Business Retail Price Review 2016

July 2016

United Utilities

helping life flow smoothly

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1. Summary of our proposal

1.1. Introduction

1. United Utilities serves over 180,000 non-household customers in the North West of England. We are a strong supporter of retail competition. We started our journey to establishing a standalone Business Retail division in 2012, to focus on providing a retail service tailored to the needs of business customers. Later that year, we obtained our Scottish licence and have since become a leading competitor in the Scottish market. By the time of the PR14 submission, over 90% of business retail costs were directly attributable to our separate Business Retail division. We are well advanced in our preparations for English market opening, having implemented a new customer management system at the end of 2014.

2. We saw the potential benefit of combining our business retail operation with that of another company to create a competitive proposition for customers. On 1 March 2016 we announced that we were entering into a joint venture with Severn Trent to combine our business retail activities. This has led to the creation of a new company, 'Water Plus', and the process of transferring all business retail activity to it from each parent business is well underway.

3. Our high level of retail separation has helped us to gain a much better understanding of the costs and risks of providing retail services to different customers. Therefore we are confident that this PR16 submission represents the most appropriate balance of cost and margin recovery in advance of market opening.

4. This submission is being made by United Utilities Water Limited. Water Plus has been involved in the development and approval of the submission. Following the final determination, Water Plus will independently develop retail tariffs in preparation for market opening in 2017, considering only its own costs and margins and the control set by Ofwat.

1.2. Proposal overview

5. We welcome the opportunity to review the business retail default tariff caps set at the PR14 price determination. Having consulted with customers and the customer challenge group, carefully considered the issue of cost and margin allocations, and gained external expert advice and assurance, we are proposing changes to our default tariff caps in a number of areas. These changes will:

   - ensure that the default tariff caps better reflect the costs of delivering business retail services to different customer groups, reflecting improvements in the cost allocations used in the PR14 price determination;
   - ensure that the allocation of margins to different customer groups better reflects the financing costs and risks associated with that group; and,
   - reflect Ofwat's proposed simplified form of control, mapping from 15 to 6 tariff bands, including bands for customers consuming 0 to 5 Ml per annum.

6. A summary of our proposal is shown in Table 1. We have presented this at a high level, across the three volume bands. We have calculated the effect of showing our PR14 tariff bands in the same 3 bands for ease of comparison. We have shown the effect of changes for 2017-18. More detail is presented in Section 6.

Table 1: Gross margin per volume band from the Final Determination compared to this proposal, 2017-18

Volume Band	UUW PR14	Ofwat Backstop cap	UUW PR16 Proposal	Change
0 to 5 Ml	7.6%	n/a	8.4%	0.8%
5 to 50 Ml	4.1%	5%	3.9%	-0.2%
Over 50 Ml	5.4%	3%	2.6%	-2.8%

7. In broad terms, our proposed changes lead to the following impacts on customer bills in 2017-18 (compared with what they would be under the current default tariff caps):

   - A 2.8% decrease in bills for customers using over 50 Ml per annum, resulting in a gross margin of 2.6%. This gross margin is below Ofwat's indicative cap of 3% for backstop protection for these customers.
   - A 0.2% decrease in bills for customers using between 5 and 50 Ml of water per annum, resulting in a gross margin of 3.9%. Again, this gross margin is below Ofwat's indicative cap for backstop protection of - in this case - 5%.
   - An offsetting relative increase of 0.8% in bills for customers using less than 5 Ml per annum. This represents a gross margin of 8.4%, which is comparable to the mean of other companies. The bill increase is also below the levels tested in our customer research exercise, in which customers supported cost reflectivity principles and did not reject bill changes of this magnitude.

8. The proposals set out in this document represent modest changes to overall customer charges but offer enhanced cost reflectivity, and in our view are important to ensure that the company is better able to manage its obligations, including under competition law.

9. Our proposals have been informed by two stages of customer research.

10. The first stage of research was qualitative, exploring which principles business customers thought should be applied to our approach to cost and margin allocation, including notions of fairness, cross subsidy, and cost reflectivity. This research uncovered common ground that many customers could agree on, but did not establish a clear consensus view.

11. The second stage of research was quantitative and further tested the opinions of customers on these principles. This research showed that customers were supportive of the principle of cost reflectivity and tended to oppose cross subsidy. We also tested the application of those principles using two specific scenarios.

12. The first scenario showed a 1% bill increase for smaller customers (defined as using less than 50 Ml of water per annum), with offsetting bill decreases for larger customers. Customers did not clearly reject this scenario, but were instead somewhat split on its acceptability. 39% of respondents found it reasonable and 36% found it unreasonable[1].

13. We also tested a second scenario which reflected a 2% bill increase for smaller customers, again offset by decreases for customers using over 50 Ml per annum. This scenario was less acceptable to customers, with 24% finding it reasonable and 49% unreasonable[2].

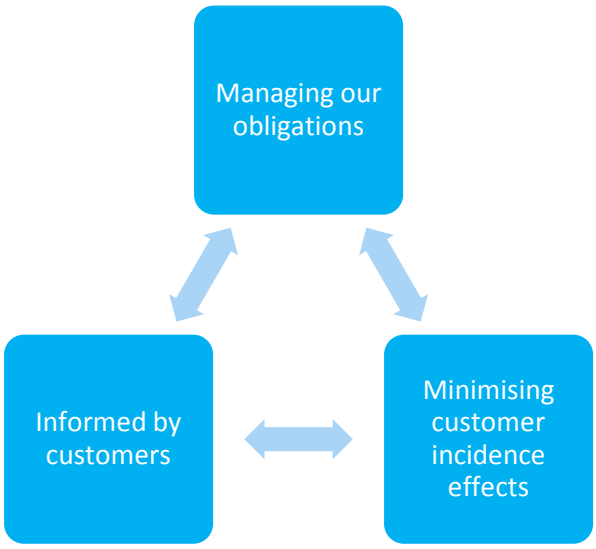
14. These results informed our proposals, which result in a lower bill increase for smaller customers than in either of the two scenarios tested with customers.

15. We have also involved YourVoice (the North West customer challenge group) throughout our preparations for this 2016 price control process. They reviewed, commented on and contributed towards the methodology used to engage with business customers and have ensured that the results of this engagement have been reflected in this submission.

16. As seen in Figure 1, our proposals strike a fair balance between:

    - the changes necessary to better manage our obligations including under competition law;
    - avoiding significant customer incidence effects, with the proposals having a modest impact on customer bills; and
    - customer preferences, as informed by continuous customer engagement, customer research and input from YourVoice.

Figure 1: Balancing our submission



[1] 39% of customers found it quite or very reasonable and 36% of customers found it quite or very unreasonable
[2] 24% of customers found it quite or very reasonable and 49% of customers found it quite or very unreasonable

17. The United Utilities Water Limited board is supportive of the proposed changes and has approved the methodology for preparation and assurance of this submission. It has been subject to rigorous third party assurance by Frontier Economics and PwC. Further detail is provided in Section 7 of this document.

1.3. Our approach

18. Our approach is based on applying a robust cost and margin allocation methodology, and our proposals are informed by insights gained from customer research and engagement.

1.3.1. Robust approach to cost and margin allocation

19. We have worked with independent economic advisors (Frontier Economics) to establish a best practice methodology for cost and margin allocation between different customers. Section 4 sets out our approach in further detail, and the full methodology report from Frontier Economics is in Annex 1.

20. As part of this submission, we have also provided the model used to allocate costs and margin to customer groups in Annex 2. The data used to populate the model and complete Ofwat's data tables has been externally assured by PwC. Further information on our approach to assurance is set out in Section 7, and PwC's full report can be found in Annex 6.2.

1.3.2. Extensive customer engagement and innovative market research

21. The principles underpinning our approach have been informed throughout by evidence from customers and engagement with the YourVoice customer challenge group. A copy of YourVoice's report is included as Annex 5.

22. As a first step in our work, we undertook qualitative customer research working with the market research firm Populus. Further details of our approach are provided in Section 3 and the full report by Populus is provided as Annex 3. This work focused on the key principles of setting business retail tariffs, seeking to establish customers' views on:

    - the meaning of 'fairness' in the context of a utility's price setting process;
    - the acceptability of one group of customers cross subsidising another; and,
    - differential pricing, including principles of cost reflectivity and 'pay for what you use'.

23. We paid considerable attention to developing a research approach capable of generating meaningful results from customers, taking into account that they may find the concepts being asked of them to be unfamiliar and unusual. Whilst customers expressed a range of views, there was general support for principles of cost reflectivity and for customers "paying for what they use", which favoured approaches that did not cross subsidise between customer groups.

24. Both we and YourVoice considered that this provided sufficient support for our continued work on reviewing the cost and margin allocations set at the PR14 price determination, to ensure they were cost reflective and based on the latest and best view of costs and cost drivers.

1.3.3. Improved cost and margin allocations

25. Our proposals are also consistent with the company's need to pursue cost reflectivity in order to comply with competition law by being fair in the way that costs and margins are allocated to customer groups, and by not being unreasonably high or low for any particular customer group.

26. The methodology for allocating costs and margins was developed with Frontier Economics and identified a number of areas where cost and margin allocations set at the PR14 price determination were capable of improvement. The most notable of these were:

- key customer account management activities cover both very large users (sites using over 50 Ml p.a.) and customers with large portfolios of sites (whose sites individually often use less than 50 Ml p.a.). However the cost of this service at PR14 had been allocated entirely to customers using more than 50 Ml p.a.;
- there were no fixed costs allocated to small sewerage customers; and,
- our tariffs had a flat 2.5% net margin across all customer groups. This meant they therefore did not reflect the different levels of capital employed and risk profiles incurred in serving different types of customers.

27. We had sought to address similar issues through our representation to the PR14 Draft Determinations. Whilst Ofwat did not accept our proposed changes, it decided to set the business retail default tariff caps for a two year period, giving companies an opportunity to review cost and net margin allocations between customer types. It stated that this might help companies manage compliance, including with competition law.

1.3.4. Modest movements in customers' bills are necessary, and were not rejected by customers

28. Having made an initial assessment of the potential impact on customer bills of addressing these issues, we decided to further test customer views on cost reflectivity and cross subsidy both in the abstract and with reference to two test scenarios.

29. Customers strongly supported the principle of cost reflectivity, and rejected notions of cross subsidy. Further details are provided in Section 3 with the full report by Populus as Annex 4. This was challenging research to undertake, and we made it transparent to customers which types of customer would see an increase in bills as a result of applying the principles.

30. The first scenario showed a 1% bill increase for smaller customers (defined as using less than 50 Ml of water per annum) with offsetting bill decreases for larger customers. Customers did not clearly reject this scenario, but were instead somewhat split on its acceptability. 39% of respondents found it reasonable and 36% found it unreasonable[3].

31. We also tested a second scenario which reflected a 2% bill increase for smaller customers, again offset by decreases for customers using over 50 Ml per annum. This scenario was less acceptable to customers, with 24% finding it reasonable, and 49% unreasonable[4].

[3] 39% of customers found it quite or very reasonable and 36% of customers found it quite or very unreasonable
[4] 24% of customers found it quite or very reasonable and 49% of customers found it quite or very unreasonable

32. These results informed our proposals, which result in a lower bill increase for smaller customers than in either of the two scenarios tested with customers.

1.4. Simplified price controls

33. On 19 May 2016 Ofwat published its methodology for the 2016 business retail price review. This established that customers using over 5 Ml p.a. should be subject to uniform tariff caps whereby the gross margin for customers using between 5 and 50 Ml and over 50 Ml p.a. would be subject to uniform backstop controls. The initial expectations Ofwat set for these default tariff caps were a gross margin of 5% for customers using 5 to 50 Ml and 3% for customers using above 50 Ml.

34. Our PR14 Final Determination separated our business retail default tariff controls into 15 tariff bands. We have been able to map the PR14 Final Determination and our proposals to Ofwat's simplified structure of 6 bands.

35. Our cost and margin allocation methodology was produced and our customer research was conducted prior to Ofwat's final methodology. We believe this work will help Ofwat set the levels of the uniform caps for medium and large users. We note that our proposed gross margins for customers consuming more than 5 Ml p.a. are below the initial expectations for the uniform backstop controls communicated by Ofwat.

1.5. Conclusions

36. In conclusion:

- We have developed a best practice cost and margin allocation methodology, using external advice from Frontier Economics;
- When applied to our PR14 Final Determination business retail default tariff caps, it identified that a number of changes were necessary to improve cost reflectivity and to better manage our legal obligations, including under competition law;
- To ensure the views of customers informed any decisions taken, we engaged early with YourVoice and sought customer views both from continuous engagement and two stages of bespoke research;
- Customers supported the principles used to allocate cost and margins, and did not reject scenarios leading to a 1% - 2% increase for smaller customers;
- Our proposals take these results into account, in that we have applied the best practice methodology and ensured that the increase for smaller customers is less than either of the scenarios tested with customers;
- The YourVoice group is supportive of the research carried out and agrees that the proposals have been informed by customer views;
- We have sought to minimise incidence effects, whilst ensuring that our proposals are cost reflective, and in line with our approach to compliance with competition law;
- The resulting gross margins are well within the range of other companies' PR14 Final Determinations; and,
- These proposals are supported by the board of United Utilities Water Limited and have been subject to rigorous third party assurance by Frontier Economics and PwC.

2. Rationale for changing cost and margin allocation from PR14 Final Determination

2.1. PR14 Draft and Final Determinations

37. During the PR14 process we concluded that an alternative allocation of cost and net margin could improve fairness and cost reflectivity, and better ensure that we avoided the possibility of inappropriate cross subsidy.

38. In particular, we noted that:

- key customer account management activities cover both very large users (sites using over 50 Ml p.a.) and customers with large portfolios of sites (whose sites individually often use less than 50 Ml p.a.). However the cost of this service had been allocated entirely to over 50 Ml p.a. tariff bands;
- there were no fixed costs allocated to small sewerage customers. Allocating fixed costs to these customers could avoid a potential risk of cross subsidy post market opening; and,
- our tariffs had a flat 2.5% net margin across all customer groups. This meant they therefore did not reflect the different levels of capital employed and risks incurred in serving different types of customers.

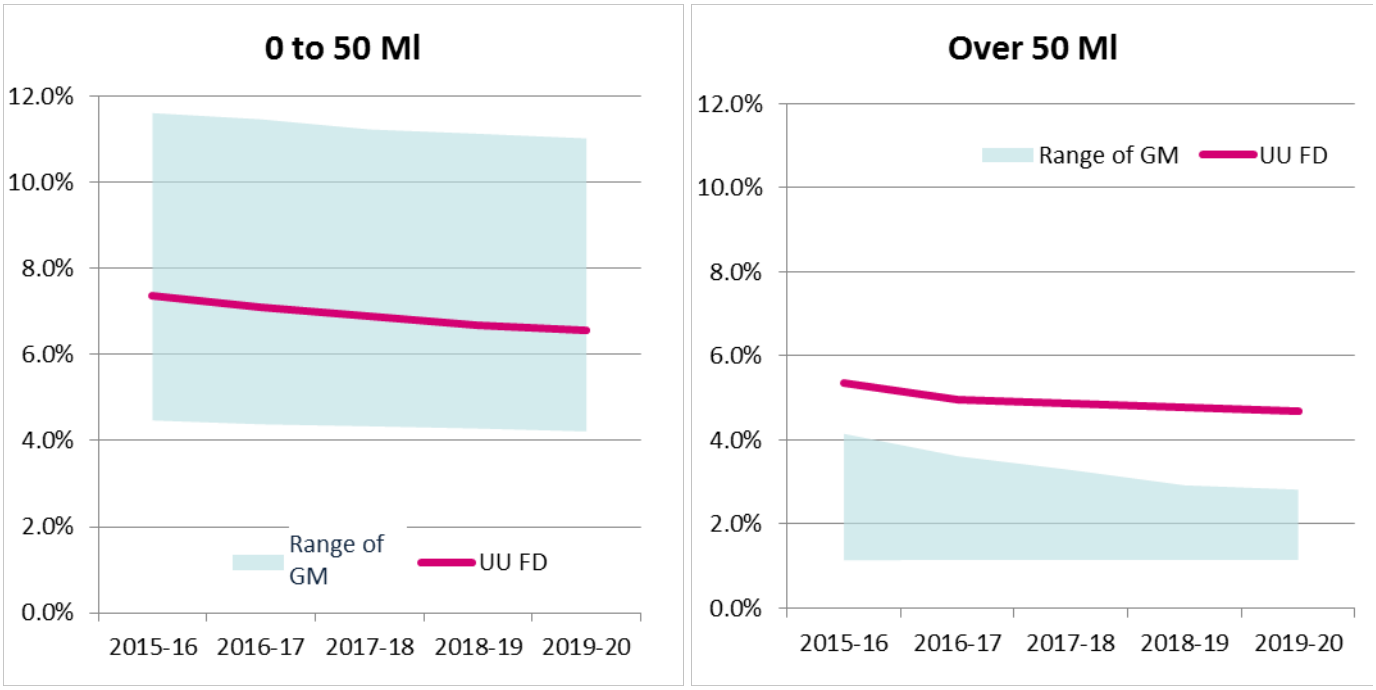
39. We sought to address some of these issues through our representation to the PR14 Draft Determinations. While Ofwat did not accept the proposed changes, it decided to set business retail default tariff caps for a two year period, giving companies an opportunity to review cost and net margin allocations between customer types. It stated that this might help companies manage compliance, including with competition law.

2.2. Tariff band analysis

40. We reviewed our default tariff caps against those of the other water and sewerage retailers, using data from the business retail default tariff caps for all companies, published by Ofwat as part of the PR14 Final Determinations. This data was captured from the individual company PR14 financial models published by Ofwat. To make comparisons easier, we aggregated data from customers in tariff bands consuming below and above 50 Ml of water per annum.

41. Our analysis, summarised in Chart 1 showed that in some areas our default tariff caps were an outlier in the industry, particularly for customers consuming more than 50 Ml of water per annum.

Chart 1: Comparative analysis of portfolio gross margin, 0 to 50 Ml customers, and over 50 Ml customers



Sources: United Utilities analysis of individual company PR14 Final Determination financial models, December 2014

42. Following the opening of the retail market, it is important that there is sufficient incentive for new entrant retailers who seek to attract customers in the lower consumption category.

43. We therefore decided to conduct a thorough review of our cost and margin allocation prior to PR16 to better manage our obligations, including under competition law. Recognising Ofwat's concerns[5] about our final representation during PR14, we elected to develop our methodology by engaging with external experts, having our application of this methodology externally assured, and engaging the YourVoice customer challenge group and customers early in the process. We believe that on all these counts, we are submitting high quality evidence to the PR16 process through this submission.

[5] In section A5.3 of our PR14 final determination company specific appendix, Ofwat stated "*…it was not clear whether the CCG had been made aware of the significant increases to smaller and unmetered customers. The company also responded that its initial allocations had received external assurance, but its new approach had not.*"
Final price control determination notice: company-specific appendix – United Utilities, Ofwat (December 2014)

2.3. Conclusions

44. In conclusion:

- Following our PR14 Draft Determination we considered that an alternative allocation of cost and net margin could improve the fairness and cost reflectivity of our default tariff caps, and better ensure that we avoided the possibility of inappropriate cross-subsidy;
- We proposed changes in our final representations to make these improvements;
- While Ofwat did not accept these changes, it set business retail default tariff caps for a two year period, giving companies an opportunity to review cost and net margin allocations between customer types;
- Analysis of PR14 Final Determinations shows that our default tariff caps were an outlier in the industry, particularly for customers consuming more than 50 Ml of water p.a.; and,
- We therefore decided to conduct a thorough review of our cost and margin allocation before PR16 to better manage our obligations, including under competition law.

3. Customer Engagement

3.1. Aims and general approach

45. We have undertaken a comprehensive exercise to engage with customers and obtain their views to inform our revised tariff submissions for the PR16 business retail price review. We have done this to better understand what our customers' priorities are, acknowledging Ofwat's comments in our PR14 Final Determination that we should gain customer support for any change in our cost and margin allocations.

46. We have engaged with customers in a number of ways over the past 12 months:

    a) We continuously engage with customers via day-to-day transactions and have collated and reviewed data from these regular interactions in our planning process. More information about this is set out in Section 3.2 below.

    b) We have worked closely with YourVoice (the North West customer challenge group) since September 2015, which established a dedicated sub-group for the PR16 process, to provide detailed input and report back to the main group. This group has helped us design and develop the direct engagement element of this project. This is detailed in Section 3.3.

    c) We appointed an external research company, Populus Research Ltd, to carry out two phases of direct customer research with a representative sample of customers to understand their views on several principles of tariff setting and the subsequent potential impact on charging. The methodology and results are presented in Section 3.4.

47. The insights gained from engagement with customers were used to inform the design of our tariffs in this proposal.

3.2. Continuous engagement

3.2.1. General approach

48. Ofwat's statement of methodology for the review of business retail price controls[6] set out an expectation that companies should engage with customers and customer challenge groups on any proposed changes to default tariffs as part of the Price Review process.

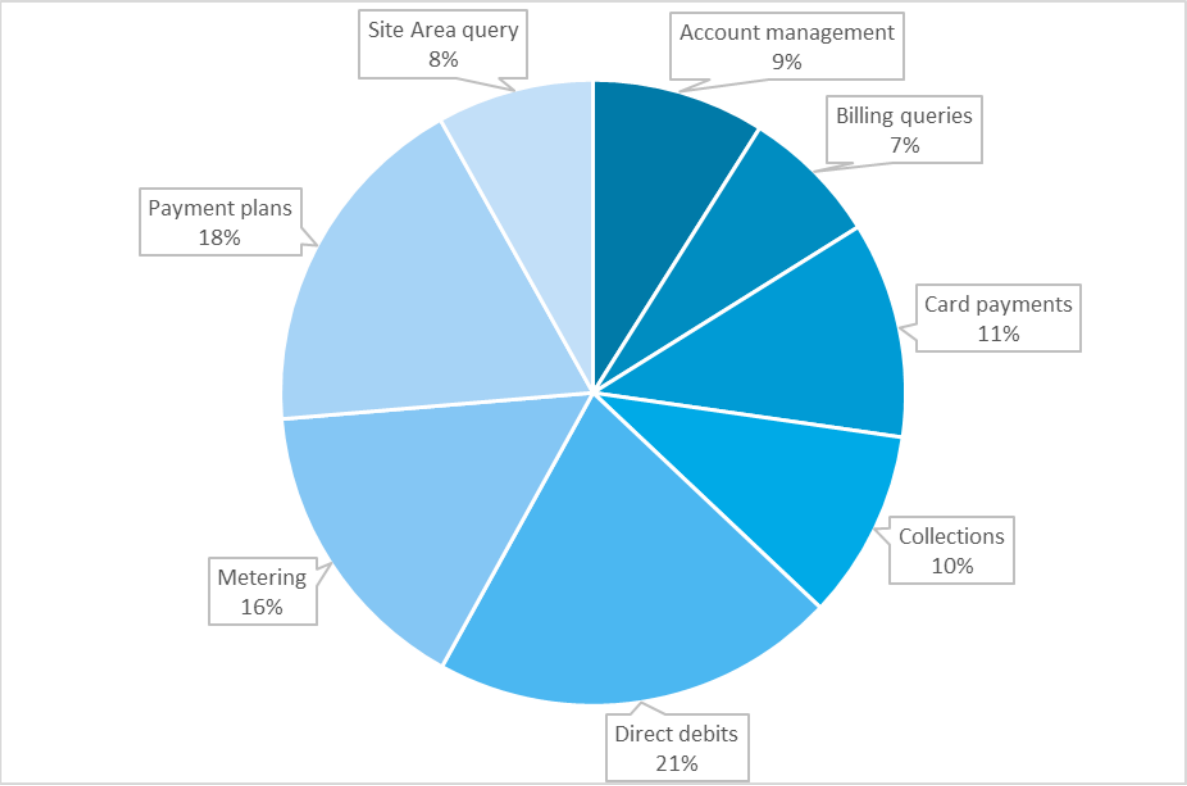
> *"If companies make proposals for rebalancing default tariff caps that would change tariffs and have significant incidence effects on customers then we would expect these to be supported by evidence from companies' ongoing customer engagement and research and their day-to-day interactions have [sic] with customers. We would also expect that companies would have engaged with their CCGs on these matters and be able to provide evidence of this engagement and the views of the CCG alongside the other evidence they will need to submit as part of this review."*

[6] Section 4.2. of Business retail price review 2016: Statement of method and data table requirements, Ofwat (May 2016)

3.2.2. Engagement with United Utilities customers

49. We continuously engage with customers on a variety of topics through our day to day interactions. We have reviewed call data, including voice analytics, and the main reasons for contact are summarised in Chart 2. Customers usually contact us to conduct transactions, such as providing payments and meter readings, and with other general billing related queries.

Chart 2: Reasons for customer contact



50. Additional feedback from key customer meetings, alongside written complaints, and direct feedback from our customer satisfaction surveys highlight these as the issues at the forefront of customers' minds.

51. For Small and Medium Enterprise (SME) customers the main billing issues raised are about layout, timing, accuracy and frequency of bills and for key[7] customers the focus is on their requirements for monthly, consolidated and e-billing, although accuracy and access to reporting and analysis of their consumption data also features.

[7] Key account managed customers include very large users (sites using over 50 Ml p.a.) and customers with large portfolios of sites (whose sites individually often use less than 50 Ml p.a.).

3.2.3. Customer engagement with competition

52. Many smaller customers are not aware of the arrival of retail competition[8], but interactions with key account managed customers show that they have a good understanding of when the market will open and broadly how this will work in the future. Within our monthly customer satisfaction (CSAT) survey feedback, it is clear that the fact smaller users cannot yet switch supplier drives dissatisfied or neutral responses from some customers. They are unable to express their satisfaction with us as a water services provider as they currently have no way of comparing what we deliver by way of service or value for money with any other provider.

53. Customers do not mention issues of retail cost and margin allocation in their interactions with us. Those customers who mention switching have often experienced a previous or ongoing service or billing issue, and state this as a driver for them to want to explore their options, but express frustration when they realise they cannot currently change provider. Where charges are mentioned, these are almost exclusively related to wholesale charging issues such as surface water and highways drainage. A few customers do make reference to charges being complicated and expensive, but this is often with the caveat that they have no comparison they can make against other providers.

3.2.4. Wider customer research

54. The issues raised by customers are in line with other water industry research findings highlighted in a number of Ofwat and CCW research reports.

55. The issues raised in continuous engagement are consistent with issues raised by customers in our direct engagement, where there has been the opportunity for additional comment. Interestingly, the findings from direct engagement are also consistent with findings from previous CCW and Ofwat research reports reviewed.

56. Key points emerging include:

    a) The numbers of customers saying they would consider switching has changed over time. Some earlier reports indicate 33% of customers[9] would consider it, whilst more recent reports indicate this has risen to as high as 64%[10]. Our customer research indicated that 65% of customers would consider switching suppliers in 2017[11].

    b) Research indicated that customers wanted tariffs to be simple, fair, flexible and transparent[12]. Alongside this, pay for what you use was seen as the most fair way of charging[13]; cross subsidy was almost universally seen as a bad thing (unless for social tariff purposes, where there was not a consensus).

[8] Only 33% of customers were aware of the introduction of water competition in 2017, falling to 24% for non-key customers. Annex 4, page 9
[9] Understanding the needs of SME's, AECOM (July 2012)
[10] Testing the Waters, CCW (July 2014)
[11] Annex 4, page 9
[12] Uncharted Waters: Phase 2, CCW (October 2015)
[13] Deliberative research into consumer views on fair charging, Corr Willbourn for CCW (2007)

c) As was found in our research, customer views on fairness are strongly linked to the impact on them[14]; not surprisingly, customers are more likely to consider something acceptable if they themselves benefit from it[15].

3.3. Customer challenge group engagement

57. A sub-group of YourVoice, was formed in September 2015 specifically to consider issues surrounding the 2016 business retail price review. Its purpose was to ensure that customer views on our tariff proposals and any potential impacts on different customer groups were considered, and that direct engagement with customers on these topics was simple, fair and transparent and of the appropriate quality. This group has met seven times since it was formed, with three additional meetings held with the YourVoice sub-group Chair. We have also provided updates to the full YourVoice group on four occasions.

58. Ongoing liaison took place throughout the development of the direct customer engagement phase. Members provided feedback on the approaches taken, methodologies used, the supporting materials produced, and the conclusions from each stage of work. Members of the group attended qualitative customer research sessions to view the focus group discussions, and also took part in pilot testing for the quantitative customer research to test for effectiveness and ease of understanding. In addition they provided sources of data and information for the continuous engagement phase of this project.

59. The sub-group reported back regularly to the main YourVoice group. It produced a report on its findings, which was approved by the main YourVoice group. This document has been provided to Ofwat separately, by YourVoice itself. For ease of reference, it has also been included as part of this submission as Annex 5.

60. In summary, the YourVoice sub-group was pleased with the amount and quality of engagement undertaken, which it found to be extensive and thorough. The sub-group members were satisfied with the way in which the research agency engaged with the sub-group, and they agreed with the findings reported. The sub-group assessed the approach and outputs of the research as excellent and fed back that the work gave valuable insight into customer views on competition and charging principles. The sub-group felt included throughout the approach, design and material development stages of work, and were happy that their feedback was taken on-board throughout.

61. Finally, the YourVoice sub-group members indicated that they agreed the company's proposals are informed by customer views, and are based on the findings from comprehensive customer research. They added that they were confident the customer research undertaken was of the appropriate quality required to underpin the company's proposals, and they were pleased the company held early discussions with customers to ensure their views were used to inform the submitted proposals.

[14] Deliberative research into consumer views on fair charging, Corr Willbourn for CCW (2007)
[15] Cross subsidies and social tariffs, Creative (2010)

62. The main YourVoice group agreed with the sub-group's findings and report. They also agreed that the company's proposals have been reasonably informed by customer engagement and research and discussion with the company's CCG both directly and via the sub-group. This work has been supported by the evidence from ongoing customer engagement, the outcome of both stages of customer research conducted by third party market research company Populus and the views of the YourVoice Customer Challenge Group.

3.4. Direct customer engagement

3.4.1. General approach

63. We appointed Populus Research Ltd, an independent research company, to design and deliver the direct customer engagement phase of this project. They engaged with a mix of customers from a variety of locations (urban and rural), covering a range of business types, company sizes and water and wastewater requirements. The direct engagement work was split into two stages: an initial qualitative phase and a second, quantitative phase.

64. The initial qualitative phase was designed to test views from a small sample of customers on specific principles which could be applied to tariff setting. This phase also aimed to gather information to inform the design of future quantitative stages. The views of small and medium sized customers were obtained from mixed focus groups (based on water use and importance of water to their business), with facilitated discussions to explore the various issues. The views of large customers and customers with multiple sites were captured through one to one interviews with a mix of large industrial, commercial and public sector customers.

65. A second quantitative phase was conducted in March and April 2016. Data was collected from customers on their views of general and specific principles which could be applied to tariff setting. This took the form of an online questionnaire completed by a robust and representative sample of 542 customers across our customer base. Due to the complex and unfamiliar nature of the subject being researched, the approach taken included an education element to ensure that the customers who took part did so from an informed point of view.

66. The survey was designed to allow testing of the charging principles in both water industry and other contexts, followed by asking customers for their views on bill changes as a result of applying these principles. This allowed for elements to be tested separately, and more in-depth analysis of the results. The study design incorporated a pilot phase to ensure that the terminology and materials used were suitable for the intended audience. The YourVoice sub-group played an important role in developing and testing the materials through this pilot stage.

3.4.2. Results from the qualitative research stage

67. Research with SME customers was conducted through six focus groups of around six customers each, during October 2015, with a mix of customers as below in Table 2. The views of larger customers were gained through in depth interviews with seven customers representing a mix of industry sectors and range of importance of water to their business.

Table 2: Composition of SME focus groups

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Water usage	Minimal (< 1Ml)	Low (1 – 5 Ml)	Moderate (5 – 25 Ml)	Medium (25 – 50 Ml)	Mix in each (1-2 each of other groups)	
Role of water	Peripheral	Peripheral	Peripheral / Central	Central	Peripheral	Central
Industry sector / business type	Range of SIC Codes					

68. This stage of research tested two core principles with customers: the meaning of 'fairness' in the context of a utility's price setting process; and views on the acceptability of one group of customers cross subsidising others. We also wanted to understand the sensitivity of these views to resulting price changes, and more specifically in response to a price increase for the individual customer. The research also tested how views differed across a range of customer types depending on their size, business type, water usage and the criticality of water to their business. Given that the concepts discussed were complex issues that customers would not necessarily have addressed before, the research was innovative and required a substantial educational element.

69. Populus disseminated the results of this phase of work to United Utilities and YourVoice at the same time during a meeting in November 2015. This report is attached as Annex 3. The results from this stage showed that customers broadly agreed with some of the key principles explored, but there was not a consensus view. The key findings of the report are summarised below.

'Fairness' in the context of price setting[16]

70. Fairness as applied to price setting was seen as an ambiguous and relative concept, but was an underpinning value of how customers would like to be treated. It operates more as a fundamental value, rather than as an overt business principle. Ideas of 'unfair' were easier for participants to identify than 'fair'.

"What do you mean by fair – we have goods in our shop, they have a price and it's the best price we can do for customers –is that fair?"

Lower user / SME

"It depends which end of the scale you're on –if you are the ones getting subsidised you'll want it and if you are the ones doing the subsidising you won't want it"

Lower user / SME

Cost to serve based pricing principle[17]

71. Some businesses accepted that the principle of a cost based approach was commercially acceptable or understandable. However, when applied to their own circumstances, businesses either assume they would benefit, or else worry that they may be "unfairly" placed in the higher cost to serve segment.

[16] Annex 3, pages 7 - 12
[17] Annex 3, pages 29 - 30

Differential pricing[18]

72. Differential pricing, including on the basis of cost to serve, exists as an established and acceptable business behaviour, which might support customer segmentation. However, the dominant commercial factor supported by customers was volume based, seen as the idea of the more you buy, the cheaper it should be. The principle of "pay for what you use" was also a strong business principle which could legitimately include the idea of cost to serve. However, as described by participants, this principle tended to relate to product consumption rather than service, and therefore related more to wholesale rather than retail factors.

"Part of me wants to say that it should be specific to the company but also part of me thinks that if me and the company next door are the same size, got the same usage then we should be on the same [tariff]"

Over 50 Ml User

"There are deals in my trade –the more you buy the cheaper you can get it. But also the bars in town get cheaper rates than me as a pub and they are allowed bigger bandits so they can make more money"

Lower user / SME

"We get a discount if we pay our invoices within 14 days"

Lower user / SME

Cost of bad debt[19]

73. Debt related factors were familiar to businesses, usually through late and early payment terms, and therefore could fairly be included into tariff pricing strategy. However, there was a strong feeling that debt was a complex issue, and not always the "fault" of the customer, and thus would not always be a fair component of differential pricing.

Cross-subsidy[20]

74. The principle of one group of customers cross subsidising another was not thought of as fair. However, the "everyone paying the same rate" principle was seen as an initially appealing and apparently fair approach. Some customers also believed that the "cross subsidy issue" was taken account of in the "pay for what you use" principle.

"I was just going to say no I don't want to pay for Joe Bloggs with five factories down the road, I'm not paying his service charge"

Lower user / SME

[18] Annex 3, pages 16, 20
[19] Annex 3, page 31
[20] Annex 3, page 28

75. This stage of research provided valuable customer insight which was used to inform the subsequent stage of research. Many businesses were disengaged from the water industry and the idea of competition in the sector. A straightforward research methodology which would not confuse respondents was therefore required. Many of the subjects discussed were unfamiliar to customers, suggesting that the next stage required an education element. Since fairness was seen as an ambiguous principle, more clarity on this was needed in the quantitative stage. The concept of unfairness was easier to identify for customers than fairness.

76. Likewise, when initially discussed, "everyone paying the same rate" seemed fair and rational. But customers did not tend to support this principle when presented in terms of cross subsidy between customers. This underlined that the phrasing and framing of each principle would be important in the next stage.

77. We concluded that quantitative research was required to test our tariff setting principles further, and to gain reliable and robust feedback from customers. We did note that traditional quantitative research would be challenging given the complex subject matter and the nature of the issues being covered. In the dissemination session we discussed at length the options and issues related to the next phase of research.

78. Planning with Populus and the YourVoice sub-group for Phase 2 ran to the end of January 2016 until we had a draft proposal for further discussion. Activity then switched to the development of materials for the research.

3.4.3. Results from the quantitative research stage

79. A trial customer questionnaire was designed by Populus, with input from YourVoice members. A pilot was conducted in early March 2016 with 16 customers and the YourVoice members to test completion rates, sense check initial results and to gather feedback on the survey experience and clarity. The findings were positive, although the feedback resulted in a number of changes being implemented before the full launch of the survey. The full online survey was conducted between 23rd March and the 12th April 2016, achieving 542 completed surveys. The results are attached as Annex 4.

80. We tested three charging principles in the survey: cross subsidisation, grouping of customers, and cost reflectivity. The methodology involved explaining each concept using a non-water related example, and then asking customers if they thought the concept was fair or unfair.

81. Customers found the cost reflectivity ("pay for what you use") principle was fair[21] (79% quite or very fair), whilst a majority though that cross subsidisation was unfair[22] (69% quite or very unfair). Views on the grouping principle[23] were more mixed (34% fair, 41% unfair).

82. Customers were then shown a situation where four changes would be made to our approach on setting charges based on the application of these principles[24]:

    a) **Key account management:** All customer groups that benefit from this service would pay towards it, not just large sites as is currently the case.

[21] Annex 4, page 13
[22] Annex 4, page 15
[23] One way to set retail water charges for businesses is to **"group"** customers and set different retail charges for different groups based on common characteristics. Annex 4, page 14
[24] Annex 4, page 18

b) **Debt:** The customer groups that take longest to pay and have the highest risk of going into debt would pay more than customer groups that pay quickly, and have a lower risk of going into debt.

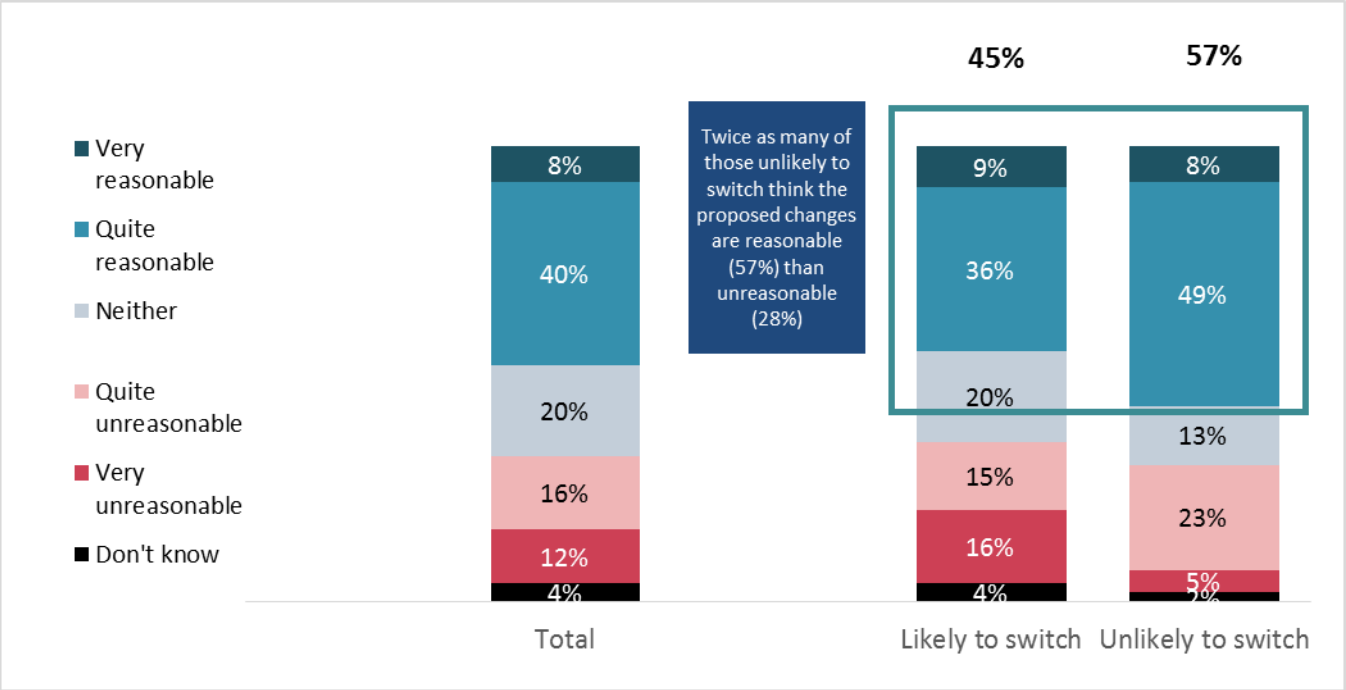
c) **Fixed costs:** All customers would pay an amount towards the fixed costs, no matter which service they are taking.

d) **Margin:** The customer groups with the highest risk would pay more, and the groups with lower risk would pay less.

83. Customers were then asked to consider how reasonable they would find the approach if it led to an increase in their own bill, even if on balance they knew it made charges fairer for all customers. The results of this are shown in Chart 3. 48% of customers stated that they would find this scenario quite reasonable or very reasonable, with 28% of customers stating that they would find it quite unreasonable or very unreasonable. This demonstrates that there is a good level of support for the application of these principles.

84. Customers who identified themselves as less likely to consider switching supplier were even more supportive. 57% of them found the proposal quite reasonable or very reasonable compared to 45% of customers who were more likely to switch.

Chart 3: If pricing this way led to an increase in your bill but on balance you knew it made charges fairer for all customers, how reasonable would you think this approach was?



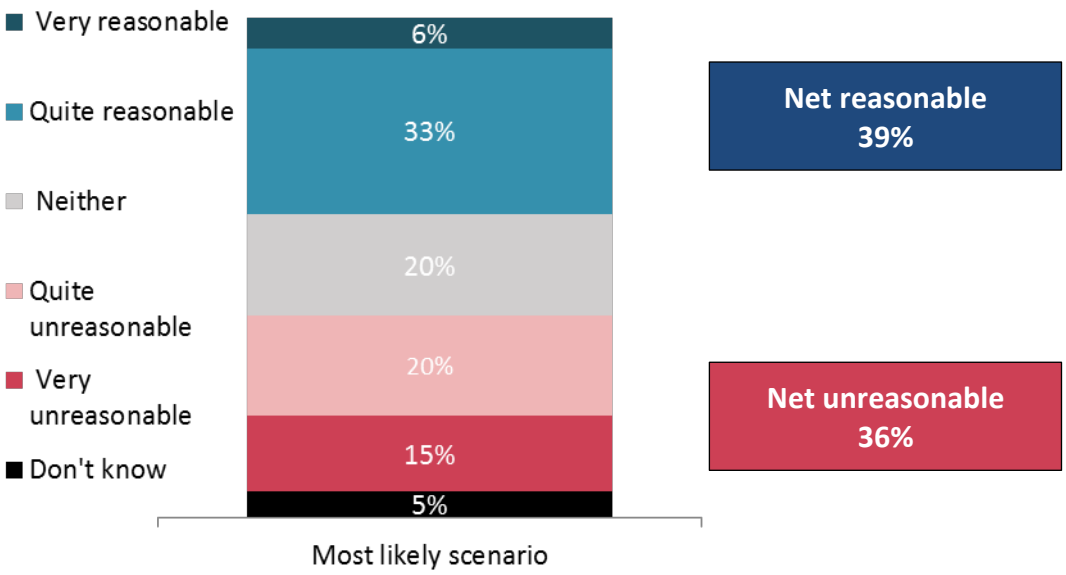
85. Customers were then shown two scenarios showing the financial impact on customers of applying the principles. The first scenario resulted in a c.1% increase in bills for smaller customers (consuming less than 50 Ml of water per annum), with a c.2.5% decrease for large customers. A second scenario doubled these bill impacts for customers. The scenarios, customer types tested and information shown within the survey are shown in Table 3. Customers were asked how fair and reasonable the overall changes to charges were.

Table 3: Impact of proposed scenarios on different types of customers

	Small unmetered user – i.e. a shop	Small metered user – i.e. a pub	Mid-sized metered user – i.e. a supermarket	Large metered customer – i.e. a food manufacturer
Customer volume band	0 – 5 Ml	0 – 5 Ml	5 – 50 Ml	>50 Ml
Average bill size	£ 580	£1350	£29,000	£265,000
Scenario 1 Change to bill	Increase of £6	Increase of £14	Increase of £290	Decrease of £6,600
% change to bill	+ 1%	+ 1%	+ 1%	- 2.5%
Scenario 2 Change to bill	Increase of £12	Increase of £28	Increase of £580	Decrease of £13,200
% change to bill	+ 2%	+ 2%	+ 2%	- 5%

86. Customers did not reject the first scenario and were split on its reasonableness, with 39% finding it quite reasonable or very reasonable compared to 36% who found it quite unreasonable or very unreasonable, as seen in Chart 4. While the level of support is lower than customers expressed before seeing the impact on customers, including a reduction for larger users, this is perhaps to be expected given that the vast majority of customers would see a bill increase and the evidence of 'self-protection' responses from customers in the first phase of qualitative research, and the findings observed from previous Ofwat and CCW research. Even given this, it is notable that customer responses are best described as divided, falling short of rejecting the proposals.

Chart 4: Based on the information above, how reasonable do you think the overall changes to charges are (Scenario 1)?



87. The second scenario was rejected by a greater proportion of customers[25], with 24% finding it quite or very reasonable, against 49% of customers finding it quite or very unreasonable.

88. It is also notable that customers who were unlikely to consider switching in 2017 found the scenarios more reasonable than those likely to consider switching. This is noteworthy because this is the same group that is most likely to be affected by our proposals.

89. The results from our customer research informed our proposals in this submission, which result in a lower bill increase for smaller customers than in either of the two scenarios tested with customers. This recognises that whilst customers appeared to support the principles underpinning these scenarios, they were split when presented with evidence of the financial impact.

90. Diagnostic feedback from the survey[26] found that 73% of participants found the survey relevant to them, 70% found the questions clear and easy to understand, and 70% felt they knew more about their water charges than they did before completing the survey.

[25] Annex 4, page 22
[26] Annex 4, page 26

3.5. Conclusions

91. In summary:

- Concepts of cost and margin allocation are not front of mind for customers. Customer contact with us typically involves service issues such as billing and payments;
- Customers support the principle of fairness, when applied to charge setting;
- Differential pricing is acceptable, with customers showing support for the principles of cost reflectivity and paying for what you use;
- Cross subsidising other customers was seen as unfair and received less support;
- We tested potential bill changes with customers, clearly setting out the impacts on small and large customers;
- Customers were evenly split on acceptability of a 1% bill increase scenario for small customers, but did not reject the proposal;
- A scenario with a doubled impact (a 2% increase for small customers) received less support from customers;
- We have used these results to inform our proposals, and, in view of the split results for Scenario 1, have proposed an increase for smaller customers which applies the key supported principle of cost reflectivity but which is below the levels tested with customers through the research exercise; and,
- The YourVoice customer challenge group has been fully engaged in the research design and is supportive of the way the company has used it to inform its proposals.

4. Cost and margin allocation

4.1. Aims and general approach

92. Our aim for the PR16 business retail price review is to allocate costs and margins in a way that is more cost reflective and more consistent with the risk inherent in serving each customer group. We are proposing this to reduce the possibility of cross subsidy across customer groups and tariff bands, (as supported by our customer research[27], summarised in Section 3 of this report) and to better ensure that returns are commensurate with the level of risk incurred for serving a customer group. This approach is not merely in line with customer views on cross subsidy, it will also produce results which enable us to better manage our obligations, including under competition law.

93. There are also further benefits of this approach such as being fairer in a competitive market, allowing for the new entry of retailers across all customer types, and enabling all customer groups to benefit from the market.

94. We sought to address some of these issues through our representation on the PR14 Draft Determinations. While Ofwat did not accept the proposed changes, it decided to set the business retail default tariff caps for a two year period, giving companies an opportunity to review cost and net margin allocations between customer types. Ofwat's feedback in the Final Determination stressed the importance of using best practice and obtaining external assurance in future submissions. We therefore commissioned a report from Frontier Economics to inform our cost and margin allocation modelling.

95. This report, included as Annex 1 of this submission, found that whilst the previous submission and charging model and methodology for the original PR14 submission and subsequent representation was in line with Ofwat's guidance, there was further room for improvement to make our tariffs more cost reflective.

96. Frontier's recommendations on the principles of cost allocation and their recommendations to improve cost reflectivity in our tariffs are highlighted in Section 4.2.

97. Their recommendations on best practice to allocate net margin across customer groups are summarised in Section 4.3.

98. We have adopted the recommendations of the report, and engaged Frontier to amend our charging model in line with them. Frontier Economics has also assured our final model and methodology used, in line with Ofwat's submission requirements. Furthermore, PwC has assured the model inputs.

99. We believe that our submission represents a more cost reflective approach to allocating costs and risk between customer groups, and has been informed by the results of our customer research. The North West customer challenge group, YourVoice, supports the approach we have taken to engaging customers and agrees that the results have informed our proposals.

[27] 69% of customers thought cross subsidy was unfair, Annex 4, page 15

4.2. Cost allocation

4.2.1. Principles of cost allocation

100. Frontier's report highlighted two high level principles of cost allocation that we have embedded in our charging model:

    a) All costs that can be directly attributed to a service are allocated to that group of customers. For example: the cost of a member of staff that works exclusively with large retail customers should be assigned to that group.

    b) Costs that cannot be directly attributed are instead allocated on an indirect basis using cost drivers, which should closely represent the activities underlying the costs. This ensures that more of the costs are allocated to customers and tariffs associated with a higher value of the underlying cost driver.

101. The overall cost base has been updated in line with Ofwat's methodology to reflect 2015-16 actual costs, consistent with our 2015-16 Regulatory Accounts. We have ensured that the total level of retail cost recovery is consistent with the PR14 Final Determination by multiplying the average cost per customer for each tariff band with the customer numbers from PR14 for each tariff band, as net changes have been immaterial. We then reduce all 2015-16 costs by category by a constant percentage to ensure the total level of retail costs recovered matches the total level of PR14 cost recovery, and so that the relative levels of cost per customer group stay consistent and cost reflective.

102. We use a range of cost drivers which are based on reports from our customer billing and management system, and other corporate systems. These drivers include customer numbers, the level of bad debt, numbers of bills, and the number of meter reads that can be attributed to a group of customers within a tariff. Data extracts are consistent with the data used for our 2015-16 Regulatory Accounts.

4.2.2. Improvements since PR14

103. Our approach to cost allocation is to follow the minimum standards set out in Ofwat's PR14 default tariff methodology,[28] and to use a more cost reflective approach where one is recommended by Frontier if the data is available to us. We have directly allocated costs between key customers (with high consumption at one site or a large portfolio of sites who receive a more bespoke, account managed service) and non-key customers first, before applying the requisite cost drivers. Cost elements that we are able to split into key and non-key include billing costs, costs associated with customer enquiries and complaints, and debt management.

[28] Setting price controls for 2015-20 – guidance for companies on producing default tariffs, Ofwat (April 2014)

4.2.3. Categorisation of fixed and variable costs

104. Metering costs had previously only been allocated to water customers, via the fixed meter charge. Since the meter reading is used to generate both the water and the wastewater invoice for each metered customer, half of this cost is now allocated to the sewerage charge. This has moved some costs from water customer bands to wastewater customer bands.

4.2.4. Categorisation of key and non-key customers

105. Our submission in June 2014 used for the PR14 Final Determination assumed that all costs of key account management should be recovered solely from premises using more than 50 Ml of water per annum. We have performed an analysis of our key account managed customers, and found that customers who did not have any premises consuming more than 50 Ml actually accounted for 61% of the key account managed customer base, by count of customers. We have therefore modified the allocation of key account management costs between tariff bands to reflect this, otherwise customers with premises consuming over 50 Ml would cross-subsidise customers with premises below 50 Ml.

4.2.5. Allocations updated for PR16

106. Frontier considered that the majority of our costs were already allocated in line with best practice, and therefore no change in allocation methodology was required. We have made some changes to our allocation methodology where Frontier recommended that a change would improve cost reflectivity, and the data required to do so was available to us. Where data is not available to us, we are investigating how this data can be captured for future price control reviews.

107. Other operating costs are now allocated across tariffs on an equi-proportional mark-up (EPMU) basis, in line with all other costs, rather than just in line with the fixed costs. The majority of these costs are overheads, allocated as a recharge of central support functions to the retail business unit.

108. Forecast depreciation costs were previously allocated in line with all other retail cost allocations, and were therefore applied as a flat mark-up on retail costs for all tariffs. This has now been revised and depreciation costs are now allocated via a cost driver made up of the sum of customer billing and contact costs per tariff.

109. We have summarised our cost allocation approach in Table 4. This shows the different categories of cost, whether they can be split into costs that can be allocated to key customers, the cost driver used for the PR14 Final Determinations, whether they are consistent with Ofwat's minimum requirements, Frontier's recommendation, and the cost driver used for this submission.

Table 4: Previous and current cost allocation methodology

Included costs	Key / Non-key split?	Cost driver for PR14	Consistent with Ofwat's minimum requirements?	Frontier's recommendation	Cost driver for PR16
Billing	✓	No. of bills raised	✓	Use existing driver	No. of bills raised – existing driver
Payment handling, remittance & cash handling	×	Customer no's	✓	No. of payments received	No. of bills raised - proxy for payments
Network & non-network customer enquiries & complaints	✓	Customer no's	✓	No. of enquiries & complaints	Customer no's - no data for enquiries
Debt management	✓	Customer no's	✓	Debt outstanding for more than x days	Debt outstanding for more than 12 months
Meter reading	✓	No. of meter reads	✓	Use existing driver	No. of meter reads – existing driver
Doubtful debts	✓	Bad debt provisions	✓	Use existing driver	Debt outstanding for more than 12 months
Depreciation	×	Sum of billing & contact costs	✓	Update to reflect categories of fixed assets	Sum of billing & contact costs - asset covers both
Other operating costs:	×	All other "fixed" costs – key & non-key customers	No guidance (but seems reasonable)	EPMU against all other costs	EPMU against all other costs

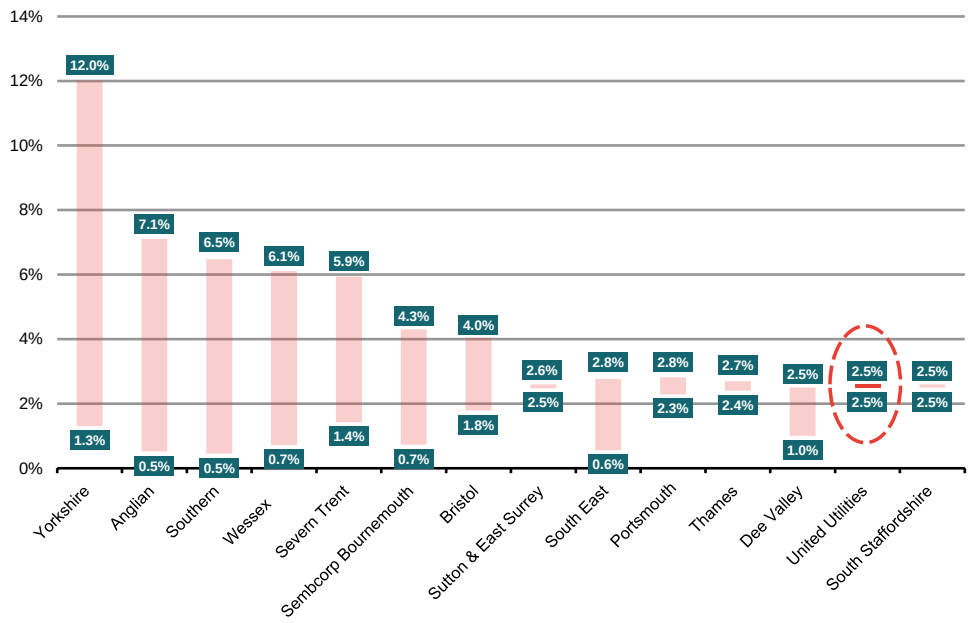
110. Frontier have reviewed the cost allocation methodology used for our proposals, and consider this to be sound and consistent with Ofwat's guidance[29].

4.3. Margin allocation

111. Our PR14 Final Determination was based on a uniform net margin allocation of 2.5% for all customers which, as can be seen in Chart 5, differed significantly from the approach taken by the vast majority of other companies. Across the industry, net margin was allocated using a variety of methods, leading to a wide range of margins for different customer groups. This was a significant driver of the differences in gross margin which saw UUW as an outlier compared to other retailers (as seen in Chart 1).

[29] Annex 1, pages 43

Chart 5: Comparison of maximum and minimum business retail net margin by retailer at PR14



Source: Frontier analysis of Ofwat PR14 Final Determinations

112. Given this difference in approach, we asked Frontier Economics to review the approach we had taken in allocating the overall 2.5% net margin to different customer groups, and to advise us on a best practice methodology for doing so. Following their advice, we have revisited our methodology for net margin allocation in order to better meet and support the requirements of cost reflectivity, and to better support the compatibility of the resulting tariffs with the management of compliance, including in relation to competition law.

4.3.1. Principles of revised net margin allocation

113. Frontier's advice was that we should follow a number of core principles in designing our net margin allocation methodology:

    a) There should be no undue discrimination between customers or within tariff bands. The net margin allocation should reflect the difference in risks and the opportunity cost of capital required to deal with the risks incurred;

    b) An efficient retailer should be able to enter and compete fairly; therefore the margin offered in each tariff band should be sufficient to enable an efficient entrant to earn a reasonable return; and,

    c) The allocation method should be proportionate and transparent.

4.3.2. Revised approach to net margin allocation

114. We have taken account of Ofwat's guidance on how net margin allocated to each tariff band should reflect the risk and financing cost of serving the customers in that band.

115. To allocate the net margin appropriately across customer groups, we identified the key elements that comprise a net margin. This reflects the profit required to compensate for the risk associated with a retail only business in the water sector. Part of the margin is to cover the return on capital employed that can be observed on the balance sheet. The remainder is to cover the return on contingent capital or other risks not already recovered from operating expenses.

116. These elements were grouped into four categories:

    a) The cost of capital employed, including fixed assets and working capital;

    b) The cost of contingent capital to cover bad debt risk;

    c) A return to cover retail cost risk and switching risk; and,

    d) A residual return, reflecting the remaining margin left after identifying and estimating plausible risk factors, to arrive back at the overall level 2.5% net margin set by Ofwat.

117. Our approach to each of these elements in our net margin allocation methodology is highlighted below.

4.3.3. Capital employed – return on fixed assets

118. We have used the level of fixed business retail assets at the 2015-16 year end. We applied a cost of financing of 10% to reflect the cost of a new entrant supplier into the market, based on a CMA assessment[30], to calculate an estimate of capital employed to be recovered through the net margin.

119. This is then allocated across tariffs based on the sum of the cost of customer calls and the cost of billing per tariff, in line with the allocation of depreciation costs. Net margin allocated via this method is in line with the majority of cost allocation and results in higher margins for tariffs with a greater amount of cost allocated to them.

4.3.4. Capital employed – working capital

120. Under the business retail price control, any cost of financing working capital must be recovered through the net margin.

121. We have calculated debtor days per tariff band from data held on our customer billing system and other corporate systems.

[30] Energy market investigation. Analysis of cost of capital of energy firms – CMA (Feb 2015)

122. We have assumed 30 days as an estimate for the benefit of creditor days based upon the ability of a retailer to receive credit from wholesalers, and therefore pay wholesale invoices a month in arrears. However, this calculation yields a negative working capital, and per Frontier's recommendation, we have used pure debtors as an estimate of the upper bound net working capital cost[31].

123. We have assumed a 10% cost for financing working capital to reflect fact that a standalone supplier will have a high level of working capital relative to fixed assets, making the overall WACC the most representative estimate of working capital financing costs.

124. Net margin allocated under this method is based on the forecast level of wholesale charges per tariff, and on the number of debtor days per tariff band. This results in higher net margins for customer groups where wholesale charges represent a higher proportion of their bill, and for customer groups where payment is slower.

4.3.5. Bad debt risk

125. A projected level of bad debt is already included in the operating expenses, based upon historic levels of bad debt by tariff band, and is therefore included within the cost allocation methodology. However, the actual level of bad debt in each period varies, and therefore a provision must be included in the net margin to cover the risk of increased bad debt.

126. The method we have used is to provide for the cost of financing contingent capital required to cover the maximum historic variation from average levels of bad debt seen between 2009-10 and 2015-16. This ensures that the net margin is sufficient to manage future bad debt risk.

127. Allocation of margin to tariffs is then made according to the level of bad debt, resulting in higher margins for those customer tariffs where bad debt levels are highest.

4.3.6. Retail cost performance risk

128. Cost performance can deviate from forecast costs over time, with some of this risk outside a company's control (e.g. cost of services or fuel prices). If the out-turn cost is significantly higher than expected, we must hold sufficient contingent capital to perform our services as customers expect, without any disruption.

129. We have allocated 2% of total retail costs as a provision in the net margin, which is within the range recommended by Frontier. Margin allocation is based on the level of total retail costs by tariff and so this results in higher margins for those customer groups where retail costs are highest.

4.3.7. Stranded cost risk due to customer switching

130. When a customer switches its retail services away from us to another retailer after April 2017, we will be unable to recover fixed retail costs allocated to that customer. The minimum net margin required where customers can switch is higher than a situation where no such risk applies.

[31] Annex 1, page 37

131. Ofwat has set a higher net margin of 2.5% for customers where there is competition (all non-household customers in England), than the 1% allowed for customers where there is no such risk (Welsh non-household customers consuming less than 50 Ml per annum, and all household customers).

132. The potential stranded cost can be identified from our fixed costs from our regulatory accounts for all cost elements apart from doubtful debts. This has been broken down to a tariff level.

133. We have assumed a net switching rate across the whole United Utilities in-area portfolio of 9.8% based upon assumptions in our internal business plan.

134. The margin required to cover this risk is calculated as the stranded cost multiplied by the switching rate. Allocation of this across tariffs is based on the total fixed costs allocated to each tariff, resulting in higher margins for customer groups with higher fixed costs.

4.3.8. Residual net margin

135. As Ofwat has allowed 2.5% net margin in total for the retail business, any net margin that has remained unallocated to tariffs using the above approach will require appropriate allocation.

136. We have considered a number of methodologies to allocate this, including allocations based on all retail costs and customer numbers, but have used a mark-up based upon total wholesale and retail costs per tariff. We believe this is the fairest way to allocate the residual margin more broadly across all customer groups.

137. Frontier have reviewed our net margin methodology and the resulting net margins per tariff band. In their report[32] they note that:

> *"There is now some differential between margins on different bands compared to UU's proposal of a uniform 2.5% margin across all tariff bands at PR14 FD. We believe that the differential reflects fundamental economic principle of cost-reflectiveness and fair access to competition. Furthermore, we do not consider that it currently raises any material risks regarding the compliance of competition law, both regarding excess margin and margin squeeze".*

[32] Annex 1, page 44

4.4. Conclusions

138. In summary:

- We have comprehensively reviewed our cost and margin allocation since PR14;
- We have worked with independent economic advisors (Frontier Economics) to establish a best practice methodology for cost and margin allocation between different customer groups;
- Frontier Economics have assessed our PR14 final determination against this methodology and suggested a number of enhancements;
- We have followed their advice, and Frontier have helped redesign and assure our model, and methodology;
- We believe our new approach is more cost reflective, and fairer to all customers; and,
- We have tested the principles and scenarios showing the potential impact on bills with customers, and used the results to inform our proposals.

5. Simplified price control and methodology

5.1. Tariff model and methodology

139. We asked Frontier Economics for advice on best practice to follow for the allocation of costs and net margin across customer groups. They also advised on the development of a new tariff model, included as Annex 2. The cost and margin allocation methodology followed is as set out in Section 4.

5.2. Simplified tariff bands

140. On 19 May 2016 Ofwat published its methodology for the 2016 business retail price review. This established that customers using over 5 Ml p.a. should be subject to uniform tariff caps whereby the gross margin for customers using between 5 and 50 Ml p.a. and over 50 Ml p.a. would be subject to uniform backstop controls. The initial expectations Ofwat set for these default tariff caps were a gross margin of 5% for customers using 5 to 50 Ml and 3% for customers using above 50 Ml.

141. Our PR14 Final Determination separated our business retail default tariff controls into 15 tariff bands. We have been able to map the PR14 Final Determination and our proposals to Ofwat's simplified structure of 6 bands.

142. Our cost and margin allocation methodology was produced and our customer research was conducted prior to Ofwat's final methodology. We believe this work will help Ofwat set the levels of the uniform caps for medium and large users. We note that our proposed gross margins for customers consuming more than 5 Ml p.a. are below the initial expectations for the uniform backstop controls suggested by Ofwat.

5.2.1. Challenges presented by simplification

143. The mapping of customers to the volume bands set out in Ofwat's final methodology presents us with two challenges:

- We do not currently have separate water and sewerage tariffs for customers consuming below 5 Ml p.a. and between 5 and 50 Ml p.a., but rather have 'standard' tariffs which cover 0 to 50 Ml p.a.
- Our Surface Water and Highways Drainage (SWHD) charges are calculated based on site area rather volume, and we do not have separate tariffs for customers in different volume bands.

144. The effect of this is that we need to take costs and margin allocated to 'standard' water and sewerage tariffs and to SWHD tariffs in our model and divide them amongst the new volume bands.

145. We demonstrate how we have translated customers from the tariff bands from our PR14 Final Determination to our proposals for this submission in Table 5.

Table 5: Mapping PR14 tariff bands to PR16 tariff bands

	PR16 tariff bands					
PR14 tariff bands	1 Water 0 to 5 Ml	2 Water 5 to 50 Ml	3 Water Over 50 Ml	4 Wastewater 0 to 5 Ml	5 Wastewater 5 to 50 Ml	6 Wastewater Over 50 Ml
1 Up to 50 Ml Water Unmetered	■					
2 Up to 50Ml Water Metered	■	■				
3 > 50Ml water metered			■			
4 Up to 50Ml Non-potable Water Metered	■	■				
5 > 50Ml Non-potable Water Metered			■			
6 Up to 50 Ml Sewerage Unmetered				■		
7 Up to 50Ml Sewerage Foul Metered				■	■	
8 > 50Ml Sewerage Foul Metered						■
9 SWHD Metered Bands 1 – 7				■	■	■
10 SWHD Metered Bands 8 - 15				■	■	■
11 Up to 50Ml Sewerage TE Metered				■	■	
12 > 50Ml Sewerage TE Metered						■
13 Foul / SWD Special Agreements				■		■
14 Trade Effluent Special Agreements						■
15 Water Special Agreements			■			

5.2.2. Approach taken to mapping accounts to volume bands

146. We have extracted annualised billed consumption data from our customer billing system. The report extracts the amount billed in pounds per account, and uses the pence per m^3 charge to calculate a consumption volume in m^3.

147. Customers on a Select water tariff (which is for customers using more than 50 Ml of water) are assumed to be in the Water over 50 Ml p.a. consumption band. Customers on 'standard' tariffs are placed in the Water 0 to 5 Ml and Water 5 to 50 Ml bands respectively, based on their water consumption.

148. Customers on a Select Sewerage tariff (which is for customers discharging more than 50 Ml) are assumed to be in the Wastewater over 50 Ml p.a. consumption band. Customers on 'standard' tariffs are placed in the Wastewater 0 to 5 Ml and Wastewater 5 to 50 Ml bands respectively based on volume.

149. SWHD accounts are placed into a consumption band, based on the sewerage and trade effluent volume of associated accounts, but given that our SWHD charges are calculated on a site area basis, we have been unable to map all drainage accounts to a sewerage account.

150. 52% of drainage accounts in our customer management system are mapped to sewerage or trade effluent accounts, with this rising to 59% for accounts in larger consumption bands. We have assumed that the unmapped drainage accounts are divided amongst the new volume bands in the same proportion as the accounts which are mapped.

151. The result of this mapping is shown below in Table 6. The customer number splits are calculated based on the total number of connections.

Table 6: Number of customers per simplified tariff bands

	0 to 5 Ml	5 to 50 Ml	Over 50 Ml	Total
Water customers	165,145	2,395	714	168,254
Sewerage customers	138,176	1,548	336	140,060
Drainage customers	132,307	1,579	472	134,358
Trade Effluent Customers	2,272	540	136	2,948
Wastewater customers	272,755	3,667	944	277,736

5.2.3. Approach taken to allocating costs and margin between volume bands

152. Having assigned accounts to volume bands, we have an estimate of:

- For water, sewerage and trade effluent tariffs, the proportion of volume in total which is in each of the simplified bands
- For all tariffs, the proportion of accounts which is in each of the simplified bands

153. For each individual tariff, we then allocate cost and margin between the simplified bands using the most appropriate driver. For volumetric tariffs this is typically volume and for fixed charges this is typically number of customers.

5.3. Conclusions

154. In summary:

- Ofwat's methodology for the 2016 business retail price review established a simplified consistent structure for default tariff cap bandings, with three price control bands for water and three for wastewater;
- We have been able to map the PR14 Final Determination and our proposals to the six bands; and,
- This has involved dividing costs and margin for SWHD and for 'standard' (below 50 Ml) tariffs from our model amongst the six bands.

6. Our tariff band proposals

6.1. Our approach

155. Rather than have separate levels of gross margin for water and wastewater default tariff caps for each customer volume band, we have decided to ensure that the level of gross margin is identical for water and wastewater in each volume band. This provides two main benefits:

- It helps manage incidence effects, preventing a substantial rise for 0 to 5 Ml customers for whom water is the greater proportion of their bill; and
- It is consistent with the approach to simplified default tariff caps, under which we expect the uniform backstop gross margins for water and wastewater to be identical for customers in each of the larger volume bands.

156. We considered whether this could cause a detriment to competition by leading to a lower gross margin for customers wishing to switch only their water service. However, we note that the Competition and Markets Authority assessed the effects on the joint venture between Severn Trent and United Utilities[33] on the supply of both water and sewerage retail services. A key piece of evidence which supported the CMA's decision in this regard was evidence from customers themselves that the vast majority of customers would wish to purchase **both** these services from the same supplier. Furthermore around 94% of our customers receive both water and wastewater from us.[34]

6.2. Our proposals

157. Table 7 shows calculated gross margins prior to smoothing gross margins between water and wastewater for 2017-18. Using these gross margins without smoothing would result in large incidence effects for customers taking only one service from us.

Table 7: Unsmoothed gross margins, 2017-18

Tariff band	PR14	Unsmoothed Gross Margins	Change
1 Water 0 to 5 Ml	9.3%	15.2%	5.8%
2 Water 5 to 50 Ml	3.6%	4.4%	0.9%
3 Water over 50 Ml	4.6%	2.4%	-2.1%
4 Wastewater 0 to 5 Ml	7.0%	5.6%	-1.4%
5 Wastewater 5 to 50 Ml	4.9%	3.1%	-1.8%
6 Wastewater over 50 Ml	6.3%	2.9%	-3.4%

[33] Anticipated non-household retail water and sewerage services joint venture between Severn Trent Plc and United Utilities Group Plc Decision on relevant merger situation and substantial lessening of competition, Competition and Markets Authority, 27 May 2016

[34] In our 2014-15 Regulatory Accounts, we reported that we billed 171,100 Non-household properties for water and 181,400 for sewerage

158. Table 8 shows the effects of our revised cost and margin allocation after smoothing of margins between water and wastewater for tariffs in 2017-18.

Table 8: Proposed gross margins per tariff band, 2017-18

Tariff band	PR14	Our PR16 proposal	Change
1 Water 0 to 5 Ml	9.3%	8.4%	-0.9%
2 Water 5 to 50 Ml	3.6%	3.9%	0.3%
3 Water over 50 Ml	4.6%	2.6%	-1.9%
4 Wastewater 0 to 5 Ml	7.0%	8.4%	1.4%
5 Wastewater 5 to 50 Ml	4.9%	3.9%	-1.0%
6 Wastewater over 50 Ml	6.3%	2.6%	-3.7%

159. Table 9 shows the effects of our smoothed margin approach[35] on customers taking both services in 2017-18.

Table 9: Proposed smoothed gross margins per volume band, 2017-18

Volume band	PR14	Our PR16 proposal	Change
0 to 5 Ml	7.6%	8.4%	0.8%
5 to 50 Ml	4.1%	3.9%	-0.2%
Over 50 Ml	5.4%	2.6%	-2.8%

6.3. Incidence effects assessment

160. The average impact on customer bills in 2017-18 of our revised proposals is in line with the change in gross margin highlighted in Table 9. This shows that customers in the 0 to 5 Ml p.a. band would see an increase of 0.8%, which is less than in the scenarios that we researched with customers. Customers in the 5 to 50 Ml band would see an average decrease of 0.2% and customers in the above 50 Ml band a decrease of 2.8%. Changes in 2018-19 and 2019-20 are slightly smaller than seen in 2017-18.

161. When undertaking our research with customers, we showed customers two scenarios with bill impacts for a range of typical customers (outlined in more detail in Section 3.4.3. and Table 3). In Table 10, we compare the average percentage impact of our proposals in each volume band with the scenarios researched with customers. We note that the increase proposed for small customers is below both of the scenarios tested.

[35] We have presented results for the 0 to 5 Ml volume band as a gross margin percentage to aid comparison to PR14. In the data tables this is presented as a £ cost per customer and a % net margin separately for Water 0 to 5 Ml and Wastewater 0 to 5 Ml.

Table 10: Incidence effects for typical customers in 2017-18

Customer Type	Change % tested in research		Band	Average change from new proposals for customers in each band		
	Scenario 1	Scenario 2		Water	Waste	Weighted average
Unmeasured	1%	2%	0 to 5 Ml	-0.9%	1.4%	0.8%
Small	1%	2%	0 to 5 Ml	-0.9%	1.4%	0.8%
Medium	1%	2%	5 to 50 Ml	0.3%	-1.0%	-0.2%
Large	-2.5%	-5%	Over 50 Ml	-1.9%	-3.7%	-2.8%

162. Individual customer bill impacts may vary from the average by customer band due to differences in the proportion of the bill represented by water and wastewater for each customer. Also the application of the uniform backstop control may lead to different incidence effects for medium and large customers.

6.4. Supplementary restraint on incidence effects

163. In its statement of method, Ofwat suggests that it could implement a supplementary restraint prohibiting increases in any retail default tariffs causing a greater than one percent increase in final prices to customers in any one year. We note that the overall average increase in bills for customers using less than 5 Ml p.a. as a result of our proposals is less than one percent. We believe that a restriction of this type is sensible at tariff band level, but would be difficult to apply at individual tariff level due to the difficulty of establishing the counterfactual (i.e. what each tariff would have been under the old cost and margin allocation methodology).

6.5. Conclusions

164. In summary:

- Our proposals lead to a 2.8% decrease in bills for customers using over 50 Ml per annum, a 0.2% decrease in bills for customers using between 5 and 50 Ml of water per annum and an increase of 0.8% for customers using below 5Ml;
- The average increase for smaller customers is less than either of the scenarios that we tested with customers;
- We have set an identical level of gross margin for water and wastewater within each volume band, to help manage incidence effects; and,
- A supplementary restraint prohibiting changes in retail default tariffs causing a greater than one percent increase in final prices to customers would be sensible if applied at tariff band level.

7. Governance and assurance

7.1. Approach to governance

165. The UUW Board approved the approach to developing and governing the submission, which was led by a sub-group pf the Strategy Steering Group (Group Executive team). Sub-group attendees included the Business Retail Director (Chair and Project Sponsor), Business Retail Commercial Director, Director of Regulation, Regulatory Strategy Manager, Corporate Affairs Director, Group Financial Controller and Head of Business Retail Finance. The Strategy Steering Group was regularly updated by the sub-group. The UUW Board also received updates on the submission process and the proposed submission.

166. The business has engaged the customer challenge group ('CCG') throughout the development of this submission, having met with the CCG (YourVoice) sub-group regularly, on seven occasions, since September 2015 and regular attendance, on four occasions since December 2015, by the Business Retail Commercial Director at the main CCG (YourVoice) group meetings.

7.2. Approach to assurance

167. The Board approved approach to assurance of this submission consisted of:

- First line assurance provision by day-to-day business operation processes and controls;
- Second line internal assurance review of model inputs and consistency of these, and the model outputs, with the methodology and submission documents; and,
- Third line external assurance activities provided by Frontier Economics and PwC.

168. Frontier Economics provided assurance of the financial Default Tariff Model and that the base case model is consistent with Ofwat guidance. The Frontier report is submitted as Annex 6.1; and states[36]:

- *"Frontier has carried out a systematic model audit to check the correct functioning of the model. This does not include an audit of the input data, which we understand has been separately assured by PwC. We have checked the model calculations in a systematic way, as documented in this note. We have verified that the relevant calculations in the model reflect the methodology described in Frontier's main assurance report; the calculations are carried out accurately; and pass our assurance checks. All reasonable efforts have been made in the assurance process to ensure the accuracy of the model. On the basis of this work, we are confident that the model reflects the intended methodologies and is working accurately. More specifically, we have found that:*

[36] Annex 6.1, page 5

- *The retail cost items are taken as input and are categorised appropriately before allocation, in line with the methodology described in Frontier's main assurance report;*
- *The allocation of the retail cost and net margins is carried out at tariff level, and the calculations in the model reflect the methodology set out in the main assurance report; and*
- *Taken the mapping from tariffs into the six tariff bands as an input, the aggregated retail net margin, and gross margin per tariff bands are accurately calculated and reported."*

169. PwC provided assurance of financial data quality - a series of agreed upon procedures, to ensure the input data into the financial model was supported and subsequent output tables accurately completed. The performed procedures are stated below and the PwC report is submitted as Annex 6.2. Against each procedure[37], PwC stated *"No findings noted."*

1) Agree the model data inputs back to data sources (e.g. a corporate system report, internal formally approved document or third party reference document) and agree intermediary calculation steps (i.e. between data sources and data input into the model) were performed in line with United Utilities' stated methodology.
2) Check that populated Ofwat prescribed data tables agree with the model outputs.
3) Check that any references to model input data, model assumptions and model outputs (i.e. stated figures and directly related text) within the Business Retail Price Review 2016 submission commentary is consistent with the model content.
4) Check that the United Utilities documented Business Retail Price Review 2016 methodologies are consistent with how the model is intended to operate.
5) Check that customer numbers, retail cost per customer, cost multiplier data and wholesale costs have been correctly transferred from the PR16 final model to the PR14 final determination model ('PR14 model').
6) Check that populated Ofwat prescribed data tables for the PR14 15 tariff bands agree with the PR14 model (with PR16 customer numbers, retail cost per customer, cost multiplier data and wholesale costs) outputs.
7) Check that the percentages used to allocate tariffs into 6 tariff bands has been correctly transferred from the PR16 final model to the PR14 model.
8) Check that populated Ofwat prescribed data tables for the PR14 6 tariff bands agree with the PR14 model (with PR16 customer numbers, retail cost per customer, cost multiplier data and wholesale costs) outputs.
9) Check that any references to PR14 model assumptions and model outputs (i.e. stated figures and directly related text) within the Business Retail Price Review 2016 submission commentary, is consistent with the PR14 model content.
10) Check that the model data inputs reviewed as part of AUP 1 and the model outputs reviewed as part of AUP 2 are consistent with the inputs and outputs of UU's final submission model Annex 2 - UUW NHH Default Tariff Model 2017-18.

[37] Annex 6.2, page 5

7.3. Board Assurance Statement

170. The UUW Board assures:

a) That the information provided is consistent with our legal obligations (including, where relevant, the prohibitions on undue discrimination or preference in licence condition E and licence condition R, and the charging scheme rules) and competition law. This has been supported by the cost and margin allocation methodology from third party experts, Frontier Economics.

b) That the allocation and attribution of costs and margins to revised or new default tariff caps are reasonable and robust (with costs and margins attributed by appropriate drivers and activities, and the proportion of costs subject to broader allocation rules kept to the minimum that is reasonably practicable.) This has been supported by the cost and margin allocation methodology from third party experts, Frontier Economics.

c) That proposals have been reasonably informed by customer engagement, and research and discussion with the company's CCG. This has been supported by the evidence from ongoing customer engagement by Business Retail, the outcome of both stages of our customer research conducted by third party market research company Populus and the views of the YourVoice customer challenge group.

d) That data tables have been completed accurately and consistent with any guidance provided. This is supported by PwC's completion of agreed upon procedures.

7.4. Conclusions

171. In summary:

- The Board of United Utilities Water Limited (UUW) has considered and endorses these proposals;
- YourVoice, the customer challenge group, is supportive of the research carried out and agrees that the proposals have been informed by customer views;
- Frontier Economics has assured our approach and methodology, including financial model functionality; and,
- PwC has provided assurance of financial data quality to ensure the input data into the financial model and subsequent output tables are accurately populated.

NON-HOUSEHOLD PRICE CONTROL REVIEW

Final report prepared for United Utilities

06 July 2016

Confidential

CONTENTS

EXECUTIVE SUMMARY

In April 2017, competition will be introduced to the non-household retail water sector in England. Ofwat will continue to protect non-household retail consumers for at least the first three years after April 2017, and will provide this 'back-stop' protection through the use of default price caps that will be applied as part of PR16.[1] On 19 May 2016 Ofwat published its final statement of method for the PR16 price control, including confirmation that it will apply uniform caps to gross margins for medium and large customers. Ofwat has decided to introduce these uniform caps to help simplify tariff structures, and provided indicative levels of these caps in its final statement of method.

Companies operating wholly or mainly in England are required to respond to Ofwat by setting out their proposed default tariffs for PR16, with supporting justification for these proposals. These companies are also required to provide Board assurance to Ofwat on whether the proposed tariffs are in-line with Ofwat's statement of method, and are consistent with competition law.

Frontier Economics was commissioned by United Utilities to review the company's methodology underlying their default tariffs set at PR14, to assist them in developing a robust approach for revising their tariffs for the PR16 review and to review the consistency of their resulting proposed tariff methodology for PR16 with Ofwat's method statement and with competition law principles.

Our conclusions

In this report we have employed an assessment framework based on fundamental economic principles relating to the design of a default tariff structure in a retail market newly open to competition. Our framework is based on cost-reflective principles, and so as to be likely to enable fair access to competition for different segments of the non-household market. Furthermore the framework pays attention to the principles of competition law and Ofwat's final statement of method for PR16, as well general acceptability of the tariff structure.

Drawing on our framework we outlined a set of appropriate approaches to cost and margin allocation, that UU could employ to develop its tariffs, that would ensure consistency with regulatory and competition law principles and Ofwat's method statement for PR16.

In summary, we set out an approach that included:

- a revamp of cost categorisation, and more specifically the categorisation of fixed and variable costs and costs attributed to key and non-key customers;
- consideration of appropriately cost reflective cost drivers that can be applied to the different cost items;

[1] PR16 is the name given to the non-household retail price control for the last few years of AMP6 (i.e. it will run from April 2017 for three years).

- a net margin allocation methodology that strikes the balance between cost-reflectiveness and fair access to competition.

UU has developed its tariffs in line with this framework, and as a result we are able to provide assurance that the default tariffs proposed are cost reflective, based on a robust and objectively based methodology and consistent with regulatory and competition law principles.

Furthermore, the resulting gross margins resulting from the proposed cost and net margin allocation are also in our view reasonable and robustly justified. In particular,

- the gross margins on the medium (5-50Ml) and large (>50Ml) user tariff bands are consistent with Ofwat's indicative caps, in line with Ofwat's method statement for PR16; and
- the proposed revised bespoke gross margins on smaller customers (0-5 Ml) are robustly cost reflective, and the company has ensured that the revised tariffs do not increase customers' bills by more than 1% per annum on average within the band.

Finally, although it has not been within our current remit, we understand from UU that it has undertaken customer engagement on the potential incidence effects.

1 INTRODUCTION AND BACKGROUND

1.1 Introduction

Frontier Economics was commissioned by United Utilities (UU) to provide support on its retail non-household tariff design within the context of Ofwat's 2016 business retail price review (PR16) on non-household retail tariff price control for the period beginning in April 2017. We were asked to review the present methodology underlying existing default tariffs and to assist UU in developing a robust approach consistent with regulatory and competition law principles, for revising their tariffs for the PR16 review of the default tariff price control.

1.2 Background

In April 2017, competition will be introduced to the non-household retail segment of the water markets in England and Wales. Ofwat will continue to protect non-household retail consumers for at least the first three years after April 2017. It will provide this protection through the forthcoming PR16, through which it will require incumbent companies, such as UU, to offer a set of wholesale prices for potential new entrants, and a corresponding set of default tariffs.

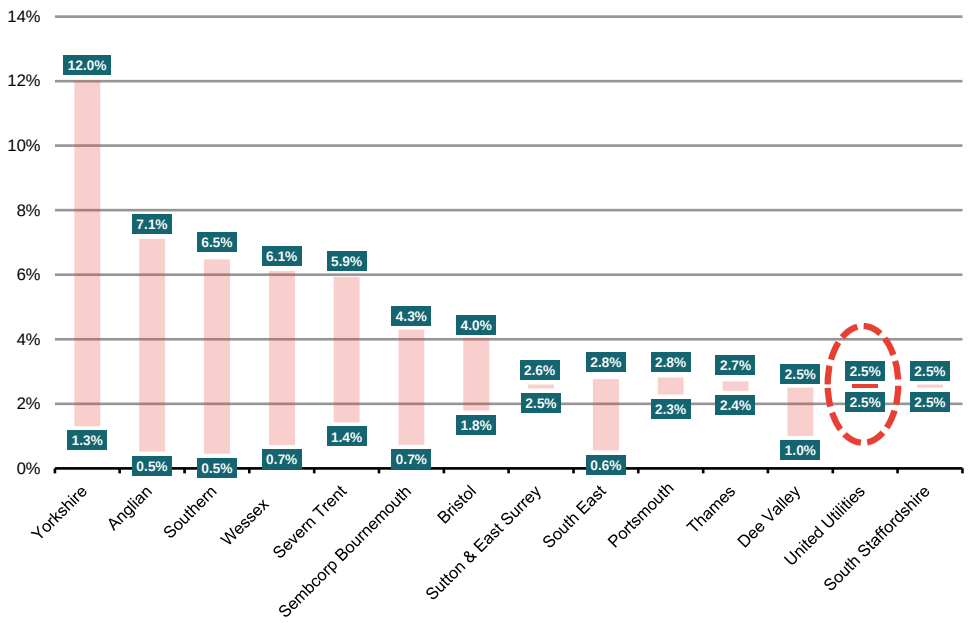
These default tariffs must be cost–reflective and set in such a way as to enable efficient new entry to occur and competition to develop. Tariffs must be set in a way that is consistent with UK competition law principles, and in particular, in a way that avoids 'margin squeeze'.[2]

PR16 is a reopener of the default tariff controls that were set at the last price control PR14. The approach taken by Ofwat at PR14 involved requiring overall revenues to be recovered from default tariffs to reflect incumbents' base year costs (not allowing for inflation) and to allow a 2.5% net margin overall, which it determined by reference to evidence on margins from other sectors. It was for companies to determine how to allocate costs and margin between customers to derive default tariffs for different customer groups.

In announcing its Final Determinations (FD) for PR14, Ofwat noted the wide range between companies in the spread of net margin allocations across tariff bands. This is illustrated in Exhibit 1 below.

[2] Margin squeeze arises when a vertically integrated firm increases its wholesale margin and lowers its retail margin to deter entry in the downstream retail market. This is explained in further detail in Section 2.2.2

Exhibit 1. Comparison of maximum and minimum NHH margins



Source: Frontier analysis

Raising concerns about simplicity for customers and consistency between companies, the regulator announced the PR16. This price review was also to give companies and their Boards an opportunity to review the cost reflectivity of their tariffs so that they could provide assurance that they were consistent with competition law principles.

UU had initially proposed in its Business Plan for PR14, to apply a constant 2.5% net margin to all tariff bands, but subsequently changed this, following the Draft Determinations to a variable percentage based, amongst other reasons, on different working capital requirements and levels of bad debt. The company also proposed minor changes to its allocation of key account management costs.

However, Ofwat rejected these proposals, citing insufficient consultation with customers or evidence of external assurance. It was particularly concerned that the new allocation had led to a 'significant increase' in revenues to be recovered from unmetered and smaller non-household (NHH) customers, noting that 'average gross margins for these customers were already high by comparison with the rest of the industry'.

It is apparent from Exhibit 1 that UU's default tariffs, and net margin allocations, reflect an atypical approach from that adopted in the industry. It is of interest that the spread of margins across companies remained broadly similar after the FDs to that at Draft Determination (DD) stage although some companies did have proposals to amend their DD tariffs accepted by Ofwat.

The PR16 price control approach

Ofwat published its final statement of method for PR16 on 19 May 2016.[3] Ofwat re-iterated that it will use default tariff caps to provide this 'back-stop' protection for consumers. Confirmation was also provided that default tariffs will only cover existing tariff structures, and will not apply to innovative tariffs that emerge.

Ofwat's approach is summarised in detail in section 2.

1.3 The purpose of this report

UU asked Frontier to review its default tariffs set at PR14 and to provide support in developing revised proposals for PR16 so as to ensure consistency with Ofwat requirements for PR16, relevant regulation and competition law principles.

- Our work comprised establishing an assessment framework, reviewing UU's approach at PR14, considering alternatives and reviewing UU's revised proposals for PR16.
- Frontier also assisted in reviewing the UU default tariff model as fit for purpose, and added a bespoke net margin model capability.
- Our separate model audit report sets out our approach to providing assurance, and our conclusions, on UU's default tariff models.[4]
- It is important to note that our review does not include an audit of the input data to the tariff calculations. The input data includes:
  - customer numbers (in total, and in each tariff);
  - total retail revenue to be recouped;
  - the split of costs / revenues between the household and non-household price controls;
  - cost drivers; and
  - other input data (such as the amount of income that is collected and bad debt).

We started by developing a generic assessment framework to apply when developing default tariffs to ensure consistency with regulation and competition law principles. The framework covers the following aspects, which are outlined in more detail in section 2:

- compliance with the regulatory price control;
- compliance with competition law;
- compliance with pricing guidance and incidence impacts; and
- processes and assurance.

As the basis for providing assurance, this report focusses on whether UU's tariffs are consistent with relevant regulatory guidance (including consistency with Ofwat's final method statement for PR16, relevant licence conditions and pricing

[3] Ofwat (May 2016), Business retail price review 2016: Statement of method and data table requirements

[4] Frontier Economics (2016), NHH Default Tariff Model Audit for United Utilities.

guidance) and consistency with competition law principles. Our assessment considers the cost and margin allocation methodologies adopted by UU.

Our remit for this project did not include a review of the company's assessment of and response to managing any incidence impacts of any proposed changes to cost or margin allocations.

1.4 Materials reviewed

To inform our assessment we reviewed the following materials.

- Ofwat (November 2015), Consultation on the review of non-household retail price controls.
- Ofwat (March 2016), Draft statement of method and data table requirements – Review of non-household retail price controls.
- Ofwat (May 2016), Business retail price review 2016: Statement of method and data table requirements.
- United Utilities spreadsheet tariff model, entitle "2017 Model frontier V2-0 2017-18final k - (preGold PR16)".
- United Utilities Representation to Ofwat in October 2015 after the Draft Determination, entitled "REP10 Retail Non-Household representations".

1.5 The structure of this report

The remainder of this report is structured as follows:

- section 2 discusses the overall assessment framework;
- section 3 reviews UU's previous cost allocation methodology at the PR14 Final Determination, describes the adjustments that we considered appropriate to improve the cost reflectiveness of the cost allocation, and summarises the methodology adopted by UU for PR16;
- section 4 presents our recommended net margin allocation methodology and summarises the detailed choices of relevant parameter values by UU for PR16;
- section 5 reviews the resulting costs and net margins as well as gross margins per tariff band; and
- section 6 summarises our findings.

2 ASSESSMENT FRAMEWORK

This section describes an overall assessment framework that enables UU to test non-household retail default tariffs for consistency with regulatory and competition law principles.

The framework comprises the following strands:

- Consistency with Ofwat's method statement for PR16 – the tariff proposals should be consistent with Ofwat's method statement, and be compliant with condition B of the company's instrument of appointment.
- Consistency with competition law principles – the tariffs should be based on a robust allocation of costs and levels of net margin for each tariff band that do not result in either margin squeeze or excessive pricing.
- Consistency with general pricing guidelines and incidence impacts – the tariffs should involve no undue discrimination and ensure that incidence effects are managed appropriately.
- Processes and assurance – the process for calculating tariffs should follow a clear methodology that is properly documented, sourced and subject to assurance review.

This framework can be used by UU on an on-going basis to develop its non-household default tariffs. We have drawn on it for our approach to providing assurance. Our focus has been on assuring consistency with regulation and competition law principles, i.e. the first three elements. Finally, this report in itself is an input to the process of Board Assurance described in the fifth strand of the framework.

2.1 Consistency with Ofwat's method statement for PR16

Ofwat published its final statement of method for PR16 on 19 May 2016. In this publication, Ofwat concluded that experience from other sectors suggests that in the transition to full competition there will be a need for continued regulatory protections. In particular this protection should act to shield customers from potential abuse associated with any remaining pockets of substantial market power.

Ofwat re-iterated that it will use default tariff caps to provide this 'back-stop' protection for consumers. Confirmation was also provided that default tariffs will only cover existing tariff structures, and will not apply to innovative tariffs that emerge.

We provide below a summary of the key elements of Ofwat's final statement of method for PR16. Our review has assessed whether UU's approach is consistent with Ofwat's expectations.

- **Average cost to serve:** Ofwat concluded that it would not be in the interests of consumers to revisit the matter of average cost to serve at this time. Companies will therefore be required to make proposals for default tariffs on

the basis of the PR14 levels for average cost to serve. Ofwat did not rule out considering these issues at PR19, when retail and wholesale price controls will be reviewed together, and Ofwat will have the benefit of information revealed from the first few years of competition.

  - Ofwat accepted that incumbent retailers might benefit from economies of scale, but felt that it would not be appropriate to artificially set prices above efficient levels. Ofwat felt that doing so would not protect customers, and would not be necessary to encourage efficient entry.
  - Ofwat stated that it does not consider that comparisons with the energy sector constitute compelling evidence that cost allowances in the retail water price control are set too low.
  - Ofwat did state however that if substantial new evidence emerges that demonstrates the existing cost to serve is not in the best interests of customers, it will re-consider this at the PR16 draft determinations.

- **Net margins:** Ofwat stated that it intends to maintain the total net margin at 2.5% of total revenue. However, Ofwat stated that it would consider working capital costs again, once there is more clarity on the final proposals for the working capital arrangements that will apply after market opening.
- As companies must ensure that their default tariffs meet this total retail margin across all tariff groups, this means that the margin for one tariff group can only rise if the margin for another group falls.
- **Customer numbers and eligibility:** Ofwat will update the definitions in the regulatory accounting guidelines (RAGs), so that the automatic revenue adjustment mechanisms deal with changes in the eligibility criteria. Ofwat will not separately add a guarantee of revenue neutrality, as it feels this would modify the PR14 settlement and create additional complexity for PR19. Further confirmation was provided that if a company's Board is satisfied that modest changes to customer numbers would have no substantial impact on cost/margin allocations, the Board would not need to submit proposals for revised default tariff caps.
- **Uniform caps for medium and large users.** Ofwat concluded that issues of potential margin squeeze appear particularly pronounced for larger customers, where margins for default tariff caps appear 'relatively tight'. Ofwat felt that such caps might constrain companies' behaviour and could prevent companies from being held fully accountable for any anti-competitive behaviour. Ofwat therefore concluded that it would be appropriate to set uniform tariff caps for medium and large users.
  - The uniform bands would be *average price caps*, so each company would be able to charge less than the cap.
  - Ofwat's initial expectations for the level of these caps are: a gross margin of circa 5% for customers using 5Ml to 50Ml; and a gross margin of circa 3% for customers using over 50Ml. These caps will apply separately for water and sewerage users (with trade effluent customers' tariffs falling under the sewerage default tariff caps).

- Ofwat may change the level of these uniform caps at the PR16 draft determination.
- Ofwat will not make changes to the bespoke company-specific controls for customers that use less than 5Ml. Ofwat does not consider that it would be appropriate to make automatic balancing adjustments to the default price caps for smaller customers.
- If incumbent companies want to rebalance the default tariff caps that will apply to customers consuming less than 5Ml, or if they need to create a new default tariff cap (due to the new caps cutting across existing bands), these companies will need to provide new information that clearly justifies their new cost and margin allocation. The evidential bar that Ofwat will apply to these proposals will be high.
- Ofwat may also introduce a supplementary restraint that prohibits companies from making increases in default retail tariffs that lead to a more than one percentage point increase in final prices in any year.
- Ofwat will confirm whether it will take this approach at the PR16 draft determination.

- **Board assurance:** Ofwat has the same requirements on companies' Board assurance as before, i.e. that the information provided by companies is consistent with their legal obligations, that proposals have been informed by customer engagement and that cost/margin allocations are reasonable.

2.2 Consistency with competition law principles

In order to assess whether UU's non-household retail tariffs are likely to be consistent with competition law principles, we first need to establish the relevant competition law issues that could arise. The principles of competition law are reflected in the licence conditions that incumbent water companies must meet and in Ofwat's charging scheme rules. For example, licence condition E states:

> "*It shall be the duty of the Appointee in fixing or agreeing charges…that no undue preference is shown to, and that there is no undue discrimination against, any customer or potential customer".*[5]

We further note that licence condition R more generally requires that incumbent companies do not engage in any anti-competitive behaviour. Since our work is specifically related to the design of charges, rather than UU's behaviour more generally, we have only assessed UU's proposals against licence condition R insofar as they relate to the setting of charges.

We also note that competition law principles are reflected in the charging scheme rules issued by Ofwat.[6] These rules mainly relate to the wholesale charges that incumbent companies set, which are outside the scope of this review. However, to

[5] Department of the Environment (2015): Instrument of Appointment by the Secretary of State for the Environment of United Utilities plc as a water and sewerage undertaker under the Water Act 1989.

[6] Ofwat (November 2015), Charges scheme rules issues by the Water Services Regulation Authority under sections 143 (6A) and 143B of the Water Industry Act 1991

the extent that these rules also apply to the retail charges that companies set, they are relevant to our review.

In reviewing whether UU's tariffs are consistent with licence conditions E and R, the charging scheme rules issued by Ofwat, and the underlying competition law principles, we have identified the following aspects of tariff design that UU's proposals should meet.

- First, prices should be cost reflective, including a reasonable basis for the allocation of joint or common costs.
- Second, the profit level or margin should reflect a reasonable level of return that might be expected by investors, taking account of the risks involved. A margin that is too high relative to this level could be considered to be excessive pricing. A margin that is too low relative to this level could be considered to be anti-competitive by restricting efficient entry (a margin squeeze).

If the proposed tariffs meet these two principles, then no one tariff group should be given undue preference, or be unduly discriminated against.

This section therefore provides a high-level overview of:

- cost reflective charging;
- the issue of margin squeeze, and then further details on how margin squeeze can be tested in practice; and
- the risk of excessive pricing.

2.2.1 Cost reflective charging

There are a number of important cost concepts to be considered when assessing the cost reflectivity of tariffs.

- Direct costs – these are costs that can be directly attributed to a specific service or activity.
- Joint costs – these are costs than can be directly attributed to two or more activities but cannot be directly attributed between them.
- Common costs – these are costs that cannot be directly attributed to an activity or service.
- Stand-alone costs (SAC) – this is the total cost of providing a single service independent of any other service.
- Incremental cost – this is the additional cost of providing a service alongside the provision of an existing group of services. This can be a long-run incremental cost (LRIC) which includes the capital costs of providing a service on a permanent basis.

The principles of cost reflective charging are as follows.

- All costs that can be directly attributed to a service should be attributed to that service. For example, the cost of a member of staff who works exclusively with large retail customers should be assigned to that group.

- Joint or common costs should be allocated between the relevant services using a metric that reflects the relative scale of the different services. For example, the allocation could be based on:
  - an equal proportionate mark-up on direct costs;
  - proportionate to the revenue of the service; or
  - some operational characteristic (e.g. number of customers or number of bills).
- There is no single 'right answer' to the allocation of common costs. It can be important to understand the sensitivity of the results to alternative allocation rules.
- The sum of direct costs and allocated common costs for any service should not be greater than the stand-alone cost or less than the incremental cost. These conditions set the boundaries around the allocation of common costs and provide an important cross-check on the method used.

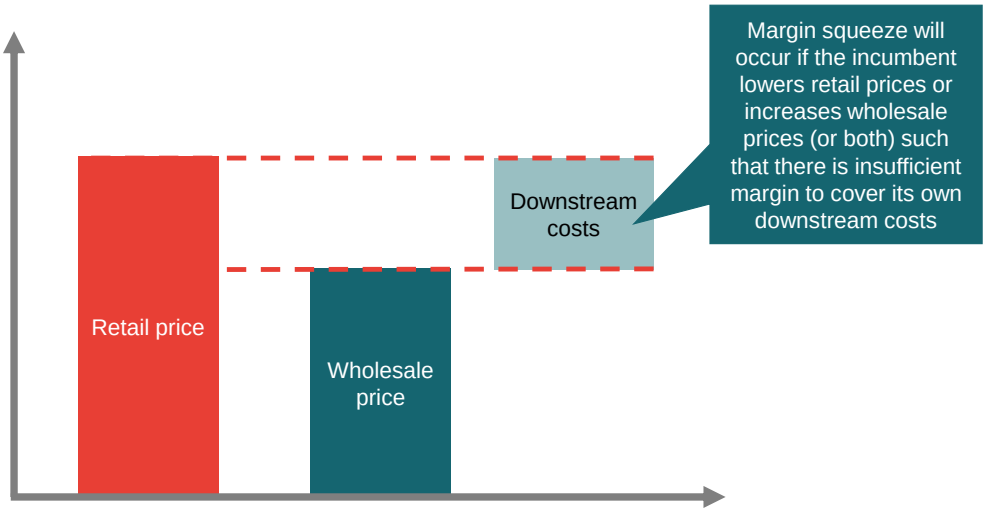
Ofwat has provided guidance on the identification of direct costs and the allocation of common costs. One key question therefore is whether this guidance has been followed and, if not, whether there is a clear justification (either in terms of data availability or objective rationale) for the decision to depart from the guidance.

2.2.2 Margin squeeze

Margin squeeze arises a when vertically integrated firm increases its wholesale margin and lowers its retail margin to deter entry in the downstream retail market.

The issue of margin squeeze arises when an incumbent firm is vertically integrated so it provides upstream (wholesale) services and downstream (retail) services. The wholesale services are essential for the provision of downstream services. If a competitor wants to enter the market to provide retail services, it has to buy the wholesale inputs from the incumbent. To avoid entry, the incumbent can lower its retail margin so that the potential new entrant cannot operate profitably at the new retail margin. Exhibit 2 below illustrates this concept. In order to assess UU's non-household retail tariffs, we therefore need to consider whether the margin in each tariff group is sufficient to allow a new entrant to make sustainable profits.

Exhibit 2. Illustration of margin squeeze

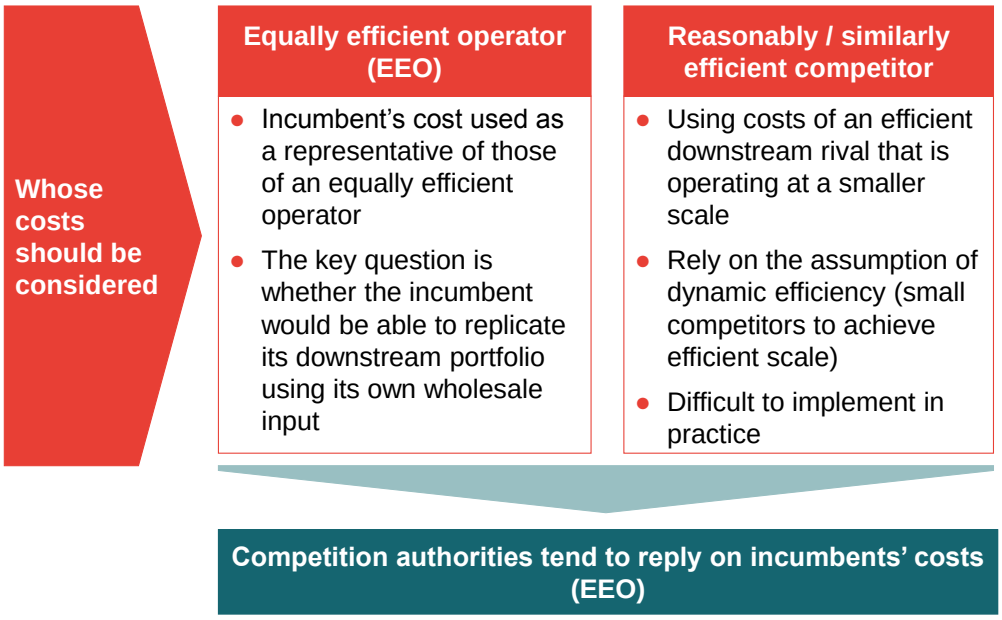


Source: Frontier illustration

How do we test for margin squeeze?

The test generally applied by competition authorities when considering margin squeeze is that of an equally efficient operator (EEO). The test is whether an EEO is able to enter the market and make sustainable profits. The EEO is generally defined on the basis of the incumbents' costs so the test is whether the incumbent is making sufficient profits based on its current cost structure. In addition, competition authorities have considered the concept of a reasonably efficient operator (REO). In this case the potential entrant may be assumed to be slightly less efficient than the incumbent, e.g. as it does not benefit from the same economies of scale. Exhibit 3 illustrates both concepts.

Exhibit 3. 'Equally' efficient or 'reasonably / similarly' efficient operator?



Source: Frontier illustration

In practice, it is not clear which approach would be applied in the case of a margin squeeze test in the water sector. Generally, considering the EEO at this stage is reasonable as the purpose of market opening is to encourage efficient new entry.

The additional consideration is whether the Equally Efficient Operator should be assessed based on UU's actual costs or on the allowed costs that Ofwat has determined to be reasonable for an efficient operator.

The advantages of using actual costs are:

- It is more consistent with the precedent from competition authorities which has focussed on actual incumbent costs.
- Allowed costs may depart from the efficient, for example due to changes in input prices.

The advantages of using allowed costs are:

- Consistent with a regulatory assessment of efficient costs based on comparative assessment. Precedent generally relates to single firm industries, but in this case, where comparators are available, authorities may place greater weight on comparative data.
- Consistent with regulatory determination. Calculated margins would line-up to the regulatory margins in the tariff proposals.

At this stage we consider that the advantages of using allowed costs are greater, unless there is strong evidence that actual costs have diverged from allowed costs based on valid cost drivers.

If UU allocates allowed costs based on detailed data on actual costs, there is a question of how to reconcile the two. It would appear reasonable to apply this as a proportionate adjustment to all costs.

As a result, we consider it appropriate to assess UU's non-household retail tariffs by considering the EEO test based on allowed costs.

Variations in margin by tariff band

The margin squeeze test could be based on considering a new entrant that provides the full range of services that the incumbent provides or a sub-set of those services. We consider it appropriate to assess entry on the basis of each tariff band so a new entrant should be able to sustain sufficient profits if it only provides services for one tariff group.

Therefore variations in margin can be justified if they relate to objective differences between tariff bands in terms of either:

- The amount of capital (working capital, fixed assets or risk capital) required to provide the service to the tariff band.
- The level of risk (e.g. bad debt risk, cost risk) faced by the retailer in relation to the tariff band.

Differences in margin should be justified in terms of capital and risk factors and based on objective evidence. Care must be taken in extrapolating from historic

data on a relatively small sample (e.g. on bad debt experience) to justify differences between bands.

The methods to calculate these margins are discussed in the separate working paper.

Risk of compliance failure in relation to margin squeeze

In the water sector, the separate price control structure means that there is a wholesale price and a retail price, which together constitute the final price. The risk of a compliance failure on margin squeeze is greatest if there is any tariff band with a negative retail margin.

If the retail margin is positive then the risk of a compliance failure in relation to margin squeeze will decline as the level of margin increases. It should be noted that there will a degree of uncertainty around the allocation of capital and the assessment of risk in determining the appropriate margin for each tariff band. As a result there is a possibility that a competition authority will determine an appropriate level of margin that is different to the company's assessment. Therefore it is not possible to state that the risk of compliance failure is zero if the margin is set at the target level based on a reasonable methodology for allocating costs and risks. Nevertheless, following a clear and robust method is core to minimising the risk and consequence of a compliance failure.

It is for this reason that some of the other tests in the framework, such as the comparative assessment, are important for assessing tariff proposals.

Assessment of excessive margins

A complaint about excessive pricing could arise if margins are set above the competitive level. In practice there is a (non-trivial) range around the competitive level where the risk of a complaint (of either excessive margin or margin squeeze) being upheld is relatively low. This can be seen from the following extract from the CMA's guidance, which highlights that information of profit levels needs to be interpreted carefully in a competitive assessment:

> *"In practice, a competitive market would be expected to generate significant variations in profit levels between firms and over time as supply and demand conditions change, but with an overall tendency towards levels commensurate with the cost of capital of the firms involved. At particular points in time the profitability of some firms may exceed what might be termed the 'normal' level. There could be several reasons, including cyclical factors, transitory price or other marketing initiatives, and some firms earning higher profits as a result of past innovation, or superior efficiency.*
>
> *However, a situation where profitability of firms representing a substantial part of the market has exceeded the cost of capital over a sustained period could be an indication of limitations in the competitive process."*[7]

[7] Competition and Markets Authority, *Guidelines for market investigations: Their role, procedures, assessment and remedies*; April 2013.

In practice there would need to be evidence of persistent profitability that was materially above the competitive level for a competition authority to conclude that this was clear evidence of excessive pricing.

2.3 Compliance with pricing guidelines

The next area of the assessment framework covers whether the tariff proposals are consistent with pricing guidelines as summarised in section 1.4. The main questions to be addressed relate to discriminatory pricing of customers and the assessment of incidence impacts.

Undue discrimination would arise where customers with the same characteristics were charged differentially with no robust cost based justification. There may be exceptions for instance, where uniform prices are a result of a specific policy e.g. regional averaging of tariffs, or where cost differences are immaterial, reflect legacy issues outside a customer's control or random variation. Simplicity in charging structures may also be a valid reason to have a more aggregated pricing approach.

To avoid undue discrimination attention is needed to cost allocation and the structure of tariffs. For PR16, and the assessment of default tariffs, tests of cost reflectivity are first important at the level of the reported tariff bands, but for competition law more generally, assessments might be made at the level of a tariff, a customer group or individual customer.

Changes to the allocation of costs and margins between the tariff bands could give rise to incidence impacts on customers, although we note that changes in retail charges may be dwarfed by the changes in wholesale charges. Where changes in tariffs are material and caused by changes in retail charges rather than wholesale charges, the company should demonstrate that it has:

- evaluated the impact of the tariff change on customers; and
- considered steps to transition the changes on customers in order to manage the impact (while maintaining compliance with competition obligations).

More generally, where material changes are proposed, the company should engage with customers to test the acceptability of the pricing principles and methodology.

2.4 Processes and assurance

This area of the assessment framework covers the processes and assurance underpinning the tariff proposals. A properly documented and reviewed method for setting prices is very important in the context of competition compliance. Evidence of following a defensible methodology can play an important role in demonstrating that the company has not engaged in deliberate exclusionary practices, even if an authority determines that the actual prices are not appropriate.

The processes should include calculations of costs, margins and tariffs that are properly documented and where the input data can be traced to appropriate sources. In addition the methodology and calculations should be subject to an

assurance process and UU should have a clear internal assurance process for the approval of tariffs.

To that end, this report serves the purpose of providing the assurance on the methodology of cost and net margin allocation and its associated modelling. As a result of using the methodology and modelling approaches described in this report, the final tariffs that UU proposes can be considered in line with sound economic principles and consistent with the regulatory price control and competition laws. However, this report does not provide assurance on the input data including cost data, cost driver data, and so on.

3 COST ALLOCATION

This section describes our assessment of the approach UU adopted at the PR14 FD in allocating costs between the default tariffs for the non-household retail customers. Furthermore, it explains the recommendations we proposed UU to adopt for PR16. Finally, it summarise the methodology that UU has chosen to adopt for PR16, taking into account our recommendations.

The structure of this section is as follows:

- we start by considering the theoretical principles of cost allocation, including the use of cost drivers;
- we then describe Ofwat's current guidance on cost drivers, as this forms the basis of comparison for UU's current methodology;
- next we examine the cost allocation process shown in the tariff model which UU used to produce its final submissions to Ofwat as part of the PR14 price control review process;
- based on the outcome of this analysis, we discuss a range of options for improving the accuracy of the cost allocation approach and describe the changes we made to the cost allocation module of UU's existing tariff calculation model; and finally
- we summarise the final methodology that UU has adopted, taking into account our recommendations and the new cost driver data available for PR16.

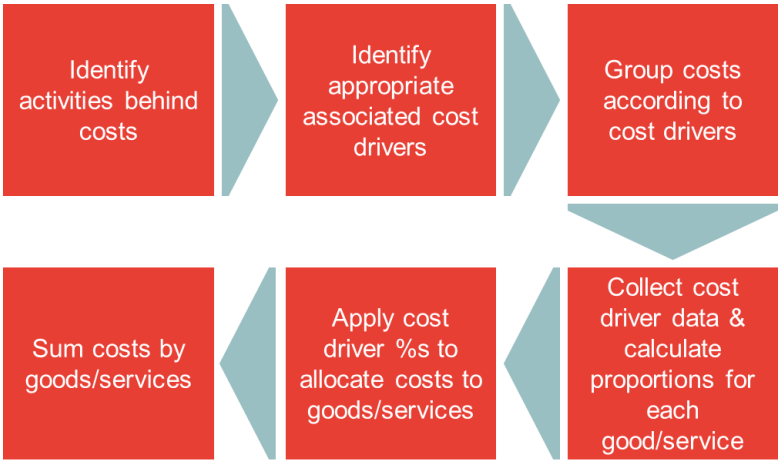
3.1 Principles of cost allocation

Cost allocation is the process of apportioning a company's costs to the specific goods or services that are produced. Costs can be either:

- **direct** – i.e. they are directly attributable, in the sense that the elements relating to each of the individual goods or services they help to produce can be separately identified; or
- **indirect** – i.e. they cannot be directly attributed and therefore must be linked to the specific goods and services they help to produce on a more indirect basis, using cost drivers.

Exhibit 4 below explains the steps typically used to allocate indirect costs, using appropriate cost drivers.

Exhibit 4. Allocation of indirect costs



Source: Frontier analysis

The cost drivers should closely represent the activities underlying the costs. This will ensure that more of a particular cost is allocated to those goods and services which are associated with a higher value of the underlying cost driver.

Although it may be possible to identify the most appropriate cost drivers, there is an issue of data availability. If volume data for those drivers is not available, it may be necessary to use alternative cost drivers which are slightly less cost reflective. Alternatively, the company may decide to collect different data in order to ensure that costs are allocated in the most appropriate manner.

3.2 Ofwat guidance on cost drivers

Ofwat has produced guidance on the allocation of costs between default tariffs (i.e. between a company's tariff bands). This is found in the document "Setting price controls for 2015-20 – guidance for companies on producing default tariffs" (see Section 5, in particular Table 4, reproduced below in Exhibit 5).

Exhibit 5. Ofwat's guidance on cost drivers

Cost type	Cost driver
Billing	Number of bills raised
Contacts	Customer numbers
Debt management	Customer numbers
Doubtful debt	Directly attributable
Meter reading	Number of meter reads
Depreciation	Proportioned in line with billing & contact costs

Source: "Setting price controls for 2015-20 - guidance for companies on producing default tariffs", Ofwat

The guidance sets out Ofwat's minimum requirements for allocating costs between non-household retail tariff bands. However, companies are encouraged to use more cost reflective allocation approaches than this. Ofwat also states that it has ensured this set of drivers are consistent with those proposed for the household/non-household split of costs, while accepting that a slightly lower bar should be applied in this case.

The guidance provided by Ofwat on the cost drivers for use in allocating costs between household and non-household services is indeed more detailed (see "2014 price review cost allocation for retail and wholesale price controls" – Section 3.2, in particular Table 2). Given Ofwat's comments this could be considered a good basis for determining the 'ideal' set of cost drivers for default tariff as well. As shown below in Exhibit 6, there is some overlap between this guidance and the minimum requirements, but in some cases the cost drivers proposed are more sophisticated and should be more cost-reflective.

Exhibit 6. Ofwat's guidance for cost allocation between household & non-household retail price controls vs. minimum requirements on non-household default tariffs

Cost category	Ofwat guidance Default tariffs	Ofwat guidance Household / Non-household 1st preference	2nd preference	3rd preference
CUSTOMER SERVICES:				
Billing	No. of bills raised	No. of bills raised		
Payment handling, remittance & cash handling	No. of bills raised	No. of payments received		
Network & non-network customer enquiries & complaints	Customer numbers	Time spent on those enquiries & complaints	Volume of enquiries & complaints	
Debt management	Customer numbers	Debt outstanding for > 30 days		
Meter reading	No. of meter reads	Time spent on meter reading	No. of meter reads x average time taken	No. of meter reads
Doubtful debts	Directly attributable	Directly attributable		
Depreciation	Proportioned in line with billing & contact costs	Apportion in line with use of fixed assets		
OTHER OPERATING COSTS:				
Demand-side water efficiency initiatives	-	Directly attributable	Customer numbers	
General & support expenditure	-	Customer numbers		
Other business activities	-	Appropriate cost driver (depending on underlying costs)	Customer numbers	
Local authority rates	-	Customer numbers		

Source: "2014 price review cost allocation for retail and wholesale price controls", Ofwat; "Setting price controls for 2015-20 - guidance for companies on producing default tariffs", Ofwat

In order to assess whether UU's current cost allocation approach would be considered appropriate by Ofwat, we could start by checking whether it meets the minimum cost driver requirements as defined by Ofwat. If an alternative is proposed, it is then necessary to consider if they are justified because they are more cost-reflective than the guidance or if they are the best alternatives given

available data. In the first instance, we will use the cost drivers proposed for the household/non-household analysis as a form of comparison. We can then determine whether data would be available at a suitable level to enable UU to apply more preferred cost drivers.

3.3 UU's cost allocation methodology at PR14 FD

The model used by UU at PR14 FD, which generated the tariff proposals for the final determination, took cost data split between 'key' & 'non-key' customers, where possible, and then allocated those costs initially to tariffs (where a tariff represents a specific fixed or volumetric charge). The resulting costs were grouped up by tariff band.

We understand that costs were allocated to individual tariff, rather than tariff band, for two reasons:

- First, it is easier in terms of collating the required cost driver volume data.
- Second, allocating costs to specific tariff is beneficial internally, as customers are charged based on these specific tariffs and hence UU needs to determine cost-based tariffs.

However, we note that this level of disaggregation is not required for submission to Ofwat.

Exhibit 7 below indicates the cost driver used to allocate each cost group. It also sets out the costs included in each group, whether the costs were split between key and non-key customers prior to applying the cost driver and whether this approach was consistent with the minimum cost driver requirements set out in Ofwat's guidance.

Exhibit 7. UU's cost allocation methodology at FD

Included costs	Key / Non-key split?	Cost driver – by tariff	Consistent with min. requirements?
Billing	✓	No. of bills raised	✓
Payment handling, remittance & cash handling	×	Customer numbers	✓
Network & non-network customer enquiries & complaints Debt management	✓	Customer numbers	✓
Meter reading	n/a	No. of meter reads	✓
Doubtful debts	✓	Bad debt provisions	✓
Depreciation	×	Sum of billing & contact costs	✓
Other operating costs:	×	All other "fixed" costs – key & non-key customers	No guidance (but seems reasonable, although should be against all other costs)
Direct debit reduction (£2.50 / customer)	×	EPMU against certain costs: Billing; Payment handling; Non-network customer enquiries & complaints; Debt management	No guidance (but seems reasonable)

Source: Frontier analysis of UU model

It is clear from Exhibit 7 that UU was either applying the minimum required cost drivers, as defined by Ofwat, to the relevant costs or the approach taken was an improvement on this. In other cases, Ofwat has not provided any specific guidance against which a comparison can be drawn. This is explained in more detail below.

3.3.1 More than the minimum requirements

In relation to some of its costs, UU was able to directly allocate between key and non-key customers first, before then applying the required cost drivers. This improved the level of accuracy compared to just applying the same cost drivers to the total costs. This included:

- Billing costs;
- Costs associated with customer enquiries & complaints;
- Debt management; and
- Doubtful debts.

3.3.2 Outside of the minimum requirements

Ofwat provides no guidance on how 'Other operating costs' should be allocated between default tariffs.

UU allocated its direct debit rebate against those costs which are reduced when a customer pays by direct debit. This seemed to be a reasonable and suitably cost-reflective method.

UU used allocated the remaining costs to tariffs using all fixed costs as a cost driver. Since these costs were either quite immaterial (in the case of local authority rates and demand-side water efficiency initiatives) or largely represented true overheads (in the case of general & support expenditure and other business activities), such an approach seemed reasonable. However, given the fact that these costs are overheads, we proposed that they should be allocated in line with all other costs, rather than just those that have been defined as fixed.

3.4 Approach to improving cost allocation

Having reviewed UU's cost allocation methodology at PR14 FD, we identified areas that could be further improved in order to enhance the cost reflectiveness of the cost allocation process. In summary, we considered the following three elements of improving the cost allocation methodology:

- we considered a revamp of cost categorisation, and more specifically the categorisation of fixed and variable costs and costs attributed to key and non-key customers;
- we identified better (more cost-reflective) cost drivers that could be applied to the different cost items, while considering if any adjustments were necessary; and
- we explored with UU potential future improvement on the representativeness of cost driver data.

We discuss these three elements in more detail below.

3.4.1 Improved cost allocation – categorisation of costs

As discussed earlier, UU's cost allocation methodology at PR14 went beyond Ofwat's minimum guidance in that it first identified costs attributed to key and non-key customers before further allocating them down into appropriate tariffs. More specifically, there were 'select' and 'standard' tariffs, which roughly reflected the key and non-key customers who pay for these respectively.

However, we identified two potential improvements to be made on this methodology.

Categorisation of fixed and variable costs

The methodology categorised costs related to key customers in a different way from those related to non-key customers. Essentially, all costs related to serving key customers were allocated across both the fixed and variable select tariffs which are designed for UU's key customers. However, costs related to serving non-key customers were first categorised into fixed and variable cost before being allocated to fixed and variable standard tariffs respectively. Tariffs that have both a standing

charge and a volumetric charge component to them had appropriate fixed and variable costs allocated to them.

We proposed to eliminate the difference in methodology between the key and non-key customers and for the select tariffs to follow the same structure as the standard tariffs. UU has followed this suggestion in its PR16 approach and the model now allocates the costs related to serving key customers in the same way as the allocation of costs related to non-key customers.

Categorisation of key and non-key customers

Some key customers are on standard tariffs because they have multiple small sites which individually do not qualify for select tariffs. These customers are nonetheless key customers due to the aggregate size of their businesses, and therefore receive key customer services (e.g. dedicated account managers).

The cost allocation methodology adopted at the PR14 FD meant that the cost of serving these customers was allocated to select tariffs, which they do not pay. This creates a situation where the recovery of costs would not be aligned with the customers who generated those costs. An adjustment was therefore necessary to take this into account.

At its Representation to Ofwat after the PR14 Draft Determination in October 2015, UU proposed this necessary adjustment that involved reallocating 44% of the costs associated with key customers – approximately the percentage of costs incurred by key customers on select tariffs – into standard tariffs.

Even though UU's Representation was subsequently rejected by Ofwat, we believe that this adjustment should be carried out as it makes tariffs more cost-reflective compared to the scenario without the adjustment. The current PR16 methodology therefore includes this adjustment. We understand that based on the latest data, this figure is now updated to 61% for PR16 from 44% at the PR14 Representation.

In the longer term, there may be a business decision to be made as to whether or not UU wants to introduce other tariffs to key customers in such way that the above problem would no longer occur rendering the adjustment redundant. In that case, the calculations currently made for this adjustment would be useful information for the design of the potential new tariff.

3.4.2 Improved cost allocation – choice of cost drivers

Ofwat recommends companies to use drivers that go beyond the minimum requirements set out in its guidance. We therefore considered if data for alternative drivers would be available, drawing on Ofwat's guidance for allocating costs between household and non-household tariffs.

Exhibit 8 summarises the results of our review of alternative cost drivers. We identified three categories of cost drivers:

- the ones that no change is need;
- those that we proposed to update; and
- those that may be updated later when more data becomes available.

Exhibit 8. UU's cost allocation methodology at PR14 FD and our proposed alternatives

Included costs	Key / Non-key split?	Cost driver – by tariff	Consistent with min. requirements?	Proposed alternative cost driver
Billing	✓	No. of bills raised	✓	Use existing driver
Payment handling, remittance & cash handling	×	Customer numbers	✓	No. of payments received
Network & non-network customer enquiries & complaints Debt management	✓ ✓	Customer numbers Customer numbers	✓ ✓	No. of enquiries & complaints Debt outstanding for more than x days
Meter reading	n/a	No. of meter reads	✓	Use existing driver
Doubtful debts	✓	Bad debt provisions	✓	Use existing driver
Depreciation	×	Sum of billing & contact costs	✓	Use existing driver
Other operating costs:	×	All other "fixed" costs – key & non-key customers	No guidance (but seems reasonable, although should be against all other costs)	EPMU against all other costs
Direct debit reduction (£2.50 / customer)	×	EPMU against certain costs: Billing; Payment handling; Non-network customer enquiries & complaints; Debt management	No guidance (but seems reasonable)	n/a

Source: Frontier analysis

We now look at the different alternatives that we proposed in turn.

Cost drivers where no change was needed

- Billing – The cost driver (number of bills raised) used at PR14 meets the requirements and Ofwat's guidance on allocating costs between household and non-household tariffs. We did not propose any alternative and as these costs were recorded separately between key and non-key activities, this improved the reliability of the allocation, relative to allocating directly across all tariffs.
- Meter reading – The cost driver used at PR14 was the number of meter readings. In theory, one alternative (based on Ofwat's guidance) would be the time spent reading meters, as this should more closely reflect the activity

underlying the costs incurred in reading meters. However, we understand that UU outsources all of its meter reading to a separate company which charges by the number of meter reads, rather than the time taken. In this case we therefore considered the PR14 cost driver to be fully cost reflective.

- Doubtful debts – The cost driver at PR14 was the level of doubtful debts charged for each tariff. Therefore, applying this to the total level of doubtful debts charges is equivalent to a direct allocation of these costs and hence is compliant with the Ofwat requirements. There can be no better way of allocating these costs than a direct attribution, therefore we recommended UU to retain this cost driver for PR16. UU told us that for PR16, due to the change in billing system, doubtful debt cost is no longer first split between key and non-key customers, but instead directly allocated by the cost drivers into the tariffs. The company has said that since bad debt cost from key customers only accounted for an immaterial proportion of the total, this change does not cause any effect in the cost allocation results.
- Depreciation – Forecast depreciation charges were allocated in proportion to the amount of billing and contact (i.e. customer enquiries & complaints) costs already allocated by tariff, in the PR14 model. This was in line with Ofwat's minimum requirements, although Ofwat's guidance on allocating costs between household and non-household tariffs states that usage of the fixed assets is a better basis. In UU's October Representation to Ofwat, it proposed a split of fixed asset for the purpose of the estimation of a cost of capital. Over half of the fixed assets were allocated using number of bills raised and the remainder using customer number. We understand that this reflected the fact that the billing system reflects the larger part of the total and buildings & other minor assets the remainder (hence the allocation method seemed reasonable). However, for PR16, UU has only one single figure for the NHH fixed assets which covers billing and customer enquiry management. This means that the appropriate cost driver should be the sum of the billing and contact costs, similar to what was done at PR14.
- Direct debit reduction – There is no relevant guidance on this 'negative' cost. However, UU's approach at PR14, which involved allocating it in relation to the level of those costs which were reduced as a result of customers paying by direct debit (i.e. billing, payment handling, non-network customer enquiries & complaints & debt management), seemed both reasonable and cost-reflective. Therefore we recommend this to be retained for PR16.

Cost drivers that Frontier recommended UU to update

We recommended UU to update the following cost driver for PR16:

- Other operating costs – None of these specific costs are referred to in Ofwat's minimum guidance. One alternative method for allocating these costs, rather than proportional to all other fixed costs, would be to allocate in relation to customer numbers. This would be in line with Ofwat's household/non-household cost driver guidance, although this does not seem likely to be more accurate. We understand that the majority of the costs within "other business activities", which is the largest element of the total, are overheads. Therefore,

it seems appropriate to redefine the allocation method as equi-proportional mark-ups across all other costs, rather than just all other fixed costs as this would be the more normal treatment of true overheads.

- Payment handling, remittance & cash handling – Ofwat's guidance on allocating costs between household and non-household tariffs proposes number of payments received as an appropriate cost driver for these costs. It is clear that this would be more reliable than the cost driver at PR14 (number of bills raised), as the activity behind these costs is dependent on the volume of payments coming in over that period. If reliable data on the number of payments received can be collected, we recommended this to be used as a cost driver and incorporated in the model.
- Debt management – The cost driver for this cost at PR14 was customer numbers. Ofwat's guidance on allocating costs between household and non-household tariffs suggests that the level of debt outstanding for more than 30 days would be the most appropriate cost driver. However, this driver would only be valid if the activities undertaken by the debt management department to pursue unpaid bills starts when they have been unpaid for 30 days. We therefore recommended UU will to collect and use appropriate data according to debt management activities.

Suggestions for potential new cost driver data collection in future

Finally, we also identified a potentially preferable cost driver which could be used to further improve cost allocation, which would only be possible with new data collection for NHH retail customers in the future. We note, however, that it is not necessarily practical to achieve in the short run, and not for PR16. It is therefore a longer-term consideration that UU may want to take into account.

- Network & non-network customer complaints & enquiries – Ofwat's guidance on allocating costs between household and non-household tariffs proposes the number of calls made, or preferably the time spent dealing with those calls, to be an appropriate cost driver for these costs. This would be an improvement on customer numbers which does not necessarily provide a good link with the costs incurred in dealing with customer calls. Currently there is no data on calls split between network and non-network complaints and enquiries, so even though the costs are broken down to that level they would currently have to be aggregated together for the purpose of allocation. As a result, in using this better cost driver, one would lose the cost reflectiveness of the split of cost categories. We therefore noted that UU may want to start collecting data on either the volume of calls or the time spent on calls split between network and non-work complaints, which can be used as a preferable cost driver than the current one.

3.5 UU's proposed cost allocation for PR16

UU's proposed cost allocation methodology for PR16 has taken into consideration our recommendations above, and implemented changes to the extent that data is available. More specifically, UU has implemented the following changes:

- It has redefined the cost categories that reflect separate types of costs, such as key/non-key and fixed/variable. This allows more flexibility and enables the user to vary the driver used to allocate each type of cost.
- It has redefined all cost categories according to select/standard and fixed/variable tariffs, and ensured that they are allocated to tariffs accordingly.[8]
- It has incorporated the adjustment proposed at October Representation which involved reallocating 61% of the costs associated with key customers to standard tariffs.
- It has updated the cost driver for 'other operating costs' – redefined as EPMU across all other costs, rather than just all other fixed costs (as the majority of these costs are overheads).
- It has changed the cost driver for payment handling cost from the number of customers at PR14 to the number of billed raised. This is slightly different from the number of payments received as recommended by us, but the company believes that the number of payments received does not necessarily provide a more accurate driver for payment handling costs as with a lot of automatic payments, the handling cost may be more in line with the bill rather than the actual payment instalments.
- It has changed the cost driver for debt management cost from the number of customers to bad debt provision. This is the same cost driver as for doubtful debt costs. UU told us that our recommended cost driver – amount of debt outstanding longer than 30 days – suffers from data quality issues, and as a reasonable proxy the company has adopted bad debt provision. The company considers this as an improvement in cost reflectivity than number of customers.

A summary of cost drivers proposed by UU for PR16 is summarised in Exhibit 9 below.

Exhibit 9. UU's cost allocation methodology at PR16

Included costs	Cost driver – by tariff
Billing	No. of bills raised
Payment handling, remittance & cash handling	No. of bills raised
Network & non-network customer enquiries & complaints Debt management	Number of customers Bad debt provisions
Meter reading	No. of meter reads
Doubtful debts	Bad debt provisions
Depreciation	Billing & contact costs
Other operating costs:	All other costs – key & non-key customers
Direct debit reduction (£2.50 / customer)	EPMU against certain costs: Billing; Payment handling; Non-network customer enquiries & complaints; Debt management

Source: Frontier analysis

[8] Note that there are also tariffs considered to be both fixed and variable and an element of both fixed and variable costs are allocated to these tariffs.

In conclusion, UU has adopted approaches to cost allocation in line with those we have considered reasonably cost reflective and objectively based. We are confident that this updated cost allocation methodology/modelling is the most cost reflective, given the data available within UU at the present time.

4 NET MARGIN ALLOCATION

This section reviews the methodology for the allocation of the total net retail margin of 2.5% allowed by Ofwat into different non-household tariff bands. The structure of the section is as follows:

- we start by summarising the overall principles of the allocation, consistent with our overall assessment framework for the design of default tariffs;
- we outline Ofwat's guidance in allocating net margins;
- we then summarise the UU approach underlying the current default tariffs set at PR14; and finally
- we make recommendations for a revised net margin allocation for PR16.

4.1 Principles of the net margin allocation

Consistent with section 2 of this report, we consider that the following principles are particularly important when designing a net margin allocation methodology.

- No undue discrimination between customers, between or within tariff bands – net margin allocation should reflect the difference in risks and the opportunity cost of capital required to deal with these risks.
- An efficient retailer could enter and compete fairly – that is, the margin offered in each tariff band would be sufficient to enable and efficient entrant to earn a reasonable return.
- The allocation method should be proportionate and transparent.

4.2 Ofwat guidance on net margin allocation

Ofwat has stated in its guidance on default tariffs that it may be appropriate to allocate different levels of net margin to different customer groups.

> *"We would expect companies to consider whether it would be appropriate to have different net margins for different tariff bands, as there may be different relevant financing costs and risks associated with different customer types."*[9]

However, we are not aware of any detailed guidance from Ofwat as to how to allocate the net margins into different tariff bands.

4.3 UU's approaches at PR14 FD

4.3.1 Approach in the Business Plan and adopted at PR14 FD

In UU's Business Plan and in the PR14 Final Determination, UU's proposed approach to allocate the net margin was based on an equal allocation method. This meant that at all tariff bands, the net margin was set at 2.5% of the revenue.

[9] Ofwat, Setting price controls for 2015-20 – guidance for companies on producing default tariffs, April 2014.

This approach had the benefit of simplicity and arguably represented an equal treatment of customers. However, as the margin is to provide a return for risks, and different customer groups may pose different risks, the approach may not be consistent with principles of cost reflectivity.

4.4 Frontier recommended framework for net margin allocation

4.4.1 General approach

In this section we propose a net margin allocation methodology which we consider to be consistent with the overall assessment framework set out in section 2, taking into account the three key principles summarised above.

Ofwat's guidance states that the net margin allocated to each tariff band needs to reflect the risk and financing cost of serving the customers in that band. It is therefore important to recognise that any cost-reflective allocation of the net margin is likely to lead to a deviation from the uniform 2.5%. Indeed, Ofwat has expressed the willingness to consider changes that would address the apparent diversity in the levels of default tariff price caps between water companies, if these were supported by evidence that suggests the default tariff caps could better reflect underlying costs.[10]

In order to allocate the net margin appropriately across customer groups, we adopt a bottom-up approach that identifies the key elements of risk that might reasonably be expected to be covered by a net margin, and that might be possible to estimate objectively.[11]

The net margin reflects the profit investors are expected to earn to compensate them for the risk associated with a retail only business in the water sector. Some part of the margin is to cover the return on capital employed that can be observed on the balance sheet, another part is to cover the return on contingent capital or other risky elements of the business not already recovered from opex.

We therefore propose to group all of these elements into four categories below:

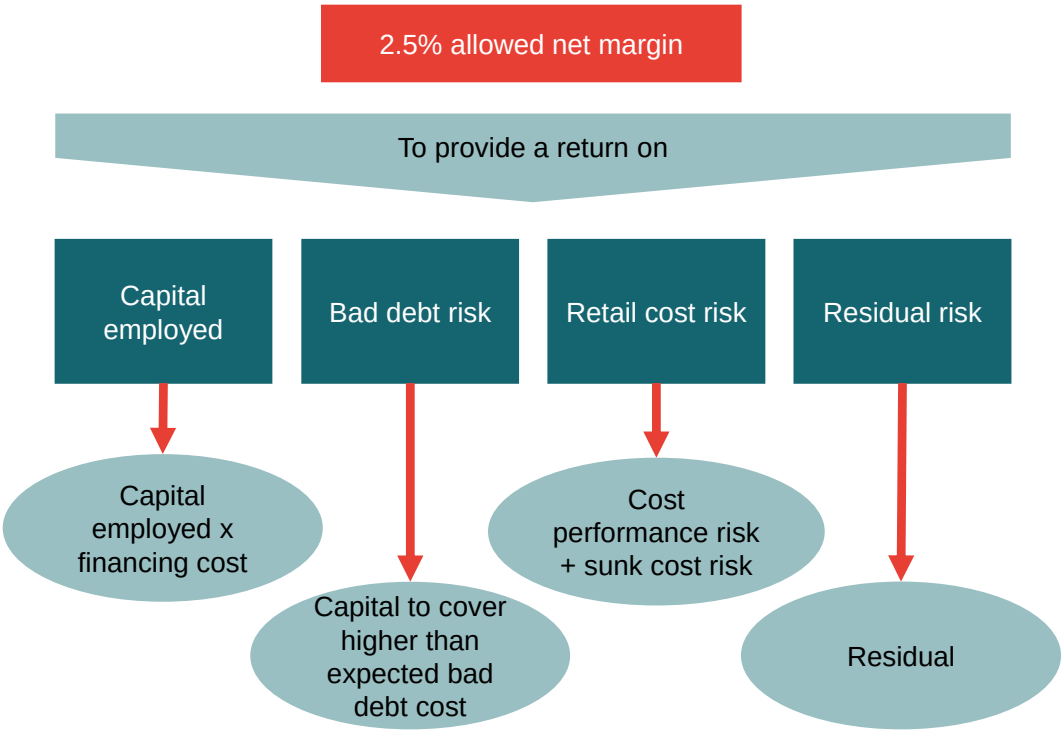
- cost of capital employed, including fixed asset and working capital;
- a return to cover bad debt risk;
- a return to cover retail cost risk and switching risk; and
- a residual return reflecting the remaining margin left after identifying and estimating plausible risk factors.

Exhibit 10 below illustrates these elements, and the high-level methodology on how they are estimated.

[10] Ofwat (November 2015), Consultation on the review of non-household retail price controls.

[11] We note that a bottom-up approach is not necessarily the only way to consider net margin allocation. Neither are the risks we highlight necessarily the only ones that might be identified, as different levels of granularity are possible. However, we believe this level of granularity is consistent with ensuring a robust evidence based methodology. Also, the approach provides a systematic and transparent methodology objectively based on sound principles. It can therefore readily provide assurance of being cost reflective and in line with Ofwat's expectations and competition law principles.

Exhibit 10. Key elements of net margin allocation



Source: Frontier illustration

We next consider possible approaches to allocate the total net margin of 2.5% according to each of these elements. In general, a two-step approach is identified as appropriate.

- Step 1: estimate the absolute value of the margin required to provide a return on each of the four key elements above; and
- Step 2: allocate the absolute value of each element into customer groups (tariff bands) using appropriate allocation methods, similar to using cost drivers for the cost allocation.

4.4.2 Capital employed

This is one of the more straightforward elements to estimate. The process distinguishes between fixed assets and working capital separately.

Fixed assets

The approach involves taking the total fixed assets forecast for each of the relevant years, and multiplying those by the financing cost. It is appropriate to consider a range of financing costs, drawing on relevant evidence, for instance:

- The WACC allowed by Ofwat for the appointed business: 3.74% in real vanilla terms, or 7.3% in pre-tax nominal terms.[12]

[12] The allowed WACC of 3.74% in the Final Determination is in vanilla real terms.

- The WACC for a standalone retail business: this may be higher than the allowed WACC for the appointed business, due to the asset-light nature of the business and the operational risks associated with it.
  - The CMA in its Energy Market Investigation estimated the WACC of a stand-alone energy retailer to be 10% in pre-tax nominal form.[13]
  - Regulators in other jurisdictions have estimated the WACC of energy retailers and the results have been slightly higher than 10% in pre-tax nominal forms.[14]

The precise estimate of the financing cost can be a choice based on UU's own judgement. Overall, in our view a nominal pre-tax WACC in the range of 7% to 15% would be reasonable.

Multiplying the value of the fixed assets and the financing rate results in an estimate of the cost of financing. This can be then be allocated across customer groups, with an appropriate cost driver. For consistency, the allocation of the financing cost of the fixed assets should be in line with the allocation of the depreciation cost of the same fixed assets. Section 3 earlier explained that UU's allocation of the depreciation cost reflects an assumed allocation of different categories of fixed assets across customer groups. This is a reasonable objectively based approach in our view and would be appropriate to use the same driver here.

Working capital

The method for estimating the cost of finance on working capital is very similar to that on fixed assets.

- First, an estimate is made of overall company-level working capital for the relevant years. This can be derived from the current estimate of debtor and creditor days, combined with the forecast revenue and costs, to estimate the total working capital for the relevant years.
- Second, this is multiplied by the financing costs to calculate the return on the working capital.
- In its study on the water retail net margin, PwC has suggested the use of a short-term financing cost of 3.2%.[15] A wider range for the financing cost of working capital, is therefore reasonable, from 3%-15%.
- However, as the WACC is the weighted average cost of all capital employed, we consider that the use of a lower rate for working capital should be combined with a higher financing cost rate for fixed assets, in order to reflect a reasonable weighted average.

There is value in running sensitivity tests on the cost of financing used in these calculations on the resulting tariffs, in order to ensure that the choice of the cost of financing does not make a material difference in the design of tariffs.

[13] The CMA, the energy market investigation, Provisional Findings, Appendix 10.4 Cost of capital, July 2015.

[14] See, for example, IPART's retail energy price control for New South Wales, Australia.

[15] PwC, Water retail margin, a report prepared for Ofwat, February 2014.

After the choice is made on the cost of financing, it can be multiplied by the amount of net working capital, and the resulting return may be allocated according to the amount of working capital broken down to different tariffs.

UU has carried out estimation of its retail working capital within its Representation in October 2015. However, although there were estimates of the actual trade debtors, there was no data to estimate the trade creditors. As a result, UU used a standard payment terms methodology to calculate trade creditors, which may not have been an accurate estimate of trade creditors for an efficient operator looking to enter the market. The resulting estimate for the net working capital was negative.

In principle it is not inappropriate to estimate creditors based on standard payment terms. However, if that yields negative working capital it raises the question whether positive cash position (which would be required to pay back the creditors in excess of debtors) need to be taken into consideration. It might be therefore helpful to consider an upper and lower bound for the estimate.

- Zero could be considered appropriate as a lower bound net working capital given current conditions in the water retail market.
- Equally, setting creditors to zero and using the pure debtors is appropriate in our view for setting the upper bound for the networking capital estimate.

Even though this would appear to be a rather wide range, the net margin allocated to finance the working capital even when using the upper bound only represents roughly 10% of the total 2.5% margin. The lower bound obviously leads to zero net margin to be allocated. Therefore, an alternative estimate of working capital will only have a moderate effect on the net margin allocation.

Nevertheless, we consider there is value in UU collecting more accurate data on creditors in the future, so that the estimate of net working capital – hence the cost of financing it – is as accurate as possible.

4.4.3 Bad debt risk

A projected level of bad debt is considered as a part of the opex, and therefore it is already taken account of in the allowed retail revenue. However, this assumes that in each period the company incurs a level of bad debt cost exactly equal to the projected level of bad debt (the allowed level).

In reality, the actual level of bad debt in each period varies, and the company must hold sufficient contingent capital to withstand the fluctuation. Therefore a provision for this element is appropriate to be included in the net margin. There is uncertainty in estimating the exact amount of capital a company must hold for the variation in bad debt.

Estimating bad debt risk

One reasonable approach is to compare actual bad debt cost with the average bad debt within a period for each tariff band/customer group. The cases which show a shortfall (where the actual exceeds the average) are those where capital is needed. It would be necessary to identify a series of historically observed shortfalls of bad debt, and use this evidence to estimate an appropriate level of capital that an

independent retail business might reasonably be expected to make provision of. The financing cost of this contingent capital can be considered a conservative estimate of the net margin required to cover the bad debt risk.

This is a suitable approach if it is reasonable to assume that the future may be the same as the past. An adjustment may be appropriate if the future is not expected to be the same, particularly when the projected bad debt may under-estimate the actual outturn in the future.

The next step is to allocate the total amount into tariffs. It would be reasonable to use the same cost driver that is used to allocate the bad debt cost in the opex allocation methodology to allocate the cost of contingent capital for the bad debt risk.

We observe that this method assumes that the bad debt variations across different customer groups are proportional to the size of the historic bad debt cost. Although there are limitations to this approach, it provides a reasonable method to allocate the margin to cover the bad debt risk.

4.4.4 Retail cost risk

Two key elements of retail cost risk can be identified:

- the risk of under-performance relative to the allowed costs, including but not limited to the effect of higher than expected wage inflation; and
- the risk of not recovering sunk costs due to customers switching to competitors.

Cost performance risk

Cost performance can face significant risks over time. Some of this risk is outside the company's control (such as cost of services, fuel prices, etc.), and the consequences of it materialising can be severe. It is hard to predict exactly how much this risk can be. But if the out-turn cost is much higher than expected, the company must hold sufficient contingent capital in order to operate the service as usual without disruption.

It is possible to analyse a number of cost performance risk scenarios, and look into the potential downside risk that companies can face. Then an appropriate margin can be allocated to compensate that risk. For example, it would be reasonable to look at scenarios where up to 2% of the retail costs need to be set aside as provision to counteract the adverse effect of significant cost setbacks caused by outside factors.

As cost performance risk might be expected to be constant across tariff bands, its impact dependent on the scale of retail costs in each band, it would be appropriate to allocate this element across tariffs in proportion to the total retail costs. Therefore, it would be reasonable to allocate this element using total retail costs as a driver.

Sunk cost risk

When retailers face competition, the risk of customers switching leads to the situation where the retailers are unable to recover fixed costs which are sunk. This implies that the minimum required margin would be higher than when such risk does not exist. This is why a default tariff designed to attract new entrants to the market should allow for these perceived risks.

In order to estimate this, two elements need to be identified:

- the sunk cost that cannot be recovered or avoided in the short run when customers switch; and
- the probability of customers switching.

The total sunk cost can be identified from the accounting fixed cost data. This can be directly identified in the cost allocation part of the existing tariff model.

The probability of switching would be ultimately a judgement as there is no accurate way of estimating it given that the market has not been open to competition to date.

It would be reasonable therefore to consider a wide range for the switching rate, e.g. between 5% and 20%. This type of wide range would allow sensitivity testing of this element of the net margin, within reason. It can also allow differences in difference segments of the market.

Some useful examples could be found from other sectors that have already opened to competition for some time, such as the energy retail market. For example, the CMA's current investigation into the energy market has found that the switching rates observed in the energy market from the domestic, SME and I&C customers are 14%, 18% and 19% respectively.[16] These numbers are indicative of what switching rates in a competitive retail water market could be like, although there is no guarantee as to the likely level of the actual switching rate in the first three years of the market opening to competition.

The margin allocated to cover the switching cost can then be estimated by the sunk cost multiplied by the switching rate.

It may not be appropriate to use different switching rates for different customer groups because of potential endogeneity in the calculation: for example, customers who are more likely to switch might be assigned a higher net margin which would lead to an even higher probability of switching. Rather, it is appropriate to view this cost risk as being in effect a risk arising from the additional variability that is a feature of a competitive market.

4.4.5 Residual risk

As Ofwat has allowed a 2.5% net margin in total for the retail business, to the extent that any of this is left unallocated after treating the first three categories mentioned above, this residual margin will also need appropriate allocation.

For this allocation a number alternative rules are considered:

[16] The CMA, Energy Market Investigation, Microbusinesses, working paper. 5 March 2015.

- Equal residual margin (in percentage terms) for all tariff bands.
- Equal residual margin (in absolute £ terms) per customer.
- Residual margin that was an equal proportion of retail costs in each tariff band.

The first method assumes that the residual risk is proportional to the size of the total bill, and therefore allocates it proportionally to total revenue per tariff band. This method allocates equal margin in percentage terms to all customer, which also means more margin in absolute terms to larger customers, and vice versa. This is in line with the equi-proportional mark-ups principle, and leads to a tariff structure with less differentiated margin allocation.

The second method assumes that the residual risk is the same for each customer. It effectively ignores the size of the bill or cost-to-serve differentials between small and large customers. It has the most pronounced effect of allocating higher net margins to small customers, and vice versa, in percentage terms

The third method assumes that the residual risk is proportional to the retail costs. Again it ignores the size of the total bill but focuses on the total retail costs incurred per customer group. It is a middle ground between the first two methods in terms of the amount differential in percentage margin between different customers.

None of the methods is necessarily the only correct one. It would be appropriate to assess scenarios with alternative usage of these three drivers. In considering which option to adopt, it would be important to examine the implications for the final overall net margin as well gross margin allocation of different tariff bands, to achievement the most balanced outcome taking into account factors such as incidence effects.

4.5 UU's proposed net margin allocation methodology at PR16

Frontier has been asked by UU to provide support on its net margin allocation modelling. We have carried out the modelling, in line with our recommended methodology set out above. We have built a net margin allocation module into UU's tariff model, in such a way that the cost allocation and net margin allocation work consistently alongside each other in UU's tariff model.

In the model, we have left the choice of certain parameters that allows UU to propose its own choice on the exact value of the parameters. In this section, we present UU's final choices on these parameters.

UU proposed to set the following parameters for the net margin allocation shown in Exhibit 11, in line with our recommended methodology.

Exhibit 11. UU's net margin allocation parameter choices

Parameter	Value
Cost of financing on fixed assets	10%
Cost of financing working capital	10%
Creditor assumption	No creditors
Bad debt risk	Cost of financing on max variation
Retail cost performance risk	2.0%
Customer switching rate	9.8%
Residual risk allocation rule	EPMU over wholesale plus retail costs

Source: UU

We note that the UU has stayed within the reasonable range on all parameters as per our recommendations. More specifically,

- Cost of financing on fixed asset and working capital at 10% can be considered reasonable and is broadly in line with Ofwat's PR14 risk and reward guidance. It is also consistent with the CMA's estimate of the retail energy market.[17]
- The size of the creditors is assumed to be zero, such that the net working capital is equal to the total size of debtors. This results in the networking capital at the upper bound of our parameter range. However, since the cost of financing working capital is likely to be a major component of the required margin for a new entrant, we consider it reasonable to put more focus on this component in the allocation of net margins.
- The return on bad debt risk is calculated as cost of financing multiplied by the maximum variation between the actual outturn bad debt cost and the average over the past six years (due to data availability). This reflects the expectation that there may be a need to hold contingent capital (at a cost) to withstand the cash requirement in case the outturn bad debt is worse than expected. This can be considered to be a reasonable and conservative estimate, as it does not cover the risk that outturn bad debt cost is more than what is allowed.
- The risk of retail cost inflation can turn out to be more than expected. We consider that an assumed 2.0% per year to be a reasonable estimate.
- Customer switching rate is assumed to be 9.8%. This is within the range that we consider reasonable.
- Finally, the residual margin according to EPMU over wholesale plus retail costs. Given that all three margin components create the effect of differentiating the net margin allocated to different tariff bands, particularly lower percentage margin for larger customers and vice versa, this allocation of the residual margin component serves to limit any further differentiations.

[17] The CMA, Energy Market Investigation, Analysis of cost of capital of energy firms, working paper, 25 February 2015.

5 UU'S PROPOSED TARIFFS FOR PR16

UU has developed a set of revised default tariffs for PR16 based on the approaches outlined in sections 3 and 4. UU has also changed its tariff band structure for PR16, in line with Ofwat's proposed simplified method. Compared with the original 15 tariff bands that were proposed for PR14, the new proposed tariff bands are the following six in Exhibit 12 below.

Exhibit 12. New tariff band structure for PR16

Tariff bands
1 Water 0 to 5Ml
2 Water 5 to 50Ml
3 Water over 50Ml
4 Wastewater 0 to 5Ml
5 Wastewater 5 to 50Ml
6 Wastewater over 50Ml

Source: UU

We present the results based on these new cost and margin allocations to the new tariff bands. Information is presented at the tariff band level rather than the individual tariff level, as this is more relevant for regulatory price control purposes. However, as both costs and net margins are allocated at tariff level, rather than tariff band level, the precise definition of tariff bands would have little effect on the overall appropriateness of UU's tariff design.[18]

We present the results on the cost allocation and the net margin allocation separately.

5.1 Retail cost allocation

UU has adopted approaches to cost allocation in line with our recommendations described in section 3. Overall, we consider UU's cost allocation methodologies to be sound and consistent with Ofwat's guidance and competition law principles.

We show the resulting retail cost allocation into the six tariff bands in Exhibit 13 below.

[18] The only exception is the allocation of net margin to cover the cost of working capital, as working capital information is based on the 15 tariff bands at PR14. This component of net margin is allocated first to tariff bands and then subsequently allocated to tariffs using a mapping based on wholesale revenue as an approximation.

Exhibit 13. Cost allocation results for the six new tariff bands (£ per customer)

Tariff band	2017-18	2018-19	2019-20
1 Water 0 to 5 Ml	35	35	35
2 Water 5 to 50 Ml	388	387	388
3 Water over 50 Ml	812	811	813
4 Wastewater 0 to 5 Ml	53	53	53
5 Wastewater 5 to 50 Ml	169	169	169
6 Wastewater over 50 Ml	544	544	543
Total allowed retail costs	22,752,284	22,751,162	22,751,680

Source: UU tariff model

5.2 Net margin allocation

In the net margin allocation methodology set out in section 4, we have shown UU's proposed parameters values in the estimation and allocation of different component of the net margin. Overall, we consider UU's net margin allocation methodologies to be sound and consistent with Ofwat's guidance and competition law principles.

The resulting net margin allocation to the six tariff bands is shown in Exhibit 14 below.

Exhibit 14. Net margin on the six new tariff bands (%)

Tariff band	2017-18	2018-19	2019-20
1 Water 0 to 5 Ml	2.87%	2.85%	2.84%
2 Water 5 to 50 Ml	2.06%	2.08%	2.09%
3 Water over 50 Ml	1.50%	1.54%	1.57%
4 Wastewater 0 to 5 Ml	2.87%	2.85%	2.84%
5 Wastewater 5 to 50 Ml	2.06%	2.08%	2.09%
6 Wastewater over 50 Ml	1.50%	1.54%	1.57%
Total	2.50%	2.50%	2.50%

Source: UU model

There is now some differential between margins on different bands compared to UU's proposal of a uniform 2.5% margin across all tariff bands at PR14 FD. We believe that the differential reflects fundamental economic principle of cost-reflectiveness and fair access to competition. Furthermore, we do not consider that it currently raises any material risks regarding the compliance of competition law principles, both regarding excess margin and margin squeeze.

5.3 Assessment of gross margin

Finally, we aggregate the retail cost and retail margin to arrive at a set of total gross margins for the six tariff bands. This is shown in Exhibit 15 below.

Exhibit 15. Gross margin on the six new tariff bands (%)

Tariff band	2017-18	2018-19	2019-20
1 Water 0 to 5Ml	8.36%	8.13%	7.95%
2 Water 5 to 50Ml	3.89%	3.83%	3.78%
3 Water over 50Ml	2.63%	2.62%	2.61%
4 Wastewater 0 to 5Ml	8.36%	8.13%	7.95%
5 Wastewater 5 to 50Ml	3.89%	3.83%	3.78%
6 Wastewater over 50Ml	2.63%	2.62%	2.61%
Total	6.66%	6.49%	6.35%

Source: UU tariff model

The table shows that the medium and large user tariff bands, as defined by Ofwat, have gross margins in line with Ofwat's indicative caps of 5% and 3%, respectively.

For the purpose of comparison, Exhibit 16 below shows the current gross margin levels for the six tariff bands, informed by UU's own modelling.

Exhibit 16. Gross margin of current tariffs on the six tariff bands (%)

Tariff band	2017-18
1 Water 0 to 5 Ml	7.77%
2 Water 5 to 50 Ml	3.97%
3 Water over 50 Ml	5.03%
4 Wastewater 0 to 5 Ml	7.77%
5 Wastewater 5 to 50 Ml	3.97%
6 Wastewater over 50 Ml	5.03%
Total	6.68%

Source: UU

This shows that the gross margins on the larger bands would not have been under the Ofwat's indicative cap of 3%. The revised methodology proposed for PR16 therefore can be considered a necessary step to bring tariffs in line with Ofwat's guidance.

6 CONCLUSION

In this report we have employed an assessment framework based on fundamental economic principles relating to the design of a default tariff structure in a retail market newly open to competition. Our framework is based on cost-reflective principles, and so as to be likely to enable fair access to competition for different segments of the non-household market. Furthermore the framework pays attention to the principles of competition law and Ofwat's final statement of method for PR16, as well general acceptability of the tariff structure.

Drawing on our framework we outlined a set of appropriate approaches to cost and margin allocation, that UU could employ to develop its tariffs, that would ensure consistency with regulatory and competition law principles and Ofwat's method statement for PR16.

In summary, we set out an approach that included:

- a revamp of cost categorisation, and more specifically the categorisation of fixed and variable costs and costs attributed to key and non-key customers;
- consideration of appropriately cost reflective cost drivers that can be applied to the different cost items;
- a net margin allocation methodology that strikes the balance between cost-reflectiveness and fair access to competition

UU has developed its tariffs in line with this framework, and as a result we are able to provide assurance that the default tariffs proposed are cost reflective, based on a robust and objectively based methodology and consistent with regulatory and competition law principles.

Furthermore, the resulting gross margins resulting from the proposed cost and net margin allocation are also in our view reasonable and robustly justified. In particular,

- the gross margins on the medium (5-50Ml) and large (>50Ml) user tariff bands are consistent with Ofwat's indicative caps, in line with Ofwat's method statement for PR16; and
- the proposed revised bespoke gross margins on smaller customers (0-5 Ml) are robustly cost reflective, and the company has ensured that the revised tariffs do not increase customers' bills by more than 1% per annum on average within the band.

Finally, although it has not been within our current remit, we understand from UU that it has undertaken customer engagement on the potential incidence effects.

Populus

NHH PR16 Tariff Reopener

Debrief Report

MAY 2016

Populus presentation to

United Utilities

Approach overview

Qualitative stage → Pilot → Quantitative Survey

Qualitative stage

- In October 2015, Populus conducted a mix of focus groups with SMEs (lower water users) and interviews with larger businesses/water users (50ML+).
- As well as exploring customer views on fairness, this research identified some considerations for the quantitative stage:
  - Many businesses are disengaged with water. In this stage we need a straight forward methodology that will not confuse or alientate respondents
  - Many of the subjects we discussed were unfamiliar to businesses – education will be needed to ensure there is full understanding
  - How each key principle is phrased and framed will greatly affect responses

Pilot

- We spent c. 6 weeks designing the questionnaire in conjunction with United Utilities and the Your Voice team.
- We conducted a pilot stage of the online survey from the 11th to the 16th March. This was amongst 16 non key customers to test the incidence rates, sense check initial results and gather feedback from the customers on the survey experience and clarity. At this stage we also got final feedback from the Your Voice team.
- The general consensus was that the questions were clear and easy to understand (81% agree), three quarters know more about how water charges are set than before (validating the need to educate customers in the survey) and half say that the survey took a reasonable time to complete.
- We made some small amends before full launching the survey.

Quantitative Survey

- We conducted the full online survey from the 23rd March to the 12th April.
- We achieved 542 completes in total using customers sample supplied from United Utilities. On average the survey took 19 minutes to complete.
- All respondents were United Utilities customers who pay their water bills directly to UU and have influence on utilities decisions.
- 28 completes were key customers and 514 were non key customers. As this is the main way that United Utilities categorise their customers (rather than employee size or bill size) we have weighted the data to ensure it is representative of the NHH base

Research Objectives

The overall objective of the research is to provide customer insight to inform revised tariff proposals to Ofwat.

Specific research objectives include:

To educate respondents on relevant principles such as cross subsidy, debt risks and customer management costs so they can make an informed choice on the fairness of the scenario

To understand customer's views on these principles

To discover customer views on the impact of tariff scenarios

To assess how perceptions of fairness differ for different customers types

Overall summary of findings

1 **65% say they are likely to switch when the market is opened in 2017**
On average, customers need a 15 percent saving to switch but larger customers need less (on average 9%)

2 **Customers generally think that "pay for what you use" is a fair way to set water charges, but think cross subsidy is unfair**
Customers were equally split on the fairness of the grouping principle

3 **Before customers saw the actual monetary impact of the proposed changes, they thought changes were less reasonable if they affected them negatively**
Customers thought the proposed scenario was less reasonable if it increased their bill but was fairer for all customers

4 **Customers are evenly split between thinking the proposed scenario is reasonable or unreasonable and fair or unfair**
39% think it is reasonable versus 36% unreasonable; 34% fair versus 35% fair

5 **Amongst customers who have said they are unlikely to switch in 2017, more see the changes as fair and reasonable than unfair and unreasonable for the most likely scenario**
48% think it is reasonable versus 24% unreasonable; 58% fair versus 20% unfair

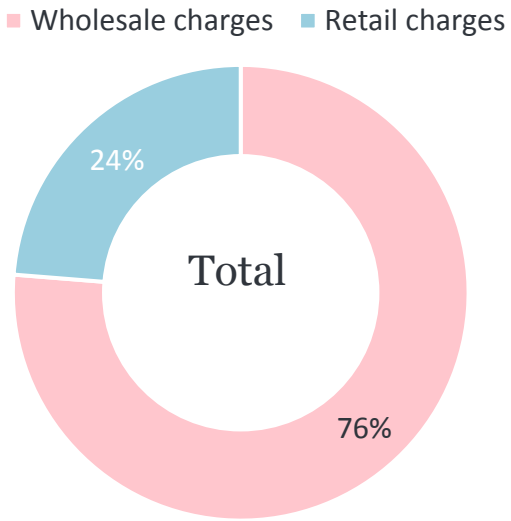
Understanding of charges and switching

Populus

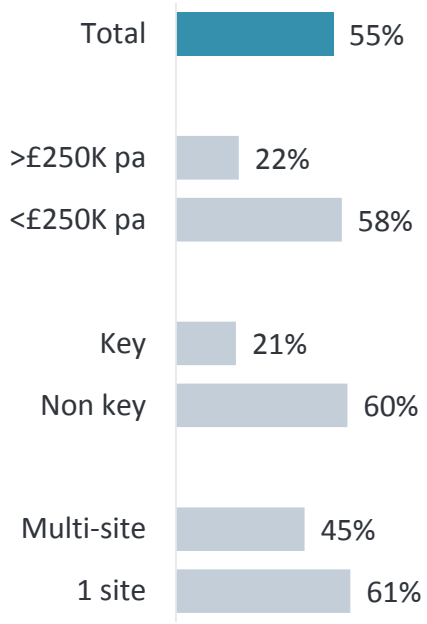
Customers are generally uninformed about how water charges are set, and often underestimate the proportion of wholesale charges

Overall, customers think retail charges make up a quarter of their total bill (of those who gave an answer)

45% gave an answer



However, 55% didn't know at all, though larger companies are more knowledgeable



"Waste water charges constitute 80% of the bill and are based on a banding rate. Economical usage of water has no effect"

"I don't believe that the wholesale costs are as high a percentage as given"

"The retail % is smaller than I expected"

"If so little of the bill is retail what is the point of giving customers the choice in that aspect only"

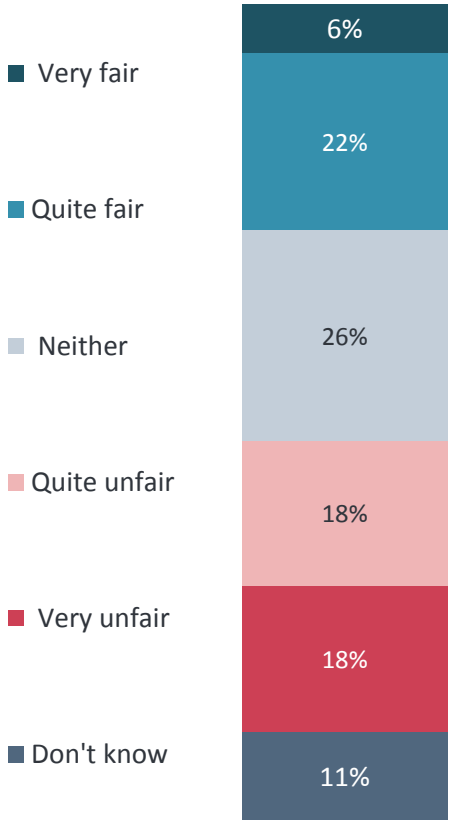
Populus

Q12, Q13

Base: all respondents (542)

United Utilities

The fairness of water charges is an emotive subject for customers. 36% think it is currently unfair; a key driver is the wholesale costs



Reasons the wholesale/retail charges are fair/unfair

28% fair

"Someone has to pay for the admin services"

"Because the retail % is smaller than I expected"

"I realise that companies must satisfy shareholders"

26% neither

"Don't have anything to compare it with , don't know what another company might charge for their 'retail' charges, but if it only makes up 7% of the bill it's not going to make a great difference"

"I have no idea why the split is the way that it is so I do not know whether it is fair or not."

36% unfair

"The wholesale supply is the highest proportion of the cost, therefore, opening retail to competition is only window dressing."

"The largest percentage of our water bill relates to wastewater and is calculated on the Mogden formula."

"The costs of water have increased every year above inflation for around 15 years however there was been no improvement in the "retail" element or in the infrastructure."

Populus

Q12. And why do you say this?

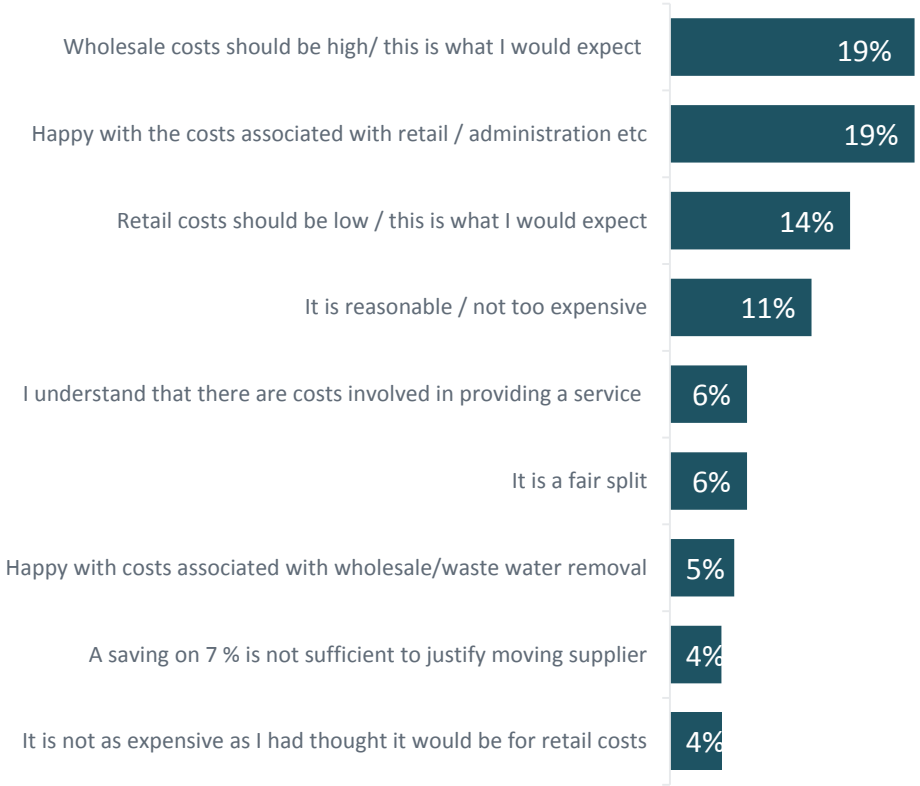
Base: all respondents (542)

United Utilities

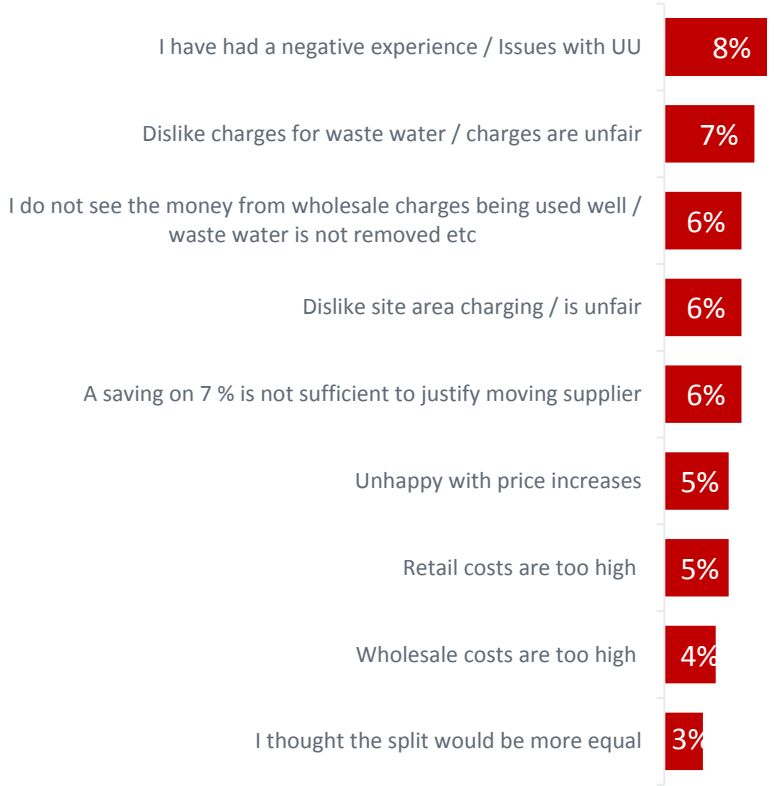
Negative experiences with United Utilities and opinions of waste water and wholesale charges colour fairness perceptions

Reasons the wholesale/retail charges are fair/unfair (coded verbatim)

28% say it is fair because...



36% say it is unfair because...



Populus

Q12. And why do you say this?

Base: fair (152) unfair (194)

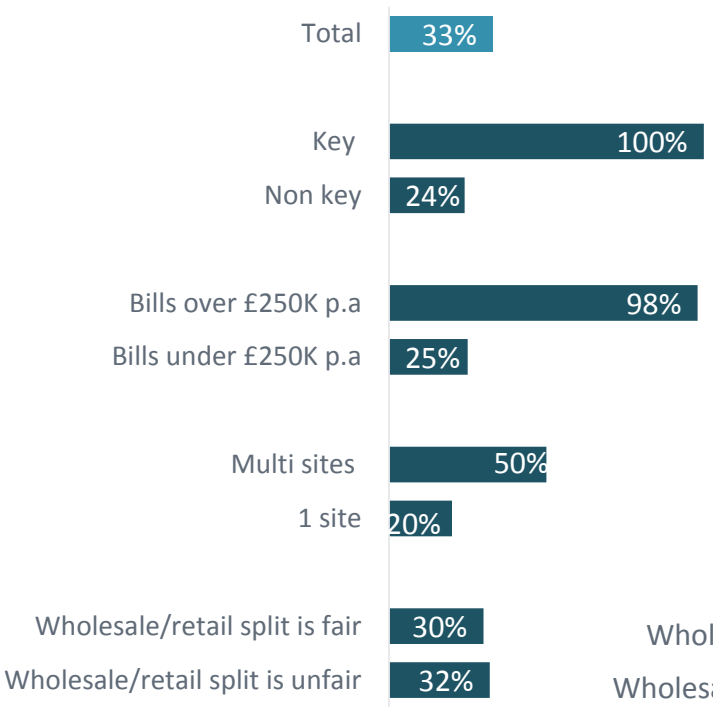
United Utilities

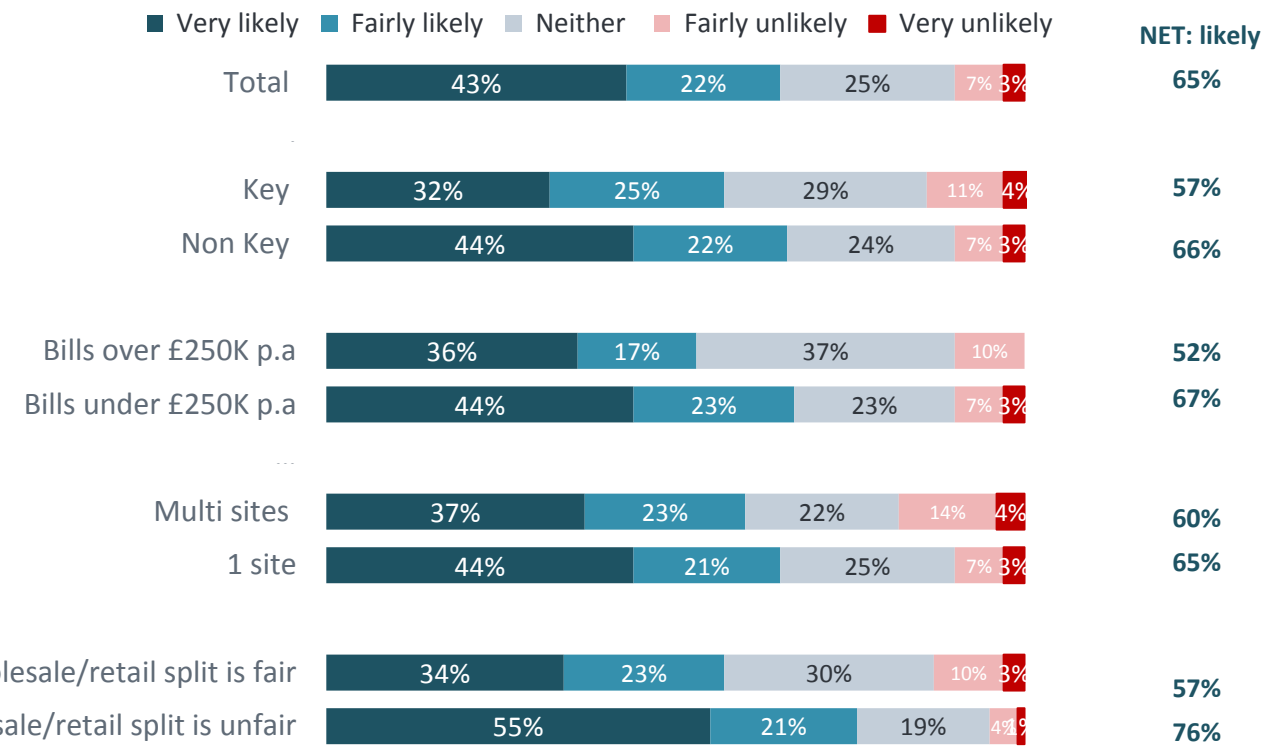
Although two thirds were not aware of the introduction of water competition, 65% state they are likely to switch

Water Competition

33% were aware of the introduction of water competition in 2017

65% are likely to switch providers





Populus

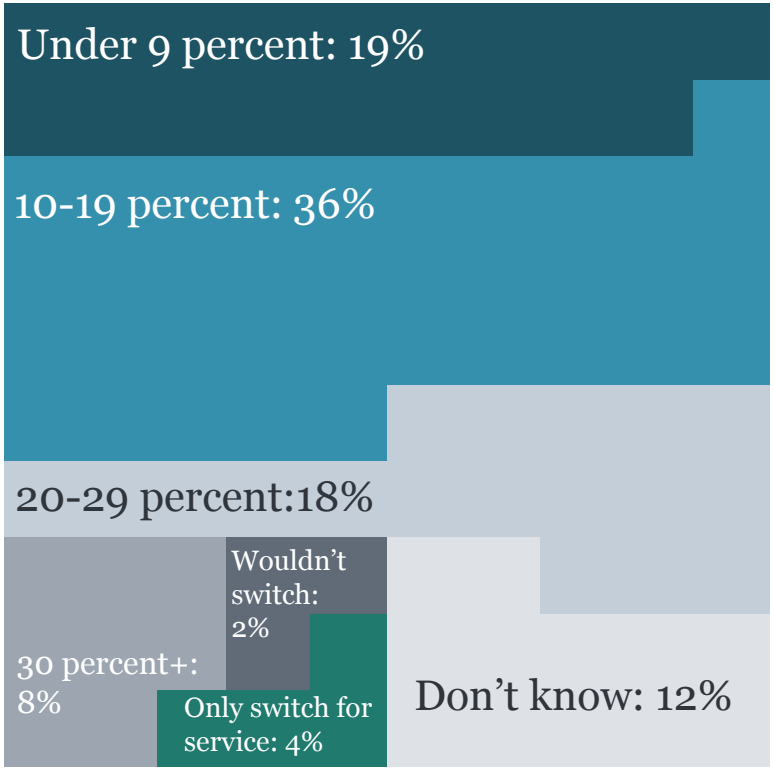
q7, Q8

Base: All customers (542)

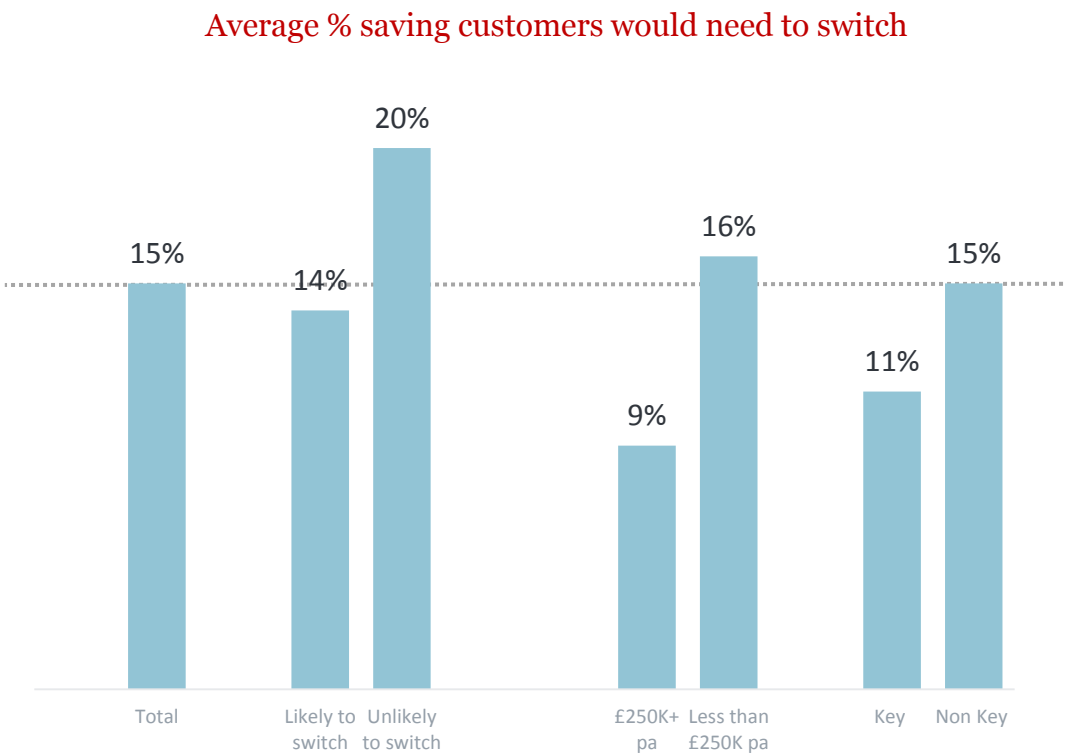
United Utilities

Smaller customers need a higher saving to switch than large customers

On average, customer would need a 15% saving on their bill to switch



On average, customers with water bills over £250K need a 9% saving to switch



Populus

Q9/Q10. Summary table

Base: all respondents (542)

United Utilities

Fairness of principles

Populus

When initially discussed in the qualitative phase, “everyone paying the same rate” seemed fair and rational

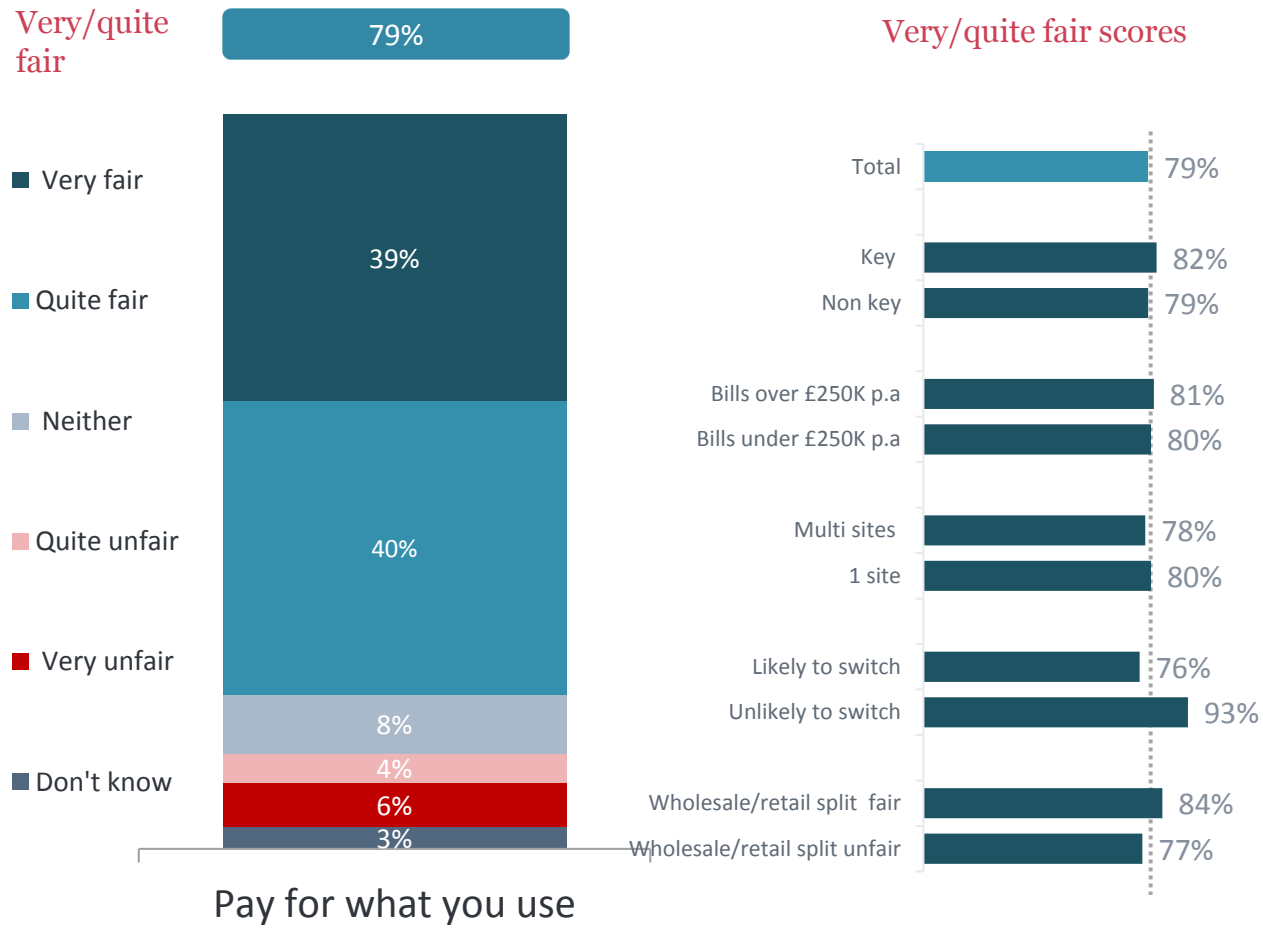
However when presented in terms of cross subsidising, customers felt that it was not fair that one group should cross subsidise another

- As we saw in the qualitative research, SMEs (who have not previously considered these issues in detail) **do not immediately see a problem** with all businesses paying the same “rate”, but paying more or less dependent on their consumption (this seems the fairest and simplest way of organising things)
- Larger businesses felt there should be more granularity in tariffs but based, in the main, on **volume bands** rather than more complex factors
- When presented in terms of one group **cross subsidising** another’s servicing, most people agreed that it is **not fair** for one group to cross subsidise another, **in principle**
- This **offends the fairness principle** of “pay for what you use” in the sense that one customer might be paying less for the “service” they use and another might be paying more
- However how this works **in practice** is harder to understand or accept (e.g. cost to serve, debt)

8 in 10 customers think pay for what you use is a fair way to set charges

One way to set retail water charges for businesses is for customers **to pay for what they use** in terms of retail services and the related costs.

An example of customers paying for what they use is in the parcel delivery sector. Parcel delivery companies base their prices on the size and weight of the item being delivered, and the speed of the delivery needed (e.g. overnight). A customer sending a large, heavy parcel for next day delivery will pay more than someone sending a small, light parcel for delivery in 5 working days.



Populus

Q13b, Q14, Q15

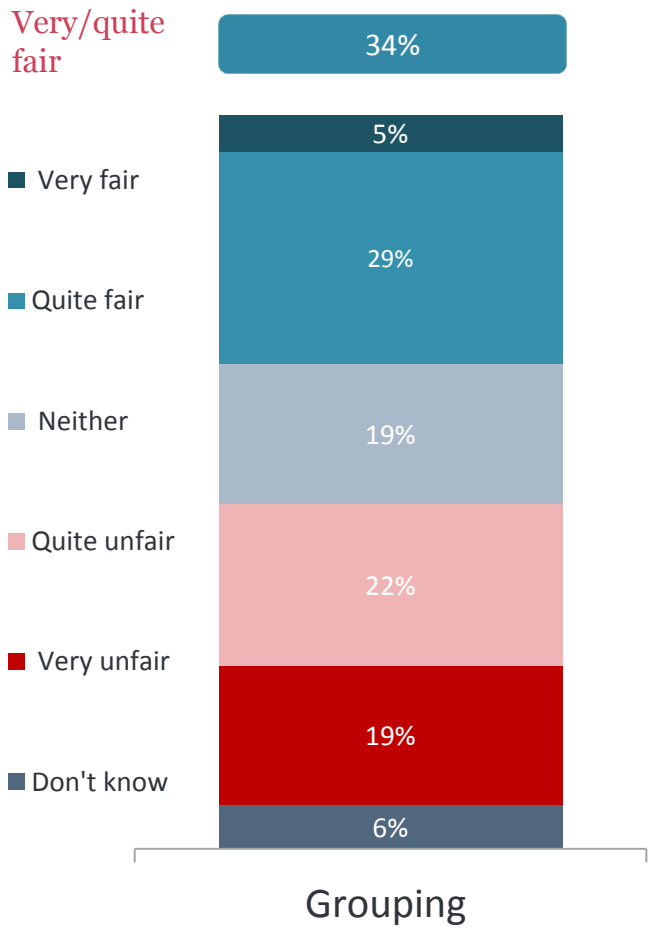
Base: all respondents (542)

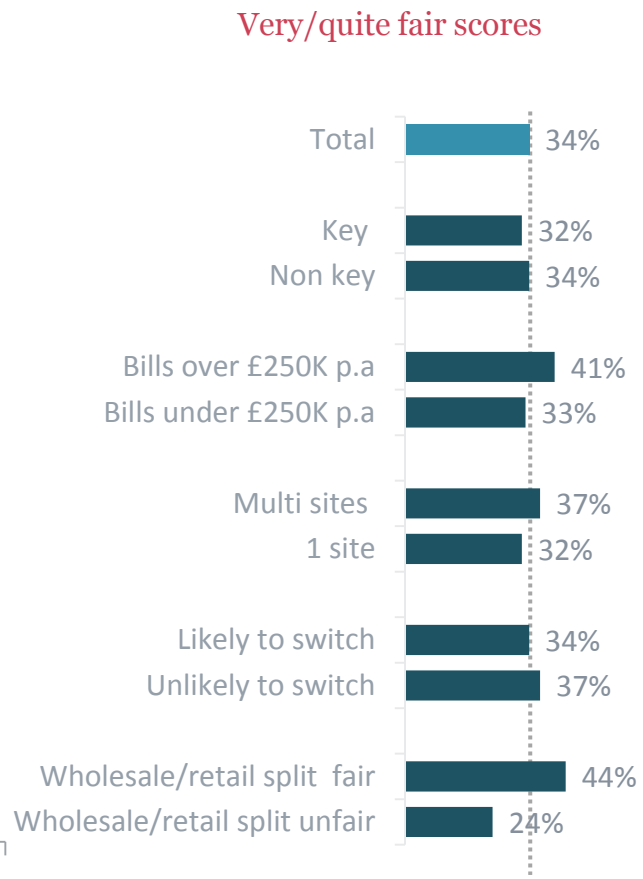
United Utilities

Customers were more evenly split on the grouping principle; larger bill payers and those who think the wholesale/retail split is fair are more likely to think grouping is fair

One way to set retail water charges for businesses is to **"group"** customers and set different retail charges for different groups based on common characteristics.

An example of customers with similar characteristics being grouped for pricing purposes is in the insurance industry. Newly qualified drivers are seen as high risk, regardless of their own driving history, and they therefore pay higher premiums than other groups of drivers (e.g. drivers who have been driving for 20 years).





Populus

Q13b, Q14, Q15

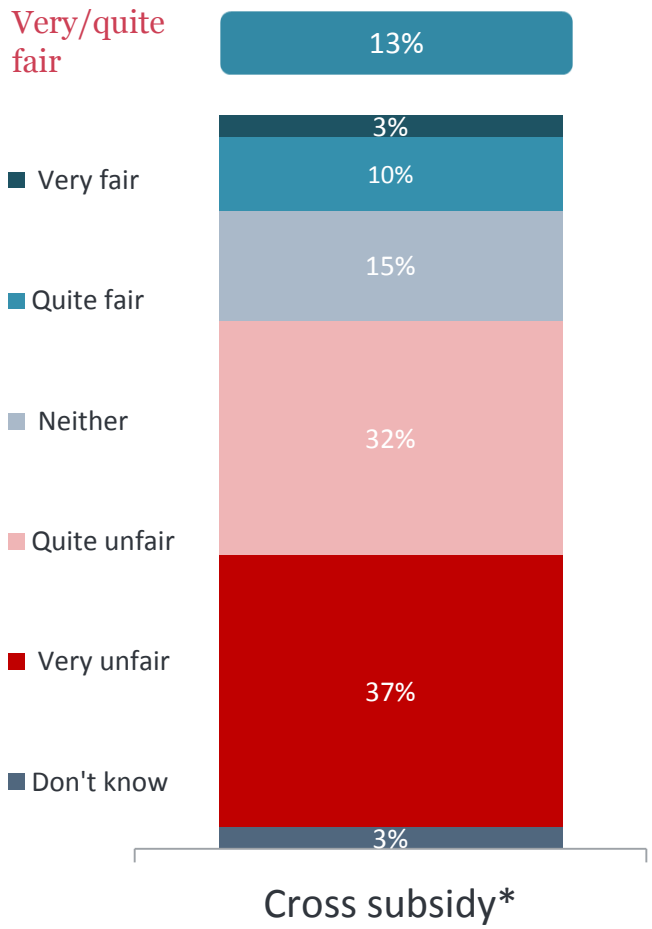
Base: all respondents (542)

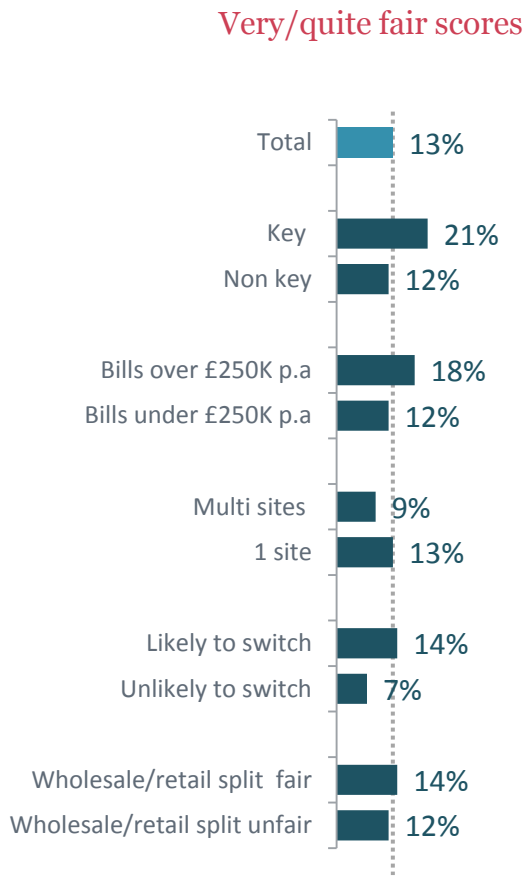
United Utilities

Cross subsidy was seen as unfair; key customers are more likely to think cross subsidy is fair than non-key

One way to set retail water charges for businesses is to apply a **set amount charge** for retail services no matter how much each customer uses those services. This may mean that some groups of customers are cross subsiding others (e.g. infrequent users of services are paying for other customers using the services more frequently, or for longer periods).

An example of customers paying the same amount but not using the same amount of service is the example of gym membership, where you pay a monthly fee for access to the facilities. In this instance the fee is the same no matter whether you visit the gym twice a year or every day, so some customers that visit infrequently are paying more per visit than those who are regular visitors.





Populus

Q13b, Q14, Q15

Base: all respondents (542)

*this was positioned as "set amount charge" to customers

United Utilities

Fairness and reasonableness of proposed scenario

Populus

We showed customers the below summary of proposed changes

In the last few questions, we have asked you about some approaches that could be used for setting charges: paying for the services you use, cross subsidy and grouping similar customers. Adopting these changes would impact various elements of water bills. There are four key changes that could be made-which are outlined over the next few screens. For each approach we have set out the current and future situations.

Key account management: Some customers have a key account manager. Currently, all the costs of this service are charged to large sites (e.g. food manufacturer) even though some customers with many small sites (e.g. supermarket chains) also use these services. This means customers with many small sites are being cross subsidised by larger sites. In this future scenario all customer groups that benefit from the service would pay towards it, not just large sites as is currently the case

Debt: Some customers take longer to pay their water bills, and some may not pay their bills at all. Currently United Utilities sets its charges as if all customers take the same amount of time to pay and have the same risk of going into debt. In this future scenario United Utilities will group its customers (i.e. based on the volume of water they use and whether they have a water meter). The customer groups that take longest to pay, and have the highest risk of going into debt, would pay more than groups of customers that pay quickly, and have a lower risk of going into debt.

Fixed costs: United Utilities has various fixed costs including rent and IT systems. Currently all water and drainage customers pay for fixed costs, but customers who only take a small sewerage service do not pay anything towards these costs. In this future scenario all United Utilities customers would pay an amount towards the fixed costs no matter which service they are taking, based on whether they are in a high volume (e.g. food manufacturer) or small volume (e.g. shop or pub) user group.

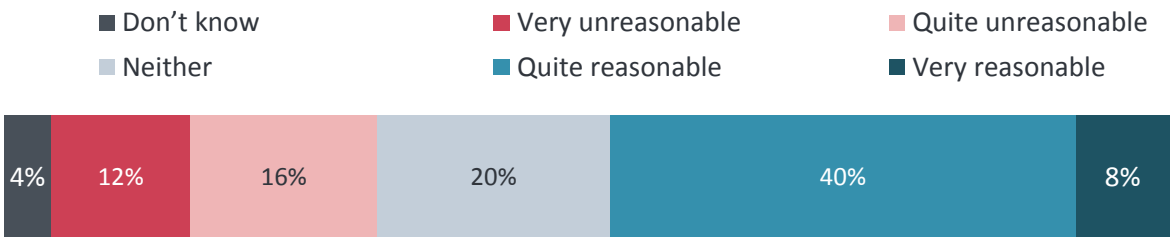
Margin: The retail part of United Utilities is allowed to charge a profit margin to give a fair return for the risks involved in running the business. Currently United Utilities charges all customers the same profit margin as a percentage of their bill. In this future scenario United Utilities would make the same overall profit, but could vary the percentage it charges to each group of customers. The customer groups with higher risk would pay more, and the groups with lower risk would pay less.

Customers think changes are less reasonable if their bill goes up as a result

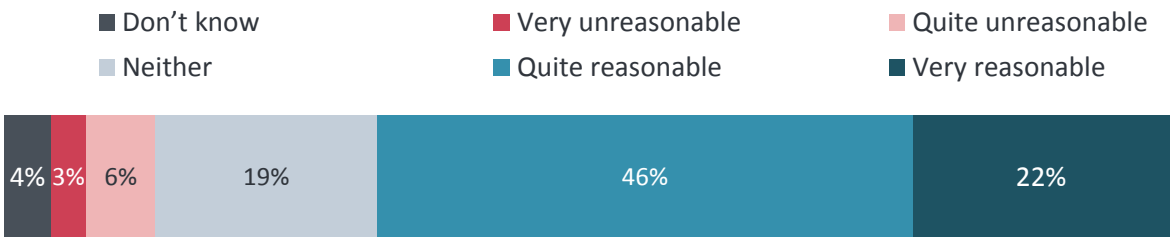
SUMMARY OF CHANGES:

1. **Key account management:** In this future scenario all customer groups that benefit from the service would pay towards it, not just large sites as is currently the case.
2. **Debt**: The customer groups that take longest to pay, and have the highest risk of going into debt, would pay more than groups of customers that pay quickly, and have a lower risk of going into debt.
3. **Fixed costs:** all United Utilities customers would pay an amount towards the fixed costs no matter which service they are taking,
4. **Margin:** The customer groups with higher risk would pay more, and the groups with lower risk would pay less.

If pricing this way led to **an increase** in your bill but on balance you knew it made charges fairer for all customers, how reasonable would you think this approach was?



If pricing this way led to **a decrease** in your bill but on balance you knew it made charges fairer for all customers, how reasonable would you think this approach was?



Populus

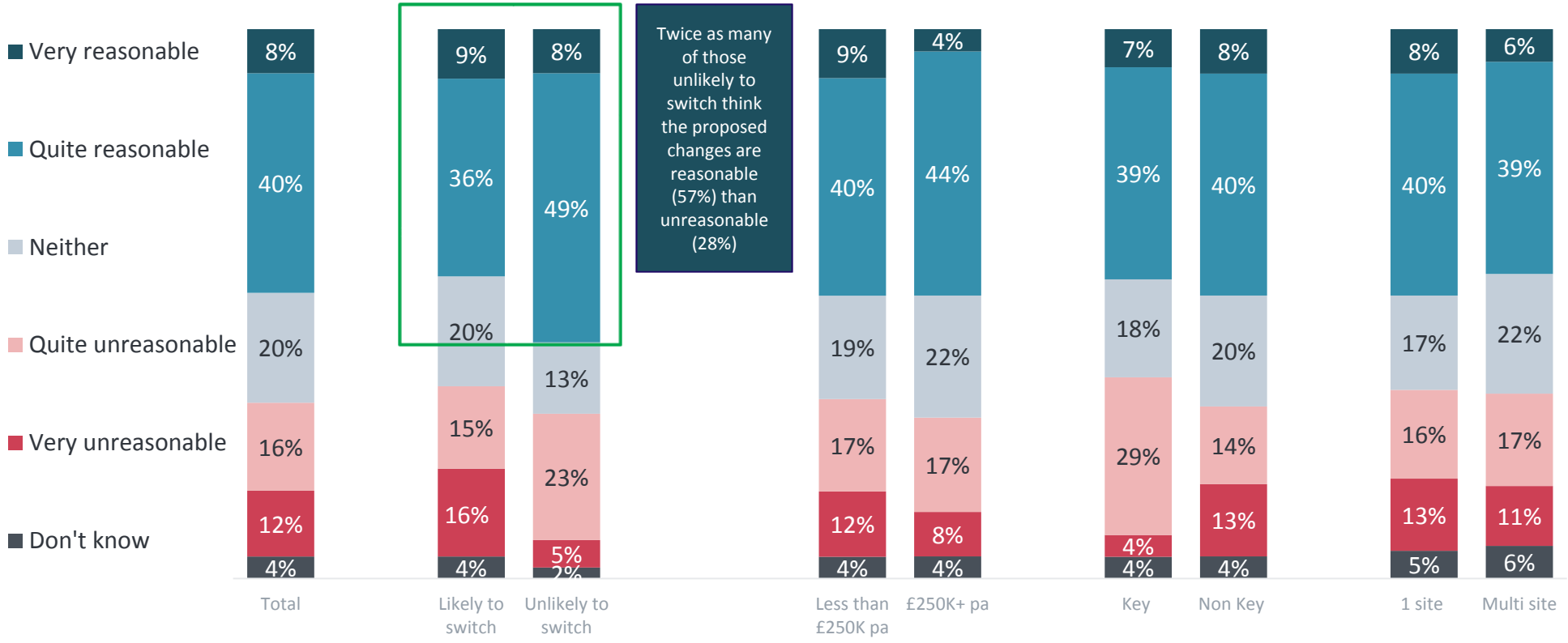
Q16, Q17

Base: all respondents (542)

United Utilities

When thinking of a bill increase that makes things fairer for all customers, there is little difference in perceptions of reasonableness amongst groups, except for those unlikely to switch

If pricing this way led to **an increase** in your bill but on balance you knew it made charges fairer for all customers, how reasonable would you think this approach was?



Populus

Q16, Q17

Base: all respondents (542)

United Utilities

Customers were shown the summary of proposed changes, as well as the monetary impact on different types of customers for the most likely scenario and one where the impact was doubled

Most likely scenario

	Small unmetered user – i.e. a shop	Small metered user – i.e. a pub	Mid-sized metered user – i.e. a supermarket	Large metered customer – i.e. a food manufacturer
Average bill size	£ 580	£1350	£29,000	£265,000
Change to bill vs. current	Increase of £ 6	Increase of £ 14	Increase of £ 290	Decrease of £ 6,600
% change to bill	+ 1%	+ 1%	+ 1%	- 2.5%

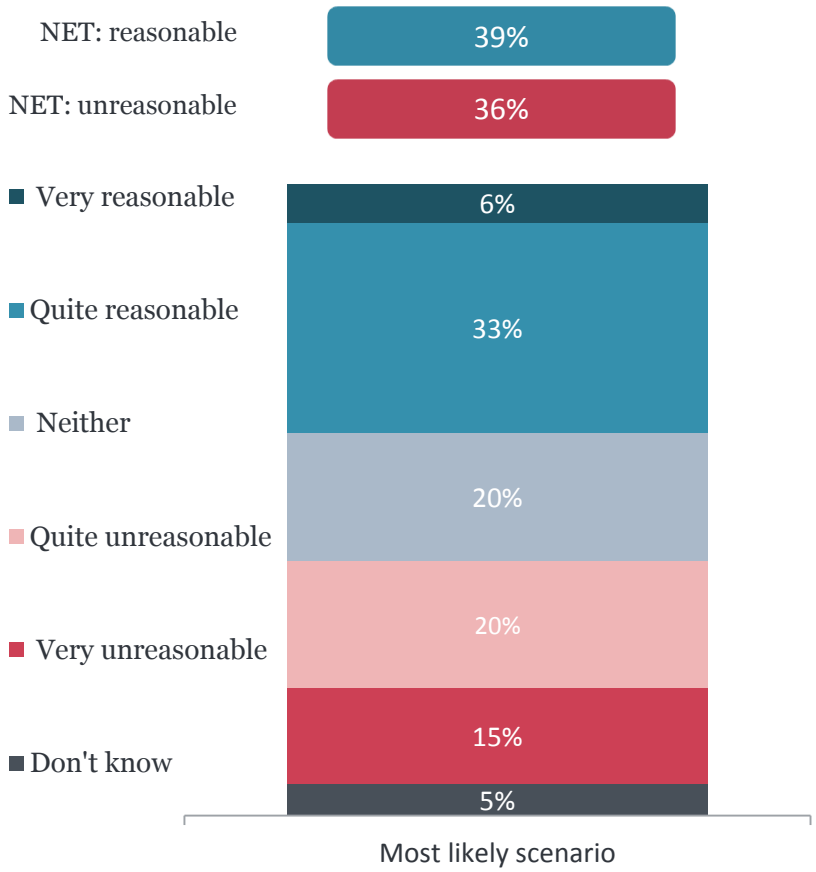
Doubled impact scenario

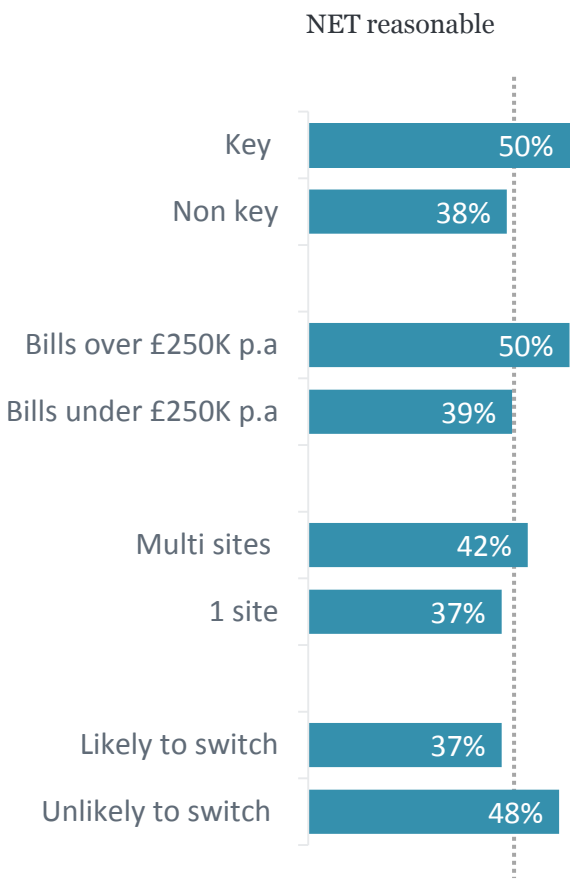
	Small unmetered user – i.e. a shop	Small metered user – i.e. a pub	Mid-sized metered user – i.e. a supermarket	Large metered customer – i.e. a food manufacturer
Average bill size	£ 580	£1350	£29,000	£265,000
Change to bill vs. current	Increase of £ 12	Increase of £ 28	Increase of £ 580	Decrease of £ 13,200
% change to bill	+ 2%	+ 2%	+ 2%	- 5%

Populus

United Utilities

Overall, an equal number of customers think the scenario is reasonable and unreasonable. Those unlikely to switch in 2017 and key customers are more accepting of the proposed changes





Those unlikely to switch are less likely to think the proposed scenario is unfair (20%) or unreasonable (24%) than those likely to switch (39% unfair, 41% unreasonable).

Of those unlikely to switch, 58% thought the proposal was fair and 20% unfair. For those likely to switch 30% thought it was fair and 39% unfair

Fairness is in line with reasonableness: 34% fair, 35% unfair

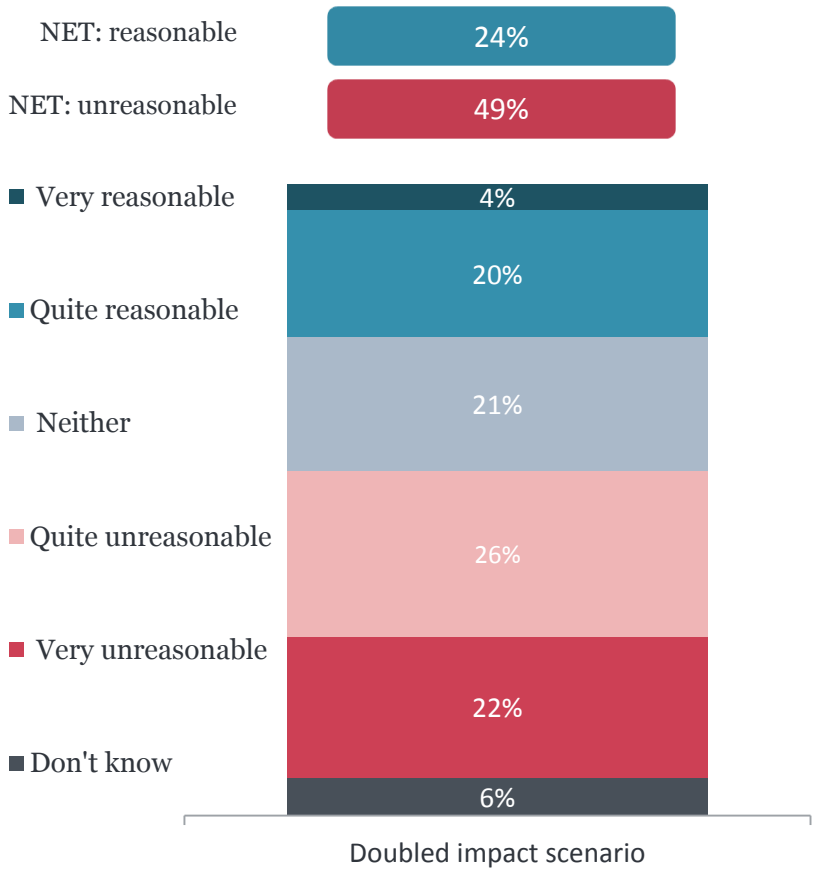
Populus

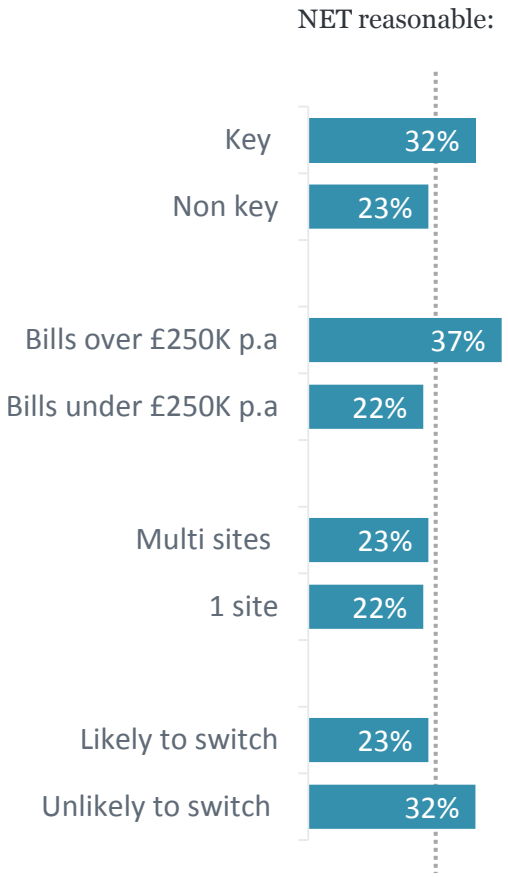
Q18

Base: all respondents (542)

United Utilities

Perceptions of reasonableness drop when the impact is doubled; but for those unlikely to switch there is a more even split between those who think it is fair/unfair and reasonable/unreasonable





Those unlikely to switch are less likely to think the proposed scenario is unfair (36%) or unreasonable (44%), than those likely to switch (52% unfair, 52% unreasonable)

Of those likely to switch, 22% thought the proposal was fair and 52% unfair. For those unlikely to switch 38% thought it was fair and 36% unfair

Fairness is in line with reasonableness: 23% fair, 48% unfair

Populus

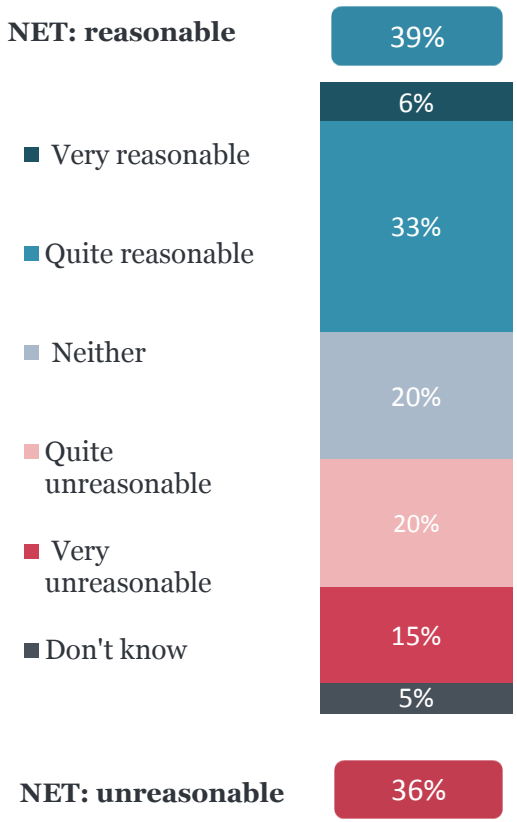
Q18, Q21

Base: all respondents (542)

United Utilities

Perceptions of unreasonableness are often spurred by the feeling that users with more profits are paying less

Most likely scenario: reasonableness



"The increase is minimal and if you pay your bills on time you won't be penalised"
Very reasonable

"Competition is clearly going to make pricing structure fairer."
Very reasonable

"One % will not make much difference to most people"
Very reasonable

"Although I'd end up paying a little more it is not fair for a very large business to disproportionately pay more "
Very reasonable

"I think you should pay more if you consume more use more services"
Quite reasonable

"There are always winners & losers with changes. I would need to see the impact to our own business."
Neither

"Because potentially we would see a decrease, but it does not address the unreasonable SWHD costs which clearly used to cross subsidise the other services."
Quite unreasonable

"I think it simply reverses subsidy from the large customer to the smaller one."
Quite unreasonable

"It is unfair to ask small businesses to pay more and large businesses less - it appears to look after those with most money whilst penalising those who can least afford it."
Very unreasonable

"UU is already overcharging customers. It should be trying to find ways to reduce the costs to all customers, instead of trying to justify redistributing its excessive charges."
Very unreasonable

Populus

Q20, Q21

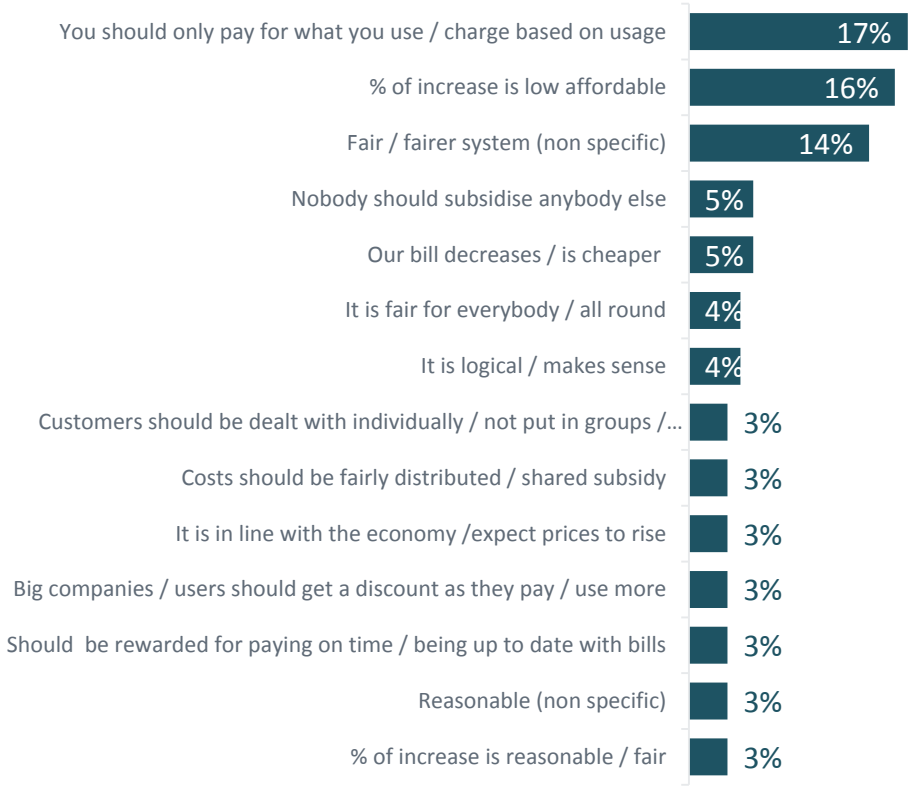
Base: all respondents (542)

United Utilities

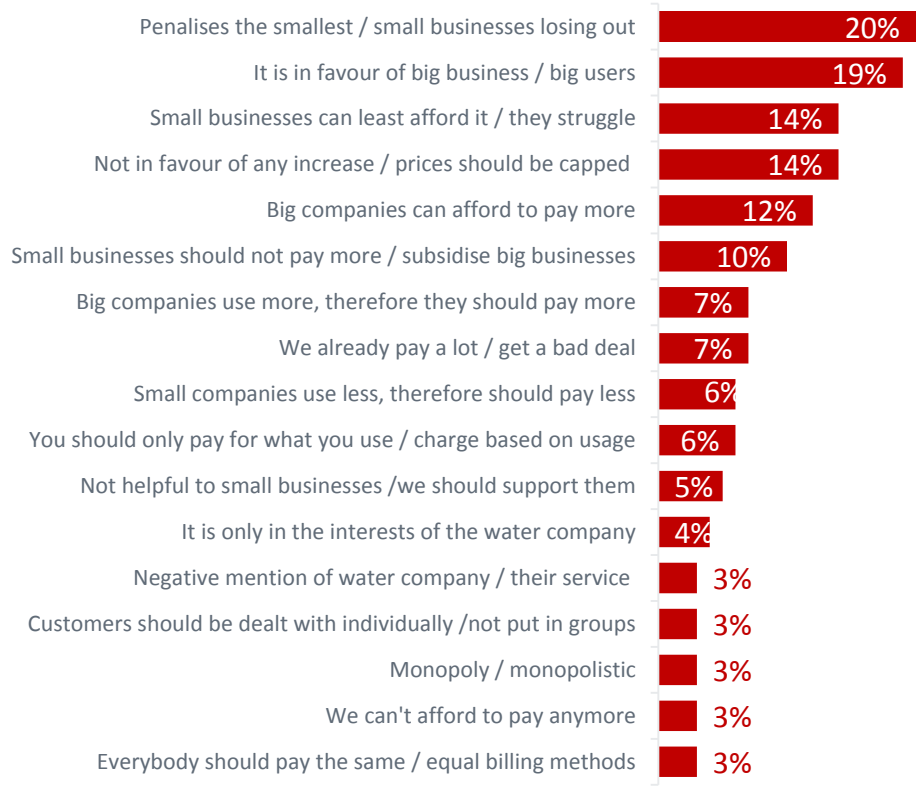
Customers who think the proposed changes are reasonable think so because you should pay for what you use and because it is affordable to them

Reasons the proposed scenario are reasonable (coded verbatim)

39% say it is reasonable because...



36% say it is unreasonable because...



Populus

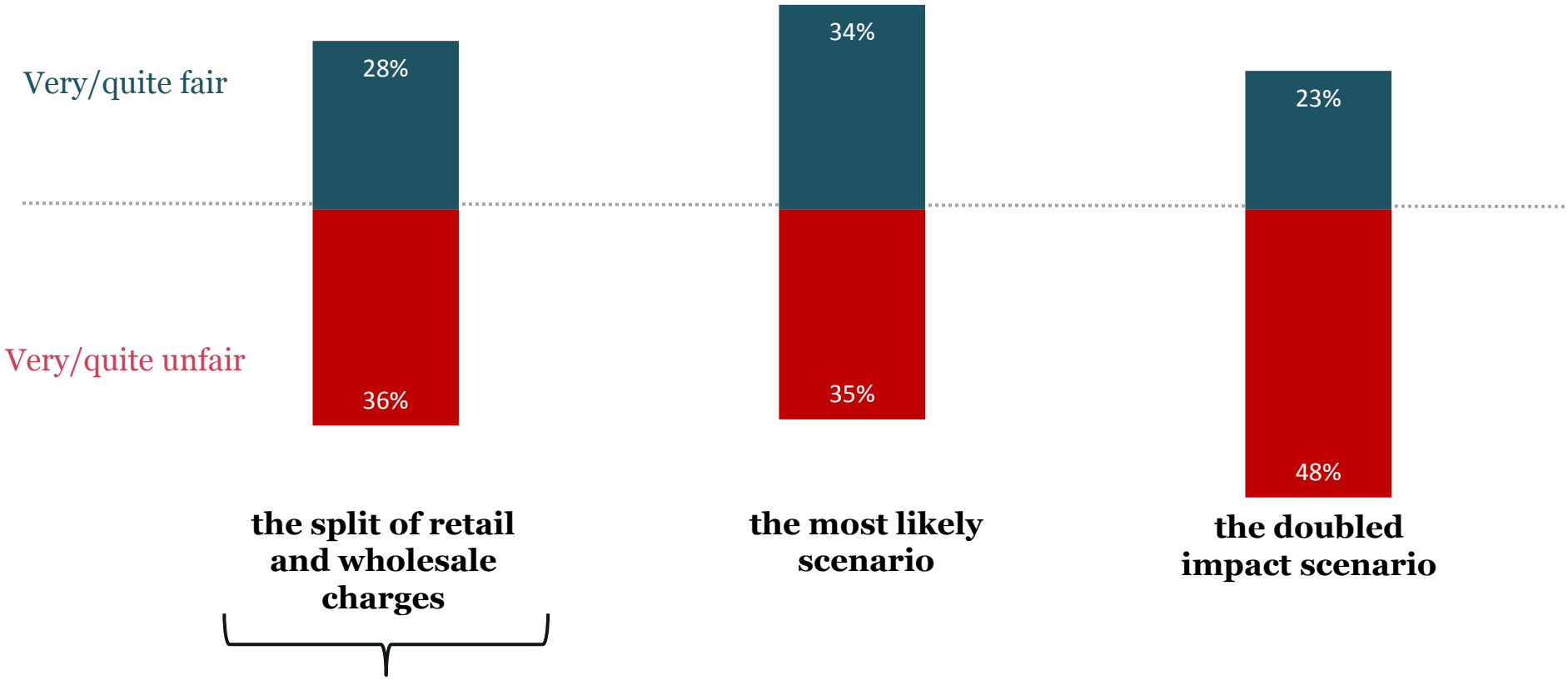
Q12. And why do you say this?

Base: reasonable (152) unreasonable (194)

United Utilities

There is a "baseline" of unfairness perceptions around water and wholesale charges (36%). Customers think the new scenario is fairer than the split of retail and wholesale charges, but the doubled impact scenario is much less fair

Summary: Customer's perceptions of fairness based on:



The wording was kept consistent each time we asked the fairness question.

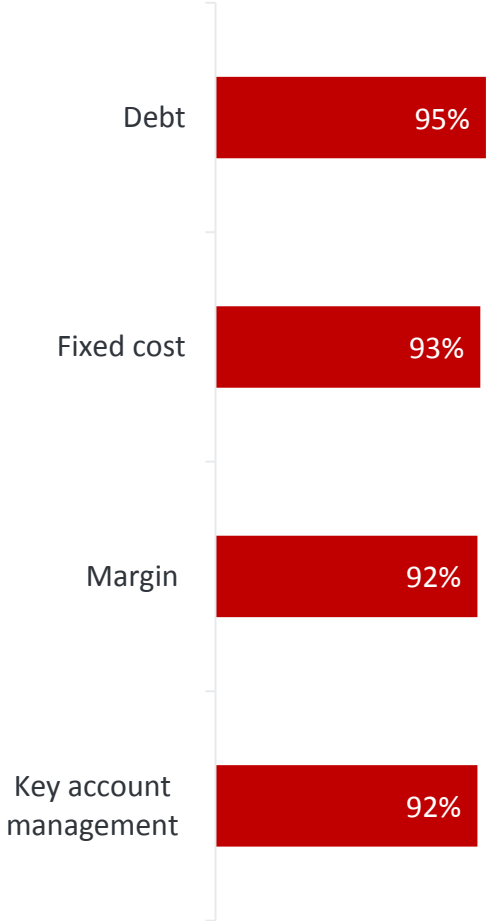
Populus

Base: all respondents (542)

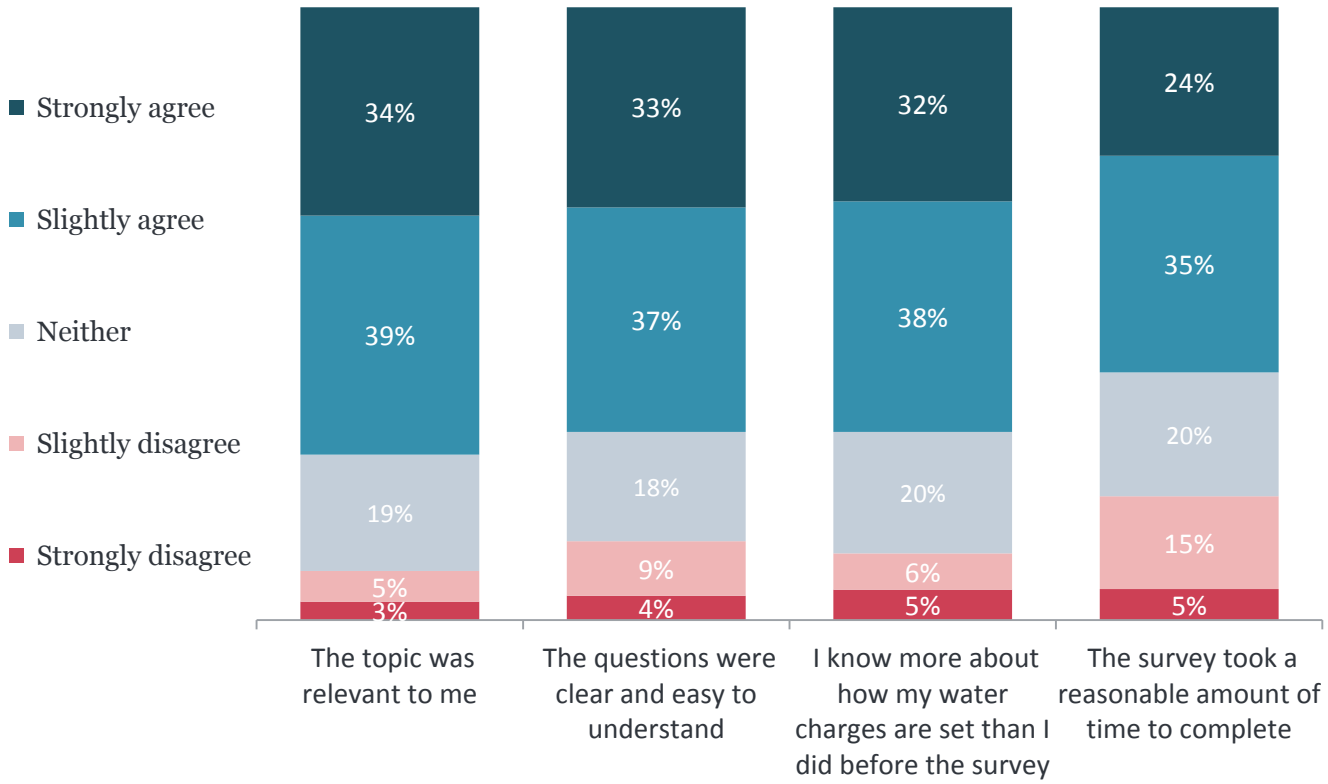
United Utilities

Survey diagnostics

% who found the descriptions clear:



Perceptions of the survey

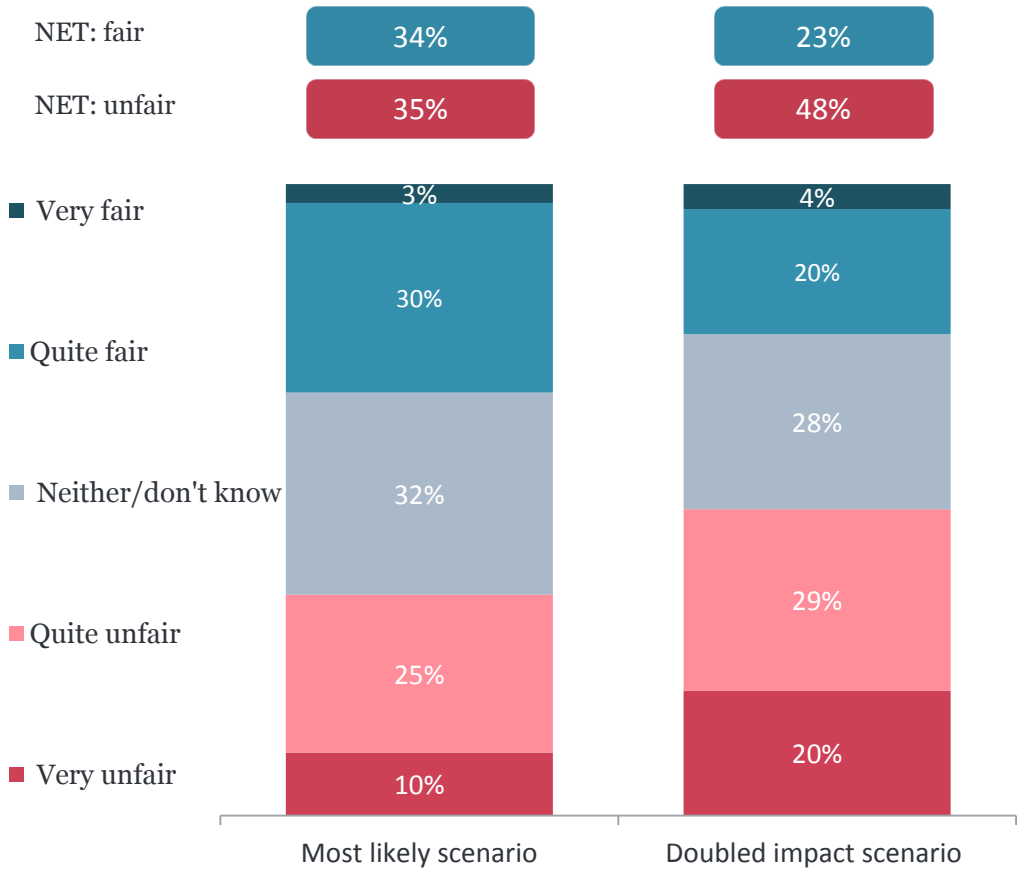


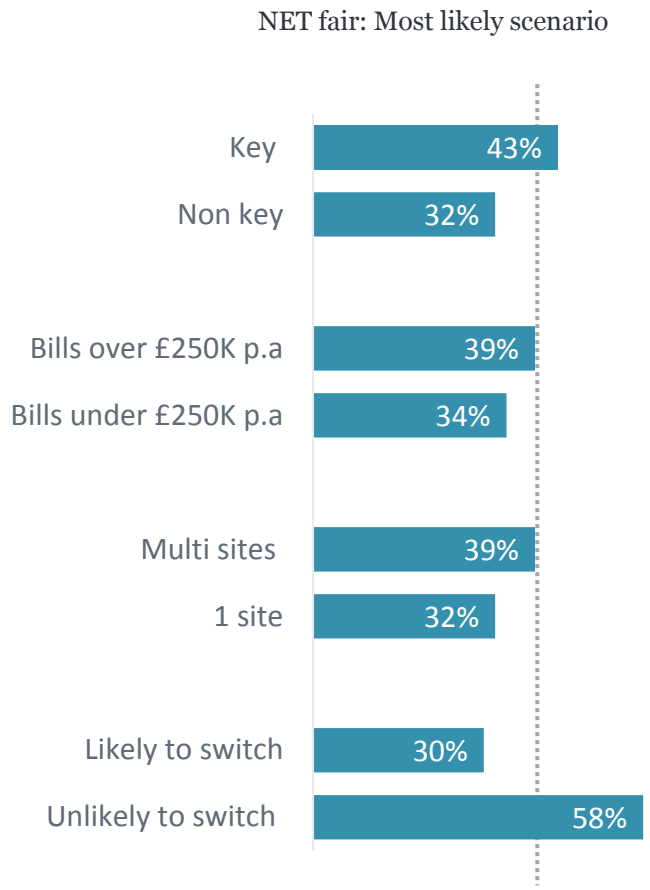
United Utilities

APPENDIX

Populus

Perceptions of fairness are similar to reasonableness, but there is less variability by subgroups





Populus

Q20, Q22

Base: all respondents (542)

United Utilities

NHH DEFAULT TARIFF MODEL AUDIT FOR UNITED UTILITIES

13 July 2016

SUMMARY

As a part of the assurance Frontier Economics is providing UU for its NHH default tariffs for PR16, Frontier has carried out a full model audit on UU's latest tariff model.

The UU model allocates retail costs and retail margins using various cost drivers into UU's existing tariffs. It aggregates the different tariffs into tariff bands that the company is proposing for PR16. It presents the allocated, retail costs, net margin as well as gross margin according to these tariff bands.

Our audit covers the relevant calculations in the model, while ignoring parts of the model which are either obsolete or exist solely for reference purposes. By relevant calculations we mean all calculations on which the final outputs (retail costs, net margin and gross margins of the different tariff bands) depend. Our audit does not include an audit of the input data, which we understand has been separately assured by PwC.

We have checked the model calculations in a systematic way, as documented in this note. We have verified that the relevant calculations in the model reflect the methodology described in Frontier's main assurance report, are carried out accurately, and pass our assurance checks. All reasonable efforts have been made in the assurance process to ensure the accuracy of the model. On the basis of this work, we are confident that the model reflects the intended methodologies and is working accurately.

We have created a QA version of the model entitled "Model frontier V2-0 2017-18final d - WC Correction +FL QA 240616", which is made available to UU as an attachment to this audit note. This version of the model contains our built-in checks on the calculations in the model and, in certain places, alternative calculations to verify and double-check the outcome. It also contains comments and suggestions on modelling details.

THE MODEL

There are three versions of the tariff model that were relevant for this review.

1. A spreadsheet entitled "Model frontier V2-0 2017-18final d - WC Correction", last saved on 17 June 2016. This is the version on which Frontier has carried out the full model audit explained in detail in this note.
2. Following Frontier's initial model audit on model 1 above, UU provided us an updated version entitled "2017 Model frontier V2-0 2017-18final k - (preGold PR16)". We understand that the only update in this version compared to model 1 is updated input data, which is out of the scope of our audit review.

We therefore consider that our assessments on model 1 in this note also stand for model 2. Frontier's main assurance report entitled "Non-Household Price Control Review –Final report prepared for United Utilities" assess the final tariffs drawn from model 2.

3. Finally, for the purpose of submission to Ofwat at PR16, UU has prepared a spreadsheet entitled "Annex 2 - UUW NHH Default Tariff Model 2017-18". UU has explained to us in detail the changes made to this version of the model, compared to model 2 above. Our understanding is that these changes are purely for the purpose of a clearer presentation to Ofwat and do not affect the working of the model or the output. We can confirm that the relevant outputs of model 3 (i.e. cost, net margin and gross margin allocation on the six tariff bands) are indeed identical to that of model 2.

For the remainder of this note, we shall refer to model 1 explained above as "the model".

We have reviewed all relevant worksheets in the model that contribute to the calculation of the final output. We list below the sheets that we have reviewed in detail. We provide a short description of the main inputs and/or outputs of each. [1]

- Sheet "2-Inputs - Tariff"
  - Inputs multipliers, and tariff band allocations (for the 15 tariff bands as per PR14 Draft Determinations) and wholesale costs for each tariff
  - Forecasts wholesale costs based on the RPI+K formula based on data from the final determination
- Sheet "3-Inputs - Other"
  - Amends multipliers for SWHD tariffs (Tariffs 0400s and 0500s)
- Sheet "4-OpEx"
  - Allocates direct debit reduction back to each relevant operating expense category
  - Reallocates Billing, Payment handling, Enquiries & complaints, Debt management, Doubtful debts and Meter reading costs between key and non-key customers
- Sheet "5-Cost & margin allocation"
  - Inputs relevant cost drivers for each cost item
  - Allocates retail costs and margins according to cost items
  - Compresses wholesale cost according to total cost recovery allowed by PR14 Final Determination
  - Calculates smoothed retail costs and margins within tariff bands
  - Calculates cost per unit based on the relevant multipliers and the choice of smoothed/unsmoothed tariff bands
- Sheet "7a - Simplification Bands"
  - Inputs multipliers, and customer numbers and tariff band allocations (for 6 tariff bands)

[1] We reiterate that where we have checked an 'input' sheet, this is to check the workings not the input data itself.

  - Calculates main model outputs:
    - retail cost and retail margins for 0-5Ml, 5-50Ml and 50Ml+ bands (water and sewerage combined)
    - total charges per customer for 6 tariff bands (0-5Ml, 5-50Ml and 50Ml+ bands for both water and sewerage)
- Sheet "Working Capital"
  - Estimates net working capital based on debtors and creditors recovery times and cost of financing
  - Allocate net working capital costs across tariffs according to multipliers

MODEL AUDIT APPROACH

Our approach for auditing the model comprised the following three steps:

- Ensuring that formulas represent the required methodologies
- Checking that the calculations are correctly implemented
- Cross-checking results using alternative formulas

Step 1: Ensuring that formulas represent the required methodologies

We have checked that all the steps involved in the calculations are consistent with the principles set out in Frontier's main assurance report. In particular, we have considered in particular:

- The principles for the allocation of Billing, Payment handling, Enquiries & complaints, Debt management, Doubtful debts and Meter reading costs between key and non-key customers
- The principles for the allocation of tariffs between Select and Standard
- The principles for the allocation of retail costs and margins according to cost drivers
- The rationale for "compressing" total cost according to total cost recovery allowed by PR14 Final Determination
- The approach for calculating smoothed retail costs and margins within tariff bands
- The approach for calculating the net retail margin for 0-5Ml, 5-50Ml and 50Ml+ tariff bands combining water and sewerage
- The approach for calculating net working capital based on debtors and creditors recovery times and cost of financing.

Step 2: Calculation checks

We have performed two types of calculation check: reviewing formulas conceptually (for each individual field) and sampling them for consistency (within each field).

Reviewing formulas

We have traced back calculations step-by-step from the final output to the initial input cells, to ensure that calculations (those which influence outputs) are carried out as intended. To do this, we have checked a representative cell for each field.

The final output, for the purposes of this review, is the charge per tariff band (composed of wholesale cost, retail cost and retail margin) in cells M4:M11 in sheet 7a. These are marked in red in the attached file "Model frontier V2-0 2017-18final d - WC Correction +FL QA 240616".

The review identified all the cells in the model that are relevant to obtain the final results. These were classified in two types: inputs, marked in Blue Gray and calculations, marked in colour Teal.

This process identified multiple fields in sheets 1 through 7a and in the Margin allocation section, particularly sheet "Working Capital" and the sheets that feed inputs into it.

Sampling for consistency of calculations within each field

When calculations involve a large number of items in a repetitive fashion, we have undertaken a comprehensive sampling throughout the spreadsheet to check for consistency of repeat functions.

The consistency check was performed throughout the model. However, particular attention was paid to the following fields:

- The rolling forward of wholesale cost according to RPI+K in sheet 2.
- The operating expenditure of the various cost items in sheet 4, including the adjustment for direct debit reduction.
- The importing of the relevant drivers for retail margin allocation in sheet 5.
- The charge per unit for wholesale costs, retail costs (smoothed and unsmoothed) and the retail margin (smoothed and unsmoothed) in sheet 5.
- The calculation of debtor costs and net working capital in sheet "Working capital".
- The working capital costs for each individual tariff in sheet "Working capital".
- That the results from sheet 5 are correctly imported to sheet 7a via sheets 6 and 7.

Step 3: Cross-check results using alternative formulas

We have calculated separately a substantial number of the calculations included in the spreadsheet. These often rely on alternative approaches to obtain the same results. This approach relies on checking that the alternative approach coincides with the calculations of the spreadsheet.

All cross-checks are highlighted in yellow in the attached file "Model frontier V2-0 2017-18final d - WC Correction +FL QA 240616". The cross-check calculations performed are the following:

- The model correctly identifies the tariff band from where the majority of costs are allocated according to the allocation from sheet 2.

- The cost items in sheet 5 correctly obtain the total costs from sheet 4.
- The list of tariffs is consistent across all the sheets of the model.
- That the tariff multipliers in sheet 5 are consistent with the ones introduced in sheet 2 and the amendments estimated in sheet 3.
- That the determination of whether a tariff is “Standard” or “Select” is consistent with the tariff allocation introduced in sheet 7a.
- That each cost item references to the correct cost driver and the actual value of the cost driver for each tariff and cost item is correct.
- That the total wholesale cost used in sheet 5 can be reconstructed by multiplying average charges and customer numbers from sheet 2.
- That the retail margin is correctly allocated across cost items.
- That each tariff band applies correctly the selected version of the retail margin (smoothed or unsmoothed).
- The retail margin is correctly calculated for each tariff band and each individual tariff.

MAIN FINDINGS

Frontier has carried out a systematic model audit to check the correct functioning of the model. This does not include an audit of the input data, which we understand has been separately assured by PwC. We have checked the model calculations in a systematic way, as documented in this note. We have verified that the relevant calculations in the model reflect the methodology described in Frontier’s main assurance report; the calculations are carried out accurately; and pass our assurance checks. All reasonable efforts have been made in the assurance process to ensure the accuracy of the model. On the basis of this work, we are confident that the model reflects the intended methodologies and is working accurately. More specifically, we have found that:

- The retail cost items are taken as input and are categorised appropriately before allocation, in line with the methodology described in Frontier’s main assurance report;
- The allocation of the retail cost and net margins is carried out at tariff level, and the calculations in the model reflect the methodology set out in the main assurance report; and
- Taken the mapping from tariffs into the six tariff bands as an input, the aggregated retail net margin, and gross margin per tariff bands are accurately calculated and reported.

YourVoice NHH Retail subgroup: Report on engagement 6th July 2016

1. Introduction

In June 2014, as part of the Price Review process (PR14), United Utilities submitted information to Ofwat on future retail pricing strategy for its Non-Household (NHH) customers. During its Draft Determination assessment of all water company submissions in August 2014, Ofwat observed significant differences in the approach to cost and net margin allocation across companies, which led to it consulting on other options.

In response to this, United Utilities produced a representation to alter cost and margin allocations. As part of its preparations, the document was discussed with the PR14 Customer Challenge Group (CCG) prior to submission in October 2014.

Ofwat did not accept the company's allocations as submitted in the representation for a couple of reasons, and they cited the level of CCG and customer engagement, especially in relation to the impacts on bills for smaller users as a factor. This decision left the company as an outlier compared to the rest of the industry, especially for customers that use large volumes of water.

Ofwat decided at this stage the NHH price controls would be set from 1 April 2015 for a period of two years, to allow for arrangements to be reviewed before the English competitive market opens in April 2017; the company's new proposals aim to revisit these controls.

The company has been reviewing its previous submissions and revising its cost and margin allocations for NHH customers to make them more cost reflective since April 2015, with a view to producing a robust business case which addresses the previous issues raised by Ofwat. The company has involved the CCG (now known as YourVoice) in ongoing discussions, and started engagement with the group upon commencement of this work.

2. Engagement approach

2.1. CCG and subgroup

After initial discussions with the company on the scope and timescales for the NHH reopener, YourVoice considered how it should be involved most effectively. Andrea Cook (as the Chair of YourVoice) proposed a subgroup be created to work specifically on the NHH reopener in detail, and to report back to the main YourVoice group on a regular basis.

The members of the subgroup are:

- Bernice Law, Independent Deputy Chair of YourVoice, and Chair of the NHH reopener subgroup with extensive business and public service experience from a variety of roles including Director and Executive positions at the North West Regional Development Agency and Warrington Borough Council
- Damian Waters, Regional Director of the CBI for the North West, responsible for the CBI's interaction with its members and for managing the relationships with the public sector in the region
- Dr Tayo Adebowale, Director at Cirkadia, and the Environment Agency appointed member for sustainability on the North West Regional Flood and Coastal Committee, with a focus on the environment, sustainable business management, and community and social enterprise
- Andrew White, Senior Policy manager at the Consumer Council for Water (CCW), national lead for Fair Charging and Affordability since 2006 and head of CCW's social policy team which has responsibility for consumer protection, charges and tariffs, affordability, debt, customer vulnerability and business customers

The subgroup met with the company for the first time in September 2015, and at this session outlined members' commitment to providing support and challenge for the duration of the NHH reopener project. During this meeting members discussed the importance of getting the right blend of attendees for the subgroup to ensure small and large business interests were represented fairly. Members agreed the representatives on the subgroup were the right mix for the project, but that this would be reviewed as the project progressed in case other commitments affected members' availability.

Subsequently a further five meetings of the subgroup were held (in November 2015, January 2016, March 2016, May 2016 and June 2016) to discuss matters including:

- the approaches for direct and continuous engagement with customers
- progress with the submission
- the potential impacts on customer bills and the results from customer research

In addition, a conference call was held in May 2016 at the request of the subgroup to allow the company to update the group on the final Ofwat methodology. These sessions provided useful forums for discussion and enabled the subgroup to question and challenge, as well as to provide advice and feedback to the company.

Subgroup meetings were scheduled to align with the main YourVoice meeting dates, usually falling in the preceding week, so that relevant updates (including challenges and recommendations) from the subgroup could be reported in a timely manner. The updates also provided YourVoice with an opportunity to comment on the work being carried out by the company. No major issues or challenges

were received, with the main group supportive of the work being undertaken by the company and the subgroup.

In advance of all meetings, materials were circulated to ensure members had sufficient time to review information. Minutes for these meetings were created and circulated to all members following each session (see Appendix A), and a log of key interactions and challenges during the NHH reopener process has also been kept (see Appendix B).

2.2. Customer engagement

The subgroup was involved with three stages of customer engagement, providing guidance and challenge throughout the development, execution and reporting of the qualitative, quantitative and continuous phases.

2.2.1. Continuous phase

The company outlined to YourVoice subgroup members Ofwat's expectation that continuous engagement should inform their investment plans and charging proposals. The company explained it was conducting a detailed review of data from a range of sources, including call volumes and reasons, feedback from monthly Customer Satisfaction surveys, and information obtained from regular meetings with key customers to ensure customer views were captured. The company updated the subgroup on this exercise early on in the process, and flagged that it was likely research would be required alongside this due to the lack of directly relevant information from the continuous engagement review. The company asked members if they could suggest other sources of information that may be useful to review as part of this assessment. Andrew White from CCW supplied links to a variety of CCW and other industry reports for consideration. The company reviewed these alongside the aforementioned data, and shared a summary of the findings with the subgroup who accepted that the key points gleaned from the continuous engagement phase showed customers did not discuss themes directly related to the reopener. The company explained to the subgroup that the findings would be included in the final submission.

2.2.2. Qualitative Research phase

The subgroup discussed customer engagement at the first meeting in September 2015. The company explained that there was no Ofwat methodology available, so all data modelling work completed to date was based on feedback from the previous submission and representation. The subgroup noted the likely timescales for submission, and the company explained a consultation on the methodology was due from Ofwat in November.

The company outlined that it had started to consider what customer engagement might be appropriate and that it should be started as early as possible to ensure it was produced in a timely manner to

influence the planning process. The subgroup agreed that this was a sensible approach. The subgroup also agreed that obtaining customer views on aspects of competition, switching, charging principles and potential impact on bills would be important for the NHH reopener planning process.

Options for a qualitative phase of research work were then discussed. The subgroup agreed that a qualitative phase of work was a sensible starting point, and that Populus Research Ltd., should be appointed to assist with this work as they were a good fit due to their expertise and previous experience. The subgroup was supportive of the qualitative approach outlined, and the intention to obtain a balance of views, across the customer base from small to large customers. The subgroup requested that members should see detailed proposals once available, as well as being involved in contributing to topic guides, questionnaires and other materials for the research.

Research Methodology & Discussion Guide feedback

The points raised by subgroup members during the preparation of survey material are captured in the interaction and challenge log at Appendix B, but in summary these covered:

- Clarifying wording and positioning of questions and prompts
- Minimising jargon and modifying the language used
- Additional explanatory narrative for context, clarity, and to improve flow, and
- Simplifying the approach overall

All points raised were addressed prior to the research sessions starting.

The final approach used was a mixture of six semi-deliberative focus groups that took place in Bolton, Bury, Manchester and Barrow for <50Ml users, and seven face to face depth interviews with >50Ml users. The aim of these discussions was to understand:

- The meaning of 'fairness' in the context of a utility's price setting process
- Customer views on whether it is acceptable for one group of customers to subsidise another
- Whether these views are sensitive to resulting price changes
- Whether these views are sensitive to a price increase to the individual customer
- How views differ across a range of customer types depending on their size, business type, water usage and the criticality of water to their business

The focus group sessions ran in October 2015, and all members were invited to attend to observe, review and provide feedback.

Early focus groups held in Manchester were used as a pilot to test that the discussion guide worked well. Dr Tayo Adebowale attended these, and concluded they were well run, with a good mix of vocal

attendees. However, Dr Adebowale highlighted that on the night participants appeared to be confused by one of the visual stimuli used to prompt discussions. Instead of aiding the debate within the groups it created some confusion, and led to a number of participants going off on a tangent. A second more simplified stimuli was then trialled in the subsequent session and observers agreed that this worked far more effectively.

Based on this assessment, the updated stimuli was used in future sessions. The discussion guide was refined after the pilot for use in the subsequent focus groups.

The full findings from the Phase 1 research can be found in the Populus report; however in summary the work concluded that customers broadly agreed with some of the key principles, but there was not a consensus:

- Fairness as applied to price setting was an ambiguous and relative concept
- Customer segmentation can be appropriate in some circumstances
- Costs should be allocated where incurred – there was an expectation that 'pay for what you use' principle would cover this
- Cross subsidisation is not generally fair; however everyone paying the same rate is initially seen as an appealing approach
- Customers were unclear how the application of these principles applied to them; some customers changed their views if they thought they would be adversely impacted

The results from Phase 1 were disseminated to the company and the subgroup by Populus at the same time during a meeting in November 2015.

Dr Adebowale fed back to the subgroup the importance that SME customers in the sessions placed on service, and how once the market was open to competition, customers are likely to consider this aspect equally to price, and in some cases even more so.

Members reflected on whether the customer views expressed in the research on cross subsidy differed as a result of the impact on the individual, (whether positive or negative). Populus Research responded that at this stage the research was not able to answer this. This question was subsequently tested during the Phase 2 research, which is discussed later.

The subgroup discussed how customers can save money on bills through efficiency and sustainable use, and members highlighted the potential difficulty of customers understanding the split between wholesale and retail element of bills. It was agreed that the complexity this presented should be taken into account for future phases of research.

Members commented that some of the concepts involved were complex, and that the use of examples would help. Damian Waters (CBI) suggested that a useful example to illustrate customer segmentation or 'grouping', was to explain how risk is allocated in the insurance industry; for example, the risk profile and subsequent premium charged to an eighteen year old who has just passed their driving test versus that for a fifty five year old who has been driving for 37 years. The company noted this and used the example specifically in the Phase 2 research.

Overall the subgroup concluded that the qualitative phase of research had been helpful in providing customer insight about the difficult concepts of fairness, cross subsidy and the impact of price changes on individual customers, and that there had been no single consensus across these aspects.

The subgroup agreed with the company and Populus' recommendation that further research was needed and that a quantitative phase was a sensible next step to test these ideas further, in order to obtain reliable, robust feedback from customers. The subgroup agreed that for continuity purposes it made sense to continue to work with Populus for future phases of research.

> *"The YourVoice subgroup concluded that the research had been well planned and executed and it delivered some interesting, if not unsurprising findings, based on members experiences of other industries, and this conclusion was provided to the main YourVoice group. Members also commented that Populus had done a good job considering the complexity of the research topics for customers. One of the members, who viewed the group sessions in Manchester, commented that the research write-up and conclusions very much mirrored what was observed. "*

The detailed discussion points and challenges from the November session are recorded within the minutes for the meeting (see Appendix A).

2.2.3. Quantitative phase

The second phase of research aimed to validate the findings from the qualitative phase and to explore key areas in more detail with a representative sample of the customer base.

This phase of research aimed to:

- Educate respondents on relevant principles such as cross subsidy, debt risks and customer management costs so they can make an informed choice on the scenarios
- Understand customer's views on these principles
- Discover customer views on different scenarios and the reasons behind these views
- Assess how perceptions of the above differed by customer type (e.g. small and large customers)

The subgroup agreed that traditional quantitative research would be challenging given the complexity of the unfamiliar subject matter for customers, and the 'iterative' nature of the issues. To address these issues it was proposed that the research should be education-led, and conducted online.

This approach aimed to maximise uptake rates as well as increase the chance of complicated subjects being understood. It would also allow access to a large number and wide variety of customers, as well as ensuring consistency in approach across all those taking part.

The company shared an overview of the draft proposal for the quantitative work with the subgroup in January 2016. This included educative elements to explain to customers the detail of the topics being covered. The subgroup agreed this was a sensible approach, and that an online survey would be appropriate. Members emphasised that, due to the complex concepts being explored, the design of the survey needed to take into account the learning from Phase 1 and be sympathetic to the issues highlighted. Members suggested that further information needed to be easily accessible in the survey, and explanations would be required for any technical terms and definitions.

The subgroup discussed how best to maximise survey uptake. Members suggested that the invitation should make it clear to customers that involvement in the research would benefit them by giving them a chance to 'have their say.' The subgroup also recommended that the company consider incentivising participation in the survey. The company responded by offering a charitable donation to North West Air Ambulance for every survey completed.

Members requested the opportunity to provide input to the survey material prior to it being used with customers and to take part in a live pilot of the survey once developed. The company agreed this was a good idea.

Members stated that it would be important for the company to make customers aware of the potential bill impacts, and how these may differ between large and smaller customers within the research using clear, and simple language. The company agreed with these points, and advised that figures from preliminary modelling were broadly in line with the figures from the representation, indicating an increase in the order of +1% for customer sites using less than fifty megalitres, and a reduction for customer sites using more than fifty megalitres in the order of 2 to 3%. The company explained that these numbers were provisional and may change as the modelling work progressed.

Members commented that, to the man-in-the-street, it may appear that smaller customers were being made to pay for larger customer bill reductions, and that it is imperative to be absolutely transparent about potential bill impacts during the research stage. The company responded by explaining that the indicative bill impact values relate to the application of a more 'cost reflective' methodology. The

members commented that this approach was appropriate, and that larger customers paying slightly less actually aligned with customer expectations on the principle that 'the more you buy the less you pay' from the first phase of research. It was acknowledged this was a principle relating to wholesale charges rather than being directly related to retail services, however customer views on this theory were still seen to be relevant in this context.

Members commented that it was important to ensure that a representative sample of customers were recruited for the research, to ensure a good cross section of views were captured. Members expressed an interest in ensuring results could be segmented for both small and large customers so that it was clear how views differed, especially views on bill increases and decreases. The company ensured this was built into the design of the survey.

Following on from the January meeting, the subgroup contributed greatly to the development of the Phase 2 approach. The company liaised with the subgroup on the development of the questionnaire and supporting materials, with several versions being circulated to members during the development period (February/March). A log of the comments and challenges recorded and actioned are in Appendix B. These covered a range of topics but broadly related to the language and terminology used, the examples included to help customer's understanding of the principles tested, the layout and flow of questions, and descriptions and explanations included for context and education.

The duration of the survey was a key consideration in terms of creating optimum clarity and minimum survey fatigue. Two alternative drafts of the questionnaire were produced based on the feedback from the subgroup. The first covered examples of all the main principles in realistic scenarios, the application of principles to water charges, and bill impacts via two scenarios in a shortened, summarised version. The second option covered the same overall content, but in greater detail.

Populus Research advised that the length of the second survey presented a real risk of customers dropping out or not fully engaging all the way through owing to the length of time it would take to complete, and the amount of information included.

The subgroup considered both versions, along with the advice from Populus Research. Members agreed the shorter version of the survey was most appropriate in terms of content and duration, but requested a bridging section to cover some of the detail, which was subsequently built into the survey.

> *"On balance I agree the shorter version is likely to work better"*
> *"The shorter version is much more likely to get a lower drop off rate and covers the principles that need to be tested"*

> *"The short survey isn't as clear as the longer version. The breakdown of the principles will help customers see why changes are needed and what the impacts of those changes are. On reading the longer one it makes it clear that the company are trying to be fair to all customers (and it even makes the respondent feel some empathy for the company and what it is trying to achieve), whereas some of this is lost in the shorter version. But the long version contains a lot of information for customers to take in"*
> CCG subgroup member feedback

The subgroup took part in the online pilot of the survey which ran from 11th to 16th March and all members provided feedback on the language and descriptions used, online functionality, format, navigation, and overall user experience. A small sub-set of customers were invited to take part in the pilot, with 16 taking up the offer. Populus Research monitored completion rates, errors flagged and general diagnostic feedback during this testing period.

Feedback from customers that took part in the pilot was positive:

- 81% felt the questions were clear and easy to understand, and 80-90% found the more technical descriptions (for debt, key account management, margin and fixed costs) clear
- 75% agreed that they understood more about how water charges are set after taking the survey (indicating the value of educating through the survey)
- 50% of customers agreed the survey took a reasonable amount of time to complete
- 63% felt the topic was relevant to them

Based on the pilot results and feedback from the subgroup, Populus made changes to the survey (e.g. adding a link to water efficiency advice for customers, adding prompts for clarity on how the survey worked), as well as making modifications to wording and format, and retaining questions intended for the pilot only (e.g. diagnostics) where the subgroup felt this was useful. The company took all feedback into account and reviewed this alongside the results from the pilot before taking action. Where any individual suggestions were not incorporated, the company provided a reasoned response.

The main survey went live on the 23rd March 2016, and achieved 542 completes against a target of 350 with a mix of small, medium and large users taking part.

Diagnostic feedback received from the main survey highlighted that:

- 73% of participants found the survey relevant to them
- 70% found the questions clear and easy to understand
- 70% knew more about their water charges than they did before completing the survey
- 59% felt the survey took a reasonable amount of time to complete

- For the individual descriptions of debt, fixed costs, margin and key account management, between 92 and 95% of participants found each clear

Key findings from the research survey work concluded that:

- 65% of customers are likely to consider switching when the market is opened in 2017
- On average, customers need a 15 percent saving to switch but larger customers need less (on average 9%)
- Customers generally think that "pay for what you use" is a fair way to set water charges (79%), but think the principle of cross subsidisation is unfair (69%). Customers were equally split on the fairness of the grouping principle with 34% thinking this approach was fair and 41% unfair, despite this approach being more cost reflective
- Before customers saw the actual monetary impact of the proposed changes, they thought the potential changes were less reasonable if they affected them negatively – this aligns with results from the Phase 1 research, and the continuous engagement review
- In the first scenario tested, application of the principles led to a 1% increase for small and medium users (<50Ml) and a 2.5% decrease for larger users (>50Ml):
    - 39% of customers thought this was reasonable, and 36% unreasonable, while 34% thought it was fair, and 35% said it was unfair
    - There were markedly different results when comparing customers who were likely to consider/unlikely to consider switching. For those customers unlikely to consider switching substantially more found the increases fair than the sub-set of customers who were likely to consider switching (58% vs 30%)
- A second scenario was also tested with customers, where the bill impacts doubled (e.g. a 2% increase for <50Ml customers and a 5% decrease for >50Ml customers). For this scenario perceptions of fairness and reasonableness dropped, but there was not a consensus:
    - 24% of customer thought this proposal was reasonable (23% fair), while 49% thought it was unreasonable (48% unfair)
    - For those unlikely to consider switching there was a more even split between those who thought it was fair/unfair and reasonable/unreasonable with 32% assessing the proposal as reasonable (44% unreasonable) and 38% fair (36% unfair). Those unlikely to consider switching are less likely to think the proposed scenario is unfair (36%) or unreasonable (44%) than those likely to consider switching (52% unfair, 52% unreasonable). Of those likely to consider switching, 22% thought the proposal was fair and 52% unfair.

The full findings from the Phase 2 research can be found in the Populus report.

Populus Research attended the subgroup meeting in May 2016 to discuss the research findings which were disseminated to the group prior to the session. The subgroup queried whether the customer sample size was representative of the overall customer base. Populus Research replied that the sample for larger volume/key customer numbers were slightly on the low side, but that the results had been weighted to reflect the actual composition of the customer base. The subgroup was happy that good practice had been followed to ensure there was no results bias.

The subgroup noted that the research was balanced just right in terms of length and complexity due to the good response numbers overall, and positive feedback from the diagnostics. There was also consistency in the results received between the qualitative and quantitative stages.

Members also stated that Populus had done a good job, engaging well with the subgroup, being very receptive to comments and suggestions, and considering feedback. The subgroup added that members felt engaged through the process and were happy that the improvements suggested were taken on board.

The subgroup agreed that the results from Phase 2 aligned closely to the findings from the Phase 1 research, especially in terms of the principles tested. Members also commented that the results were in line with expectations based on experiences of research from other industries such as energy.

Members agreed that the findings from the research indicated customers supported the principles tested, and there was a case for the introduction of revised proposals based on the application of these principles. Members also noted that customers did not reject either of the scenarios tested. It was observed that those customers who are least likely to consider switching retail supplier appear most supportive of the scenarios, and customers who are most likely to consider switching retail supplier show least support for the scenarios tested. The subgroup noted the overall conclusions from the research.

3. Further Subgroup activity in development of the submission

During April, May and June, the company provided updates to the subgroup on the latest developments arising from the Ofwat methodology, and the likely impacts these changes would make to customer bills. Three sessions were held to discuss in detail the practicalities of applying the methodology and to highlight the implications for the submission including both phases of research (which had already been completed in advance of the methodology being published).

These principles and the survey results were reviewed alongside the Ofwat methodology and draft model to ensure the approach was in line with customer views. Where there was not a consensus (e.g. for grouping) the most cost reflective approach was judged appropriate in terms of recommendation

from the economic advisers, and based on the application of the favoured 'pay for what you use' principle. The subgroup agreed this was a fair approach taking all aspects into account.

The company shared its proposals and the potential impact on customer bills with the subgroup and main CCG group throughout the engagement process, with iterations shared at each stage of the governance process. The final bill impacts shared are set out below.

Gross Margins by Volume Band	PR14	This proposal	Change	Scenario 1 tested with customers	Scenario 2 tested with customers
0 - 5Ml	7.6%	8.4%	+0.8%	+1%	+2%
5 – 50Ml	4.1%	3.9%	-0.2%		
>50Ml	5.4%	2.6%	-2.8%	-2.5%	-5%

The subgroup and the CCG main group agreed that the proposals had been informed by the research undertaken, noting that the proposed bill increase for small customers was below the level researched.

4. Conclusions

The YourVoice subgroup is pleased with the amount and quality of engagement which has been undertaken as part of the reopener process, and that the company held early discussions with customers. It has found the work completed was extensive and thorough, and was impressed with the way in which Populus engaged with the subgroup. Members felt included throughout approach, design and material development phases, and members thought that overall the research delivered was excellent and gave valuable insights into customer views on competition and charging principles.

Dialogue between the company and the subgroup has been wide ranging and has allowed for challenge and queries as set out in the minutes and log within the appendices. The research approach and findings, and potential bill impacts have been discussed at length, and the subgroup is satisfied that proposals within the submission take account of customers' views on the principles, and the reasonableness of the scenarios tested.

Overall conclusion

The YourVoice subgroup was fully involved in the development of the customer engagement activities required to provide insight on which to inform the company's price control submission. The subgroup was comprehensively consulted on the approach, format and content of the engagement, and is confident that the customer research is of the appropriate quality required to underpin the company's proposals. The company demonstrated, by analysis of continuous customer interactions, that customers do not routinely talk about aspects of service that are

relevant to the NHH reopener, and this is accepted by the subgroup. The members are satisfied that the right areas have been covered and questions asked within the research, and are pleased to see the process aligned well with Ofwat expectations.

The subgroup appreciates that Ofwat's methodology aims to simplify tariff caps and the overall NHH price control. When the methodology was released in May, members expressed concern to the company regarding the apparent change in direction by Ofwat from the consultation in November, based on the view that the changes could have invalidated the customer engagement already completed, and the tight deadlines would have made the delivery of further quality research extremely challenging. The company kept the subgroup updated throughout, and both parties worked closely to understand the impact of the final methodology on the research. The subgroup is pleased to report that these changes did not in the end adversely impact the research conducted, with the topics researched and findings still very relevant.

The subgroup is appreciative of the company's approach to this engagement and the involvement of the YourVoice panel. The subgroup feel that its input to this process has been appreciated and valued by the company, and that the company has worked hard to involve the subgroup at all stages.

The subgroup is content that potential and actual bill impacts were shared throughout the process and that the numbers tested with customers via the scenarios align with the changes included by the company within their submission. Members are also content that the proposals within the submission have been informed by the findings from the customer research undertaken.

The content of the submission reflects the discussions that the subgroup has had over the last 10 months, and the proposals within the submission are based on the findings from comprehensive customer research.

PRIVATE AND CONFIDENTIAL

United Utilities Water Limited
Haweswater House
Lingley Green Avenue
Lingley Mere Business Park Great Sankey
Warrington
Cheshire
WA5 3LP

15 July 2016

Dear Sirs

Agreed upon procedures in respect of Business Retail Price Review 2016

You have asked us to agree to you providing to The Water Services Regulation Authority ("Ofwat", the "recipient") a copy of our report dated 15 July 2016 (the "Report"), prepared in connection with our agreed upon procedures in respect of Business Retail Price Review 2016.

To ensure that Ofwat has a clear understanding of the terms under which the Report is being provided to them, a copy of this letter should accompany the Report.

We confirm that we give our consent to you doing so on the clear understanding that the Report was addressed to you and was prepared on your instructions as set out in our agreement dated 20 June 2016 and variation letter dated 4 July 2016 and therefore the Report will not address or reflect the interests or circumstances of the recipient or any other third party. Furthermore, we accept no duty or responsibility and deny any liability to the recipient or to any other third party in relation to their regulatory oversight of you or otherwise, whether or not the Report influences the decision or action of the recipient or any other party.

If our report is given to the recipient, it should be made clear that receipt of the Report should not be a substitute for enquiries the recipient should undertake for its own purposes and any independent advice it should obtain. You should also point out to the recipient that it will be bound by a duty of confidentiality to PricewaterhouseCoopers LLP, as well as to you, and that in respect of any Personal Data in the Report, they are required to comply with the Data Protection Act 1998. Consequently, the Report, and information obtained from it, must not be made available or copied, in whole or in part to any other person without our prior written permission which we may, at our discretion, grant, withhold or grant subject to conditions (including conditions as to legal responsibility or absence thereof).

Where disclosure of the Report or information contained in the Report is required by law or regulation, the recipient should i) ensure that a copy of this letter is disclosed with such information so that the other party receiving the information is on written notice of the terms on which the recipient itself had access to it; and ii) where legally permissible inform us promptly of the specific requirement to disclose and before making any disclosure.

PricewaterhouseCoopers LLP, Cornwall Court, 19 Cornwall Street, Birmingham, B3 2DT
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Notwithstanding our consent to the release of the Report to the recipient, the Report remains addressed to you and it is a matter for you to decide whether the release of the Report is appropriate in the circumstances.

In consideration for PricewaterhouseCoopers LLP consenting to you providing the Report to the recipient, you agree that you will not hold PricewaterhouseCoopers LLP responsible for the consequences of us doing so; accordingly PricewaterhouseCoopers LLP, its members, partners, staff and agents shall have no liability to you, whether in contract or in tort (including without limitation negligence or breach of statutory duty) or in any way whatsoever, for any loss, damage, cost or expense suffered by you as a result of the provision of the Report to the recipient. Without conferring any greater rights than you would otherwise have at law, we accept that this does not exclude any liability we may have for death or personal injury or for the consequences of our own fraud.

This letter shall be governed and construed in accordance with the laws of England. The Courts of England and Wales will have exclusive jurisdiction to settle any claim, dispute or difference which may arise out of or in connection with this letter.

Yours faithfully

Geraldine Rutter

Geraldine Rutter
Partner
For, and on behalf, of PricewaterhouseCoopers LLP

The Directors
United Utilities Plc
Haweswater House
Lingley Green Avenue
Lingley Mere Business Park Great Sankey
Warrington
Cheshire
WA5 3LP

15 July 2016

Dear Sirs

Report of factual findings in connection with Business Retail Price Review 2016

This report is produced in accordance with the terms of our agreement dated 20 June 2016 and variation letter dated 4 July 2016.

The directors of United Utilities (the "company") have prepared the Business Retail Price Review 2016 submission (including supplementary information) and remain solely responsible for it and for the creation and maintenance of all accounting and other records supporting its contents. The company's directors are also responsible for identifying and ensuring that the company complies with Ofwat's methodology, instruction and guidance in respect of the Business Retail Price Review 2016.

You are responsible for ensuring / obtaining comfort that the Business Retail Price Review 2016 model is mathematically accurate and operates in line with Ofwat's Business Retail Price Review 2016 methodology and guidance. We understand that you have commissioned the third party supplier of the model to provide comfort with regards to these aspects of the model.

You are responsible for ensuring / obtaining comfort that the PR14 model used to create the PR16 supplementary information is the PR14 final determination model. As such, you are responsible for ensuring / obtaining comfort that the PR14 model is mathematically accurate.

We have performed the procedures agreed with you and listed below in respect of the Business Retail Price Review 2016. Our work was performed in accordance with the International Standard on Related Services (ISRS) 4400 'Engagements to perform agreed-upon procedures regarding financial information.' The procedures were performed solely to assist the company's directors in fulfilling their reporting obligations in respect of the Business Retail Price Review 2016.

The procedures performed and associated findings are detailed in the following schedule.

Our procedures, as stated in our agreement, did not constitute an examination made in accordance with generally accepted auditing standards, the objective of which would be the expression of assurance on the contents of the Business Retail Price Review 2016 submission. We do not express such assurance. Had we performed additional procedures or had we performed an audit or review of the Business Retail Price Review 2016 submission in accordance with generally accepted auditing standards, other matters might have come to our attention that we would have reported to you. This report relates only to the Business Retail Price Review 2016 and does not extend to any financial statements of the company taken as a whole.

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This report is solely for your use in connection with the purpose specified above and as set out in our agreement. No part of this report is to be copied or distributed to any other party except as permitted under the terms of our agreement. We do not accept any liability or responsibility to any third party.

Yours faithfully,

Geraldine Rutter
For and on behalf of PricewaterhouseCoopers LLP
Chartered Accountants, Birmingham

Business Retail Price Review 2016: Schedule of procedures performed and corresponding findings

Ref.	Agreed Upon Procedures	PwC Testing	Findings
1	Agree the model data inputs back to data sources (e.g. a corporate system report, internal formally approved document or third party reference document) and agree intermediary calculation steps (i.e. between data sources and data input into the model) are performed in line with United Utilities' stated methodology.	Obtained final PR16 model: *Annex 2 - 2017 UUW NHH Default Tariff Model 2017-18.xlsm*. Agreed the model data inputs back to data sources and agreed intermediary calculation steps were performed in line with United Utilities' stated methodology.	No findings noted.
2	Check that populated Ofwat prescribed data tables agree with the model outputs.	Checked that the populated Ofwat prescribed data tables (*NHH-Retail-PR16-United-Utilities GOLD Submission (PR16).xlsm*) agree with the model (*Annex 2 - 2017 UUW NHH Default Tariff Model 2017-18.xlsm*) outputs.	No findings noted.
3	Check that any references to model input data, model assumptions and model outputs (i.e. stated figures and directly related text) within the Business Retail Price Review 2016 submission commentary, is consistent with the model content.	Checked that any references to model input data, model assumptions and model outputs (i.e. stated figures and directly related text) within the Business Retail Price Review 2016 submission commentary (*Submission Document Gold Draft V1.0.docx*), is consistent with the model content (*Annex 2 - 2017 UUW NHH Default Tariff Model 2017-18.xlsm*).	No findings noted.
4	Check that the United Utilities documented Business Retail Price Review 2016 methodologies are consistent with how the model is intended to operate.	Checked that the United Utilities documented Business Retail Price Review 2016 methodologies (*Methodology Statement NHH PR16 V2.docx*) are consistent with how the model (*Annex 2 - 2017 UUW NHH Default Tariff Model 2017-18.xlsm*) is intended to operate.	No findings noted.

Ref.	Agreed Upon Procedures	PwC Testing	Findings
5	Check that customer numbers, retail cost per customer, cost multiplier data and wholesale costs have been correctly transferred from the PR16 final model to the PR14 final determination model ('PR14 model').	(a) Checked that **customer numbers** and **retail cost per customer** for each of the PR14 tariff bands within the PR14 model (*2017 Model frontier V1-1 2017-18final - incidence checks f (preGold final - PR14).xlsm*) agrees with the PR14 final determination (*Ofwat prepopulated table (R4a) within the Ofwat prescribed submission tables within NHH-Retail-PR16-United-Utilities (PR14 - fifteen bands).xlsm).* (b) Checked that **cost multiplier data** and **wholesale costs** have been correctly transferred from the PR16 final model (*Annex 2 - 2017 UUW NHH Default Tariff Model 2017-18.xlsm*) to the PR14 PR14 model (*2017 Model frontier V1-1 2017-18final - incidence checks f (preGold final - PR14).xlsm*).	No findings noted.
6	Check that populated Ofwat prescribed data tables for the PR14 15 tariff bands agree with the PR14 model (with PR16 customer numbers, retail cost per customer, cost multiplier data and wholesale costs) outputs.	Checked that populated Ofwat prescribed data tables (Table R4A PR16 within *NHH-Retail-PR16-United-Utilities (PR14 - fifteen bands).xlsm)* for the PR14 15 tariff bands agree with the PR14 model (*2017 Model frontier V1-1 2017-18final - incidence checks f (preGold final - PR14).xlsm*) outputs.	No findings noted.
7	Check that the percentages used to allocate tariffs into 6 tariff bands has been correctly transferred from the PR16 final model to the PR14 model.	Checked that the percentages used to allocate tariffs into 6 tariff bands has been correctly transferred from the PR16 final model (*Annex 2 - 2017 UUW NHH Default Tariff Model 2017-18.xlsm*) to the PR14 model (*2017 Model frontier V1-1 2017-18final - incidence checks f (preGold final - PR14).xlsm*).	No findings noted.

Ref.	Agreed Upon Procedures	PwC Testing	Findings
8	Check that populated Ofwat prescribed data tables for the PR14 6 tariff bands agree with the PR14 model (with PR16 customer numbers, retail cost per customer, cost multiplier data and wholesale costs) outputs.	Checked that populated Ofwat prescribed data tables (Table R4A PR16 within *NHH-Retail-PR16-United-Utilities GOLD PR14 Six bands.xlsm)* for the PR14 6 tariff bands agree with the PR14 model (*2017 Model frontier V1-1 2017-18final - incidence checks f (preGold final - PR14).xlsm*) outputs.	No findings noted.
9	Check that any references to PR14 model assumptions and model outputs (i.e. stated figures and directly related text) within the Business Retail Price Review 2016 submission commentary, is consistent with the PR14 model content.	Checked that any references to PR14 model assumptions and model outputs (i.e. stated figures and directly related text) within the Business Retail Price Review 2016 submission commentary (*Submission Document Gold Draft V1.0.docx*), is consistent with the PR14 model content (*2017 Model frontier V1-1 2017-18final - incidence checks f (preGold final - PR14).xlsm*).	No findings noted.

United Utilities Water Limited
Haweswater House
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unitedutilities.com

Cathryn Ross
Chief Executive
Ofwat
21 Bloomsbury Street
London
WC1B 3HF

18 July 2016

BY EMAIL

Dear Cathryn

PR16 Non-Household Retail Price Control

On behalf of the Board of United Utilities Water Limited, I am pleased to provide you with our proposals for the PR16 non household retail price control. The development of these proposals has been informed throughout by the views of customers, including analysis of issues raised by customers in their day to day interactions with us, two stages of customer research undertaken by market research firm Populus and engagement with YourVoice - the North West customer challenge group which has provided an independent report on our approach to engagement.

We have also worked with independent economic advisors, Frontier Economics, to establish a best practice methodology for cost and margin allocation between different customers and this has been reflected in our approach. The data used to populate the model and complete Ofwat's data tables has been externally assured by PwC.

Our submission is consistent with Ofwat's methodology as published in May 2016, including the proposed simplification of the form of control. We are also providing Ofwat with copies of all external guidance on costs and margin allocation received and all assurance reports. Inevitably there are likely to be issues in the submission which may require further clarification or discussion and James Bullock is writing separately to Andrew Walker to suggest how the teams might be able to approach the process.

Statement of assurance

The Board of United Utilities Water Limited assures:

a) That the information provided is consistent with our legal obligations (including, where relevant, the prohibitions on undue discrimination or preference in licence condition E and licence condition R, and the charging scheme rules) and competition law. This has been supported by the cost and margin allocation methodology from third party experts, Frontier Economics.

Cathryn Ross
Ofwat

15 July 2016

b) That the allocation and attribution of costs and margins to revised or new default tariff caps are reasonable and robust (with costs and margins attributed by appropriate drivers and activities, and the proportion of costs subject to broader allocation rules kept to the minimum that is reasonably practicable.) This has been supported by the cost and margin allocation methodology from third party experts, Frontier Economics.

c) That proposals have been reasonably informed by customer engagement, and research and discussion with the company's CCG. This has been supported by the evidence from ongoing customer engagement by Business Retail, the outcome of both stages of our customer research conducted by third party market research company Populus and the views of the YourVoice customer challenge group.

d) That data tables have been completed accurately and consistent with any guidance provided. This is supported by PwC's completion of agreed upon procedures.

I can confirm that the Board of United Utilities Water Limited (UUW) has considered and endorses these proposals.

Yours sincerely

Steve Mogford
Chief Executive

cc Andrew Walker, Owat
Kevin Ridout, Ofwat
James Bullock, UU

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Andrew Walker
Director, Markets and Economics
Ofwat
21 Bloomsbury Street
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WC1B 3HF

19 July 2016

BY EMAIL

Dear Andrew

PR16 Non-Household Retail Price Control

Following our submission for the PR16 Non-Household Retail Price Control, I wanted to write to suggest how the UUW team might best be able to support Ofwat in its review process over the coming weeks.

Meeting

One suggestion is that it might be helpful to have a meeting between members of the UUW team responsible for the submission and members of your team as soon as is practicable. I recognise that you have a very challenging timetable to adhere to, with draft determinations planned for publication on 15 September, less than two months from now. Therefore it may be useful to invest some time discussing the proposals early on and face to face, to ensure that there are no differences in understanding regarding our proposals.

Price Review Queries Mailbox

In recognition that you and your team may have queries regarding our proposals, I would be grateful if these can be directed to our dedicated query inbox ***PriceReviewQueries@uuplc.co.uk*** . This mailbox will be monitored daily throughout the upcoming holiday period, in the interests of providing you with as speedy a response as possible.

Other contacts

Whilst the final determinations will be adopted and implemented by the Water Plus joint venture with Severn Trent, the remainder of this price control process will be managed and governed by UUW. On this basis, please consider the main points of contact within UUW for further work on PR16 as set out below.

Andrew Walker
Ofwat

19 July 2016

James Bullock	Director of Economic Regulation	james.bullock@uuplc.co.uk
Jon Latore	Regulatory Strategy Manager	jon.latore@uuplc.co.uk
Sian Taylor	Price Review Programme Manager	sian.taylor@uuplc.co.uk

I trust this is of assistance; please do not hesitate to let me know if you need anything further.

Yours sincerely

James Bullock
Director of Economic Regulation

cc: Kevin Ridout, Ofwat