollout on industry metering and marketing costs. The derivation of this component is discussed in detail in Appendix 7 – Smart metering costs.

3. Key issues raised in response to our statutory consultation

In this chapter, we describe the key issues raised in response to the proposed approach to calculating and updating the operating costs allowance, as set out in our September consultation. We then discuss our view on each of these issues.

Our estimate of an efficient level of operating costs in 2017

3.1. In response to our statutory consultation a number of suppliers raised concerns about the level of the efficient benchmark for operating costs in 2017, and especially the proposal to set this at a level below – rather than equal to — the costs of the lower quartile supplier. We set out below the key arguments raised in stakeholder responses.

Rationale for the £5 deduction

3.2. Some stakeholders asked for further clarity as to how the deduction equivalent to £5 for a dual fuel customer had been arrived at.

3.3. As described above, we reached the view that setting the benchmark at the frontier would likely result in a benchmark beneath the true level of efficient costs, given – among other factors – that the lowest cost suppliers had customer bases that appeared materially lower cost.

3.4. At the same time, we considered that setting the benchmark at the level of costs of the lower quartile supplier (approximately 18% above the frontier, or around £27 per dual fuel customer) would likely *overstate* an efficient level of operating costs. This was based on:

- the evidence that we had collected which suggested that observed differences in the number of vulnerable and single fuel customers were likely to account for only a small part of the large difference in costs between the lower quartile and frontier suppliers, even when using assumptions likely to cause us to overstate the additional efficient costs of supplying these customer groups
- the evidence that we had collected which suggested that the role of other differences in suppliers' customer bases and operating conditions in explaining variation in efficient costs was likely to be relatively small and
- the findings of the CMA, which – in its direct analysis of consumer detriment – had assumed a significantly tighter view on efficiency than the lower quartile in our sample.

3.5. We therefore considered how much below the lower quartile the benchmark should be set. Despite the evidence that we had collected suggesting that differences in suppliers' customer bases would explain only a small part of the difference in costs between the frontier and the lower quartile, we considered there to be a significant degree of uncertainty affecting our estimates. To account for this uncertainty, we concluded that the benchmark should be set only a relatively small amount beneath

the lower quartile (ie that the benchmark should be set closer to the lower quartile than the frontier).

3.6. In our judgement, a benchmark £5 beneath the lower quartile for a dual fuel customer – amounting to around a fifth of the difference between the costs of the lower quartile and the frontier suppliers - accounts for both the uncertainty affecting our estimates, and the role of non-efficiency factors in driving variation in costs. We pro-rated this deduction between fuels, applying it as an equal percentage reduction to both, equal to £2 per electricity account and £3 per gas account.

3.7. We recognise that there is some unavoidable uncertainty surrounding the value of the benchmark (as there would be around any benchmark that could have been chosen). We discuss in Appendix 2 – Cap level analysis and headroom how we have set the overall level of the cap with reference to the efficient benchmark in a way that reflects the overall level of uncertainty that we consider to exist across the different cost components.

3.8. Two stakeholders queried whether part of the rationale for setting the benchmark beneath the lower quartile was that operating costs had been atypically high in 2017. However, while we noted in our statutory consultation that operating costs were higher in 2017 than in previous years for a number of the large suppliers, this was in line with our expectation, given trends in smart meter expenditures and the declining customer base of these suppliers. This did not, therefore, form part of our rationale for setting the efficient benchmark at a level beneath the lower quartile.

3.9. One stakeholder questioned whether the £5 reduction was intended to meet the requirement of the Act which provides that Ofgem must have regard to the need to create incentives for suppliers to improve their efficiency. They argued that setting the benchmark a given amount below the lower quartile level of operating costs was not required as an efficiency incentive. Similarly, another supplier argued that the arbitrary £5 reduction would not achieve an efficiency saving, and was not required as an efficiency incentive was already created by indexing the operating cost allowance with inflation.

3.10. The Act requires us to exercise our functions with a view to protecting existing and future customers on SVTs and default tariffs, and to have regard to the need to create incentives for suppliers to improve their efficiency. To achieve this, we must first reach a view on what is an efficient level of costs, and then set the cap with reference to this level. We discuss how the overall level of the cap is set relative to our estimate of efficient costs, given the different matters to which we have regard, in Appendix 2 – Cap level analysis and headroom.

3.11. For this reason, we have chosen the level of the operating cost benchmark to reflect our view on the level of operating costs that would be incurred by a supplier that is operating efficiently, taking the uncertainty affecting our analysis into account.

Relevance of the CMA's findings to our benchmark

3.12. Two stakeholders questioned whether Ofgem was correct to point to the findings of the CMA in supporting an efficient benchmark set beneath the lower quartile. One noted that Ofgem had not adopted the CMA's precedent in many other areas – including headroom – and that the CMA's prepayment price cap covered a much lower proportion of the market than the default cap. The other argued that the CMA's analysis was flawed, and findings of inefficiency amongst the large suppliers were

exaggerated; as well as now being out of date (with significant measures having been made to increase efficiency since the CMA investigation).

3.13. We agree that there are a number of differences between the methodology we will use to set the level of the default tariff cap, and that used to update the prepayment price cap (for example, while the CMA's benchmark included a higher level of headroom, the implicit allowance for operating costs was significantly less than included in our cap). This is to be expected, given the methodologies have been designed at different times to meet different objectives. Nevertheless, we consider that it *is* relevant to consider the findings of the CMA's detailed investigation into the energy market when designing the cap. One of the key findings of the CMA was the inefficiency in the retail market, and its role in driving the detriment identified.

3.14. While it is correct that two years have now passed since the publication of the CMA's findings, the overall market structure and distribution of operating costs across suppliers in the market remains broadly similar to that observed in 2015. Therefore, while we have carried out our own updated analysis of costs, we nevertheless have had regard to the findings of the CMA in reaching our conclusions.

The role of differences in suppliers' customer base in driving variation in costs

3.15. One supplier argued that Ofgem's stated aim of setting the operating cost allowance at a level which permits an efficient supplier with an average customer base to cover its costs implied that any supplier with a customer-base containing higher-than-average proportions of vulnerable, single-fuel or offline customers would be unable to finance its activities. It also argued that the majority of GB customers are with suppliers that have a higher cost-to-serve than the lower quartile supplier.

3.16. It is correct that the lower quartile supplier has proportions of PSR and single fuel customers that is relatively close to the market average. Four suppliers in the sample (serving less than 50% of the total market) had higher proportions of *both* single fuel and PSR accounts than the lower quartile supplier – other suppliers either had a lower proportion of PSR customers, or a lower proportion of single fuel customers, or both.

3.17. However, we expect that suppliers with a range of different customer bases (including all of the suppliers in our benchmarking sample) that were otherwise operating efficiently would be able to finance their activities under the cap. In particular:

- First, the evidence that we have collected suggests that observed differences in customer base between the lowest cost suppliers in the market and even the supplier in our sample with the *most* disadvantageous customer base are unlikely to account for all of the difference in costs between the frontier and the chosen operating cost benchmark (see Appendix 2 – Cap level analysis and headroom, paragraph 3.92).

- Second, notwithstanding the point above, the overall cap has been set at a level above our efficient benchmark by including a headroom allowance. Part of the reason for this is to provide for suppliers with different customer bases, in light of the uncertainty affecting our estimates (see Appendix 2 – Cap level analysis and headroom).

3.18. Another stakeholder argued that the benchmark was below the costs of all of the large companies, which indicated that the level was not reflective of the cost of serving these

suppliers' customers. However, as described above, we have by design set the benchmark at level that is below the costs of the large suppliers in 2017, reflecting our view that their costs were higher than they would have been had they been operating efficiently.

3.19. One supplier noted that there was significant uncertainty affecting Ofgem's estimates of the additional costs of supplying PSR and single fuel customers. It suggested that using the upper bound estimates of the additional costs associated with these customers implied differences in customer base between suppliers in the sample could drive very significant differences in operating costs.

3.20. We agree that there is material uncertainty affecting our estimates of the impact of customer characteristics on costs. For this reason, we have taken our decision on the most appropriate level of operating cost benchmark in the round, with our estimates of cost variation driven by differences in the proportion of PSR and single fuel customers forming only one part of our overall conclusion. In general, we consider that using the median of the additional costs reported by suppliers may cause us to overstate the scale of variation in costs driven by differences in customer bases, in that it ignores possible efficiencies in supplying these customer groups.

3.21. One stakeholder disagreed with the statement that the proportion of offline customers a supplier serves is likely to a material extent to be within a supplier's control. It stated that a company's ability to migrate customers online was limited by the willingness of customers to do so, and argued that it was more difficult to persuade a customer that was accustomed to service offline to switch online than putting a new customer onto an online product.

3.22. We agree that there is likely to be variation in the willingness of different suppliers' customer bases to switch their accounts online – and this is one factor that we have taken into account when choosing a cost benchmark at a level significantly above the frontier. However, we continue to take the view that suppliers have influence over the proportion of customers administering their account online via both the provision of incentives (eg online discounts), and the service offering provided. In reaching this view, we have had regard to the evidence we have seen of some suppliers focusing on increasing digitisation in their business plans.

3.23. One smaller supplier (not included in our benchmarking sample) told us that the operating cost benchmark we had chosen was significantly higher than its own level of operating costs. It said that while differences between suppliers' customer bases would lead to variations in costs, these differences would not be able to account for the extent of the difference between its own costs and the benchmark. It also submitted that while PSR customers were likely to interact more frequently with their supplier, customers that had been with their supplier for a longer period of time were, on average, less likely to interact.

3.24. We agreed that there was evidence of some suppliers incurring costs significantly below our chosen benchmark. We also agreed that – to the extent that customers that had been with their provider for longer were less likely to interact with their supplier on average – it was possible that this could offset some of the additional costs of supplying PSR and single fuel customers. However, we remain of the view that, given the evidence we have reviewed, differences in customer bases are likely to drive material differences in costs, and that – given the level of uncertainty affecting our estimates – it is appropriate to set the level of the benchmark significantly above the costs of the frontier suppliers.

Unobserved variation in suppliers' operating conditions

3.25. One stakeholder noted that, by definition, it was not possible to quantify the impact of unobserved variations between suppliers – and for this reason the benchmark should be set at the lower quartile rather than the frontier. It said that Ofgem's analysis ignored the rationale for using a lower quartile estimate rather than the frontier: which is to account for unobserved factors which may make the frontier company's costs unobtainable. It was also argued that no justification was given for Ofgem's position that the impact of factors other than the observed features of the proportion of vulnerable and single fuel customers on variation in costs was likely to be relatively small.

3.26. We agreed that it is possible that unobserved variation in operating conditions or customer base between suppliers, unrelated to efficiency, could be driving some of the variation in costs shown in Figure A6.1. This is part of our rationale for setting the efficient benchmark a significant amount (around 15%) above the frontier – despite the evidence that we had collected suggesting that observed differences in suppliers' customer bases would explain only a small part of the difference in costs between the frontier and the lower quartile.

3.27. We also note that apart from the key differences in customer base that we have identified (and which are outside of suppliers' control), in most respects we'd expect suppliers' operating conditions to be similar, by virtue of supplying the same market.

3.28. One supplier disagreed with Ofgem's statement in our statutory consultation that the uncertainty affecting our analysis was not greater than that involved in the cost benchmarking carried out in relation to network companies. They argued that suppliers differ in many ways that network companies do not – for example because they are customer facing businesses, and can target specific customer groups. They also argued that what was relevant was the uncertainty subsequent to any attempts to control for exogenous cost drivers. The approach taken in operating cost benchmarking described in our statutory consultation fell short of the complex analysis carried out for the network companies.

3.29. We agree that it is the residual uncertainty, subject to any adjustments and after controlling for any exogenous cost drivers, which is relevant to the choice of benchmark. Comparisons between retail suppliers and network companies are necessarily of limited value, given the very different activities carried out by the businesses. However, we continue to take the view that there are features of supply companies which mean – even after adjustments – that the uncertainty affecting our analysis is not greater than that involved in the cost benchmarking carried out in relation to network companies. In particular, while true that suppliers are customer-facing business, and can target specific customer groups, their operating conditions and outputs are significantly more homogenous than those of the regional network companies.

Excluding suppliers from our sample

3.30. One stakeholder argued that a better approach to benchmarking would have been to exclude the frontier companies on the grounds that they did not provide a robust comparator given their different customer base. It said that effectively Ofgem has chosen the lowest cost frontier supplier from the pool of comparable suppliers.

3.31. We did not agree that the frontier suppliers should have been excluded from our analysis, and were not comparable with other companies in the sample. Both suppliers operate at material scale, and supply into the same market as the large suppliers. We have taken the potential impact of differences in their customer base into account in how we have selected the benchmark.

3.32. One stakeholder said that it did not agree with the proposal to exclude suppliers that targeted particular customer segments, as – while costs may vary — there is clear potential for customer benefit where customers are served by suppliers who are expert in their needs.

3.33. However, we remain of the view that including in our sample suppliers that target specific customer groups would introduce a risk that the level of the benchmark could be set higher or lower than would be appropriate for the market as a whole.

The length of time across which sales and marketing costs are amortised

3.34. One stakeholder questioned the standardised five-year customer term used to amortise customer acquisition costs, and argued that this was unreflective of the rapid turnover in the active portion of the market. It suggested that three years should be the upper bound, and that this would add a material sum to the level of the benchmark.

3.35. The assumed five-year customer term reflects the current market average annual switching rate, across all households. We recognise that newly acquired customers may, on average, switch more frequently than this. However, we consider that using the market average is a reasonable approximation in the absence of data on expected churn rates for specific cohorts of customers. We have tested the sensitivity of our findings to this assumption, and found that using a three-year assumed customer term would *reduce* the level of the benchmark by a small amount.

Economies of scale

3.36. Some stakeholders questioned Ofgem's treatment of the impact of supplier size when benchmarking operating costs:

- one supplier argued that our treatment of economies of scale was inconsistent – at one point dismissing economies of scale, but then referencing the possibility that the frontier companies might have higher costs than would be expected were they operating at a larger scale
- another supplier told us that it did not agree that the differential between the costs faced by small and large suppliers is insignificant
- a third supplier told us that it did not believe that the costs of a larger supplier would reflect the costs to smaller suppliers, and questioned the 250,000 threshold used for determining which companies information was collected from.

3.37. We have set the cap with reference to the efficient costs of a supplier that is operating at scale, as the best way of protecting customers on default tariffs. While it is possible that some of the smallest suppliers could have higher costs due to their smaller customer base across which overheads can be spread, we note that there will be some

significant offsetting effects as a result of the exemptions from the costs of the WHD and ECO schemes. We continue to take the view that it is appropriate to exclude suppliers with fewer than 250,000 customers from our benchmark analysis.

3.38. As described in our statutory consultation, we have found some limited evidence of scale economies among companies within our sample – although the relationship between customer numbers and costs is not straightforward, and we were not able to quantify the scale of any impact. Given this, we did not make any specific adjustments to the costs of individual suppliers, eg to reduce the costs of smaller suppliers in the sample to reflect the level of overheads that might be expected were they operating at a larger scale. We did, however, take the possibility that the frontier suppliers' reported costs could have been higher than would have been expected had they been operating at a larger scale as one factor considered in the round when choosing the overall level of the benchmark.

Selection effects implicit in Ofgem's benchmarking methodology

3.39. One supplier argued that Ofgem's reliance on the lower quartile introduces a selection effect into the analysis, which would create a downwards bias. For example, focusing on a single year, and excluding fines and exceptional costs, would cause us to select an apparently better performing supplier in any given year, when in reality the lower cost would just reflect that companies have good and bad years.

3.40. As we describe in our statutory consultation, in deciding to benchmark suppliers' operating costs in 2017 we have balanced on the one hand wanting to reflect the most recent trends affecting suppliers' operating costs – particularly the smart meter rollout – while on the other hand avoiding the risk that our findings are sensitive to random year-on-year variation in costs.

3.41. We note that the overall distribution of costs is similar across the period 2015 to 2017, and that there was no evidence to suggest that the lower quartile suppliers' position in the distribution in 2017 was driven by a one-off cost shock. However, we nevertheless agree there is some uncertainty affecting the drivers of the variation in operating costs that we observe in our sample. This is part of the rationale for choosing an efficient benchmark significantly above the frontier.

3.42. In relation to the exclusion of fines and exceptional costs, while we continue to take the view set out in our statutory consultation that including these cost lines would risk distorting our benchmark above an efficient level, we note that in practice only one such adjustment has been made to 2017 data, and this does not affect the lower quartile supplier. Therefore, we do not believe that our treatment of these cost items affects our benchmark.

Differences between the costs of default tariff customers, and those on other tariffs

3.43. One supplier disagreed with Ofgem's view that SVT customers are likely to have significantly lower sales and marketing costs than other customers. It said that in addition to new customer acquisitions, sales-related spend also includes engagement towards internal switching. It noted that part of its marketing spending was on brand and rewards, which also supported retention of existing customers.

3.44. Similarly, another stakeholder argued that Ofgem had not considered variation between the costs of supplying SVT and fixed tariff customers, which it considered to

be material due to the greater propensity of these customers to manage their accounts offline, their higher debt costs, their greater propensity to contact, and their greater likelihood to be vulnerable. It also suggested that this wouldn't be offset by lower sales and marketing costs because of the considerable expense involved in engaging and retaining these customers.

3.45. As described in our statutory consultation, we agree that there could be some features of default tariff customers which cause them to have higher costs, even after considering direct debit and standard credit customers separately.

3.46. However we continue to take the view that this is likely to be offset by lower sales and marketing costs for these customers. While we note the difficulty of allocating some sales and marketing expenditures between customers (and have not attempted to do so), by definition, default tariff customers are significantly less engaged than those on competitive tariffs, and therefore on average attracting and retaining them will require significantly less expenditure.

3.47. Given this, we did not see a clear case for assuming that the operating cost allowance for customers on default tariffs should be either higher or lower, and so have not sought to make an adjustment.

Updating the cap to reflects trends in operating costs

3.48. In response to our statutory consultation, a number of stakeholders argued that CPIH does not adequately capture upward pressures on efficient operating costs per customer over time, and that account should be taken of additional upwards pressures on operating costs arising from regulatory changes.

Historic trends in an efficient level of operating costs

3.49. One supplier argued that efficient operating costs have historically increased at a rate greater than CPIH. They provided analysis based on the CSS that the operating costs per customer of the lower quartile large energy supplier (ie the second most efficient) increased over the past three years at a rate greater than CPIH, even after making an adjustment for the costs of the smart metering programme. On this basis, they argued that Ofgem should either propose a more suitable metric, or provide additional allowance as part of headroom.

3.50. We agreed that, looking at trends for the six large suppliers, there was evidence that operating costs per customer had increased more quickly than inflation in the period since 2009. This was the case both looking at the combined costs of the six suppliers, as well as looking at the trend in the lowest cost and the lower quartile supplier.

3.51. However, we noted that:

- It was not the case that costs of the large suppliers had always increased more quickly than inflation over the period. There were a number of examples of suppliers making significant year-on-year reductions in real costs per customer.

- Costs per customer are highly correlated to changes in customer numbers over time. The observed increases in cost per customer among the large suppliers, particularly from 2014 onwards, are correlated to a period of significant customer

losses to smaller suppliers. To the extent that is falling customer numbers that is driving transitional increases in costs, we do not consider that this reflects the trend in the efficient level of operating costs.

- Some of the increases in costs from 2014 onwards are likely to be attributable to the smart metering programme – and so would have been captured in how we update the level of the default tariff cap.

3.52. Focusing on only the six large suppliers also ignores the possibility that trends in market-wide efficient costs may be driven by the entry of new (or expansion of existing) suppliers, with different business models. As set out in Figure A6.1, the two suppliers' in our sample with the lowest costs across the market are not among the six large suppliers.

3.53. Looking at trends for our larger benchmarking sample of ten companies for the period between 2015 and 2017 showed that whilst real historic operating costs have increased somewhat for many suppliers, year-on-year trends have not been consistent or one-directional. For example, the operating costs per customer of the lowest cost supplier across the sample remained at a similar level in real terms between 2015 and 2017, despite significant pressures on costs from the smart meter rollout. At the same time, the lower quartile saw real increases in operating costs per customer between 2015 and 2017.

3.54. Given this mixed evidence, we did not consider that evidence of trends in historic costs supported the view that – ignoring the impact of the smart meter rollout — an efficient level of operating costs had in the past increased more quickly than CPIH, nor that it should be expected to do so in the future.

Impact of faster switching and other regulatory programs

3.55. Several stakeholders argued that there will be a material increase in the cost of delivering regulatory change during the life of the cap compared to 2017 – citing among other programmes the impact of the new switching arrangements and the midata initiative. It was argued that these costs should be accounted for in how we update the operating cost allowance. To demonstrate the materiality of these additional costs, one supplier referred to Ofgem's Impact Assessment for the new switching arrangements, which it said suggested a required per-customer allowance of £0.88 for a dual fuel customer for the transitional costs, and a further £0.25 to reflect the annual ongoing costs.

3.56. A number of suppliers also argued that charges from Elexon and Xoserve are similarly expected to increase at a rate faster than CPIH, due to the increased costs of delivering planned investments. It has been argued that these costs are known with some certainty, given the financial forecasts outlined in the business plans of these organisations. On this basis, stakeholders have argued an additional allowance should be provided to cover these known increases in costs.

3.57. We agree that there is likely to be some upward pressure in efficient operating costs per customer driven by increased regulatory requirements from 2019 onwards, particularly as a result of the Faster Switching programme. However, there is significant uncertainty as to the incremental extent of these costs, compared to costs incurred in the baseline period. We note that other projects (such as Nexus) that have costs incurred or amortised in 2017 were material.

3.58. We also note that the cost per customer of delivering the faster switching and other regulatory programmes will be to some extent within the supplier's control, given variations in suppliers' system maturity, change capabilities and historical investment decisions. Therefore, the average expected implementation costs may not reflect the efficient level.

3.59. We have reviewed the business plan of Xoserve, and have identified some significant expected increases in charges compared to 2017. These costs are outside of suppliers' control, although subject to some uncertainty given the significant planning assumptions used in the budget forecasts (including not reflecting required investment were Xoserve appointed as the provider of the Central Switching Service). Our analysis shows that the per customer impact of increases in the Xoserve business plan are in the region of £0.52 per gas customer, largely due to new systems investment in the Central Switching Service.

3.60. Similarly, Elexon's business plan for 2018/19 also describes a material increase in budget in 2019/20 compared to 2017/18 (around 10%, albeit from a relative small base of approximately £0.23 per electricity customer per year). Elexon told us that while it was still finalising its budget for 2019/20, it was looking to invest in systems over the next few years, which could give rise to a short term spike in costs.

3.61. Taken together, we consider that these regulatory changes and increases in industry charges are likely to place some upwards pressure on an efficient level of operating costs. However, we also expect some downward pressures on real efficient operating costs per customer over the life of the cap, offsetting these upward pressures. For example, we expect opportunities in automation and digitisation will enable further cost savings for an efficient supplier. Reduced third party commissions due to possible decreases in customer churn would also result in downward pressure on operating costs per customer.

3.62. Given these offsetting effects, we considered that it was uncertain whether the net effect on efficient costs would be upwards or downwards, compared to the allowance included in the cap. Nevertheless, we did expect that the overall materiality of any residual effect would in either case be small, and — in line with the position set out in our September consultation — not of a materiality or level of certainty sufficient to warrant a dedicated allowance. We have taken the expected impact of these trends into account alongside the other uncertainties affecting the overall level of the cap, as discussed in Appendix 2 – Cap level analysis and headroom.