December 2014

Setting price controls for 2015-20

Final price control determination notice: company-specific appendix – Bristol Water

OFWAT

Contents

Overview

This appendix sets out the details of the final determination of price controls that are specific to Bristol Water. As set out in 'Policy chapter A1 – introduction' ('policy chapter A1'), the final determination protects customers in accordance with 'Setting price controls for 2015-20 – final methodology and expectations for companies' business plans' (our 'final methodology statement') and our statutory duties (summarised in policy chapter A1). We have also had regard to relevant guidance from the UK Government and the principles of best regulatory practice to be transparent, accountable, proportionate, consistent and targeted.

We published 'Draft price control determination notice August 2014: company-specific appendix – Bristol Water' (the 'draft determination' for Bristol Water) on 29 August 2014. Bristol Water is not an enhanced company. Given the very material difference in its wholesale cost proposals compared to our various assessments, Bristol Water has been through an extended process compared with all other non-enhanced companies. This is outlined below. In all other areas Bristol Water has been treated in the same way as the other non-enhanced companies.

Bristol Water's customer challenge group (CCG) has played an important role in both the development of the company's original plan and its revised proposals in response to our challenges and published guidance. Since the first submission of its business plan in December 2013, Bristol Water's proposals have also continued to evolve to take into account 'Setting price controls for 2015-20 – risk and reward guidance' (our 'risk and reward guidance'), the outcome of our risk-based review (RBR), our draft determination and other relevant policy consultations.

In its revised business plan in June 2014, Bristol Water sought to provide further evidence and close the gaps we identified in the RBR, including making a £10 million reduction to its overall wholesale cost proposals. This still left a very material difference between our view at the RBR and Bristol Water's revised plan for wholesale costs. Following our assessment of the revised plan, there were a number of broader areas where we considered it necessary to intervene to safeguard the interests of customers in the draft determination, but the most material of these areas remained wholesale water costs. Due to the scale of the difference between the company's plan and assessment, we published the outcome of our assessment of the company's wholesale cost claims on 6 August (along with our assessment of two other companies' individual price controls). We did this to give the company more time to reconsider its proposals or to supply us with further evidence.

In its representations on the draft determination, Bristol Water made some further reductions in the overall level of wholesale costs and provided additional evidence intended to support its business plan proposals. However, even taking into account the proposed efficiency reductions (£21 million), Bristol Water remained by far the most significant outlier within the sector with regards to wholesale costs. Given our concerns, at Bristol Water's request we offered to have further engagement on wholesale costs – beyond our published process – to provide a further opportunity for the company to submit evidence to us on why its proposed adjustments to the wholesale water cost models were appropriate and in the interest of customers. Bristol Water did provide some additional information to us during this period of further engagement.

In addition to wholesale costs, the company's other representations focused on the overall financeability of the draft determination, with specific concerns around the consequences of our interventions on wholesale costs. The company also made representations on other interventions in relation to:

- the cost of capital, and specifically the company-specific uplift;
- changes to performance commitments (PCs) and outcome delivery incentives (ODIs), including amending its asset reliability ODI to be more in line with those proposed by other companies; and
- an adjustment to recognise poor performance in 2010-15.

We also received representations on the draft determination from Bristol Water's CCG and the Consumer Council for Water (CCWater). Both the CCG and CCWater expressed concern at the size of the remaining 'gap' on wholesale costs. CCWater also suggested that the industry wide cost of capital should be lower than in our draft determination. The Environment Agency made specific comments on Bristol Water's proposed PC levels.

In reaching the final determination we have carefully considered all representations that we received on the draft determination (which was based upon the latest business plan submitted to us) and taken account of the most up-to-date information available where appropriate. As a result, this has led to changes which we consider are in the interests of customers and in line with our other statutory duties. These changes include:

- revising the wholesale cost allowance, though noting that our cost threshold remains significantly below Bristol Water's forecasts of total expenditure (totex), and the company will need to seek out a wide range of further efficiencies (including reviewing the scope of its proposed investment

programmes) or it is likely that shareholders will be exposed to additional costs;
- in line with all non-enhanced companies, reducing the weighted average cost of capital (WACC) to 3.6% for the wholesale business to reflect the significant movement in the cost of new debt since the publication of our risk and reward guidance in January 2014 (though noting we continue to not accept Bristol Water's proposal for a 70 basis point uplift);
- reducing the size of the downwards adjustment (or shortfall) we made to reflect some aspects of performance in 2010-15;
- making an (upwards) adjustment to the company's retail costs in recognition of pricing pressure it will face; and
- adjusting the pay as you go (PAYG) rate during 2015-20 to bring forward revenue in the first year, recognising the impact on notional company financeability in 2015-16 associated with the very significant efficiency challenge Bristol Water must now meet.

We provide a summary of the key elements of Bristol Water's final determination in chapter A1 of this document.

The remainder of the document sets out Bristol Water's final determination in more detail and is structured according to the binding price controls we are setting for the wholesale and retail elements of the appointee (the whole regulated business)[1]:

- wholesale water;
- household retail; and
- non-household retail.

As we explained in our final methodology statement, these separate controls are binding, confirmed through the modifications already made to the price setting elements of companies' licence conditions. This means that the companies cannot recover more revenue than allowed under each specific price control and cannot transfer costs between the controls. The revenue allowance for each price control is determined by the costs specific to that particular price control. This provides the companies with more effective incentives. It also helps to avoid distortion to the non-household market, which will be fully open to competition from 2017, as provided for in the Water Act 2014.

[1] Figures stated in this document (including wholesale costs and bill information) are in 2012-13 prices; retail data is stated in nominal prices. This is consistent throughout this final determination unless otherwise stated.

To support these separate, binding controls, throughout this document we also provide details on:

- the responses that we have received to our draft determinations and any consequential adjustments that we have made;
- the outcomes for the company to deliver and associated ODI;
- the efficient costs that we consider the company can achieve;
- the adjustments we are making to the wholesale water price control to reflect the company's performance in 2010-15;
- the allowed return for the wholesale water control, and the retail household and non-household net margins;
- the return on regulatory equity (RoRE) range;
- the financial ratios under the notional capital structure;
- the uncertainty mechanisms that form part of each price control; and
- where appropriate, the assumptions we have made to arrive at the allowed revenue for each price control.

Implementing these price limits

Bristol Water must deliver its obligations as required by the Water Industry Act 1991, other relevant legislation and its Instrument of Appointment ("licence"). This price control determination has been made under the terms of Bristol Water's licence and the Water Industry Act 1991. We consider that Bristol Water must act in an economic and efficient manner in delivering all of its obligations.

Policy chapter A1 sets out the milestones leading up to April 1, 2015 that will ensure effective business plan delivery. These cover menu choices, charges approval, reporting and assurance requirements during 2015- 20, and the 2014 price review (PR14) reconciliation.

In IN 14/15: '2014 price review – timetable for setting charges for 2015-16 and making menu choices' we set out the requirement for companies to notify us of their menu choices by 16 January 2015. We will make any adjustment to the company's allowed revenues that result from its menu choice as part of the price review in 2019 (PR19). A company's menu choice will be influenced by our decisions in this final determination. We confirm in annex 4 of this document a commitment that the ODIs will be recalibrated in the true up calculations, based on a sharing rate that is consistent with the company's menu choice. To facilitate this, we expect the company to publish its ODIs with the cost sharing rate that is implied by its menu choice on 16 January 2015. This will allow inclusion of the recalibrated ODIs within the framework for reporting and assurance from 1 April 2015, which we will publish on 9 February 2015. We require companies' Boards to provide assurance that the recalibrated ODIs conform with the final determination and are consistent with their menu choice. Any modifications should be confined to correctly adjusting the incentive rates for the difference between the FD assumption on the cost sharing rate and the rate associated with their final menu choice.

This price determination sets out the allowed revenues that Bristol Water can recover from its customers in the period 2015-20. Bristol Water is responsible for converting the allowed revenues into charges. In IN 14/17: 'Approval of charges 2015-16 – our approach, process and information requirements for large and small companies' and the accompanying policy document, we set out the timeline and process for charging approval. Companies are required to provide us with their charges schemes, associated assurances, and the other information requirements, and to provide any new appointees in their area with their charges schemes by 16 January 2015. By 2 February 2015 each company is required to publish their charges schemes.

A1 Final determination – at a glance

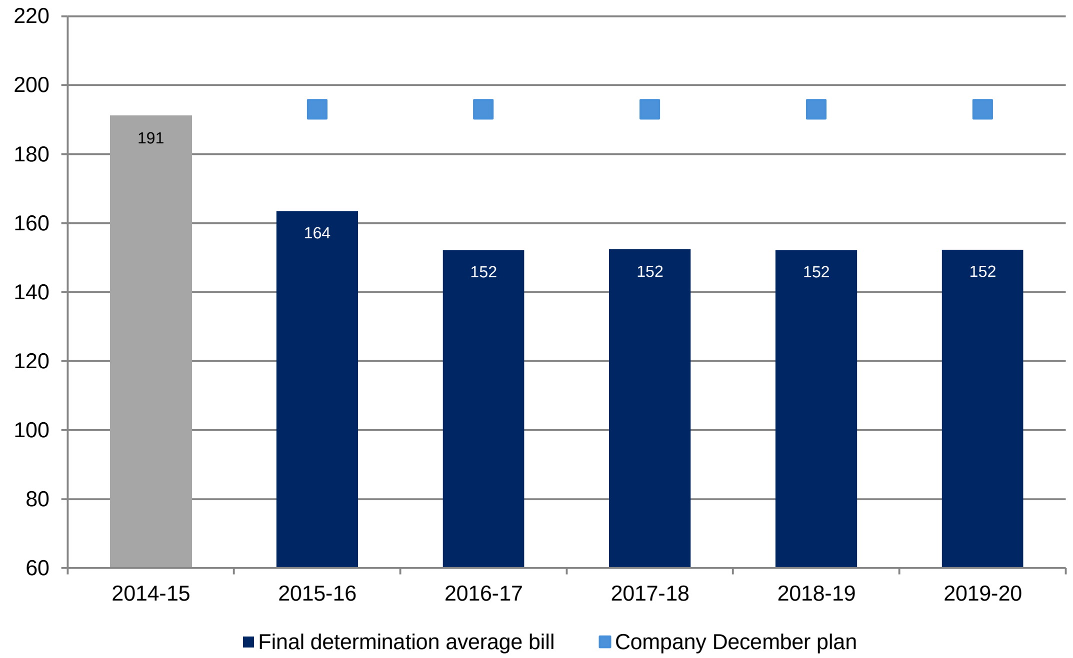
This chapter provides a summary of the final determination for Bristol Water. It summarises what the final determination will mean for customers, with respect to the average bills they will pay and the outcomes that the company will deliver in return. For the company, it covers its allowed costs and revenues, RoRE and financeability ratios. We also summarise the interventions we have made to the company's revised plan in order to protect the interests of customers.

Combined average household bill (£)

The chart below shows the average bills proposed in the company's December plan, the average bills in our final determination and the level of current bills (2014-15).

On average, our final determination means that bills in 2019-20 will be £152, which is 20% lower than current average bill levels (of £191), before inflation is considered. The difference between the company's December plan and our final determination is the result of the company accepting our risk and reward guidance, other revisions to its business plan, and the interventions we have made. This represents a cumulative saving of £192 for the average customer over the 2015-20 period compared to the bills set out in Bristol Water's December plan.

All bills are shown without the impact of inflation and are indicative as final bills will depend on the growth in the number of customers, changes in their usage and the specific charges that the company sets each year within the overall price controls that we have determined.



Note: The comparative bills from the company's December plan is based on the data submitted in the business plan but projected using our financial model, thereby ensuring consistency with the final determination projection. As a consequence the company's proposed bills illustrated above may not necessarily be the same as those described in the business plan.

The outcomes committed to by Bristol Water

Bristol Water has committed to delivering outcomes which reflect its customers' views. These outcomes are supported by 22 associated PCs in the final determination which identify the company's committed level of performance under each outcome. For 11 of these PCs, the company is subject to associated financial ODIs whereby it will incur a penalty for performance worse than its commitments, but for some can earn a reward for performance better than its commitments during the period from 2015 to 2020.

The table below sets out Bristol Water's outcomes. These reflect the priorities of customers as set out in the company's research and engagement with its customer challenge group. We have undertaken a comparative assessment of outcomes where it was possible to draw comparisons across the sector and, where necessary, we have intervened to challenge companies to deliver an upper quartile level of performance.

Details of the types of incentives and level of PCs associated with these outcomes are set out in annex 4.

Wholesale	
Reliable supply	Resilient supply
Sufficient supply	Safe drinking water
Water is good to drink	Efficient use of resources by company
Efficient use of water by customers	Sustainable environmental impact
Retail	
Affordable bills	Satisfied customers
Easy to contact	Bills are accurate and easy to understand

Allowed costs and revenue for Bristol Water

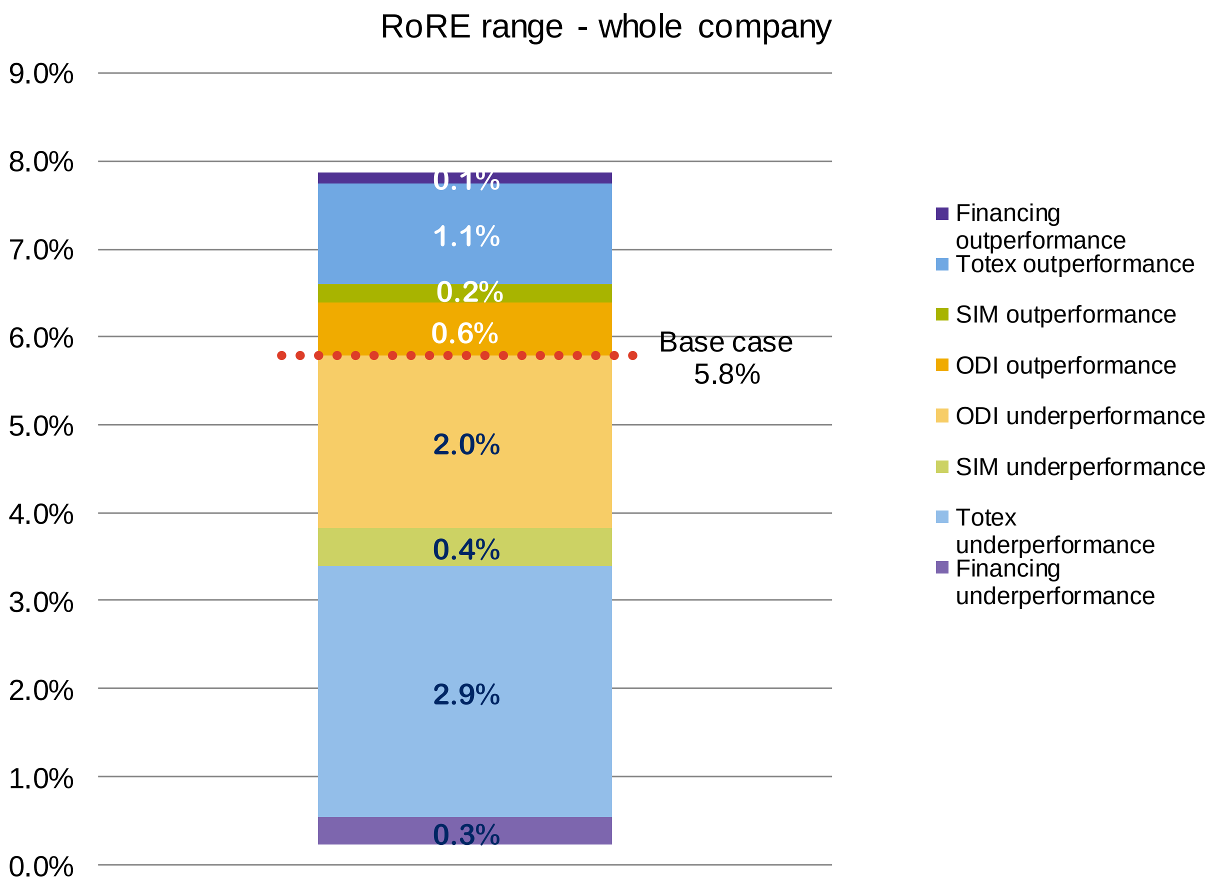
The table below shows the wholesale totex we have allowed over the period from 2015 to 2020 for Bristol Water. This is 19% less than Bristol Water's proposed totex of £541 million. The final determination allows Bristol Water to receive revenues of £507.9 million (over the period from 2015 to 2020). This combines allowed revenues for the wholesale and household retail controls. For non-household retail, we have also set average revenue controls per customer for each of the customer types proposed by the company. The £7.8 million of non-household revenue shown in the table below is indicative as it does not assume any gains or losses from competition or the company charging customers at levels different to the relevant default tariffs.

Wholesale	Water	
Totex 2015-20 total (£m)	437.8[1]	
Allowed return (%)	3.60%	
Allowed wholesale revenue 2015-20 (£m)	450.9	
Retail	**Household**	**Non-household**
Cost allowance – 2015-20 total (£m)	52.7	
Margin (%)	1.00%	2.49%
Retail allowed revenue (£m)	57.0	7.8

Note: Wholesale figures are in 2012-13 prices as wholesale revenue will be affected by inflation. Retail figures are in nominal prices as retail revenue will not be affected by inflation. This is consistent throughout this final determination unless otherwise stated.
1. This takes into account the implied menu choice as set out in table A2.4. The final wholesale cost threshold for Bristol Water (pre-menu) is £409 million.

RoRE ranges – appointee

Bristol Water has estimated the range of RoRE that it could earn dependent on its performance and external risk factors over the price control period. The RoRE range reflects the company's evidence and is based on an efficient company with the notional capital structure[2]. We have identified the RoRE impact separately for ODIs, totex performance, financing and the service incentive mechanism (SIM).We note that Bristol Water's actual returns may differ from notional returns due to differences between notional and actual capital structure and notional and actual cost of new debt and level of cost efficiency compared to allowed totex and household retail average cost to serve (ACTS).



[2]The notional capital structure is the capital structure which reflects Ofwat's assumption of an appropriate level of gearing to use in determining the allowed WACC.

Source: Our calculations based on information from Bristol Water.
Note: Numbers presented based on calibration of the ODIs against an assumed menu choice of a 50% sharing factor.

Ofwat's calculation of notional financeability ratios

Ofwat has a statutory duty to secure that a company is able to finance the proper carrying out of its functions. We interpret this financing duty as requiring that we ensure that an efficient company with a notional capital structure is able to finance its functions. A company's actual capital structure is a choice for the company and it bears the risk associated with its choices. An efficient company is assumed to be able to deliver its plans based on the expenditure allowance in our final determination.

Bristol Water provided assurance that its plan was financeable on the basis of a notional and its actual structure. The notional financial ratios on which this final determination is based, which take account of our interventions, are set out in section A5 and summarised on a 5-year average basis below. Given the scale of our interventions in Bristol Water's revised business plan, we have closely examined the financeability of the notionally efficient company. We have assessed this final determination for Bristol Water to be financeable on a notional basis.

Financial ratios for notional company	Ofwat calculation (average 2015-20)
Cash interest cover	3.63
Adjusted cash interest cover ratio (ACICR)	1.69
Funds from operations/debt	12.07%
Retained cash flow/debt	9.41%
Gearing	64.89%
Dividend cover (profit after tax/dividends paid)	1.85
Regulatory equity/regulated earnings for the regulated company	16.49
Regulatory capital value (RCV)/Earnings before interest, taxes, depreciation and amortisation (EBITDA)	8.96

Summary of interventions

In reaching our final determination we have intervened in the company's business plan, where necessary, to safeguard the interests of customers. In doing so, we have considered carefully and fully the representations that we have received on the draft determination and taken account of the most up-to-date information available where appropriate. We summarise the most significant interventions in the table below.

Outcomes	Wholesale costs
• **Cap:** We have imposed an overall cap and collar on ODIs of +/- 2% of RoRE • **Comparative assessment:** We have updated our comparative assessment and interventions on PCs, deadbands, collars and caps that are applied consistently for all non-enhanced companies. This results in interventions to Bristol Water's PCs for unplanned customer minutes lost and contacts from customers about water quality. • **Company-specific assessment:** We have made interventions to ensure that Bristol Water is subject to effective incentives that protect customers in areas that are not comparable across companies. For example, we have changed the penalty associated with population at risk of asset failure in order to ensure the company is properly incentivised to deliver the underlying scheme.	• We have intervened significantly in Bristol Water's **wholesale water totex** proposals. The company's revised forecast of totex (£541 million) is significantly above our assessment of the final wholesale water cost threshold (£409 million, pre menu adjustments). This had led to additional complexities in our review. The company will need to seek out a wide range of further efficiencies (including reviewing the scope of its proposed investment programmes) or it is likely that shareholders will be exposed to additional costs. • In reaching the final wholesale cost threshold we have not accepted some of the company's wholesale cost adjustments, or only partially allowed them. For several claims this is because the costs are not atypical for the industry and are already included in the allowance from our models. For other claims it is because Bristol Water has not provided persuasive evidence.
Retail	**Reconciling 2010-15 performance**
• We have accepted the company's claim for an adjustment to the ACTS for input price pressure relating to household retail costs. However, we have not accepted the company's claim for an adjustment to its non-household retail price limits for input price pressure. • We have not accepted the company's claim for non-household retail new costs associated with market opening.	• We have intervened in the adjustments related to 2010-15 performance – primarily the capital expenditure incentive scheme (CIS) – to ensure that the adjustments are consistent with our methodology. This has reduced the company's proposed revenue adjustment by £2.1 million and its proposed RCV adjustment by £17.4 million. • This includes a shortfall on water infrastructure, which results in an RCV adjustment of £4.1 million.

Risk and reward	Financeability and affordability
• We have reduced the company's proposed allowed return from 4.4% to 3.6%. As part of this, we have not accepted Bristol Water's proposal for a 70 basis point uplift to the industry wide allowed return. Based on the latest market evidence for the cost of new debt we have also reduced the industry wide allowed return from 3.7% to 3.6%. • We confirm our draft determination decision to remove the company's proposed change protocol for costs associated with non-household competition from 2017.	• Bristol Water provided a late representation requesting a three year glidepath for allowed revenues and expected average customer bills. We have intervened to include a one year glidepath in order to provide time for Bristol Water to adjust to efficient cost levels. We have set a flat profile for the remainder of the period (from 2016-17) consistent with Bristol Water's evidence on customer bill preferences.

A2 Wholesale water

A2.1 Consideration of representations on our draft determinations

In policy chapter A1, we provide a list of the respondents to the draft determinations published in April, May and August of this year. We have fully considered all of the responses received, and where appropriate, we have made either consequential adjustments to our price control methodology or company-specific interventions.

Our general policies relevant to the wholesale water control are set out in the following policy chapters that accompany our final determinations. These include our responses to representations on sector-wide issues.

- 'Policy chapter A2 – outcomes' ('policy chapter A2').
- 'Policy chapter A3 – wholesale water and wastewater costs and revenues' ('policy chapter A3').
- 'Policy chapter A4 – reconciling performance for 2010-15' ('policy chapter A4').
- 'Policy chapter A7 – risk and reward' ('policy chapter A7').
- 'Policy chapter A8 – financeability and affordability' ('Policy chapter A8').

Table A2.1 lists the representations we have received that are specific to Bristol Water's wholesale water control and sets out where to find more information on our responses to company-specific issues in this document.

Table A2.1Representations specific to the wholesale water control of Bristol Water

Area	Company-specific representations	Detailed commentary in this company-specific appendix
Outcomes, PCs and incentives	Bristol Water, CCG and CCWater	Annex 4
Outcome delivery and reporting	None	Annex 4
Calculating allowed wholesale water expenditure	Bristol Water, CCG and CCWater	Section A2.4.1 and Annex 1

Area	Company-specific representations	Detailed commentary in this company-specific appendix
Calculation of revenues: PAYG and RCV run-off	None	Section A2.4.2 and A5.5
Return on the RCV	Bristol Water, CCG and CCWater	Section A2.4.3
Reconciling 2010-15 performance	Bristol Water	Annex 3
Uncertainty mechanisms	None	Section A2.5

A2.2 Company outcomes, performance commitments and delivery incentives

A2.2.1 Outcomes, performance commitments and incentives

In policy chapter A2, we discuss our approach to outcomes for the wholesale and retail controls. Bristol Water has developed and committed to delivering outcomes which reflect its customers' views. These are supported by specific PCs and associated incentives (ODIs) whereby the company can be rewarded or penalised for its performance during the period from 2015 to 2020.

The company's outcomes have been developed through customer engagement, with input from its CCG. The CCG's role was to challenge how well the company's outcomes, PCs and delivery incentives reflect the views and priorities of customers, both now and in the future, as well as environmental priorities.

Consistent with the draft determination our assessment of the specific PCs proposed by each company for wholesale water has focused on:

- comparative assessments where it was possible to compare PCs and incentives across the sector and so challenge companies to deliver an upper quartile level of performance so that companies are focused on delivering benefits for customers and the environment; and
- company-specific assessments to ensure that the PCs proposed by each company are challenging, appropriately incentivised and supported by customer engagement.

We summarise the outcomes, PCs and ODIs for the wholesale water control for Bristol Water in table A2.2 below.

For some PCs and incentives types, we have intervened to change the underlying performance level or incentives. Where we have intervened we have done so to ensure that companies are subject to effective incentives that protect customers against under-delivery and where merited, reward companies for outperformance.

We summarise our interventions in table A2.2 and set out whether they are the result of our horizontal review or company-specific assessment. Full detail of the wholesale water outcomes, PCs and incentives, and our consideration of relevant responses, is provided in annex 4.

Consistent with our proposal at draft determination we are intervening to impose an overall cap and collar on ODIs for the 2015-20 period, thereby limiting total rewards and penalties. The cap and collar will apply in line with the approach set out in policy chapter A2. For some companies, there are exclusions from the overall cap and collar. There are no exclusions for Bristol Water.

Table A2.2 Wholesale water outcomes, performance commitments and incentives

Company proposal			Intervention
Outcome	**Performance commitment**	**Incentive type**	
Reliable supply	Unplanned customer minutes lost*	Financial – reward and penalty	**Comparative assessment** – We have made the PC more challenging to reflect the fact that the company's measure only includes unplanned interruptions. Our revised assessment of upper quartile levels and deadbands has led to minor changes as set out in annex 4.
	Asset reliability – infrastructure*	Financial – penalty only	**Company specific assessment** — The company revised its ODI in line with our suggestion in the draft determination. We have accepted the revised ODI. The scope and maximum penalty are now better aligned with the rest of the industry.

Company proposal			Intervention
Outcome	**Performance commitment**	**Incentive type**	
	Asset reliability – non-infrastructure*	Financial – penalty only	**Company specific assessment** — The company revised its ODI in line with our suggestion in the draft determination. We have accepted the revised ODI. The scope and maximum penalty are now better aligned with the rest of the industry.
Resilient supply	Population in centres >25,000 at risk from asset failure	Financial – reward and penalty	**Company specific assessment** – We confirm our draft determination intervention to change the range over which penalties apply to ensure the company is sufficiently incentivised to deliver the scheme.
Sufficient supply	Security of supply index (SOSI)	Non-financial	No intervention
	Hosepipe ban frequency	Financial – penalty only	No intervention

Company proposal			Intervention
Outcome	**Performance commitment**	**Incentive type**	
Safe Drinking Water	Mean zonal compliance	Financial – penalty only	**Comparative assessment** – We confirm our draft determination intervention to set the PC at 100%. We reduced the penalty deadband to 99.95% and the penalty collar to 99.94% from 2017-18. Our revised assessment of upper quartile levels and deadbands has led to minor changes as set out in annex 4.
	Construction of Cheddar treatment works – algae removal	Financial – penalty only	**Company specific assessment** – We confirm our draft determination intervention to amend this PC in line with our change to the allowed costs for the scheme.
Water is good to drink	Negative water quality contacts*	Financial – rewards and penalties	**Comparative assessment** – We confirm our draft determination intervention to change the PC so the company is incentivised to reach upper quartile performance by 2017-18. We have updated our assessment and made small changes to the performance level and deadband.

Company proposal			Intervention
Outcome	**Performance commitment**	**Incentive type**	
Efficient use of resources by company	Leakage	Financial – reward and penalty	No intervention
Efficient use of water by customers	Meter penetration (%)	Financial – reward and penalty	No intervention
	Per capita consumption	Non-financial	No intervention
Sustainable environmental impact	Total carbon emissions	Non-financial	No intervention
	Raw water quality of sources	Non-financial	No intervention
	Biodiversity index	Non-financial	No intervention
	Waste disposal compliance*	Non-financial	**Company specific assessment** – We have set the PC at 100% from 2015-16 to 2019-20.

Notes:
* Denotes PCs where our interventions have been adjusted following consideration of representations to our draft determination. Further details are provided in annex 4.

A2.2.2 Outcome delivery and reporting

Bristol Water's proposed approach to the measurement, reporting and governance of outcomes and our assessment of this approach is summarised in annex 4.

A2.3 Calculating the wholesale water price control

A2.3.1 Calculating allowed wholesale water expenditure

The cost of delivering wholesale water services is a major driver of customer bills, comprising about 90% of the value chain. In order to protect the interests of customers, we have determined the efficient level of costs for the company to deliver the outcomes that matter to customers both today and tomorrow and to allow it to meet its statutory obligations.

For Bristol Water, our assessment of efficient wholesale expenditure is significantly different to the company's forecasts of required expenditure. This has led to additional complexities in our review of Bristol Water's wholesale cost threshold. In order to protect the customers of Bristol Water, we have extended further opportunities for Bristol Water in relation to our assessment of wholesale costs, both before the draft determination and as part of our assessment for final determination:

- Along with two other companies, we gave Bristol Water early warning on 6 August 2014 of the large gap which remained following our assessment of the revised business plan, to give the company extra time to reconsider its proposed totex in light of the evidence on totex revealed during PR14 and to gather the evidence it considers necessary to justify its totex proposal[3].
- After receiving Bristol Water's response to the draft determination, Bristol Water was the only company that we offered to have further engagement with beyond our standard process on wholesale costs, as set out in the letter to Bristol Water from Sonia Brown of 10 October 2014. Bristol Water submitted evidence in early November on why its proposed adjustments to the wholesale water cost models were appropriate and in the interest of customers.

[3] We also published our assessment on 6 August for two other companies with very material wholesale cost gap: United Utilities – in respect of wastewater – and Thames Water – in respect of Thames Tideway costs.

In its representations to the draft determination on 3 October the company reduced its proposed totex by £21 million, while retaining the original scope of its business plan. Alongside this, Bristol Water made 15 special cost factor claims and modelling representations. Overall, Bristol Water's final wholesale water totex forecast is £541 million over 2015-20.

Subsequent to 3 October, Bristol Water made two additional representations in support of its wholesale water totex – the further submission of a report by its economic consultants Oxera in late October, and finally a more detailed report from Oxera on 7 November. We had only very limited time to assess the later information within the timescales for PR14.

Given the additional complexities for Bristol Water, we have set out further information in Annex 1 on our assessment of the final determination threshold. Further information about our assessment of Bristol Water's wholesale cost claim is set out in the populated version of the final determination cost threshold models.

Table A2.3 Representations specific to the wholesale water totex for Bristol Water

Respondent	Summary of comment	Ofwat response
Bristol Water	**Overall comments** Bristol Water has reduced its overall totex by £21 million compared to its revised business plan, bringing the company's revised wholesale water totex to £541 million over 2015-20. This includes £152 million enhancement expenditure, £359 million base expenditure, and £30 million 'policy items'. Bristol Water does not consider that our totex modelling provides a sufficient level of wholesale costs.	**Overall response** Overall, we have made an allowance of £93.8 million (30%) on top of the cost threshold calculated by our wholesale cost models. This includes additional allowances for base, enhancement and policy expenditure, and brings the wholesale cost threshold to £409.2 million (pre-menu adjustments) over 2015-20 at final determination. The allowed totex in this final determination – after taking into account the implied menu choice – is £437.8 million. The overall wholesale water allowed expenditure for Bristol Water is summarised in table A2.4.
Bristol Water	**Base expenditure allowance** Overall, Bristol Water does not consider that our totex models provide sufficient allowance for base expenditure. On and after 3 October Bristol Water resubmitted a number of special cost factor claims related to base expenditure. These encompass: • asset reliability (unplanned minutes lost); • Bedminster service reservoir; • capital maintenance; • the costs of water treatment complexity; • the extra costs associated with Purton and Littleton;	**Base expenditure allowance** We recognise that (specifically for Bristol Water) there is a risk that that our models underestimate Bristol Water's costs. We have therefore made an allowance for some additional costs, though the value of the allowance is based on our own assessment rather than the company's claim. This is because the evidence submitted by the company to support its claims was not persuasive. We have examined the position of other companies and satisfied ourselves that no further adjustments are needed (other companies had

Respondent	Summary of comment	Ofwat response
	• Canal and River Trust payments; • traffic congestion; • modelling representations on base costs; and • base costs per capita, disaggregated modelling and other modelling adjustments. Bristol Water's forecast of base expenditure is £359 million. **Further details are set out in Annex 1.**	approached related issues through special factor claims for example). Overall the base totex allowance at final determination is £288 million. This is £27 million higher than the draft determination allowance of £261 million. The additional adjustments include: • £18 million for our assessment of the additional costs associated with including the water treatment complexity variable in the totex models; • £6 million for Canal & River Trust payments; and • £3 million for traffic congestion in the part of Bristol Water's service area relating to the city of Bristol. The overall allowance for base expenditure is £288 million. We consider that this level of base expenditure offers protection for the interests of customers both in the short and in the long-term. **Further details are set out in Annex 1.**

<table>
<tr><th>Respondent</th><th>Summary of comment</th><th>Ofwat response</th></tr>
<tr><td>Bristol Water</td><td>Enhancement expenditure

Bristol Water has not altered the scope of its enhancement plan since the draft determination. The company considers we should make additional allowances for its enhancement schemes during 2015-20 which it considers are atypical:

• Cheddar 2 reservoir
• Cheddar Treatment Works Raw Water Deterioration
• Southern Resilience
• Growth Expenditure
• National Environment Programme
• Asset Reliability – discoloured water contacts

The overall level of enhancement expenditure set out in Bristol Water's representations is £152 million.

Further details are set out in Annex 1.</td><td>Enhancement expenditure

We have not accepted the company's evidence on a number of specific schemes and we have continued to apply efficiency adjustments where we have accepted the 'need' for an individual scheme:

• We have not made an allowance for the Cheddar 2 reservoir as there is significant uncertainty associated with project drivers and whether this is in the interests of customers
• We have made a partial allowance for Cheddar Raw Water Deterioration despite concerns relating to optioneering. This is because we acknowledge that there is a need to address h changes in the quality of its raw water which could have a significant impact on customers.

The combined effect of our consideration of special cost factor claims and our wider review increases the draft determination allowance for enhancement from £68 million to £91 million.

Further details are set out in Annex 1.</td></tr>
</table>

Respondent	Summary of comment	Ofwat response
CCWater	CCWater has questioned whether beginning the Cheddar 2 reservoir scheme within the 2015-2020 period might lead to lower costs and therefore a lower impact of customers' bills.	As noted above, we have not made an allowance for the Cheddar 2 reservoir as we do not consider that starting work within the 2015-20 period is in the best interests of customers. Insofar as large capital projects are appropriate solutions to addressing customer issues, companies have the flexibility to manage the impact on bills through the use of PAYG and RCV run off.

A2.4 Calculating the wholesale water price control

A2.4.1 Calculating allowed wholesale water expenditure

The wholesale water allowed expenditure for Bristol Water is detailed in Table A2.4 below. We provide a further breakdown of some of the calculations in annex 1.

Table A2.4 Wholesale water allowed expenditure (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total 2015-20
Final determination cost threshold						409.2
Costs excluded from menu	1.4	1.3	1.3	1.3	1.3	6.7
Menu cost baseline[1]	80.7	80.5	80.8	80.1	80.3	402.4
Company's view of menu costs[2]						523.2
Implied menu choice						130.0
Allowed expenditure from menu	86.7	86.5	86.9	86.1	86.3	432.6
Costs excluded from menu	1.4	1.3	1.3	1.3	1.3	6.7
Total allowed expenditure[3]	88.1	87.9	88.2	87.5	87.6	439.4
Less pension deficit repair allowance	0.3	0.3	0.3	0.3	0.3	1.6
Totex for input to PAYG	87.8	87.6	87.9	87.1	87.3	437.8

Notes:
1. Menu baseline is equal to the final determination threshold less pension deficit recovery costs, third party costs and market opening costs related to 2014-15 (see annex 1).
2. Based on company plan totex (reflecting its representation on its draft determination) minus costs for items excluded from the menu. The company will make a final menu choice by 16 January 2016 and any difference between this and the implied menu choice will reconciled as part of PR19.
3. Includes pension deficit recovery costs.

A2.4.2 Calculation of revenues: PAYG and RCV run-off

In section A6.5 we discuss financeability at an appointee (whole regulated company) level.

Table 2.5 shows the PAYG rates and associated totex recovery for wholesale water, which we have used as the basis for this final determination. This reflects our intervention on PAYG rates as described in section A5.5 on financeability.

Table A2.5 Bristol Water's wholesale water PAYG rates

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Totex (£m)	87.8	87.6	87.9	87.1	87.3	437.8
PAYG (%)	59.9%	54.0%	54.1%	54.1%	54.2%	55.3%
Resulting PAYG (£m)	52.6	47.3	47.5	47.1	47.3	241.9

Table A2.6 Bristol Water's wholesale water RCV run-off (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Run-off of 2015 RCV	24.2	22.7	21.4	20.1	18.9	107.3
RCV run-off of totex additions	0.6	1.8	3.2	4.5	5.9	16.0
Total RCV run-off	24.8	24.6	24.6	24.6	24.7	123.3

Notes:
1. The figures in this table reflect a run-off rate of 6% for the RCV as at 31 March 2015 and 30 years for the totex additions to the RCV over 2015-20.

A2.4.3 Return on the RCV

As stated in policy chapter A3, the return on the RCV is a key component of allowed wholesale revenues. The return on the RCV is the wholesale WACC applied to the RCV during the 2015-20 period.

In our risk and reward guidance we set out a single industry cost of capital for both wholesale water and wastewater services based on market evidence, which at the time was 3.7%. The company accepted this guidance in its revised business plan, though it also proposed a company specific uplift of 70 basis points to the cost of capital.

We have considered whether it would be appropriate to allow for this uplift based on the approach we set out in our risk and reward guidance. We have not allowed a company specific uplift for Bristol Water because we do not consider that the benefits to customers justify passing the cost through. Our assessment of Bristol Water's company specific uplift is set out in the policy chapter A7. We have therefore set the final determination using the industry wholesale cost of capital. As set out in the policy chapter A7, based on the latest market evidence for the cost of new debt we have set the wholesale cost of capital at 3.6%. This results in a return on capital of £78.8 million over 2015-20.'

Table A2.7 Representations specific to the cost of capital wholesale water totex for Bristol Water

Respondent	Summary of comment	Ofwat response
Bristol Water	The company has asked for a company-specific uplift of 70 basis points to the wholesale WACC of 3.70% set out in our risk and reward guidance. Bristol Water considers that our application of a test of customer benefits is inconsistent the duty to allow companies to raise finance on reasonable terms. Bristol Water is also of the view that it is inconsistent to have an uplift to the cost of new debt but not to the cost of equity.	As set out in the annex to policy chapter A7, consistent with the approach we took at draft determination, to qualify for a company-specific uplift companies need to demonstrate that they face both a higher cost to raising finance and an offsetting benefit to customers. We accept that Bristol Water does have higher cost. However we do not consider that there are benefits to customers that are sufficient to justify passing through these costs to customers. We have therefore not accepted Bristol Water's proposal for a company-specific uplift.
CCWater	CCWater supported our approach to the company-specific uplift at draft determination and presented evidence consistent with a lower industry wide allowed return on capital.	See above

As discussed in the policy chapter A3, the RCV is calculated as the RCV at the start of the period plus totex that is not funded on a PAYG basis minus RCV run-off (or regulatory depreciation).Table A2.8 shows our calculation of the opening RCV at 1 April 2015 taking account of the adjustments for 2010-15 performance discussed in section A2.3.4 below. The average RCV, set out in Table A2.9 for each year, takes into account the proportion of totex additions to the RCV determined by the PAYG rate and RCV run-off as set out in Table A2.5 and Table A2.6 above.

Table A2.8 Bristol Water's wholesale water opening RCV (£ million)

	2015-16
Closing RCV 31 March 2015	391.8
Land sales[1]	0.0
Adjustment for actual expenditure 2009-10[2]	-0.9
Adjustment for actual expenditure 2010-15[3]	16.3
Net adjustment from logging up and logging down[3,4]	0.0
Adjustment for shortfalls[3,4]	0.0
Adjustment for serviceability shortfalls[5]	-4.1
Other adjustments[6]	0.0
Opening RCV 1 April 2015	403.1

Notes:
1. Land sales adjustment is set out in table AA3.21.
2. 2009-10 actual expenditure adjustment is set out in table AA3.21.
3. A component of the CIS adjustment as set out in table AA3.14.
4. The net adjustment from the change protocol is set out in table AA3.9.
5. The serviceability shortfall adjustment is set out in table AA3.12.
6. Other RCV adjustments are set out in table AA3.21.

Table A2.9 Bristol Water's wholesale water return on RCV (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening RCV	403.1	413.5	429.2	445.0	460.4
RCV additions (from totex)	35.2	40.2	40.4	40.0	40.0
Less RCV run-off	24.8	24.6	24.6	24.6	24.7
Closing RCV	413.5	429.2	445.0	460.4	475.7
Average RCV (year	408.3	421.3	437.1	452.7	468.1

	2015-16	2016-17	2017-18	2018-19	2019-20
average)					
Return on capital	14.7	15.2	15.7	16.3	16.9

A2.4.4 Reconciling 2010-15 performance

When we last set price controls in 2009 (PR09), we included a number of incentive mechanisms designed to encourage companies to improve and deliver services more efficiently, and, to manage uncertainty. Consistent with the broad approach set out at the time of final determination in 2009 we have made adjustments at this price review (PR14) to 2015 to 2020 revenues and RCV to take account of company performance in the 2010 to 2015 period.

Our approach to reconciling 2010-15 performance is set out in policy chapter A4.

The company proposed a number of adjustments to the opening RCV and allowed revenue for the wholesale water services to reconcile its performance in 2010-15. We have intervened and, as a result, we have changed the revenue adjustments for wholesale from £1.2 million to -£1.0 million in the final determination. We summarise these interventions in Table A2.10 below.

The main changes we have made in the final determination compared to our draft determination are removing the serviceability shortfall for iron mean zonal compliance and reducing the serviceability shortfall applied for unplanned interruptions to supply. The company has provided further information in these areas and we have made changes to our serviceability shortfall methodology which we explain in policy chapter A4.

When making these final determinations we do not have the full information on companies' performance in 2014-15. We set out in 'Setting price controls for 2015-20 – further information on reconciling 2010-15 performance' that we would reconcile for the revenue correction mechanism (RCM), change protocol and serviceability in 2015, and in 2016 for the CIS, when we have the company's actual performance for 2014-15. In carrying out this reconciliation we will take a proportionate approach (for example, applying materiality thresholds where appropriate) to making adjustments for company's actual performance and implement these changes at the next wholesale price control review in 2019.

Table A2.10 Bristol Water's wholesale water revenue adjustments to reflect 2010-15 performance (£ million)

Area of intervention	Intervention		Total revenue adjustment 2010-15 (post intervention)	
		Company view	Draft determination	Final determination
SIM	This final determination includes our view of the company's SIM reward, which we have calculated as 0.5%. This is unchanged from draft determination when we intervened on the company's resubmitted plan estimate of 0.4%. This intervention increases the reward by £0.6m.	2.4	3.0	3.0
RCM	We have intervened in the following areas: •Final determinations 2009 (FD09) assumptions •Number of households billed •Outturn financial year average RPI •PR14 discount rate •Corporation tax rate While we have made changes to the inputs to the RCM model because of data inconsistencies in the calculation of the RCM, they cancel each other out in respect of the overall adjustment. Combined, these interventions reduced revenue by less than £0.1 million compared with the company's revised business plan.	2.6	2.6	2.6

Area of intervention	Intervention		Total revenue adjustment 2010-15 (post intervention)	
		Company view	Draft determination	Final determination
Opex incentive allowance (OIA)	There are no interventions or adjustments in this area.	0.0	0.0	0.0
CIS	In carrying out our assessment, we have used the Competition Commission's (CC) redetermination values for the bid capex and replicated the CC's CIS ex ante ratio and additional income. The company has not reflected the CC redetermination in its CIS model. We have used our assumption of the cost of capital as the discount rate when profiling the revenue adjustment in 2015-20. As explained in policy chapter A4, we have changed the methodology in the CIS model for all companies with respect to the discount rate (to equal the PR09 post tax cost of capital) when calculating the future value of the revenue adjustment in the 2010-15 period. Combined these interventions reduced revenue by £2.7 million compared with the company's revised plan.	-3.8	-6.7	-6.6

A2.4.5 Calculation of allowed revenue

We set out the calculation of the allowed revenue for Bristol Water's wholesale water control in Table A2.11.

Overall, Bristol Water's wholesale water revenue allowance will be £95 million in 2015-16, and will fall to £88.5 million in 2016-17 then increase to £89.3 million in 2019-20.

Table A2.11 Bristol Water's wholesale water allowed revenue (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Totex	87.8	87.6	87.9	87.1	87.3	437.8
PAYG rate (%)	59.9%	54.0%	54.1%	54.1%	54.2%	
Totex additions to the RCV	35.2	40.2	40.4	40.0	40.0	195.9
RCV (year average)	408.3	421.3	437.1	452.7	468.1	
Wholesale allowed revenue build up:						
PAYG[1]	53.0	47.6	47.8	47.4	47.6	243.5
Return on capital	14.7	15.2	15.7	16.3	16.9	78.8
RCV run-off	24.8	24.6	24.6	24.6	24.7	123.3
Tax[2]	2.6	0.9	0.8	0.6	0.0	4.9
Income from other sources[3,4]	-1.9	-1.9	-1.8	-1.8	-1.7	-9.1
Reconciling 2010-15 performance	-0.2	-0.2	-0.2	-0.2	-0.2	-1.0
Ex ante additional menu income	-3.4	-3.4	-3.4	-3.4	-3.4	-16.9

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Wholesale allowed revenue adjustments:						
Capital contributions from connection charges and revenue from infrastructure charges	5.5	5.6	5.5	5.4	5.3	27.4
Final allowed revenues	**95.0**	**88.5**	**89.0**	**89.1**	**89.3**	**450.9**

Notes:
1. PAYG includes the PAYG calculated from totex and the pension deficit repair allowance.
2. Including tax on adjustments for reconciling 2010-15 performance and ex-ante additional menu income.
3. We have adjusted other income values to remove the deferred income element relating to IFRIC18, as this is an accounting adjustment.
4. Our assessment of income from other sources is discussed in policy chapter A3.
5. Our bill profiling adjustments are discussed in section A5.6

A2.5 Uncertainty mechanisms

We have set the company's allowed revenues for the 2015-20 period. All companies face uncertainty about future costs and revenues and this is reflected in the allowed return and the established framework in the licence.

We outline our approach to incremental uncertainty mechanisms in the risk and reward policy chapter A7, where we set out our response to the representations made by stakeholders in support of sector wide uncertainty mechanisms.

We have allowed all companies an uncertainty mechanism for business rates as the revaluation of business rates in 2017 is a material risk that is largely outside the control of companies. This mechanism allows a proportion of the costs to be passed through to customers, reflecting the fact that companies have more control than customers in managing the risk. The specific text of this Notified Item is in the annex to the final determination letter. The rationale for its inclusion in the final determination is set out in policy chapter A7.

A3 Household retail

A3.1 Consideration of representations on our draft determinations

In policy chapter A1, we provide a list of the respondents to the draft determinations published in April, May and August of this year. We have fully considered all of the responses received, and where appropriate, we have made either consequential adjustments to our industry-wide approach or company-specific interventions.

Our general policies relevant to the household retail control are set out in the following policy chapters that accompany our final determinations. These include our responses to representations on sector-wide issues.

- Policy chapter A2.
- 'Policy chapter A5 – household retail costs and revenues' ('policy chapter A5').
- Policy chapter A7.

Table A3.1 lists the representations we have received that are specific to Bristol Water's household retail control and sets out where to find more information on our responses to company-specific issues in this document.

Table A3.1 Representations specific to the household retail control of Bristol Water

Area	Company-specific representations	Detailed commentary in this company-specific appendix
Outcomes, PCs and incentives	None	Annex 4
Outcome delivery and reporting	None	Annex 4
Allocation of costs	None	Section 3.3.1 and Annex 1
Adjustments	Bristol Water	Section A3.3.2 and A5.5 and Annex 2
New costs	None	Section A3.3.3
Uncertainty mechanisms	None	Section A3.5

A3.2 Outcomes, performance commitments and incentives

In policy chapter A2, we discuss our approach to outcomes for the wholesale and retail controls. Bristol Water has developed and committed to delivering outcomes which reflect its customers' views.

The company's outcomes have been developed with input from its CCG. The CCG's role was to challenge how well the company's outcomes, PCs and delivery incentives reflect the views and priorities of customers, both now and in the future, as well as environmental priorities. Our assessment of the specific PCs proposed by each company for household retail has focused on a company-specific assessment to ensure that the performance proposed by each company is challenging, appropriately incentivised and supported by customer engagement.

Similar to the wholesale water control, our assessment of the specific PCs proposed by each company for household retail has focused on a comparative assessment of outcomes and a company specific assessment.

We summarise the outcomes, PCs and ODIs for the household retail control for Bristol Water in Table A3.2 below.

For some PCs and incentives types, we have intervened to change the underlying performance level or incentives. Where we have intervened we have done so to ensure that companies are subject to effective incentives that protect customers against under-delivery and where merited, reward companies for outperformance.

Table A3.2 below summarises the outcomes, PCs and ODIs for Bristol Water, and sets out whether they are the result of our comparative assessment or company-specific assessment.

Full detail of the household retail outcomes, PCs and incentives, and our consideration of relevant representations, is provided in annex 4.

Table A3.2 Household retail outcomes, performance commitments and incentives

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
Affordable bills	Percentage of customers in water poverty	Non-financial	No intervention
Satisfied customers	Service Incentive Mechanism (SIM)	Financial – reward and penalty	No intervention
	General satisfaction from surveys	Non-financial	No intervention
	Value-for-money	Non-financial	No intervention
Easy to contact	Ease of contact from surveys	Non-financial	No intervention
Bills are accurate and easy to understand	Negative billing contacts	Non-financial	No intervention

Notes:
1. We have required all companies to include a PC based on the SIM.

A3.3 Costs

Our approach to the household retail control is set out in the policy chapter A5. As set out in policy chapter A5, we have adjusted companies' costs to align to the 2013-14 base year. Historical costs are therefore presented in 2013-14 prices, and all future costs and revenues in nominal prices.

We set out our final household retail adjustments, the modification factors for household retail allowed revenue and the assumed number of customers we have used to calculate the total revenues in annex 2.

A3.3.1 Allocation of costs

In Table A3.3 below, we summarise our assessment of Bristol Water's cost allocation methodology.

Table A3.3 Our assessment of Bristol Water's cost allocation methodology

Area assessed	Assessment
No potential material misallocations	Pass
Adequate assurance provided	Pass
Reconciliation to regulatory accounts and December business plan provided	Pass

We have used the company's cost allocation between retail and wholesale and between household and non-household retail to set our final determination.

In the draft determination we noted that the company had not provided an external assurance report over its cost allocations. Subsequent to the issue of the draft determination we located the external assurance report that the company had provided with its June submission. We can confirm that we are satisfied with the scope and conclusions of the company's external assurance report.

A3.3.2 Adjustments

In its revised business plan, submitted in June 2014, Bristol Water sought adjustments to the ACTS for:

- pension deficit repair costs; and
- an adjustment for input price pressure.

Pension deficit repair costs

In the final determination we have included an adjustment for all companies to reflect the pension deficit recovery costs that our modelling shows is appropriate for household retail as set out in IN 13/17 'Treatment of companies' pension deficit repair costs at the 2014 price review'.

Input price pressure

In its draft determination, we did not accept Bristol Water's proposal for an ACTS adjustment for input price pressure. The company had neither provided sufficient evidence to demonstrate that input price pressure is outside of efficient management control, nor provided sufficient efficiency benchmarking evidence to demonstrate that the company is affected in a materially different way to other companies.

Bristol Water provided further evidence to support its input price pressure claim as part of its representation on the draft determination. We consider that the company has demonstrated that input price pressure is beyond efficient management control and that the company is affected in a materially different way to other companies. We have therefore included an adjustment of £4.9 million in the final determination.

Table A3.4 outlines our assessment of Bristol Water's proposed ACTS adjustment. The value of the adjustments we have accepted in our final determination is summarised in Table A3.5.

Further details on our assessment are set out in Annex 2 – Household retail. Our approach to assessing adjustment claims is set out in policy chapter A5.

Table A3.4 Bristol Water's proposals for ACTS adjustments

		Adjustment assessment criteria[1]			
Adjustment	Value (£m over 2015-20)	Materiality[2]	Beyond efficient management control	Impact company in materially different way	Value of adjustment appropriate
Input price pressure	4.9	Pass	Pass	Efficiency benchmarking evidence: Pass Upper quartile: Pass	Pass

Notes:
1.The four criteria used in our final assessment are the same for all proposed adjustments to the ACTS
2.For household retail, materiality is defined as being 2.25% of household retail opex plus depreciation over 2015-20

Table A3.5 Household retail adjustments (£ million, nominal prices)

Adjustments included in final determination						
	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Input price pressure	0.577	0.769	0.975	1.196	1.431	4.948
Pension deficit repair costs	0.070	0.070	0.070	0.070	0.070	0.349

Adjustments included in final determination						
	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Adjustments included in final determination	**0.646**	**0.839**	**1.045**	**1.266**	**1.501**	**5.297**

Note: There will be no automatic indexation for retail price controls to RPI. However, Bristol Water has been allowed a £4.9 million adjustment to reflect input price pressure – this is reflected in the values in this table.

A3.3.3 New costs

Bristol Water did not propose material household retail new costs. The value of the modification for new costs below the materiality threshold[4] is quantified in table A3.6.

Table A3.6 New household retail costs (£/customer)

	Value
Modification made to 2013-14 cost to serve for ACTS calculation	0.37

Note: There will be no automatic indexation for retail price controls to RPI.

A3.4 Calculating the allowed revenues

As set out in policy chapter A5, total allowed household retail revenues are calculated taking account of our assessment of the cost to serve per customer (after the impact of our efficiency challenge), the projected customer numbers in the company's revised business plan and the household retail net margin. The company proposed net margins of 1%. This is in line with our risk and reward guidance and our further consideration of margins following representations on the draft determination. We have therefore accepted the company's proposals.

The table below shows the household retail net margin over 2015-20.

[4] For household retail, materiality is defined as being 2.25% of household retail opex plus depreciation over 2015-20.

Table A3.7 Household retail net margins (%)

	2015-16	2016-17	2017-18	2018-19	2019-20
Household retail net margin	1.0%	1.0%	1.0%	1.0%	1.0%

Table A3.8 below sets out the components of the allowed household retail revenue. We set out the household retail revenue modification in annex 2.

Table A3.8 Components of the allowed household retail revenue (nominal prices)

	2013-14	2015-16	2016-17	2017-18	2018-19	2019-20
Company cost to serve (£/customer)						
Unmetered single service customers	16.5					
Metered water only customers	24.1					
Industry ACTS (£/customer)						
Unmetered single service customers	21.47					
Metered water only customers	27.26					
Allowed cost to serve[1] (£/customer)						
Unmetered single service customers		16.4	17.0	17.7	18.4	19.2
Metered water only customers		23.5	23.7	23.9	24.2	25.0
Total allowed (£m)						
Cost to serve (excluding net margin)		9.6	10.1	10.5	11.0	11.6
Forecast household wholesale charge (including forecast RPI[2])[3]		84.8	82.1	85.6	88.8	92.1

	2013-14	2015-16	2016-17	2017-18	2018-19	2019-20
Household retail revenue (including an allowance for the net margin)[4]		10.4	10.9	11.4	11.9	12.5

Notes:
There will be no automatic indexation for retail price controls to RPI. Bristol Water has been allowed a £4.9 million adjustment to reflect input price pressure – this is reflected in the values in this table. The wholesale price controls are indexed linked to RPI. This will affect the retail net margins.
1. Allowed cost to serve includes pension deficit repair costs.
2. The household wholesale charge includes forecast RPI so that the total household retail revenue can be displayed on the same price base as other retail costs.
3. The allocation of allowed wholesale revenue to different wholesale charges will be at the company's discretion, subject to charging rules and licence conditions, however, our assumed allocation of wholesale revenue is binding for the purposes of determining the allowance for the net margin which is one component of allowed household retail revenue.
4. This number is indicative as allowed revenue will depend upon actual customer numbers.

A3.5 Uncertainty mechanisms

We outline our approach to uncertainty mechanisms in policy chapter A7.

Bristol Water did not propose any household retail uncertainty mechanisms beyond those that will already form part of the regulatory framework for 2015-20.

A4 Non-household retail

In 'Policy chapter A6 – non-household retail costs and revenues' ('policy chapter A6'), we outline our overall approach to the non-household retail price control.

In this chapter, we provide details of Bristol Water's non-household retail final price control.

A4.1 Consideration of representations on our draft determinations

Our general policies relevant to the non-household control are set out in policy chapter A6. This includes our responses to representations on sector-wide issues.

Table A4.1 lists the representations we have received that are specific to Bristol Water's non-household retail control and sets out where to find more information on our responses to company-specific issues in this document.

Table A4.1Representations specific to the non-household retail control of Bristol Water

Area	Company-specific representations	Detailed commentary in this company-specific appendix
Net margins	None	Section A4.3
Cost proposals	Bristol Water	Section A4.4
Form of control	Bristol Water	Section A4.5

A4.2 Indicative non-household retail total revenue

Table A4.2 below shows the indicative total of non-household allowed revenue. The table is indicative, as it does not assume any gains or losses from competition or impacts from the company charging customers at levels different to the relevant default tariffs for the projected customers in each customer type. Furthermore, the controls for each customer type that we have set will only apply for two years; there will be a review in 2016. Years 2017-18 to 2019-20 below are shown for illustrative purposes only.

Table A4.2 Indicative non-household retail total revenue price control including net margins (£ million, nominal prices)

	2015-16	2016-17	2017-18	2018-19	2019-20
Indicative non-household retail total revenue price control including net margins	1.5	1.5	1.5	1.6	1.6

Note: There will be no indexation for retail price controls from this price base to RPI. The non-household wholesale charge includes forecast RPI so that the total non-household retail revenue can be displayed in the same price base as other retail costs. Figures exclude retail services to developers and revenues associated with miscellaneous charges.

A4.3 Net margins

The company proposed net margins that equal 2.5% in aggregate. This is in line with our risk and reward guidance and our further consideration of margins following representations on draft determinations. We have therefore accepted the company's proposals.

A4.4 Cost proposals

As set out in policy chapter A6, we have adjusted companies' costs to align to the 2013-14 base year. Historical costs are therefore presented in 2013-14 prices, and all future costs and revenues in nominal prices. As set out in policy chapter A6, we expect our decisions on the total level of non-household retail costs now, will still apply for years 2017-18 to 2019-20 – the 2016 review will focus on the allocations between different non-household customer types.

In IN 13/17: 'Treatment of companies' pension deficit repair costs at the 2014 price review' we explained how we would treat the costs associated with water companies reducing the deficits in their defined benefit pension schemes at the 2014 price review. Where companies' proposals have differed from our calculations we have over-written their proposals in line with our overall approach. For Bristol Water, we have adjusted these costs from £0.062 million over the control period, to £0.056 million.

In our final methodology we stated that we would take account of input cost risks when determining the appropriate level of net margin for non-household retail. This was a consideration we took into account when we decided in the round on our risk and reward guidance. In the risk and reward guidance we looked at a range of evidence, and eventually concluded on a figure that was above many of the benchmarks considered. The company chose to accept our guidance, stating in its revised business plan that it had 'set an annual net margin of 2.5% per year'.

In its revised business plan the company proposed an additional allowance for input price pressures. We did not accept this in the draft determination as the company had not provided evidence to justify input price pressure costs in the non-household control, and why the net margin was insufficient for covering input price risks.

In its representations the company provided some evidence as to the scale of the potential input price pressures it faces, but no justification as to why the net margin would be an unsuitable tool for addressing input price cost risks. We therefore do not consider it to be appropriate to provide an additional cost allowance for input price pressures, and have not accepted the company's claim. We have therefore adjusted the company's proposals down by £0.778 million over the control period to reflect this.

In the draft determination we also reduced the company's proposed material new cost increases down to the materiality threshold (5.3%) due to the company not providing sufficient evidence to justify the need, costs and benefits of the proposed costs. The company did not submit representations on this issue, and did not provide additional supporting evidence. We therefore confirm our draft determination position with regards to new costs.

In total, our interventions reduce the company's proposed costs from £7.539 million over the control period, to £4.694 million.

A4.5 Form of control

In 'Setting price controls for 2015-20, Draft price control determination notice: technical appendix A5 – non-household retail', we recognised that some companies could benefit from having further time to consider and address any issues ahead of the introduction of competition into the non-household retail market in April 2017.

Our final determination on the form of control is set out in policy chapter A6. In that document we confirm the basic form of control set out in our final methodology statement, but with a two-year initial duration and with a review in 2016.

A4.6 Average revenue controls

The allowed average retail cost component (£) and the allowed net margin (%) for each customer type are shown in the table below for Bristol Water.

The average retail revenue per customer – £ (r) – has also been shown. For the avoidance of doubt, it is the average cost component and the allowed net margin that make up the non-household retail control. The average retail revenue per customer is shown only to help comparisons to be drawn.

Table A4.3 Non-household retail average controls per customer

Customer type	Units	2015-16	2016-17	2017-18	2018-19	2019-20
Band A – 250Ml+	£	1,885.72	1,825.36	1,731.02	1,736.03	1,740.96
	%	2.0%	2.0%	2.1%	2.2%	2.2%
	£ (r)	8,669.85	8,545.39	9,028.38	9,428.87	9,908.76
Band B – 100-250Ml	£	992.90	966.33	924.79	927.00	929.17
	%	1.9%	1.9%	2.0%	2.1%	2.1%
	£ (r)	4,131.51	4,072.45	4,293.93	4,475.98	4,694.50
Band C – 50-100 Ml	£	749.59	745.23	738.41	738.78	739.13
	%	1.9%	1.9%	2.0%	2.1%	2.1%
	£ (r)	2,261.72	2,234.68	2,343.52	2,423.04	2,519.50
Band D – 15-50 Ml	£	484.16	489.15	496.94	496.53	496.12
	%	2.0%	2.1%	2.1%	2.1%	2.2%
	£ (r)	1,063.52	1,054.60	1,098.35	1,122.79	1,153.27
Band E 5-15Ml	£	201.57	196.21	187.83	188.27	188.71
	%	2.1%	2.1%	2.1%	2.2%	2.2%
	£ (r)	393.61	383.20	386.85	394.92	404.90
Band F – 1-5Ml	£	49.13	46.53	42.48	42.69	42.91
	%	1.7%	1.8%	1.8%	1.8%	1.8%
	£ (r)	92.57	88.88	87.80	89.75	92.12
Band G – 0-1Ml	£	23.62	23.95	24.46	24.43	24.41

Customer type	Units	2015-16	2016-17	2017-18	2018-19	2019-20
	%	4.2%	4.0%	3.8%	3.7%	3.7%
	£ (r)	33.78	33.43	33.81	33.80	33.86
Band U	£	7.12	7.34	7.67	7.65	7.64
	%	2.9%	4.7%	4.3%	4.2%	4.1%
	£ (r)	9.81	9.81	10.02	9.98	9.95

A4.7 Uncertainty mechanisms

We outline our approach to uncertainty mechanisms in policy chapter A7. In Table A4.4 below, we set out Bristol Water's proposed non-household retail uncertainty mechanisms and our assessment of these proposals.

Table A4.4 Bristol Water's proposals for non-household retail uncertainty mechanisms

Bristol Water's proposals	Our assessment
In the draft determination, we did not accept Bristol Water's proposed uncertainty mechanism for the introduction of competition for non-households because it failed all of our tests for uncertainty mechanisms (materiality, controllability, comparability, interests of customers). The company disagrees that the costs associated with the introduction of competition are immaterial and suggests that a two-year price control may be a practical way for this uncertainty to be addressed.	**No change to draft determination position.** The company has not provided any further evidence to support its claim that costs relating to the introduction of competition are likely to be material. Regardless of whether these costs are material or not, the proposed mechanism also fails on our other tests (controllability, comparability, interests of customers). This does not affect the company's responsibility to meet all statutory obligations. The final determination provides funding for the company for the 2015-20 period and it is the company's responsibility to manage any uncertainty. We note that there are a range of existing mechanisms available to companies to manage uncertainty, including: • interim determination of K (IDoK's); and • substantial adverse effects clauses in Condition B of the licence.

A5 Appointee financeability, affordability and assurance

In this section we discuss at an appointee level:

- bills and K factors;
- RoRE;
- financeability; and
- affordability.

However, we first consider the responses to our draft determination that are specific to Bristol Water's treatment in these areas.

A5.1 Consideration of representations on our draft determinations

Our general policies relevant at appointee level are set out in the following policy chapters that accompany our final determinations. These include our responses to representations on sector-wide issues.

- Policy chapter A7.
- Policy chapter A8.

Table A5.1 lists the representations we have received that are specific to Bristol Water at an appointee level and sets out where to find more information on our responses to company-specific issues in this document.

Table A5.1 Representations specific to issues at an appointee level for Bristol Water

Area	Company-specific representations	Detailed commentary in this company-specific appendix
Bills and K factors	Bristol Water (late representation)	Section A5.2
Appointee level uncertainty and gain share mechanisms	None	Section A5.3
RoRE range	None	Section A5.4

Area	Company-specific representations	Detailed commentary in this company-specific appendix
Financeability	Bristol Water CCWater	Section A5.5
Affordability	CCWater	Section A5.6

A5.2 Bills and K factors

Table A5.2 below sets out the allowed revenues we have assumed in our final determination for Bristol Water to deliver for its customers on its:

- statutory duties; and
- associated PCs.

It also sets out the average customer bills on the basis of the final determination.

Table A5.2 Bristol Water's final determination – K factors, allowed revenues and customer bills[1]

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Wholesale water – allowed revenues (£m)[2]	95.0	88.5	89.0	89.1	89.3	450.9
Wholesale water – K (%)	0.0%	-6.3%	0.7%	-0.2%	0.1%	-
Retail household allowed revenue (£m)	10.4	10.9	11.4	11.9	12.5	57.0
Retail non-household expected revenue (£m)	1.5	1.5	1.5	1.6	1.6	7.8
Average household bill – water (£)[3]	164	152	152	152	152	-

Notes:
1. Wholesale figures in 2012-13 prices as revenue will be affected by inflation and retail figures in nominal prices as revenue will not be affected by inflation.
2. The allowed revenue for our final determination is based on an implied menu choice. The company will have the opportunity to make its own menu choice, which will impact on its allowed revenues and customers' bills from 2020. Customer bills in the regulatory period from 2020 will also be affected by Bristol Water's performance in the forthcoming regulatory period in relation to costs and the regulatory incentives in place for performance delivery and revenue projection performance.
3. The average household bill illustrated above reflects a notional allocation (by Ofwat but based on the company's split of household and non-household customers) of the overall wholesale revenue requirement across Bristol Water's household and non-household customer base. In practice, this will depend upon the structure of wholesale charges implemented by Bristol Water.

As discussed in policy chapter A3, K is set to zero for 2015-16 for wholesale water because there are no directly equivalent wholesale revenues for 2014-15 (on account of the new price review structure). As such, there is no existing reference point against which to express a change in K.

The base (2014-15) revenue allowance we have set is the financial year average revenue for 2015-16 adjusted for inflation. We set this out for Bristol Water in the table below.

Table A5.3 Bristol Water's allowed wholesale revenue for 2014-15

Bristol Water	Wholesale Water
Allowed wholesale revenue 2014-15 (£ million)	100.2

A5.3 Uncertainty and gain share mechanisms

We outline our approach to uncertainty mechanisms and 'pain and gain share' in the policy chapter A7. In Table A5.4 below, we set out Bristol Water's proposed appointee level uncertainty mechanisms and our assessment of these proposals.

Table A5.4 Bristol Water's proposals for appointee level uncertainty and gain share mechanisms

Bristol Water's proposals	Our assessment
In our draft determination we did not provide for any appointee level uncertainty mechanism for Bristol Water because the company had not included any in its plan. We did not intervene on Bristol Water's proposed gain sharing mechanism, but noted that it may not be consistent with incentive based regulation as it may reduce the incentive for Bristol Water to seek cost efficiencies. The company revised its proposed gain-share mechanism as part of its representations on the draft determination. In particular, the company has calculated an 'adjusted RoRE' threshold of 9% (as opposed to an initial 11% threshold), which excludes totex outperformance. The exclusion of totex outperformance is based on the +/-2% totex risk set out in our risk and reward guidance. It proposes that 50% of outperformance in excess of the adjusted threshold will be shared with customers.	**No change to draft determination position.** We have not provided for any appointee uncertainty mechanism for Bristol Water. Under totex cost sharing, Bristol Water will share cost outperformance (and under-performance) with customers. Bristol's proposed change helps to avoid some of the potential overlap between totex sharing and their gain sharing mechanism by taking account of gains passed through to customers under totex sharing. However, its adjustment to the proposed 11% RoRE threshold down to 9% is based on the +/-2% range from our risk and reward guidance, rather than actual totex performance (taking account of menu sharing) during the 2015-20 period.

A5.4 RoRE range

Bristol Water has estimated the range of RoRE that it could earn dependent on its performance over the price control period. The RoRE range takes account of information provided by the company and is based on an efficient company with the notional[5] capital structure. Impacts are identified separately for ODIs, totex performance, financing and the SIM. The approach to calculating the RoRE range is set out in the policy chapter A7. Bristol Water's actual returns may differ from notional due to differences between notional and actual capital structure and cost of new debt and level of cost efficiency compared to allowed totex.

[5] Notional refers to the capital structure that reflects Ofwat's assumption of an appropriate level of gearing to use in determining the allowed WACC.

Table A5.5 Whole company RoRE range

	Lower bound (%) – appointee	Upper bound (%) – appointee
Overall	-5.6%	+2.1%
ODIs	-2.0%	+0.6%
Totex	-2.9%	+1.1%
Financing	-0.3%	+0.1%
SIM	-0.4%	+0.2%

Commentary:

The whole company RoRE range is from 0.2% to 7.9%, with a base case of 5.8% and overall impacts from -5.6% to 2.1%. These ranges take into account Bristol Water's higher cost of debt financing. We have modified the draft determination RoRE range to exclude additional returns from non-household retail control to be consistent with approach in our risk and reward guidance. This lowers the base case returns from 6.0% to 5.8%.

In its representations, Bristol Water submitted an updated version of its RoRE analysis, setting out a RoRE range of -10.6% to -1.8% and a base case of -2.9%. This was substantially different from the analysis set out in its draft determination. We do not consider that Bristol Water's changes accurately reflect the company's performance on a notionally efficient basis. Due to this, we consider that the RoRE analysis in Bristol Water's draft determination provides a more realistic assessment of the company's potential risk and potential performance in the 2015-20 period which better aligns with the notional efficient company. Further, Bristol Water's representation does not take account of the increase in cost threshold since draft determination. The totex risk range from -2.9% to +1.1% is therefore unchanged from the draft determination.

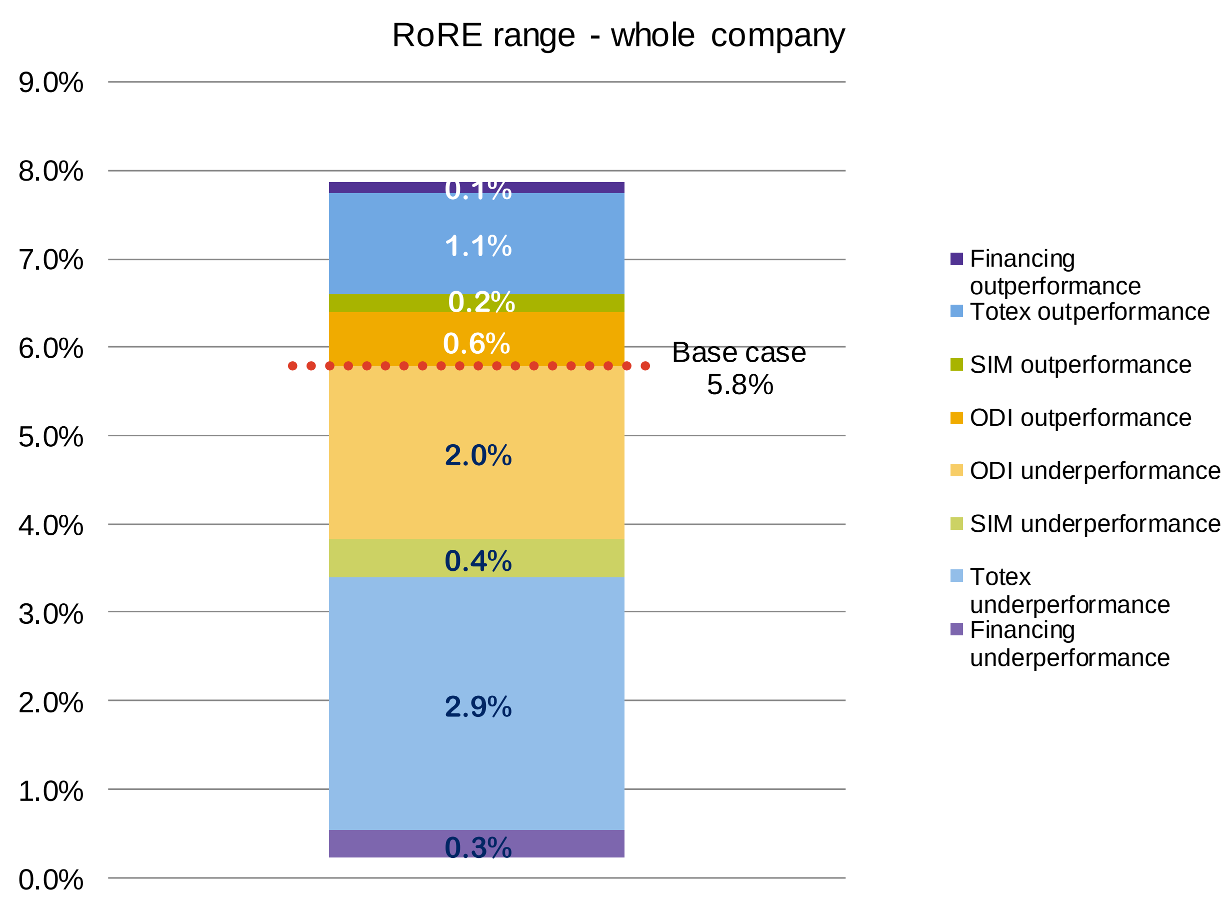
The ODI risk range proposed by Bristol Water in response to the draft determination was from 0.0% to +1.14%. However, in the base case the company assumed maximum ODI penalties. Bristol Water considered that in the high case half of ODIs would have maximum penalties. This results in an increase +1.14% on the base case (as penalties would not be paid out for the other ODIs). We do not consider that this properly reflects an efficient notional company. We have adjusted this to -2.0% to +0.6% to take account of the interventions discussed in annex 4. The adjustment includes the effect of capping in the downside case for wholesale water ODIs, which limits the overall appointee downside ODI impact to -2.0%. Without the cap the ODI range would be -3.2% to +0.6%.

Financing risk impacts from -0.3% to +0.1% are unchanged from the draft determination. The company calculated the differing impacts for the upside and downside based on a high level view of likely movements in interest rates during 2015-20. The SIM risk range of -0.4% to +0.2% is also unchanged from the draft determination. The company has estimated SIM impacts using an assumption of a maximum rewards and penalties (+6% to -12% of 2019-20

	Lower bound (%) – appointee	Upper bound (%) – appointee
household revenue).		

The composition of the RoRE range for Bristol Water at an appointee level is shown in Figure A5.1 below.

Figure A5.1Bristol Water's RoRE range – appointee



Source: Ofwat calculations based on information from Bristol Water.
Note: Numbers presented based on calibration of the ODIs against an assumed menu choice of a 50% sharing factor

A5.5 Financeability

Ofwat has a statutory duty to secure that a company is able to finance the proper carrying out of its functions. We interpret this financing duty as requiring that we ensure that an efficient company with a notional capital structure is able to finance its functions. A company's actual capital structure is a choice for the company and it bears the risk associated with its choices. An efficient company is assumed to be able to deliver its plans based on the expenditure allowance in our final determination.

Consistent with our PR14 methodology, we asked companies to provide board assurance on their financeability and to set out their target credit ratings and financial ratios for the notional company. As part of our assessment, we consider the evidence of financeability provided by companies and model their business plan and our draft and final determination financial ratios.

As explained in the financeability and affordability policy chapter, companies have been allowed to use new tools in the form of PAYG rates (the proportion of totex recovered in the period 2015-20) and RCV run-off rates (depreciation of the RCV). Both PAYG and RCV run-off rates can be adjusted to change the proportion of costs recovered within the 2015-20 period and the amount added to the RCV and recovered over a longer period.

Table A5.6 below notes the comments that we have received in relation to financeability and sets out our response.

Table A5.6 Representations specific to Bristol Water's financeability

Respondent	Summary of comment	Ofwat response
Bristol Water	**Financial ratios** Bristol Water provided a report from KPMG, which identified a number of issues. This included that Ofwat is deriving a higher value for FFO/debt than it reports by using average net debt rather than year-end net debt in its calculation of this ratio, and because Ofwat's calculation does not deduct accretion of index linked debt from the numerator whereas Standard and Poor's ratio does.	**Financial ratios** The financial ratios we consider when assessing financeability are broadly similar to those considered by rating agencies but they do not seek to replicate any single rating agency's methodology. To calculate FFO/ debt we use average net debt as the denominator for financial ratios where the numerator is based on average cash flows. We do not adjust for the capitalisation of interest costs because our ratio is based on cash. For example the accretion of index linked (IL) debt is not a cash payment therefore we do not adjust for it in the numerator. The accretion of IL debt is included in the debt figure in the denominator as it reflects the current value of the amount of debt that will need to be repaid.
Bristol Water	**Notional financeability** Bristol Water is concerned that our assessment of financeability is based on an efficient notional company rather than on companies' actual basis. Bristol Water contends that such an assessment is insufficient to assess financeability if Ofwat does not also include real world factors which companies have to consider when they are raising finance in practise.	**Notional financeability** Our approach to financeability was set out in our methodology and is consistent with the approach we have applied previously. It is appropriate to assess financeability on the basis of an efficient notional company because the company and not customers should bear the risks in adopting different capital structure and cost outperformance (subject to sharing mechanisms).
Bristol Water	**Transparency** Bristol Water considers that Ofwat's financeability	**Transparency** We set out our approach to financeability in our methodology

Respondent	Summary of comment	Ofwat response
	assessment is not transparent. Therefore Bristol Water contends that it is not clear how we have dispatched our duties.	statement, which clearly sets out our approach and subsequently in the draft determination. The onus is on companies to demonstrate their financeability in their business plans; this allows companies to explain the basis for the financeability of their business plans. We have also published our financial models including the calculation of financeability ratios for each company.
Bristol Water	**Maintaining investment grade** Bristol Water suggested that relevant financial ratios would not be consistent with raising investment grade debt if our draft determination was to apply at final determination. This is based on the company's view of how the rating agencies will calculate certain financial ratios, its actual balance sheet, the impact of PR09 legacy adjustments, and Ofwat's view of efficient costs and speed of adjustment required. Bristol Water stated that even if it adjusted its dividend policy this would not remedy its financeability concern.	**Maintaining investment grade** Our intervention on wholesale totex is materially different to that at the draft determination. Our assessment of the financeability of Bristol Water on a notional basis and is consistent with an investment grade credit rating. We consider speed of adjustment to a level of efficient costs under glidepath below.
Bristol Water	**Glide path** Following our assessment of Bristol Water's wholesale costs for the final determination, we invited the company to provide further representations on how PAYG and RCV-runoff should be applied. Bristol Water proposed that it should be given a 3 year glidepath to achieve efficient costs by bringing revenue forward. As part of its representation Bristol Water	**Glide path** We do not consider a three-year glide path is appropriate, as little evidence is provided to justify the length of the glide path and the glide path does not reach the Ofwat view of efficient costs by 2018-19. We have taken account that Bristol Water's forecast allowed revenue for 2014-15 will need to fall from around £121 million (forecast for 2014-15) to £100 million in 2015-16 based on our view of efficient costs. As part of their representations Bristol requested

Respondent	Summary of comment	Ofwat response
	requested adjustments to PAYG rates that we calculate would have reduced the impact of the decline and would have generated allowed revenues of £110 million in 2015-16. Bristol Water suggested this amounts to an average bill level of £178 in 2015-16. The company considers this is required for it to be financeable, and assumes maintaining an S&P based FFO/debt ratio of 10%-11% in order to maintain a BBB rating.	adjustments to PAYG rates that would have reduced the impact of the decline and we calculate would have generated allowed revenues of £110 million in 2015-16. As part of our financeability assessment we considered a high cost scenario, where Bristol Water is assumed to spend 50% of the difference between their view of wholesale totex (excluding costs associated with Cheddar 2) and our view of efficient wholesale cost for 2015-16, we calculated revenues of £107 million in 2015-16 is required to fully recover the higher costs. We considered alternative glide paths: • With no glidepath for allowed revenue, Bristol Water's financeability ratios for notional company(except for costs as set out in the high cost scenario) are unlikely to be financeable and fall below Bristol Water's target credit ratios (with 2015-16 ratios of FFO/debt 7.6% and AICR below 1.0). • Based on a one year glidepath with allowed revenue of £107m in 2015-16 (reaching Ofwat view of efficient costs in 2016-17), Bristol Water is financeable on basis of notional company with costs as set out in the high cost scenario (2015-16 FFO/debt 13% and AICR 1.6). • A two year glidepath is not required as it would not be reasonable to assume that Bristol could not reduce costs by 2016-17 substantially toward efficient level of cost. There is some headroom in their notional ratios to accommodate cost

Respondent	Summary of comment	Ofwat response
		variation. It is appropriate for equity holders to take responsibility for failure to reduce costs to efficient levels. Taking account of the scale of the required adjustment, we have therefore allowed a one year glidepath with additional allowed revenue of £7 million and profiled this revenue for 2015-16. We consider this provides an appropriate timescale for Bristol Water to make changes to align with efficient costs.
CCG	**PAYG** The CCG stated that PAYG is not a subject that customers would readily understand. It notes that Bristol Water is not proposing to change its PAYG ratio from the value proposed in its June 2014 business plan submission to Ofwat.	**PAYG** We understand that this reflects Bristol's Water position in their representation on draft determination. We consider that it is important companies engage with customers on adjustments to PAYG and RCV run off rates as they impact on bills in 2015-20 and in future periods.
CCWater	CCWater considered that PAYG adjustments should not be used to shield companies from a lower WACC.	We acknowledge the importance of ensuring the changes to PAYG are in customer's interest.

In Table A5.7 we set out the notional financeability ratios associated with Bristol Water's business plan, draft determination and final determination. Our financeability assessment is based on efficient, notionally structured company.

Table A5.7 Company and Ofwat financial ratio calculations based on the company business plan and financial ratios based on our final determination

Financial ratios for notional company	Financial ratio calculations based on the company business plan (average 2015-20)		Financial ratio calculations based on our final determination (average 2015-20)	
	Company calculation	Ofwat calculation	Draft determination	Final determination
Cash interest cover (ICR)	3.57	3.76	3.74	3.63
Adjusted cash interest cover ratio (ACICR)	1.96	2.07	1.85	1.69
Funds from operations(FFO) /debt	14.02%	14.36%	13.01%	12.07%
Retained cash flow/debt	10.99%	11.12%	10.30%	9.41%
Gearing	61.30%	64.65%	64.72%	64.89%
Dividend cover (profit after tax/dividends paid)	2.12	2.47	2.17	1.85
Regulatory equity/regulated earnings for the regulated company	15.07	13.67	16.66	16.49
RCV/EBITDA	7.81	7.59	8.36	8.96

Commentary:

On a notional basis the company's business plan and our draft determination ratios were broadly consistent. Bristol Water's reported notional level of gearing is materially lower than ours. However, the company assumed a low dividend yield to help prevent rising gearing and consequential deterioration of ratios. Our modelling adheres to the notional dividend assumption and, based on our calculations, the underlying trend showed some deterioration of the ratios although they were still reasonable by the end of the period. Consequently, we considered the company to be financeable at draft determination.

Bristol Water increased its PAYG rate from 52% in its December plan to 54% in its revised business plan. Bristol Water reduced its view on the allowed return by 0.2% between December and June but, due to its increased PAYG rate, did not pass through any of this reduction to customer bills in 2015-20.

For the draft determination we did not intervene in the company's revised PAYG rate on the basis of financeability. However, we asked Bristol Water to engage with and obtain customer support for any changes to PAYG levers in response to the draft determination, making clear that any engagement on financeability should be undertaken on the basis of notional financeability.

Our draft determination financeability modelling was based on the split of totex between opex and capex based on the company's business plan. However, as our interventions have impacted on the balance of opex and capex in the plan, we have taken account of the change in the balance between opex and capex in calculating ratios at final determination to ensure accurate calculation of the ratios.

As set out in table A5.6, Bristol Water did not propose any change to the PAYG rates in its initial representations, but stated that it was not financeable under the draft determination. Subsequently, the company provided a later representation which proposed a three-year glide path to efficient costs. We set out our assessment of Bristol Water's representations – including the glide path – in Table A5.6. Overall, we have not accepted Bristol Water's proposal for a three year glide path, but have included one year (NPV neutral) glide path using PAYG.

As set out in Table A5.6 we have allowed a one year a glidepath to an efficient level of costs. Using PAYG rates to do this ensures that the glidepath is financially neutral in the longer term and so customers are not paying for inefficient costs.

Table A5.8 sets out the PAYG and RCV run-off rates which shows the revenue that has been brought forward compared to the December plan and the impact that this has on RCV growth and longer term affordability and financeability.

Table A5.8 Impact of changes in cost recovery rates on RCV growth

	PAYG rate	RCV run-off	RCV growth (%) – 1 Apr 2015 to 31 Mar 2020
Company December plan	52.1%	6.0%	43.3%
Company June plan	53.7%	6.0%	29.6%
Draft determination	53.7%	6.0%	14.6%
Final determination	55.3%	6.0%	18.0%

A5.6 Affordability

We set out our approach to assessing affordability in the policy chapter A8.

Table A5.9 sets out the change in household bill profile between the company's December and June business plans, and the draft and final determination. Overall, the final determination means that expected average household bills reduce from £191 in 2014-15 to £172 in 2015-17 and to £153 in 2017-18 (before inflation).

Table A5.9 Household bill profile

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Company December plan	195	193	193	193	193	193
Company June plan	195	193	193	193	193	193
Ofwat calculation for June plan	191	192	194	195	197	198
Ofwat calculation for draft determination – pre-reprofiling	191	142	142	141	140	140
Ofwat calculations for draft determination	191	141	141	141	141	141
Ofwat calculations for final determination	191	164	152	152	152	152

Note that companies have not necessarily used the same method of calculating household bills as Ofwat. Therefore, the Ofwat calculations are not directly comparable to the company plans (lines 1 and 2 of Table A5.9). As discussed above we have re-profiled bills so that there is a one year glidepath to bills consistent with efficient costs.

The following text sets out the reasons why this final determination is assessed as affordable. It describes key changes in relation to Bristol Water's December business plan (which we also assessed as affordable).

A5.6.1 Acceptability

Table A5.10 below notes the representations that we have received that are specific to affordability for Bristol Water and sets out our response.

Table A5.10 Representations specific to affordability for Bristol Water

Respondent	Summary of comment	Ofwat response
CCWater[1]	CCWater conducted research on the acceptability of the draft determination to customers. CCWater did not seek to produce comparable results to the company. The CCWater research suggests 72% of customers find the draft determination acceptable after they have been provided with information on bills, inflation and what the water company will deliver.	We note that the CCWater research was not intended to be comparable. It has produced a significant difference to the research that the company undertook on its revised business plan, which was that 90% found the plan acceptable. The company's plan was been developed with input from its CCG. The CCG's role was to help ensure the business plan reflected the views and priorities of customers. We have reviewed the company's acceptability research, which included reviewing the transparency and accuracy of the bill and inflation information. We consider that the acceptability that the company reported is sufficiently robust. We also consider that the CCWater survey results indicate the importance of continued engagement with customers.

Note:

1. CCWater acceptability results sourced from final version of 'Customers' views on Ofwat's draft determinations for process and service 2015-20' October 2014.

Bristol Water's customer engagement, carried out in support of its December submission, found that the business plan was considered acceptable by 90% of its customers. In its June submission, the company's proposed average bills across 2015-20 were unchanged from those in the December submission. There was no evidence that there had been any reduction in the scope or scale of the service package being offered.

In our draft determination we recommended that Bristol Water engage with its customers on the issue of bill profiles. The company declined to do this on the grounds that it felt existing research already strongly indicated that customers preferred stable bill profiles. In its representation, the company stated that it did not accept our draft determination bill profile and has revisited its costs and financeability tools in order to derive its own alternative profile.

As set out above we have profiled bills to ensure that Bristol Water remains financeable on a notional basis. We have adopted a one-year glidepath to allow for a transition to efficient wholesale costs, while also ensuring that customers benefit from this cost efficiency. We do not consider that customers should fund higher than efficient costs or that customers should fund an extended transition period; Bristol Water should bear responsibility for cost performance.

Bristol Water's customer research indicates that customers prefer stable bills over 2015-20 and beyond. We have therefore provided a flat bill profile from 2016-17 onwards, following the one year glidepath in 2015-16. This provides an appropriate bill level by 2019-20 and is consistent with customers' expectations of stable bills in longer term.

As the final determination bill profile is below the company's December plan we consider that the final determination should be acceptable to the majority of customers.

A5.6.2 Identification of affordability issues and appropriate support measures

The company has a comprehensive range of affordability measures in place, and outlines in its business plan how it is proposing to both increase the coverage of these schemes and add new initiatives. The key measures are summarised in Table A5.11.

Table A5.11 Key affordability measures

Measure	Current coverage (no of customers)	Forecast 2019-20 coverage
WaterSure	1,586	2,500
Water direct	4,857	5,176
Flexible payment plans	416	443
Bill/debt advice – 3rd party	Liaises with and funds external debt advice centres	
Win-win tariff	5,587	7,349

Measure	Current coverage (no of customers)	Forecast 2019-20 coverage
Write-off scheme	3,083	3,285
Water efficiency advice/audits	35,000	35,000
Social Tariff	1,714	4,390

A6.6.3 Longer-term affordability

In its December plan, the company adjusted its cost recovery tools in order to provide a stable bill profile for customers. We concluded that while the company provided sufficient evidence to demonstrate the overall affordability of its plan, there was insufficient evidence that the company engaged with customers on affordability issues post 2020. In particular the company did not demonstrate that customers actively support its use of the PAYG rate to reduce bills in 2015-20 by £2 and increase bills at the start of the price control period 2020-25. After conducting further research, the company concluded that customers favoured stable bills over the longer term (to 2025). In response to our challenge on the changes to use of the PAYG rate levers to delay bill increases, the company adopted a PAYG rate that left bills flat for the period 2015 to 2025.

We do not consider that the increase in PAYG rates in the final determination should have a negative impact on longer term affordability as it provides a glidepath to efficient costs during the control period.

A6.6.4 Longer-term affordability – ODIs

The company has conducted research into ODIs. It tested a maximum positive bill impact of around £4 and this was not considered to be onerous by participants. Given the 90% acceptance level of the proposed bill profile across 2015-20, it is reasonable to conclude that such an impact would still see a plan that is acceptable to the majority of customers.

In the draft determination, we recommended that companies incorporate a range of ‘comparative’ indicators into their ODI packages. Bristol Water’s CCG has reviewed the company’s updated approach to ODIs, as outlined in its representation, and expresses broad support. We have taken into account representations in arriving at the final ODI package.

Annex 1 Wholesale costs

AA1.1 Establishing final determination thresholds

AA1.1.1 Overview of assessment

Our overall approach to establishing final determination wholesale cost thresholds is outlined in policy chapter A3.

In its December business plan, Bristol Water submitted a totex forecast of £572 million for 2015-20. This represents an increase of around 14% compared to 2010-15. Our totex modelling, combined with our assessment of the evidence supplied by Bristol Water on special factor cost claims, led to a gap between our threshold and the company's plan of £221 million. In its revised plan submitted in June 2014, Bristol Water reduced its totex forecast by £10 million and submitted further special factor cost claims. Our assessment for the draft determination resulted in a cost threshold of £359 million and a gap of £203 million (57%).

These significant differences to the company's forecasts of expenditure have led to additional complexities in our review of Bristol Water's wholesale cost threshold. As a result, we have extended further opportunities for Bristol Water to reconsider its business plan and make representations to us on wholesale costs as part of our process.

- We gave Bristol Water early warning on 6 August 2014 of the large gap which would remain at draft determination following our assessment of its revised business plan, to give the company extra time to reconsider its plans and provide additional evidence in support of special cost factor claims[6].
- We offered to have further engagement with Bristol Water beyond our standard process, as set out in the letter to Bristol Water from Sonia Brown of 10 October 2014. Bristol Water had a further opportunity to meet with us and submit evidence (after the standard deadline for representations on 3 October) on why its proposed adjustments to the wholesale water cost models were appropriate and in the interest of customers. We noted that we would retain discretion as to whether to consider further information, bearing in mind the advantages of making the final determination to the established timetable.

[6] We also published our assessment on 6 August for two other companies with very material wholesale cost gap: United Utilities – in respect of wastewater – and Thames Water – in respect of Thames Tideway costs.

In its representations to the draft determination the company reduced its proposed totex by £21 million. However, based on the draft determination threshold there remained a £182 million gap.

Our assessment of Bristol Water's representations to the draft determination was carried out in two parts:

- An assessment of each individual claim made by Bristol Water against the criteria used for assessing company claims.
- A wider consideration of whether our modelling provides an appropriate cost threshold for Bristol Water and so provides appropriate protection for customers. This includes taking into account the assessment made by the Competition Commission in relation to Bristol Water's costs in its 2010 report, and whether we should allow Bristol Water greater time to achieve an efficient level of costs by the use of glide paths.

Our assessment of enhancement and base expenditure are set out separately below.

AA1.1.2 Assessment of enhancement totex

Following representations on the draft determination, Bristol Water's proposed enhancement totex is £152 million over 2015-20.

Below we set out our assessment of the special cost factor claims made by Bristol relating to enhancement, and then discuss our consideration of wider issues.

AA1.1.2.1 Special cost factor claims

We considered the evidence provided to us by Bristol Water in respect of each enhancement special cost factor claim. We provide a brief summary of our assessment below. Full details are set out in table AA1.8 and the wholesale cost assessment feeder model to be published following the final determination.

Table AA1.1 Enhancement special cost factor claims (£ million)

Company proposal		Results of basic claim assessment process		
Claim	Amount sought	Assessment	Implicit Allowance	Additional Allowance[1]
Cheddar 2 reservoir	42.8	Fail	0	0

Company proposal		Results of basic claim assessment process		
Claim	Amount sought	Assessment	Implicit Allowance	Additional Allowance[1]
Cheddar Treatment Works Raw Water Deterioration [2]	28.8	Fail	10.1	0
Southern Resilience [3]	19.8	Partial Pass	8.4	10.5
Growth Expenditure	12.5	Fail	7.7	0
National Environment Programme	11.0	Partial Pass	0	9.6
Asset Reliability – discoloured water contacts	10.2	Partial Pass	4.9	5.9

Notes:
1. Allowance relates to bottom up modelling stream only. Therefore, this value is pre triangulation[7].
2. £28.8 million relates to the Raw Water Deterioration programme. Cheddar Treatment Works Raw Water Deterioration relates to £21.0 million of this.
3. £19.8 million relates to the scheme costs that driven by resilience. The total claim (resilience plus growth drivers) totals £28.1 million.

Cheddar 2 reservoir

The need for the Cheddar 2 reservoir appears contingent on a power station development[8] and relatively weak willingness to pay data. Without the power station demand then the programme of work put forward by Bristol Water for the period 2015 to 2020 in relation to Cheddar 2 does not appear necessary in order to balance future water supply and demand or optimally deliver cost beneficial service enhancements. The future supply demand surplus is projected to be greater in a scenario without both the power station demand and the development of Cheddar 2 as set out in Bristol Water's water resource management plan (WRMP). On this basis, we consider that it would not be in customers' interest to accept this special cost factor claim.

[7] Triangulation refers to the process of adjusting changes to individual modelling streams so that they can be applied to the cost threshold, which is an average of three modelling streams.

[8] The development of the power station is highly uncertain because the power station requires planning permission and the environmental impact assessment for the power station suggests it will use an alternative supply of non-potable water for power station cooling

Cheddar Water Treatment Works (WTW)

We have considered this claim as part of a wider £28.8 million assessment of raw water deterioration un-modelled expenditure. Un-modelled allowances relate only to the bottom-up modelling stream as the other two totex modelling streams encompass all water expenditure (and so there is no adjustment for un-modelled spending). Because un-modelled allowances relate to a single modelling stream, any additions to the cost threshold for un-modelled allowances are subject to triangulation.

In response to the RBR, Bristol Water had provided a qualitative assessment of why a capital solution was preferred. It also provided a more detailed appraisal relating to various options for the WTW rebuild, and, a letter of support from the Drinking Water Inspectorate (DWI)[9]. On this basis, at draft determination, we made an un-modelled adjustment of £16.9 million for raw water deterioration (with an additional £10.1 million implicit allowance within our models). After triangulation, this resulted in a £5.6 million adjustment to the cost threshold.

As part of its response to the draft determination Bristol Water provided a report by Mott MacDonald[10], which had been completed in 2013 and questioned the need for rebuilding the Cheddar WTW. In the light of this report we expected Bristol Water to have responded with a full strategic options appraisal for Cheddar WTW that showed how it had fully tested the need for a capital solution. We queried Bristol Water as to how it had responded, but it only pointed to narrative in its business plan and did not provide a full strategic options appraisal. We did not regard this response as being consistent with the evidence we required to be confident that the scheme is in customers' best interests.

Southern resilience

The £19.8 million of expenditure for the southern resilience scheme is part of our assessment of un-modelled costs. As noted above this relates to the bottom-up modelling stream only. In its draft determination representations, Bristol Water stated that we should consider the claim as a whole (resilience and growth) and that the expenditure is not appropriately allowed for in the other modelling streams.

We considered the company's representations on our efficiency challenge but have retained our view on the efficient level of costs from the draft determination. Therefore, we make an un-modelled adjustment of £10.5 million (with an additional

[9] The DWI has not issued an enforcement notice to compel Bristol Water to act.
[10] Engineering consultants advising Bristol Water.

£8.4 million implicit allowance within our models). After triangulation, this results in a £3.5 million adjustment to the threshold. We have not made any further specific adjustments for the other modelling streams or for the growth aspect of the claim. Nonetheless, we have also reviewed the overall allowances for enhancement expenditure as explained below.

Growth Expenditure

Bristol Water submitted a special cost factor claim associated with increased population growth. Although the company demonstrated that the projects planned to deal with growth are likely to be required, we do not consider that Bristol Water's growth scheme is sufficiently different to routine investment for growth. Without such justification we consider that the costs are covered by our models and consequently we have not made any extra allowance for this special cost factor claim.

National Environment Programme (NEP)

NEP spending is covered by our assessment of un-modelled costs. It was allowed at the RBR but with a significant efficiency adjustment. We retained this approach for draft determinations and made an adjustment of £9.6 million. After triangulation, this results in a £3.2 million adjustment to the cost threshold.

Discoloured water contacts

Investment in relation to reducing discoloured water contacts is covered by our assessment of un-modelled costs. Bristol Water's special factor cost claim was allowed at the RBR but with a significant efficiency adjustment and consequently we made an un-modelled adjustment of £5.9 million (there is an additional £4.9 million implicit allowance within our models). After triangulation, this results in a £2.0 million adjustment to the threshold.

Final-WRMP adjustment

We have made adjustments where the publication of final WRMPs materially impact on the supply/demand exogenous variables in our unit cost models. For Bristol Water this leads to a £16.0 million reduction in the bottom up model estimate of totex (a reduction of £5.3 million to the cost threshold after triangulation).

Summary of the company's special factor cost claims

The above special cost factor claims and allowances are summarised in the following table.

Table AA1.2 Wholesale water enhancement totex modelling streams – initial assessment (£ million)

	Bottom up modelling stream	Full totex modelling stream	Refined totex modelling stream	Triangulated allowance
Modelled allowance	69.9	80.0	13.2	**54.4**
Unmodelled deep dive adjustments[1]	26.0	-	-	**8.7**
Final-WRMP adjustment	-16.0	-	-	**-5.3**
Enhancement – initial assessment	**79.8**	**80.0**	**13.2**	**57.7**

Notes:
1. This is the combination of adjustments for discoloured water contacts, NEP and southern resilience.

AA1.1.2.2 Ofwat modelling and wider considerations of enhancement allowances

Consistent with the wider approach to cost assessment described in policy chapter A3 we have added an extra step in our approach to cost assessment for all companies, in considering whether there is wider evidence that suggests a further change to the cost thresholds would be appropriate. This is particularly important to Bristol Water given the exceptional size of the gap compared to other companies suggested by the above analysis (on the above basis the cost threshold for enhancement would be £58 million relative to Bristol Water's enhancement plan of £152 million).

For Bristol Water's enhancement expenditure we have undertaken a wider consideration of the required expenditure, including:

- a review of our decisions on scope, appropriate because of the particularly difficult decisions around Cheddar WTW;
- a review of our modelling, consistent with that undertaken for a number of other companies; and
- a review of our efficiency challenge on specific schemes, which was 20% at draft determination which was relatively high compared to that applied to other companies.

Scope challenges to enhancement plan

As described above, we have challenged the scope of Bristol Water's raw water deterioration programme. Failing the Cheddar WTW on the basis of the assessment of need was a particularly difficult and marginal decision. We acknowledge that it is likely that Bristol Water will need to deal with changes in the quality of its raw water. This is consistent with DWI support for the need to act. However it is not clear that Bristol Water has identified the optimal solution. Nevertheless, for the purposes of this final determination we have decided to make an allowance for Cheddar WTW, given the importance of water quality. This has resulted in the bottom up modelling stream increasing from £79.8 million to £96.8 million.

Performance of the three modelling streams

In relation to enhancement expenditure we have identified an area where an increase in the modelling allowance appears appropriate for Bristol Water. In particular, as Table AA1.3 demonstrates our refined totex model gives a relatively low allowance for enhancement expenditure of £13 million compared to approximately £80 million from our other models.

We have made modelling adjustments for other companies where the totex models appear to produce insufficient allowance for spending. Nonetheless, it is important to calibrate any adjustment to our models in a way that does not prejudice the interests of customers.

In Bristol Water's case we made an adjustment to the refined totex model to increase the allowance for enhancement spend so it is consistent with our bottom up modelling stream. We have done this by increasing the allowance for enhancement in the refined model by £84 million so that it matches the value from our base plus unit cost model of £97 million. Overall totex is taken as the average of the three models and so after triangulation this increases overall totex by £27.8 million.

Efficiency assumptions

We have also considered whether our efficiency assumptions in relation to un-modelled special cost factor claims are appropriate. Further information was provided by Bristol Water in its representations on these matters, but this was not sufficiently persuasive to change our view on the likely level of efficient costs. As a result, we have retained our draft determination assumptions on efficient costs in relation to Raw Water Deterioration, Southern Resilience, NEP and Discolouration contacts.

A1.1.2.3 Summary of enhancement totex allowance

The combined effect of our wider review of Bristol Water's required allowance for enhancement spend is set out in table AA1.3 below.

This increases the draft determination allowance for enhancement from £68 million to £91 million. This still represents a significant efficiency challenge (17%) on Bristol Water's enhancement plan excluding Cheddar 2 reservoir. The company will need to seek out a wide range of further efficiencies (including reviewing scope of its proposed investment programmes) or it is likely that its shareholders will be exposed to a proportion of the extra costs.

Table AA1.3 Final determination Wholesale water enhancement totex modelling streams (£ million)

	Bottom up modelling stream	Full totex modelling stream	Refined totex modelling stream	Triangulated allowance
Initial assessment – enhancement	**79.8**	**80.0**	**13.2**	**57.7**
Allowance of raw water deterioration	16.9	-	-	**5.6**
Modification to refined modelling stream	-	-	83.5	**27.8**
Enhancement	**96.8**	**80.0**	**96.8**	**91.2**

AA1.1.3 Base Totex

In its representations of 3 October 2014, Bristol Water submitted a revised business plan which included £359 million of base totex. Compared to our draft determination threshold (of £261 million) there was a gap of £97 million.

Bristol Water's special cost factor claims relating to base expenditure, submitted on and after 3 October encompassed:

- asset reliability (unplanned minutes lost);
- Bedminster service reservoir;

- capital maintenance;
- the costs of water treatment complexity;
- the extra costs associated with Purton and Littleton;
- Canal and River Trust payments;
- traffic congestion;
- modelling representations on base costs; and
- base costs per capita, disaggregated modelling and other modelling adjustments.

These are discussed briefly in turn below. The details of our assessment of these claims against our assessment gates is set out in Table AA1.8 and further details set are out in the wholesale cost feeder model 11 to be published following final determination.

Consistent with our approach to enhancement expenditure, we then explain the wider modelling and other adjustments we have considered making to Bristol Water's base cost thresholds. These include:

- a review of our modelling, consistent with that undertaken for a number of other companies;
- a review of special factor claims where there were particularly difficult and marginal decisions; and
- consideration of whether we should allow a totex glide-path for the very large differences in base costs.

AA1.1.3.1 Special cost factor base claims

Asset reliability (unplanned customer minutes lost)

Bristol Water highlights its proposed expenditures on reducing customer minutes lost (CMLs). These appear to be relatively modest reductions in CMLs and are not atypical compared to reductions made historically. On this basis such reductions can reasonably be considered business as usual for a water company and so there is no persuasive case for adjusting the cost threshold.

Bedminster Service Reservoir

This special cost factor claim relates to the rebuilding of the Bedminster service reservoir. The company provided evidence of engineering need. However, while this may be lumpy expenditure we have not seen sufficient evidence that it is genuinely exceptional for the industry so as to justify an adjustment to the cost threshold, bearing in mind that the base data for the models includes previous lumpy items and costs. On this basis we have not made an adjustment to the cost threshold for this special cost claim.

Capital maintenance

Bristol Water contends that its planned capital maintenance costs are shown to be efficient by its disaggregated modelling, its approach to workload forecasting, and omitted drivers (asset age, upstream assets and W3/W4 treatment complexity), and, that on this basis we should increase our cost thresholds. In general we did not find the evidence to be sufficiently compelling to require an adjustment to the cost threshold in respect of capital maintenance costs. Nonetheless, we have considered issues around water treatment complexity and asset age further in section AA1.1.3.2 below.

Water treatment complexity

Bristol Water has provided a range of evidence and estimates of the additional costs water treatment complexity. This has included reports by ICS and Oxera Consulting, which seek to demonstrate that the Ofwat models fail to take adequate account of treatment complexity. The company states that not including treatment complexity leads to these company-specific effects being captured as inefficiency rather than a driver of costs. The analysis provided relies heavily on 'W3/W4' data, which Bristol Water states is a proxy of treatment complexity. We consider further issues around water treatment complexity in section AA1.1.3.2 below.

Purton & Littleton

This special cost factor claim seeks to explain that the Purton & Littleton treatment works incurs greater operating costs than other relatively complex treatment works. We were not convinced that the information provided by Bristol Water demonstrates that the raw water requires significantly more costly treatment than other relatively complex treatment works or that its benchmark comparisons to the costs of another works were robust. Consequently we have not made an adjustment to the cost threshold for this claim.

Canal & River Trust payments

Bristol Water demonstrated the payments it makes to the Canal & River Trust for extracting water are in addition to the abstraction licences fees which are paid by all companies. We accept that these costs are not included in our modelled allowances but are concerned that Bristol Water has not demonstrated upper quartile efficiency. Consequently, we reduce the cost estimates to reflect upper quartile efficiency, resulting in an allowance of £6 million.

Traffic congestion costs

Bristol Water submitted a special cost factor claim for additional costs on the basis that the city of Bristol has greater traffic congestion than is typical for an area served by a water company. The company has demonstrated that the city of Bristol experiences more severe traffic congestion than cities other than central London. However, we are not convinced that its estimates of the resulting costs were robust. This claim is discussed further in section AA1.1.3.2 below.

Modelling representations on base costs

Bristol Water made a range of modelling representations supported by Oxera including:

- that we have made an ad hoc adjustment to our modelling results in order to identify the efficiency frontier (that is, the upper quartile adjustment) based on regression residuals which conflate inefficiency, unobserved heterogeneity (for example, differences in topography not captured in our models) and random shocks to costs. Bristol Water contends that an approach based on stochastic frontier analysis (SFA), which specifically tries to isolate the inefficiency, is more appropriate; and
- that there are missing explanatory variables from our models, relating to treatment complexity and mains asset age.

We have always recognised the limitations of modelling and been clear that modelling would only be the starting point for our consideration of wholesale totex. Our Final Methodology Statement explained that we would consider special cost factor claims as well as cost benchmarking models. Our intention was to capture factors not included in our modelling and as explained in the policy chapter on wholesale costs and revenues this has been effective in dealing with other water companies and it seems reasonable to assume that such an approach should work for Bristol Water.

Alternative approaches such as SFA make highly stylised assumptions to allocate model error terms between inefficiency and unobserved heterogeneity and produce results that are driven by the assumptions, particularly where the sample size is relatively small. In the light of the above, we have not accepted the element of Bristol Water's representation that we should adopt SFA modelling and the greater leniency on Bristol Water that such modelling would imply. This is consistent with the conclusions of the CEPA modelling report published in early 2013.

We discuss our approach to Bristol Water's representation on missing explanatory variables in section AA1.1.3.2 below.

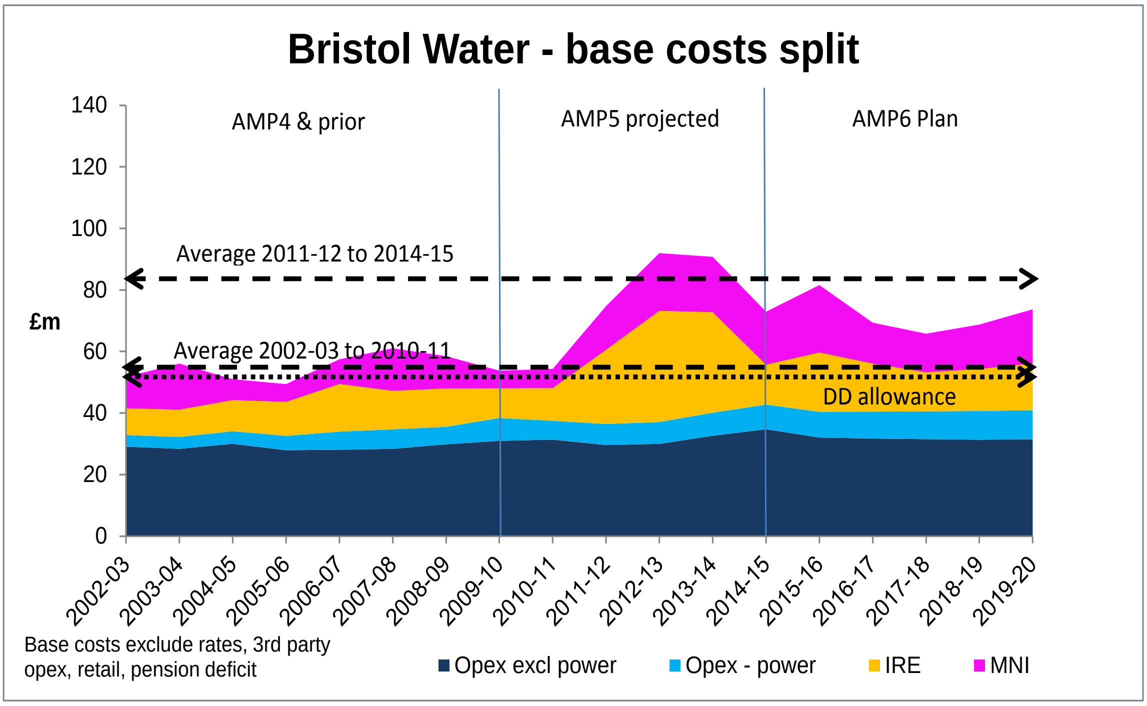
Base costs per capita, disaggregated modelling and other modelling adjustments

Bristol Water suggests that Ofwat's modelled allowances per capita are relatively low and a more disaggregated approach to cost assessment would produce more reliable estimates. On our preferred method of calculating per capita costs the differences between Bristol Water and other companies is smaller than Bristol Water suggests and there is no persuasive evidence that its disaggregated modelling produces more reliable estimates of costs.

AA1.1.3.2 Ofwat modelling and wider considerations

Bristol Water appears a relative outlier in terms of our base cost modelling largely as a result of the significant increase in costs that occurred in 2011-12 (see figure AA1.1).

Figure AA1.1: trends in Bristol Water's wholesale water totex



Bristol Water suggests that it is relatively static factors that explain the shortfall in our cost modelling compared to its estimates of base costs. In particular it suggests that there are important explanatory variables missing from our regressions in terms of treatment complexity and asset age and that correcting the models for these variables will:

- better reflect the special circumstances of Bristol Water, including coefficients that better explain the impact of density on Bristol Water's costs; and
- result in models that are at least as good in terms of statistical performance as the original Ofwat models and have fewer counter intuitive economic interpretations.

Treatment complexity and mains asset age variables are relatively static over our modelling time period and do not explain in a simple way the large increase in capital maintenance costs experienced by Bristol Water in 2011-12. Bristol Water has said that the increase reflected historical spending that was unsustainably low and that its higher levels of spending were supported by the CC investigation that followed PR09. The CC looked in detail at Bristol Water's modelling of capital maintenance spending. It supported a significant increase in spending levels, but did not appear to assume that this would be a permanent increase in spending with 2010 CC final report on Bristol Water's control noting the following.

> "Third, we appreciated that Ofwat's rationale for setting the expenditure subject to challenge ensured that companies had to justify increases in maintenance expenditure and provide a disincentive for companies to overstate planned expenditure. We noted that Bristol Water proposed spending for this review period at a much higher level than its historical expenditure, but over the last five years had underspent by approximately £10 million on the capital maintenance budget that Ofwat allowed in that period.
>
> "However, there may be legitimate and efficient reasons why companies' maintenance expenditure might vary between periods, and the penalty may affect smaller companies more than larger ones as they may naturally have more lumpy investment profiles."

We have explored further whether there is merit in increasing the draft determination allowance for base spending for mains asset age and treatment complexity in light of the arguments made by Bristol Water and the higher CC allowance for capital maintenance. We recognise that there are difficulties in performing this analysis because of data limitations.

- The data that is available in relation to asset age is subject to significant uncertainties (as part of the PR14 process some companies have reported apparently implausibly large changes in asset age statistics) and relates primarily to the age of the network and so does not necessarily translate to above ground assets. The analysis we have undertaken also suggests that network age is not a reliable indicator of asset condition, in that burst rates appear largely un-correlated with network age. On balance, and in particular because the variables are not statistically significant in our models,[11] we do not consider that there is sufficient weight of evidence to support an adjustment to the cost threshold based on this variable.
- There are also difficulties associated with the water treatment complexity data. The only metric that appears to be available comes from the June Return, however a decision was made to stop collecting this data in 2009 (that is, before the wider decision to discontinue the June Return) because of concerns about subjectivity/reliability and because the data was not being used. The metric in question is termed the W3/W4 variable and relates to the relative complexity of water treatment works processes. Despite the above caveats the variable is

[11] We do note that they are statistically significant in models developed by Oxera in its 7 November 2014 report for Bristol.

statistically significant in explaining variations in wholesale water costs across companies when included in our panel data base and totex models. On balance we consider that this constitutes sufficient evidence to consider a modelling adjustment for Bristol Water.

Adding the W3/W4 data to the base totex model increases Bristol Water's cost allowance by £26 million and in the refined model by £29 million. Including W3/W4 in the full totex model does not have a significant impact on the model results. This suggests an average adjustment across all three modelling streams of £18 million.

Taking account of Bristol Water's special cost factor claim for Canal and River Trust payments, and the modelling adjustment explained above, the cost threshold increases by £24 million. We have also allowed traffic costs, where Bristol provided good evidence that the circumstances it faced were different from those experienced by other companies.

AA1.1.3.3 Summary of our base totex allowance

Overall the base totex allowance at final determination is £288 million. This is £27 million higher than the draft determination allowance of £261 million. The additional adjustments comprise:

- £18 million for our assessment of the additional costs associated with including the water treatment complexity variable in the totex models;
- £6 million for Canal & River Trust payments; and
- £3 million for traffic congestion in the part of Bristol Water's service area relating to the city of Bristol.

We consider that this level of base expenditure offers protection for the interests of customers both in the short and in the long-term. Nonetheless, it would require an approximate 20% reduction in both planned spending and in estimated spending levels in 2014-15. It is likely that Bristol Water would need to challenge both the unit costs of delivery and scope of its programme, or shareholders will need to bear a proportion of these costs.

Given the scale of challenge, we considered whether the company should be allowed a glide path on totex to increase the time available to the company to adjust to the new level of base costs. On balance we do not consider that a glide path on totex is appropriate as it is for shareholders, not customers, to fund costs where the company is unable to demonstrate efficiency. We have separately considered a revenue glide path using PAYG rates to address concerns about notional company financeability, which is discussed in section A5.5.

AA1.1.4 Summary of enhancement and base totex thresholds

Table AA1.4 below shows, for each of the three modelling streams, how our wider consideration of Bristol Water's cost thresholds has added significantly to our initial assessment of the efficient level of the company's costs. The overall cost threshold for final determination is £409 million.

Table AA1.4 Final determination Wholesale water enhancement and base totex modelling streams (£ million)

	Bottom up modelling stream	Full totex modelling stream	Refined totex modelling stream	Triangulated cost threshold
Enhancement- initial allowance	79.8	80.0	13.2	**57.7**
Allowance of raw water deterioration	16.9	-	-	**5.6**
Modification to refined modelling stream	-	-	83.5	**27.8**
Total Enhancement	**96.8**	**80.0**	**96.8**	**91.2**
Base – initial allowance	261.0	261.0	261.0	**261.0**
Allowance of CRT payments	6.3	6.3	6.3	**6.3**
Allowance of congestion claim	3.0	3.0	3.0	**3.0**
Modelling adjustment for treatment complexity	25.9		28.7	**18.2**
Total Base	**296.2**	**270.3**	**299.0**	**288.5**
Policy items	29.5	29.5	29.5	**29.5**
Final determination cost threshold	**422.5**	**379.8**	**425.3**	**409.2**

In the tables below, we provide some information on the company-specific numbers that support these calculations. Full details of our assessment are set out in the populated version of the final determination cost threshold models.

Table AA1.5 Movement from basic cost threshold to final determination threshold for wholesale water totex (£ million)

Basic cost threshold	Policy additions[1]	Unmodelled costs adjustment	Deep dives	Final determination threshold	Deep dives fully or partially not added[2]
315.3	29.5	8.7	55.7	409.2	239.7

Notes:
1. See Table AA1.6 below.
2. Deep dives are net of implicit allowances. A value of zero means deep dives are wholly covered by implicit allowances.

Table AA1.6 Policy additions to the wholesale water basic cost threshold (£ million)

Business rates	Pension deficit payments	Third party costs	Open market costs	Net v gross adjustments	Total
22.4	1.6	5.1	0.4	0.0	29.5

Table AA1.7 Comparison of company wholesale water totex with the final determination threshold and 2010-15 totex (£ million)

Plan[1]	Final determination threshold	Gap[2]	2010-15 v plan
541.1	409.2	131.9	40.1

Note:
1. Where the company's business plan total has been adjusted by the company as part of its representations on its draft determination, this is reflected here.
2. This gap will not equal the deep dives fully or partially not added in table AA1.1 if the company's claims for special treatment in the costs thresholds are not equal to the gap.

Table AA1.8 Summary of wholesale water deep dive assessments (£ million)

Company proposal		Assessment				Final determination allowance	
Claim	Amount sought	Implicit allowance	Need	Cost-benefit analysis	Robust costs	Assessment	Amount allowed
Deep dives							
Cheddar Reservoir 2 Scheme – October representation	42.8	0.0	Fail	N/a	N/a	Fail	-
Bedminster Reservoir replacement– October representation	6.1	1.0	Fail	N/a	N/a	Fail	-
Growth Expenditure– October representation	12.5	7.7	Fail	N/a	N/a	Fail	-
Capital maintenance net claim after representation	75.4	12.2	Fail	N/a	N/a	Fail	-
Asset Reliability – Unplanned Customer Minutes Lost – October representation	3.3	0.5	Fail	N/a	N/a	Fail	-
Water treatment modelling – October representation	12.6	2.0	Fail	N/a	N/a	Fail	-
Purton & Littleton– October	8.1	1.3	Fail	N/a	N/a	Fail	-

Company proposal		Assessment				Final determination allowance	
Claim	**Amount sought**	**Implicit allowance**	**Need**	**Cost-benefit analysis**	**Robust costs**	**Assessment**	**Amount allowed**
representation							
Canal & River Trust payments– October representation	8.1	1.3	Pass	N/a	Partial Pass	Partial Pass	6.3
Bristol traffic congestion– October representation	3.5	0.6	Fail	N/a	N/a	Fail	-
Ofwat adjustment: Updating exogenous variables for final-WRMP	0	0	N/a	N/a	N/a	N/a	-5.3
Base costs modelling– October representation and Ofwat adjustment[2]	0	0	Partial Pass	N/a	N/a	Partial Pass	21.2
Totex modelling and triangulation– October representation	82.0	0	Partial Pass	N/a	Fail	Fail	-
Ofwat adjustment to ensure appropriate allowance for enhancement expenditure[3]	0	0	Partial Pass	N/a	N/a	Partial Pass	33.5
Unmodelled cost assessment[1]							

Company proposal		Assessment				Final determination allowance	
Claim	Amount sought	Implicit allowance	Need	Cost-benefit analysis	Robust costs	Assessment	Amount allowed
Representation: Raw water deterioration schemes: • Barrow WTW UV • Cheddar WTW algae removal • Stowey WTW pH correction • Metaldehyde catchment management	28.8	10.1	Fail	N/a	N/a	Fail	0
Southern Resilience	19.8	8.4	Pass	Pass	Partial Pass	Partial Pass	10.5
NEP – Drinking water protected areas • Catchment management • Baseline surveys • Investigations • Eel protection	11.0	0	Pass	Pass	Partial Pass	Partial Pass	9.6
Asset reliability – discoloured water contacts	10.2	4.9	Pass	Pass	Partial Pass	Partial Pass	5.9

Note:
1. This claim is consistent with the discussion set out in section AA1.1.3 above. The £21 million consists of £18 million in respect of treatment complexity costs and £3 million in respect of traffic congestion costs.
2. This claim is consistent with the discussion set out in section AA1.1.4 above. The £33.5 million adjustment consists of £5.6 million in respect of raw water deterioration costs and £27.8 million in respect of adjustments to our cost models. In section AA1.1.4 we also set out an adjustment of £6.3 million which is captured by our assessment of the claim "Canal & River Trust payments – October representation"

3. For the water service the unmodelled adjustment to the basic cost threshold is triangulated because it relates only to the bottom up modelling stream. Therefore, one third of the amount in this table is allowed.
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Annex 2 Household retail

Details on our assessment of proposed adjustments to the ACTS

Our approach to setting the industry ACTS is outlined in policy chapter A5.

Below we provide information on our assessment of the company-specific adjustments to the ACTS.

Input price pressure – summary

- In its revised business plan, Bristol Water sought an adjustment for input price pressure of £5.8 million over 2015-20.
- We did not accept the company's proposal for input price pressure in the draft determination.
- We have accepted the company's proposal for input price pressure in this final determination.

In its representation, the company provided additional evidence in order to support its input price pressure claim and managed to address the gaps identified in the draft determination. The company also lowered the value of its proposed adjustment from £5.8 million to £4.9 million to account for a lower forecast of gross input price pressure and a higher forecast of total factor productivity provided by the company's consultants as part of its supporting evidence. We have therefore included Bristol Water's proposed adjustment for input price pressure in its final determination.

Materiality

The company's proposed adjustment of £4.9 million is material at 9.0% of household retail operating expenditure plus depreciation over 2015-20.

Beyond efficient management control

The evidence provided on management practices is sufficient and convincing. Bristol Water provided evidence on how staff and other costs (for example, bill printing costs) are managed within its business that convinced us that it uses efficient management practices. We have therefore concluded that Bristol Water has provided sufficient and convincing evidence that the input price pressure faced by the company are beyond efficient management control.

Impact company in materially different way

The evidence provided on relative efficiency, including benchmarking, is sufficient and convincing that these costs impact the company in a materially different way to other companies. This included a range of benchmarking evidence using a variety of benchmarking methods including comparisons outside of the water sector. Also, our assessment for ACTS shows that Bristol Water is upper quartile efficient for unmetered retail costs. Therefore, the company has demonstrated that it is affected in a materially different way to other companies by input price pressure.

Value of proposed adjustment

We have not based the value of the adjustment on RPI indexation, as in previous controls. The size of the requested adjustment is instead calculated bottom up from inflation rates for different cost areas by the company. The approach appears reasonable and results in a low rate of unavoidable price increases of 1.8% a year. We have therefore accepted the full value of the adjustment proposed by Bristol Water, as opposed to RPI indexation.

Table AA2.1 Household retail adjustments (£ million, nominal prices)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Adjustments proposed in Bristol Water's business plan						
Input price pressure	0.617	0.873	1.148	1.444	1.758	5.839
Pension deficit repair costs	0.071	0.071	0.070	0.070	0.070	0.352
Adjustments included in business plan	**0.687**	**0.943**	**1.219**	**1.514**	**1.828**	**6.192**
Adjustments included in draft determination						
Input price pressure	0.000	0.000	0.000	0.000	0.000	0.000
Pension deficit repair costs	0.070	0.070	0.070	0.070	0.070	0.349
Adjustments included in draft determination	**0.070**	**0.070**	**0.070**	**0.070**	**0.070**	**0.349**
Adjustments proposed in Bristol Water’s business plan						
Input price pressure	0.577	0.769	0.975	1.196	1.431	4.948
Pension deficit repair costs	0.071	0.071	0.070	0.070	0.070	0.352
Adjustments included in business plan	**0.647**	**0.839**	**1.046**	**1.267**	**1.501**	**5.301**
Adjustments included in final determination						
Input price pressure	0.577	0.769	0.975	1.196	1.431	4.948

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Pension deficit repair costs	0.070	0.070	0.070	0.070	0.070	0.349
Adjustments included in final determination	**0.646**	**0.839**	**1.045**	**1.266**	**1.501**	**5.297**

Household retail revenue modification

We outline our approach to revenue modification in policy chapter A5.

Table AA2.2 sets out the amount per customer, by customer type, that allowed revenues will be modified by if outturn customer numbers differ from forecast customer numbers and Table AA2.3 sets out the baseline number of customers.

Table AA2.2 Household retail allowed revenue modification factors by class of customer (£/customer)

Revenue modification per:	2015-16	2016-17	2017-18	2018-19	2019-20
Unmetered water only customer	17.81	18.40	19.14	19.91	20.69
Metered only water customer	25.56	25.63	25.88	26.17	26.94

Note: There will be no automatic indexation for retail price controls to RPI.

Table AA2.3 Assumed number of customers for household retail total revenues (000s)

Number of customers	2015-16	2016-17	2017-18	2018-19	2019-20
Unmetered water only	245.7	226.3	208.3	191.5	175.8
Metered water only	237.0	261.8	285.3	307.4	328.4

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Annex 3 Reconciling 2010-15 performance

When we last set price controls at PR09, we included a number of incentive mechanisms designed to encourage companies to improve and deliver services more efficiently, and, to manage uncertainty. Consistent with the approach set out at the time of the final determinations in 2009 we have made adjustments at this price review (PR14) to 2015 to 2020 revenues to take account of company performance in the 2010 to 2015 period.

We set out our methodology for calculating the adjustments to 2015-20 wholesale price controls resulting from the company's actual performance during the 2010-15 period in policy chapter A4.

In this annex, we set out the final determination adjustments to 2015-20 price controls for Bristol Water resulting from the company's actual performance during the 2010-15 period.

As part of the final determination of the 2010-15 adjustments we have undertaken detailed calculations within our models for the RCM, OIA, CIS and serviceability shortfalls. While we provide an explanation of our interventions within this annex, each model contains the detail of the specific calculation.

We make a 'midnight adjustment' (a change to the value to take effect from the beginning of the 2015-2020 control period) to the closing RCV from the previous period (ending on 31 March 2015) to obtain the opening RCV for the next period (starting on 1 April 2015). Our detailed calculations are contained within the RCV midnight adjustment model published alongside this final determination.

In this annex, we provide an overview, comparing the company's view of the required revenue adjustments included in its revised business plan for each of the incentive tools for water services, with our own view. We then consider each adjustment mechanism in turn.

However, we first consider the responses to our draft determination that are specific to Bristol Waters' treatment in these areas below.

Consideration of representations on our draft determinations

In policy chapter A1, we provide a list of the respondents to the draft determinations published in April, May and August of this year. We have fully considered all of the responses received, and where appropriate, we have made either consequential adjustments to our industry-wide approach or company-specific interventions.

Where representations have addressed issues that are common to a number of companies, these comments, and any consequential changes to our approach, are discussed in policy chapter A4. Representations that are specific to reconciling 2010-15 performance for Bristol Water, and any consequential impact on our final determination, are summarised in table AA3.1 below.

Table AA3.1 Representations specific to reconciling 2010-15 performance for Bristol Water

Area	Respondent	Summary of comment	Ofwat response
Service standard outputs	Bristol Water	The company provided evidence in its representation to confirm achievement of service standard outputs in relation to Exceptional Items and Enhanced Service Levels (Resilience).	Having considered the evidence provided in the company's representation, we are satisfied that the service standard outputs have been achieved. We have made no intervention for the final determination.
Serviceability performance	Bristol Water	**Iron mean zonal non-compliance:** The company has provided additional evidence in its draft determination representation demonstrating that the reported performance should be revised because of water supply zone re-zoning changes its performance for three consecutive years leading up to 2014-15 shows a stable performance.	We consider that the additional information provided by the company sufficiently demonstrated that its reported performance for Iron mean zonal compliance should be revised. The revised performance demonstrates stable serviceability therefore we have removed the shortfall applied. Our assessment of the company's specific representations, in relation to exclusions and mitigating circumstances for example, is set out in table AA3.10. We have made no intervention; the shortfall of £5.6 million applied at the draft determination has been removed.
Serviceability performance	Bristol Water	**DG3 supply interruptions >12 hours** The company made challenges in its representation summarised as below:	We have conducted a full review of our methodology for calculating serviceability shortfalls in light of companies' representations. Details and the implications

Area	Respondent	Summary of comment	Ofwat response
		1) The Shortfall applied by Ofwat is excessive and largely unwarranted. 2) Ofwat did not follow the methodology set out at PR09 and 2010 3) The upper control limit is too low 4) The circumstances of individual incidents related to DG3 >12 hours were beyond its control and therefore some incidents should be excluded from the assessment. The company also provided additional information related to its latest 2014 performance. This data shows two large interruption events, one in May 2014 and one in September 2014.The event in May was not reported in the company's June 2014 revised business plan under its forecast performance for 2014-15.	of this review can be found in policy chapter A4. Our assessment of the company's specific representations, in relation to exclusions and mitigating circumstances for example, is set out in table AA3.10. In accordance with our revised shortfall calculation methodology we have included a shortfall adjustment of £4.1 million for deteriorating performance in the interruptions to supply exceeding 12 hours indicator. This is £2.1 million less than the shortfall we applied at the draft determination.
CIS	There were no representations in this area.		As explained in policy chapter A4, we have corrected a minor error in the CIS model for all companies with respect to the discount rate used when calculating the future value of the revenue adjustment in the 2010-15 period. This minor change did not have a material impact on the final revenue adjustments for Bristol Water.

Area	Respondent	Summary of comment	Ofwat response
Other adjustments	Bristol Water	In the representation, the company stated it did not agree with the -£0.6 million adjustment for 2009-10 actual expenditure as the adjustment did not take into account the Competition Commission decision for the 2009 determination covering 2010-15. We sent Bristol Water a query asking how it would modify the feeder model calculation to arrive at its position as set out in its representation (which was not quantified). In the response numbered 052 Bristol Water stated that the total actual capex should be £101.9 million. The ceiling on investment figure of £100.0 million was also disputed by the company.	We agree that the total actual capex is £101.9 million. This amount is shown in the relevant feeder model calculations (cell J15 of 'calc 1'). We have reconciled the ceiling on investment figure to both the PR09 final determination and Competition Commission calculations showing the impact of the changes in COPI as the forecast figures were replaced by actual indices. These calculations confirm that the £100.025 million used in the draft determination is robust.

Summary of 2010-15 adjustments

All companies were required to put in business plans their own adjustments for PR09 reconciliation. Table AA3.2 below compares the company's view of the required revenue adjustments included in its revised business plan with our view for each of the incentive tools for water services.

Our view reflects our understanding of the company's performance using these incentives, based on information provided in its revised business plan, subsequent query responses and representations on our draft determination. The table also shows other adjustments, such as those relating to tax resulting from the company's actual performance during the 2010-15 period.

Table AA3.1 notes the comments that we have received that are specific to this aspect of the wholesale water control of Bristol Water and outlines how our interventions have been influenced by our consideration of these responses.

The main changes we have made in the final determination compared to our draft determination, are due to changes in our serviceability shortfall values which, for interruptions to supply, is driven by our change in methodology set out in policy chapter A4.

Table AA3.2 Revenue adjustments 2015-20 (£ million)

	Company view	Ofwat view
SIM	2.435	3.023
RCM	2.560	2.552
OIA – post-tax	0.000	0.000
CIS	-3.845	-6.550
Tax refinancing benefit clawback	0.000	0.000
Other tax adjustments	0.000	0.000
Equity injection clawback	0.000	0.000
Other adjustments	0.000	0.000
Total wholesale legacy adjustments	1.150	-0.975

Notes: For the CIS mechanism, there is a corresponding adjustment to the RCV made at 1 April 2015 (part of the 'midnight' adjustments'). The impact on the RCV can be seen in Table AA3.12. This adjustment is net of any logging up, logging down or shortfalls. A full reconciliation showing all of the midnight adjustments to the RCV, including the impact of logging up, logging down and shortfalls, can be seen in Table A2.8.
Totals may not add up due to rounding.

Adjustments by 2010-15 incentive mechanism

SIM

We provide our view of each company's SIM reward or penalty in policy chapter A4.

Table AA3.3 provides the company's view and our view of the annualised rewards from the company's SIM performance. These are unchanged from the draft determination.

Table AA3.3 SIM annualised rewards (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Company view	0.487	0.487	0.487	0.487	0.487	2.435
Ofwat view	0.605	0.605	0.605	0.605	0.605	3.023

Table AA3.4 Interventions on proposed 2010-15 SIM adjustments

Area of intervention	What we did	Why we did it
SIM reward	This final determination includes our view of the company's SIM reward, which we have calculated as 0.5%. This is unchanged from draft determination when we intervened on the company's resubmitted plan estimate of 0.4%. This intervention increases the reward by £0.6 million.	We have applied our final methodology which compares the company's actual SIM performance in 2011-12, 2012-13 and 2013-14, to the industry three-year average performance during 2011-14. The 2013-14 information was not available at the time companies submitted their business plans.

RCM

This final determination includes our view of the company's RCM annualised adjustment amounts as detailed in Table AA3.5 below. Table AA3.6 summarises our interventions in relation to Bristol Water's proposed 2010-15 RCM adjustments.

For the RCM, we apply the vanilla wholesale WACC (real; pre-tax cost of new debt, post-tax cost of equity) as the PR14 discount rate. For the final determination, the updated PR14 discount rate is 3.6%. This has contributed to a small movement in the RCM from the draft determination.

Table AA3.5 RCM annualised adjustments for 2015-20 (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Company view	0.512	0.512	0.512	0.512	0.512	2.560
Ofwat view	0.510	0.510	0.510	0.510	0.510	2.552

Table AA3.6 Interventions on proposed 2010-15 RCM adjustments

Area of intervention	What we did	Why we did it
FD09 assumptions – Tariff basket revenues	Our assumptions included our view of the FD09 assumptions taking into account the CC determination. Our view of the company's tariff basket revenues is consistent with the company's FD09/CC revenue forecasts which come from the tariff basket model that we used for PR09.	There are differences between the company's and our view of the FD09/CC assumptions used in the company's populated RCM model. Our assumptions for the final determination include the FD09/CC revenue forecasts as contained in the PR09 tariff basket model in accordance with our published methodology 'Setting price controls for 2015-20 – further information on reconciling 2010-15 performance'.
FD09 assumptions – PR09 discount rate	Our assumptions include our view of the FD09 assumptions taking into account the CC determination.	The company has used a PR09 discount rate of 6%, which is not consistent with its FD09/CC determination of 4.3% for the

Area of intervention	What we did	Why we did it
	Our view of the company's PR09 discount rate is 4.3%.	company. Our assumptions for the final determination include the FD09 discount rate in accordance with our published methodology 'Setting price controls for 2015-20 – further information on reconciling 2010-15 performance'.
FD09 assumptions – Measured Non-household's revenue for the Measured Non-household group immediately above and below the 50megalitres (Ml) threshold	Our assumptions include our view of the FD09 assumptions taking into account the CC determination. Our view of the company's revenue assumptions for the measured non-household group immediately below and above the 50 Ml tariff basket threshold originate from the company's FD09/CC revenue forecasts that come from the tariff basket model, which we used for PR09.	There are differences between the company's and our view of the FD09/CC assumptions used in the company's populated RCM model. The company applied different assumptions for 'FD09 Measured Non-household's revenue for the Measured Non-household group immediately above and below the 50Ml threshold' compared with our view of its FD09/CC assumptions. As above, our assumptions for the final determination include the FD09/CC revenue forecasts as contained in the PR09 tariff basket model in accordance with our published methodology 'Setting price controls for 2015-20 – further information on reconciling 2010-15 performance'.
Number of households billed	Our assumptions for the final determination uses the data the company submitted in business plan table R3 to calculate our view of the RCM adjustment.	There were inconsistencies with the number of households billed between business plan table R3 and the company's populated RCM model.
Outturn financial year	Our assumptions for the final	There are inconsistencies with

Area of intervention	What we did	Why we did it
average RPI	determination uses the data that the company submitted in business plan table A9 to calculate our view of the RCM adjustment.	the outturn financial year average RPI between table A9 and the company's populated RCM model.
PR14 discount rate	Our assumption for the PR14 discount rate at final determination is 3.6%. We have used this to calculate our view of the RCM adjustment.	The company proposed a PR14 discount rate of 5.2%. In accordance with 'Setting price controls for 2015-20 – further information on reconciling 2010-15 performance' we have used the vanilla wholesale WACC as the discount rate for PR14 for the RCM. Our assumption for the PR14 discount rate at the final determination is 3.6%.
Corporation tax rate	Our assumptions for the corporation tax rate applied in the RCM model at the final determination is the same as HMRC's published tax rates for each year.	The company has applied a corporation tax rate of 22% in 2014-15 in its populated RCM model. Our assumption for the corporation tax rate applied in the RCM model at the final determination is set at 21%.

OIA

Table AA3.7 below summarises the company's view and our view of the incentive allowances for 2015-20. There are no changes from our draft determination and there are no interventions in this area.

Table AA3.7 OIAs for 2015-20 (£ million)

		2015-16	2016-17	2017-18	2018-19	2019-20	Total
Incentive allowance (post-tax)	Company view	0.000	0.000	0.000	0.000	0.000	0.000
	Ofwat view	0.000	0.000	0.000	0.000	0.000	0.000

Change protocol (logging up, logging down and shortfalls)

Bristol Water did not propose any adjustments to capex included in the CIS reconciliation or to the FD09 opex assumptions used in the calculation of the opex incentive revenue allowance, nor did we make any interventions in this area. In this regard, there are no changes from our draft determination.

Service standard outputs

Service standards are regulatory outputs which we set out in the FD09 supplementary reports[12]. Where companies have not reported progress on these service standards before submitting business plans, we would have expected them to do so within the price review process.

Having considered the evidence provided in the company's representation, we are satisfied that the service standard outputs in relation to Exceptional Items and Enhanced Service Levels have been achieved. There are therefore no interventions for the final determination.

Serviceability performance

Table AA3.8 below summarises our serviceability assessments for Bristol Water and Table AA3.9 quantifies the value and impact of any serviceability shortfall on the RCV. Table AA3.10 summarises our interventions in relation to Bristol Water's proposed adjustments for serviceability.

The changes we have made in the final determination compared to our draft determination, are due to changes in our serviceability shortfall values which, for interruptions to supply, is driven by our change in methodology set out in policy chapter A4.

[12] In the FD09 supplementary reports we said: "Both the project activity (as proposed in your final business plan) and the service standard are the defined output. You must demonstrate delivery of the stated service standard output through the June return. We recognise that companies may decide to prioritise activity differently in order to achieve the service output in a more efficient manner. All material changes to the project activity must be reported and explained through your June return."

Table AA3.8 Serviceability assessments for 2010-15[1]

		2010-11	2011-12	2012-13	2013-14	2014-15
Water infrastructure	Company view	Stable	Stable	Stable	Stable	Stable
	Ofwat view[2]	Stable	Stable	Marginal	Deteriorating	Deteriorating
Water non-infrastructure	Company view	Stable	Stable	Stable	Stable	Stable
	Ofwat view	Stable	Stable	Stable	Stable	Stable

Notes:

1. Assessments are based on actual and forecast performance submitted in the company's revised business plan. Assessments for 2014-15 are based on forecast data and are subject to review once actual performance data becomes available.
2. Our assessment of deteriorating performance is explained in table AA3.10.

Table AA3.9 Impact of serviceability shortfalls on the RCV (£ million)

2009-10 to 2014-15		Total
Amount subtracted from RCV	Company view	0.0
	Ofwat view	4.1

Table AA3.10 Interventions on proposed 2010-15 serviceability adjustments

Area of intervention	What we did	Why we did it
Iron mean zonal non-compliance	For the purposes of the final determination we have removed the shortfall of £5.6 million applied at the	In its representation the company provided evidence to demonstrate that it had revised its

Area of intervention	What we did	Why we did it
	draft determination following additional information provided by the company.	Water Supply Zones in order to meet the requirements of Regulation 3 of the Water Quality Regulations. The water supply re-zoning undertaking resulted in a reduction of the number of zones from 52 (which was the basis for FD09 target levels) to 27. This became effective at the beginning of 2013. We also note from the representation that DWI is in agreement with this reduction. Recalculating the percentage iron non-compliance on the basis of the reduced number of water supply zones, effective 2013, shows three consecutive years of performance under the upper control limit. Therefore we have removed the shortfall applied at the draft determination.
Interruptions to supply exceeding 12 hours	For the purposes of the final determination we have applied a shortfall for deteriorating performance for this indicator. In accordance with our amended shortfall calculation methodology (see policy chapter A4). The shortfall applied for the years 2011-12, 2013-14 and 2014-15 has been capped at 1 standard deviation. We have also applied a multiplication factor of 0.75 to the final shortfall value to mitigate the impact of the volatile nature of this indicator. The value of the applied shortfall adjustment is £4.1 million (post efficiency). The overall scale of the	The company has had three breaches of the upper control limit in 2011-12, 2013-14 and 2014-15 and was very close to the upper control limit in 2012-13. The company considers that the events leading to the supply interruptions were beyond its control (H&S concerns, strategic main in busy road, restricted access, operational miscommunication) and that these events should be excluded. However, we do not consider that these events should be excluded from the analysis, as they were within the company's control and could have been mitigated. Therefore, we have applied a shortfall

Area of intervention	What we did	Why we did it
	shortfall does not exceed 50% of the sub-service capital expenditure and therefore no further cap has been applied. Our final determination shortfall is £2.1 million lower than the shortfall we applied at the draft determination.	adjustment for deteriorating performance in this indicator.

The 2009 agreed overlap programme

As the company did not propose an overlap programme at PR09, our 2009 final determination did not contain any agreed projects that would need to be reviewed in this price review. Therefore, we have not assessed any scheme progress or costs under this mechanism.

The 2014-15 transition programme

Table AA3.11 below confirms Bristol Water's proposed transition programme. As in our draft determination we have not made any interventions in this area.

Table AA3.11 Transition programme in 2014-15

2014-15 (£ million)	Proportion of forecast in 2014-15	Proportion of capital programme in 2015-20
1.3	2.6%	0.4%

CIS

Table AA3.12 provides details of the CIS ratios and performance incentive. It also gives the:

- monetary amounts of the CIS performance reward or shortfall;
- true-up adjustment to 2015-20 allowed revenues; and
- adjustment to the opening RCV.

Table AA3.13 then sets out the profiled values of the revenue adjustments in each year 2015-20, Table AA3.14 shows the components of the opening RCV which are included in the CIS adjustment, and Table AA3.15 summarises our interventions in relation to Bristol Water's proposals.

There are no representations in this area from Bristol Water. The only change from our draft determination relates to use of the post-tax cost of capital as the discount rate when calculating the future value of revenue adjustments.

Table AA3.12 CIS true-up adjustments

		Total
Restated FD09 CIS bid ratio	Company view	112.466
	Ofwat view	127.920
Out-turn CIS ratio	Company view	113.908
	Ofwat view	113.935
Incentive reward/shortfall (%)[1]	Company view	-3.694
	Ofwat view	-4.184
Reward/shortfall (£m)	Company view	-9.226
	Ofwat view	-10.447
Adjustments to 2015-20 revenue (£m)[2]	Company view	-3.485
	Ofwat view	-6.110
RCV adjustment (£m)[3]	Company view	26.006
	Ofwat view	16.275

Notes:
1. The reward/(penalty) is adjusted for the additional income included in the 2010-15 determination and the financing cost on the difference between actual spend and capital expenditure assumed in the 2010-15 determination to derive the value of the adjustment to 2015-20 revenue.
2. The adjustment to 2015-20 revenue values shown in this table assume a single year adjustment in the first year, and do not include the NPV profiling used for the final determination.
3. In Table AA3.14 we show how the components of this agree to those shown in Table A2.8.

Table AA3.13 Profiled revenue adjustments from the CIS reconciliation (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Company view	-0.769	-0.769	-0.769	-0.769	-0.769	-3.845
Ofwat view	-1.310	-1.310	-1.310	-1.310	-1.310	-6.550

Table AA3.14 CIS components of the opening RCV adjustment (£ million)

	Total
Adjustment for actual expenditure 2010-15	16.275
Net adjustment from logging up and logging down	0.000
Adjustment for shortfalls	0.000

	Total
RCV adjustment	16.275

Table AA3.15 Interventions on proposed CIS adjustments

Area of intervention	What we did	Why we did it
Methodology	We have used the post-tax basis of the PR09 cost of capital for the discount rate when calculating the future value of the revenue adjustment in the 2010-15 period. We have used our assumption of the cost of capital as the discount rate when profiling the revenue adjustment in 2015-20.	As explained in policy chapter A4, we have changed the methodology in the CIS model with respect to the discount rate used when calculating the future value of the revenue adjustment in the 2010-15 period. The company uses its view of the discount rate (5.20%) when profiling the revenue adjustment in 2015-20.
Data inconsistencies	In carrying out our assessment, we have used the CC redetermination values for the bid capex and replicated the CC's CIS ex ante ratio and additional income. While the pre-tax discount rate has not been used in the final determination, we have corrected the input values for the CC pre-tax cost of capital.	The company has not reflected the CC redetermination bid capex in its CIS model. This affects the RCV adjustment and the revenue adjustment. The company has not correctly reflected the CC view of the pre-tax cost of capital.

Other adjustments

Table AA3.16 confirms the assumptions included in this final determination with respect to the following revenue adjustments:

- tax refinancing benefit clawback;
- other tax adjustments;
- equity injection clawback; and
- other adjustments.

There are no changes from our draft determination and there are no interventions in this area.

Table AA3.16 Other revenue adjustments 2015-20 (£ million)

	Company view	Ofwat view
Tax refinancing benefit clawback	0.000	0.000
Other tax adjustments	0.000	0.000
Equity injection clawback	0.000	0.000
Other adjustments	0.000	0.000

Table AA3.17 and Table AA3.18 below confirm the assumptions included in this final determination with respect to other adjustments to the opening RCV.

There is a change from our draft determination in relation to our adjustment for actual expenditure in 2009-10.

Table AA3.17 Other adjustments to the opening RCV (£ million)

	Company view	Ofwat view
Land sales	0.000	0.000
2009-10 adjustment	2.639	-0.936
Enhanced rewards	0.000	0.000
Other adjustments	0.000	0.000

Table AA3.18 Interventions on proposed adjustments to the opening RCV

Area of intervention	What we did	Why we did it
2009-10 adjustment	We sent Bristol Water a query asking how it would modify the feeder model calculation to arrive at its position as set out in its representation (which was not quantified). In the response numbered 052 Bristol Water state that the total actual capex should be £101.9 million. We agree and this amount is shown in the feeder model calculations (cell J15 of	This provides a consistent approach with all companies.

Area of intervention	What we did	Why we did it
	'calc 1'). The ceiling on investment figure of £100.0 million was also disputed by the company. For clarity we have reconciled this to both the PR09 final determination and Competition Commission calculations showing the impact of the changes in COPI as the forecast figures were replaced by actual indices. We calculated the 2009-10 adjustment using the capex figures from the June return. For some companies there was an incomplete dataset with regard to historical grants and contributions, we have corrected this for final determination. This means that for those companies, the adjustment included in the draft determination overstated the positive impact on the RCV. After the correction, the actual net capex being used in the 2009-10 calculation for final determination is lower than that used in draft determination.	

Annex 4 Outcomes, performance commitments and ODIs

We set out our methodology for PCs and ODIs in policy chapter A2.

In this annex we provide an overview of the PCs and ODIs we for Bristol Water. We then set out in detail these PCs and ODIs for the company's wholesale water and household retail outcomes, presented in that order.

The company has used a cost-sharing rate of 50% to calibrate the reward and penalty rates included in this annex. Companies are required to notify us of their menu choices by 16 January 2015. This might result in the company having a cost-sharing rate higher or lower than 50%. Once the company has chosen its position on the menu we are requiring it, in line with the methodology, to recalibrate its ODIs with the cost-sharing rate associated with that position, and provide us with the updated incentive rate calculations. The company must do this at the same time as its menu choice on 16 January 2015 so that the recalibrated ODIs can be included in the regulatory reporting framework for 2015-16.

We first consider the responses to our draft determinations in relation to the PCs and ODIs for Bristol Water.

Consideration of representations on our draft determinations

In policy chapter A1, we provide a list of the respondents to the draft determinations published in April, May and August of this year. We have fully considered all of the responses received, and where appropriate, we have made either consequential adjustments to our industry-wide approach or company-specific interventions.

Where representations have addressed issues that are common to a number of companies, these comments, and any consequential changes to our approach, are discussed in policy chapter A2. Representations that are specific to PCs and ODIs for Bristol Water, and any consequential impact on our final determination, are summarised in the tables below as follows.

- Table AA4.1 considers representations received on the interventions we proposed in our draft determinations as a result of comparative checks in six areas for wholesale water.
- Tables AA4.2 considers representations received on the interventions we proposed in our draft determinations as a result of our company specific assessments for wholesale water.

- Table AA4.3 considers representations received on the interventions we proposed in our draft determinations as a result of our company specific assessments for household retail.
- Table AA4.4 lists the PCs that were proposed by companies but that have been removed as part of our final determination.
- Table AA4.5 lists PCs excluded from the commentary tables above because we received no representations on them and we made no interventions at draft determination or through the comparative checks.

Table AA4.1 Representations specific to the comparative assessments on wholesale water

PC/ODI affected	What we did at draft determination/ subsequent comparative assessments	Representations	What we did at final determination	Why we did it
A1: Unplanned customer minutes lost	No intervention at draft determination. Following draft determination we informed the company that we had made an error and that we should have intervened to improve the company's PC from 12-13 minutes to 6 minutes in 2017-18 to 2019-20. The error arose because we had not adjusted for the fact that Bristol Water's measure relates to unplanned interruptions only rather than all interruptions.	Bristol Water asked us to reinstate its business plan targets. The company said its analysis showed its performance on unplanned interruptions to be upper quartile and therefore the company did not consider we had correctly calculated its revised target. Bristol Water said that if we were to apply a revised target it should be 11.25 minutes.	We reduced Bristol Water's PC level to 7.2 minutes. We made consequential changes to the deadbands, cap and collar.	The intervention we made at draft determination based on our comparative assessment did not take account of the fact that Bristol Water's PC definition was for unplanned interruptions only. We have used the same method to adjust Bristol Water's measure as we have used for Thames Water at final determination and as we used for Sembcorp Bournemouth Water and Wessex Water at draft determination (these two companies have now adopted the Ofwat KPI measure). We applied a PC level of 7.2 minutes to reflect the change in the KPI upper quartile level to 12 minutes. The evidence provided by the company in its representation was not convincing. Bristol Water has

PC/ODI affected	What we did at draft determination/ subsequent comparative assessments	Representations	What we did at final determination	Why we did it
				been one of the poorest performers on the Ofwat KPI measure of supply interruptions, averaging over 22 minutes in the period 2011-12 to 2013-14.
D1: Mean Zonal Compliance	As a result of our comparative assessment we intervened to change the committed performance level, deadband and penalty collar.	The company stated that Ofwat should apply a penalty deadband of 99.94% and penalty collar of 99.93% as this would still provide customers with sufficient protection without the company being penalised for failures due to customers' pipework and fittings.	Retained the committed performance level at 100% in 2017-18 to 2019-20, reduced the penalty deadband to 99.95% and reduced the penalty collar to 99.94% from 2017-18.	We revised our comparative assessment for final determination based on stakeholder representations on draft determinations. As a result we reduced the penalty deadband to 99.95%. We reduced the penalty collar to 99.94% to maintain the size of the penalty range. This penalty represents an incentive to the company not to reduce its compliance with water quality measures. The deadband represents the point at which financial incentives will be applied to the company through the price setting process. All companies are

PC/ODI affected	What we did at draft determination/ subsequent comparative assessments	Representations	What we did at final determination	Why we did it
				subject to drinking water quality obligations regulated by the DWI, which are the overriding statutory obligations that a water company must comply with as part of its Section 37 obligations. The company's Board has confirmed as part of its business plan submission that it will comply with all relevant statutory obligations.
E1: Negative water quality contacts	As a result of our comparative assessment we intervened to reduce the committed performance level in 2017-18 to 2019-20 to be equal to upper quartile performance. We set the penalty deadbands for 2015-16 to 2017-18 at the 2014-15 committed performance level and set reward deadbands for all years at upper quartile performance.	The company stated that Ofwat should revert back to the company's original proposal as the company will require significant investment to meet Ofwat's upper quartile performance and Ofwat's intervention is not in line with what its customers are willing to pay.	No change to intervention made at draft determination.	We have applied the same upper quartile challenge to all companies' water quality contacts PCs. Bristol Water has not provided sufficient evidence to explain why it cannot achieve upper quartile performance.

PC/ODI affected	What we did at draft determination/ subsequent comparative assessments	Representations	What we did at final determination	Why we did it
	We adjusted the penalty collars and reward caps to keep the same distance between them in order to maintain the incentive strength, and the deadbands were the same as Bristol Water proposed in its revised business plan.			

Table AA4.2 Representations specific to the company-specific assessments on wholesale water

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
A2: Asset Reliability: Infra	No formal intervention, however, Ofwat advised that Bristol Water's maximum penalties were relatively large (equal to over £8 million or 0.7% of RoRE) compared to rest of the industry and it should consider revising its proposal.	Bristol Water revisited the incentive structure and rate for this PC. The company proposed to avoid overlaps with PCs which are already incentivised elsewhere. Bristol Water quantified the triggers for the classification of marginal and deteriorating. The company considered the revised proposal removed the overlaps between performance measures within the asset reliability basket of indicators and other ODIs (principally unplanned customer minutes lost, mean zonal compliance and negative water quality contacts).	Accepted the company's revised ODI.	We were concerned at draft determination that the company's maximum penalties were relatively large compared to other companies and so asked it to review its proposals. The company has now removed overlapping measures with standalone PCs (unplanned customer minutes lost, mean zonal compliance and negative water quality contacts). Bristol Water's P10 penalty is now around £6 million (0.5% RoRE) for its infra and non-infra asset reliability PCs combined.
A3: Asset Reliability: Non – infra	No formal intervention, however, Ofwat advised that Bristol Water's maximum	Bristol Water revisited the incentive structure and rate for this PC. The company	Accepted the company's revised ODI.	We were concerned at the draft determination that the company's maximum

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
	penalties were relatively large (equal to over £8 million or 0.7% of RoRE) compared to rest of the industry and it should consider revising its proposal.	proposed to avoid overlaps with PCs which are already incentivised elsewhere. Bristol Water quantified the triggers for the classification of marginal and deteriorating. The company considered the revised proposal removed the overlaps between performance measures within the asset reliability basket of indicators and ODIs (principally unplanned customer minutes lost, mean zonal compliance and negative water quality contacts).		penalties were relatively large compared to other companies and so asked it to review its proposals. The company has now removed overlapping measures with standalone PCs (unplanned customer minutes lost, mean zonal compliance and negative water quality contacts). Bristol Water's P10 penalty is now around £6 million (0.5% RoRE) for its infra and non-infra asset reliability PCs combined.
B1: Population in centres >25,000 at risk from asset failure	We changed the range over which the penalties in 2017-18 to 2019-20 apply so that the maximum penalty is equal to half the allowed totex.	The company accepted the change to the ODI set out in the draft determination.	Confirm our intervention at draft determination.	The company accepted our intervention at draft determination.
C2: Hose	No intervention.	The EA commented that this	No intervention.	The company's legal

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
Pipe Ban Frequency		ODI is based on the number of expected days in the reporting year where water restrictions are in place, rather than actual days. The EA was concerned that the water restrictions incentive will affect the company's behaviour as it enters a drought, causing it to delay imposing restrictions. The EA expects the company to manage a drought in line with its drought plan without regard to the financial implications of the ODI.		obligations as a water company continue to apply regardless of its PCs and ODIs. The company’s Board has confirmed as part of its business plan submission that it will comply with all relevant statutory obligations.
C3: Delivery of Cheddar Reservoir Two Stage 2 construction	We disallowed the additional costs being sought for this scheme at draft determination so we removed the PC and asked the company to reconsider its costs.	The company submitted further evidence for the delivery of Cheddar Reservoir 2 in its representations. The CCG noted that the company wishes to retain the project in its plan and the penalty incentive associated with it, and that most of the	We confirmed the removal of the PC.	We have continued to disallow the additional costs being sought for this scheme as the company has not provided sufficient evidence that it needs to carry out the scheme. As a result, we have maintained our intervention on the associated incentive.

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
		cost saving will be in the period 2020-2025.		
D2: Construction of Cheddar TW Algae Removal	We changed the penalties for late and non-delivery on this PC, reflecting our downward adjustment of allowed costs at draft determination.	The company submitted further evidence for the delivery of Cheddar TW algae removal in its draft determination representations. The CCG noted that Bristol Water will accept Ofwat's change, subject to confirmation from Ofwat on its calculation.	Confirmed our draft determination intervention.	The company did not provide sufficient evidence for us to change our intervention.
H4: Waste disposal compliance	No intervention	The EA stated that companies should be targeting 100% for all statutory obligations. Bristol Water is proposing a target of less than 100% for waste disposal compliance.	Set the committed performance level at 100%.	We set the committed performance level at 100% to ensure that Bristol Water's target is consistent with its statutory obligation. The company's Board has confirmed as part of its business plan submission that it will comply with all relevant statutory obligations.

Table AA4.3 Representations specific to the company-specific assessments on household retail

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
Bristol Water did not make any representation on household retail outcomes.				

Table AA4.4 Performance commitments proposed by the company that we have removed from this final determination

Performance commitment	Reason for its removal
Wholesale water	
C3: Delivery of Cheddar Reservoir Two – stage 2 construction	Following a detailed review of Bristol Water's evidence for this scheme we have disallowed the costs associated with it. A PC is therefore no longer appropriate.

Table AA4.5 Performance commitments excluded from the commentary tables because we received no representations to our draft determinations on them and we made no interventions at draft determination or through the comparative assessments

Wholesale water	Household retail
C1: Security of supply index	G1: Per capita consumption
F1: Leakage	I1: Percentage of customers in water poverty
G2: Meter penetration	J1: SIM
H1: Total carbon emissions	J2: General satisfaction from surveys
H2: Raw water quality of sources	J3: Value for money
H3: Biodiversity Index	K1: Ease of contacts from surveys
	L1: Negative Billing Contacts

Summary of ODIs

For each outcome proposed, companies were asked to identify one or more measures that would provide evidence that the outcome was being delivered. On each measure, companies had to set out the level of performance that they were committing to deliver. Companies also had to explain why they committed to the performance level chosen and explain why this represented an appropriate level of stretch (as benchmarked against an upper quartile level of performance across the sector).

Companies also had to propose ODIs. Where customers were willing to pay for higher levels of performance and companies could demonstrate that performance was at a high level relative to its peers, then the financial incentives could contain rewards for over delivery as well as penalties for under delivery.

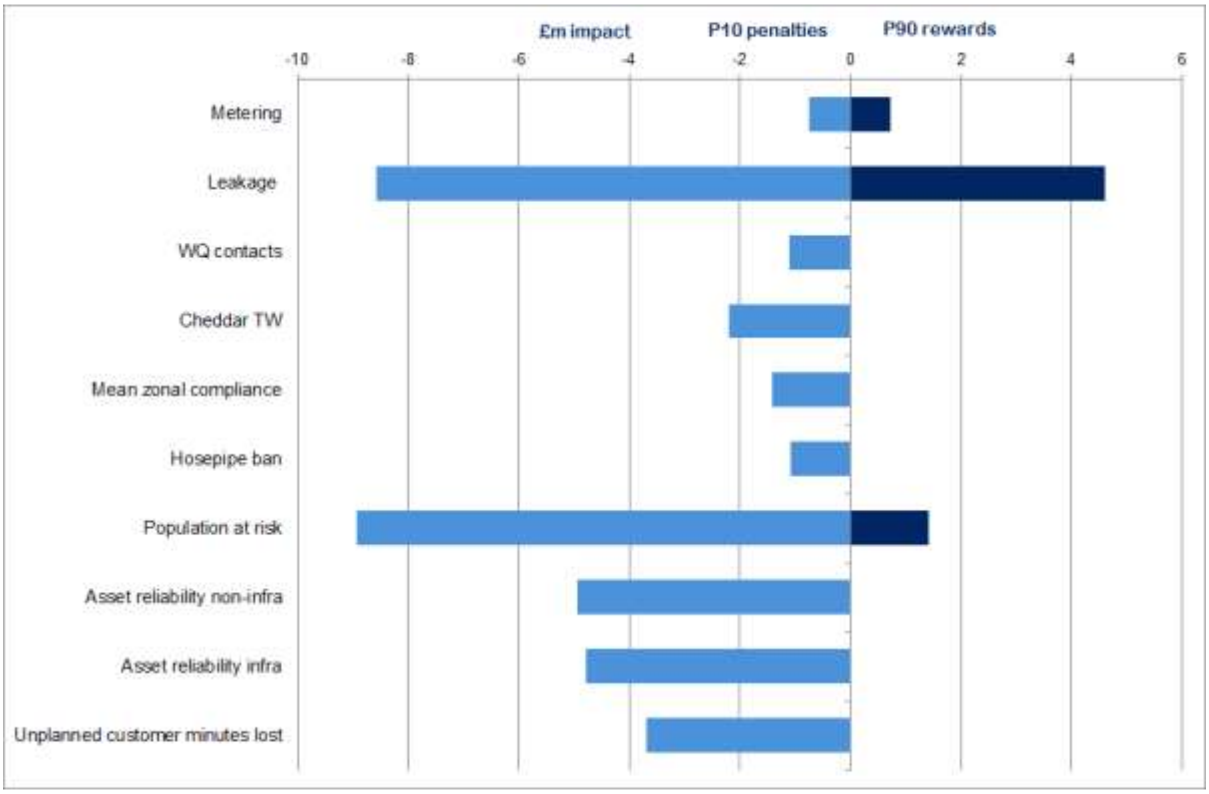
Table AA4.6 shows the balance between reward and penalty, penalty only and reputational incentives in the package of incentives for the company. Figure AA4.1 shows the potential financial impact of each of the financial incentives.

Table AA4.6 The composition of the package of ODIs

	Reward and penalty	Penalty only	Non-financial incentive
Wholesale water	5	5	5
Household retail	1	0	6
Non-household retail	0	0	0
Total	6	5	11

The following graph shows the potential financial consequences of the individual financial ODIs. The figures represent the penalties and rewards associated with the p10 and p90 scenarios over the five years (2015-16 to 2019-20). This means there is a 10% chance of performance being higher or lower than these assumed levels. In most cases the potential maximum will be bigger but is very unlikely to occur. The p10 and p90 therefore represent a more realistic estimate of potential financial consequences.

Figure AA4.1Overview of financial ODIs



As explained in policy chapter A2, we are introducing an aggregate cap on rewards and collar on penalties from the ODIs. Details of how the cap/collar will operate are set out in policy chapter A2.

There are no specific exclusions from the cap/collar for Bristol Water.

In the remainder of this section, we provide the following information on each PC included as part of this final determination.

- The name and detailed definition of the PC.
- The type of incentive.
- The PC level.
- For financial incentives:
  - the limits on rewards and penalties (caps and collars) and neutral zones (deadbands) as applicable[13]; and

[13] Unless otherwise stated, a deadband is the level of service against which an incentive is calculated and the cap or collar is the level of service at which the maximum reward or penalty occurs. So for example, if the deadband is 1.29 and the actual performance level is 1.39, the result of the incentive would be a penalty of (1.39-1.29) times the specified penalty rate.

    - the incentive rates.
- Additional details on the measure.
- Where Ofwat has not accepted the company's proposals, the nature of the intervention made is also explained.

Appendix 1 of our final methodology statement contains a number of worked examples that illustrate how the different incentive types will operate.

Performance commitments and ODIs in detail

Wholesale water outcome A: Reliable supply

Performance commitment A1: Unplanned customer minutes lost

Detailed definition of performance measure: Total number of minutes that customers have been without a supply of water in the year, through unplanned interruptions, divided by the total of number of properties served by the company in the year.

Incentive type: Financial – reward and penalty

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Minutes/ prop/year	13.7	11.5	9.4	7.2	7.2	7.2
Penalty collar	Minutes/ prop/year		14.7	14.7	8.2	8.2	8.2
Penalty deadband	Minutes/ prop/year		13.7	13.7	7.2	7.2	7.2
Reward deadband	Minutes/ prop/year		7.2	7.2	7.2	7.2	7.2
Reward cap	Minutes/ prop/year		5.9	5.9	5.9	5.9	5.9

Incentive rates

Incentive type	Incentive rate (£m/minute/property/year)
Penalty	0.7389
Reward	0.5097

Additional details

Necessary detail on measurement units	The measure is calculated by dividing the total duration of all **unplanned** water supply interruptions by the number of properties the company supply to give an average interruption time in minutes per year.
Frequency of PC measurement and any use of averaging	Performance to be calculated and reported annually, in addition to six-monthly publication of performance data. The incentive will be calculated in each year of the 5-year period.
Timing and frequency of rewards/penalties	Once at the end of the 2015-20 period.
Form of reward/penalty	Rewards and penalties will be adjustments to revenue between 2020-21 and 2024-25.
Any other information or clarifications relevant to correct application of incentive	This incentive is based on comparative analysis of Bristol Water's performance against an industry wide upper quartile. In order to allow Bristol Water to use its preferred measure, the upper quartile equivalent performance on this measure has been calculated by Ofwat. The assessment of performance for this incentive overlaps to some extent with some of the company's other measures of success that also have a financial incentive applied. These are 'population in centres >25,000 at risk from asset failure' and its measure that relate to its Water Resource Management Plan. As such, two exclusions are applied to this measure to remove any double counting: • Population at risk from asset failure: the benefits for this incentive are based on

	mitigating the risk to long duration interruptions. This means that, if Bristol Water has not delivered the improvement in line with its proposals and an event occurs, it will be penalised twice – once due to not delivering the population at risk from asset failure and once through the impact on the unplanned customer minutes lost measure. The company will exclude any long duration interruption (greater than 12 hours) after its proposed delivery date of 2016-17 in the Southern Resilience Scheme area, if it has not delivered this scheme in line with its proposals. • Water resources plan: Bristol Water will exclude interruptions due to extreme drought as the value of these has already been used to calculate the incentives for hosepipe bans, leakage and metering.

Performance commitment A2: asset reliability – infrastructure

Detailed definition of performance measure: Basket of indicators of infrastructure reliability based on serviceability measures:

- Total bursts (number); and
- DG2: low pressure (number of properties).

Incentive type: Financial – penalty only

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC		Stable	Stable	Stable	Stable	Stable	Stable
Penalty collar			Deterio-rating	Deterio-rating	Deterio-rating	Deterio-rating	Deterio-rating
Penalty deadband			Marginal	Marginal	Marginal	Marginal	Marginal

Incentive rates

Incentive type	Incentive rate (£m/year/indicator)
Penalty rate 1 – deteriorating assessment	2.054
Penalty rate 2 – marginal assessment	0.685

Additional details

Necessary detail on measurement units	Basket of indicators of infrastructure reliability, based on serviceability measure assessing the capability of a system of infrastructure assets to deliver an expected level of service to consumers and to the environment now and into the future. Bristol Water has excluded from the incentive basket performance

	indicators which are already incentivised elsewhere, and quantified the triggers for the classification of marginal and deteriorating. This removes the overlaps between performance measures within the asset reliability basket of indicators and ODIs (principally unplanned customer minutes lost, mean zonal compliance and negative water quality contacts)
Frequency of PC measurement and any use of averaging	Annual assessment to be made with performance allocated to one of the following categories: • Improving • Stable • Marginal • Deteriorating
Timing and frequency of rewards/penalties	Any penalty will apply as an adjustment to RCV with effect from 2020-21
Form of reward/penalty	RCV adjustment
Any other information or clarifications relevant to correct application of incentive	Bristol Water will return to customers up to 25% of the total maintenance spend attributable to those assets depending on the level of non-delivery. The rationale for setting a maximum penalty of 25% is as follows. • For a menu incentive rate of 50%, the benefit that the company would retain if it only spent half its allocation on maintenance is 25% • Bristol Water considers that only spending 50% of its allocation on maintenance would result in a deteriorating assessment at the end of 2015-20 • Spending less than 50% of its proposed expenditure would result in unacceptably poor performance, potentially leading to enforcement action. Given this, the company considers that greater incentives are not required To allocate the penalty Bristol Water has applied the following performance score. • Stable or improving: 0 points • Marginal: 1 point

- Deteriorating: 3 points

The maximum score that aligns with a penalty of 50% of relevant totex will be eight. The company has included a deadband of one marginal assessment over 2015-20. This means that a penalty will apply for the second marginal assessment and the value of the penalty will be based on an increment of seven. The penalty will apply to the second consecutive year that service is marginal or deteriorating.

Incentive rate calculations:

Marginal = 9.584 (totex after 50% efficiency sharing) / 2 (scenario where Bristol Water spends only half its allocation on maintenance) / 7 (number of increments) x 1 (score for marginal) = 0.685

Deteriorating = 9.584 (totex after 50% efficiency sharing) / 2 (scenario where Bristol Water spends only half its allocation on maintenance) / 7 (number of increments) x 3 (score for deteriorating) = 2.054

Infrastructure serviceability – reference levels and control limits

Composite Index					Committed performance levels				
					2015-16	2016-17	2017-18	2018-19	2019-20
Sub measure	**Unit**	**2014-15**	**Limits**	**AMP5**	Stable	Stable	Stable	Stable	Stable
Total bursts	Nr	950	High	1166	1166	1166	1166	1166	1166
			Ref	950	950	950	950	950	950
			Low	734	734	734	734	734	734
DG2: low pressure	Props	68	High	129	129	129	129	129	129
			Ref	69	69	69	69	69	69
			Low	9	9	9	9	9	9

Performance commitment A3: Asset reliability – non-infrastructure

Detailed definition of performance measure: Basket of indicators of non-infrastructure reliability, based on previous serviceability measures:

- Turbidity performance at treatment works (number); and
- Unplanned maintenance events (number).

Incentive type: Financial – penalty only

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Assess-ment	Stable	Stable	Stable	Stable	Stable	Stable
Penalty collar	Assess-ment		Deterio-rating	Deterio-rating	Deterio-rating	Deterio-rating	Deterio-rating
Penalty deadband	Assess-ment		Marginal	Marginal	Marginal	Marginal	Marginal

Incentive rates

Incentive type	Incentive rate (£m/year/indicator)
Penalty rate 1 – deteriorating assessment	2.119
Penalty rate 2 – marginal assessment	0.706

Additional details

Necessary detail on measurement units	Basket of indicators of infrastructure reliability, based on serviceability measure assessing the capability of a system of infrastructure assets to deliver an expected level of service to consumers and to the environment now and into the future.
Frequency of PC measurement and any use of averaging	Annual assessment to be made with performance allocated to one of the following categories:

	• Improving • Stable • Marginal • Deteriorating
Timing and frequency of rewards/penalties	Any penalty will apply as an adjustment to RCV with effect from 2020-21
Form of reward/penalty	RCV adjustment
Any other information or clarifications relevant to correct application of incentive	Bristol Water will return to customers up to 25% of the total maintenance spend attributable to those assets depending on the level of non-delivery. The rationale for setting a maximum penalty of 25% is as follows. • For a menu incentive rate of 50%, the benefit that the company would retain if it only spent half its allocation on maintenance is 25% • Bristol Water considers that only spending 50% of its allocation on maintenance would result in a deteriorating assessment at the end of 2015-20 • Spending less than 50% of its proposed expenditure would result in unacceptable poor performance potentially leading to enforcement action. Given this, the company considers that greater incentives are not required. To allocate the penalty Bristol Water has applied the following performance score: • Stable or improving: 0 points • Marginal: 1 point • Deteriorating: 3 points The maximum score that aligns with a penalty of 50% of relevant totex will be eight. There is a deadband of one marginal assessment over 2015-20. This means that a penalty will apply for the second marginal assessment and the value of the penalty will be based on an increment of seven. The penalty will apply to the second consecutive year that service is marginal or deteriorating.

	Incentive rate calculations: Marginal = 9.887 (totex after 50% efficiency sharing) / 2 (scenario where Bristol Water spends only half its allocation on maintenance) / 7 (number of increments) x 1 (score for marginal) = 0.706 Deteriorating = 9.887 (totex after 50% efficiency sharing) / 2 (scenario where Bristol Water spends only half its allocation on maintenance) / 7 (number of increments) x 3 (score for deteriorating) = 2.119

Non-infrastructure serviceability – reference levels and control limits

Composite Index					Committed performance levels				
					2015-16	2016-17	2017-18	2018-19	2019-20
Sub measure	**Unit**	**2014-15**	**Limits**	**AMP5**	Stable	Stable	Stable	Stable	Stable
Turbidity	Nr	0	High	1	1	1	1	1	1
			Ref	0	0	0	0	0	0
			Low	0	0	0	0	0	0
Unplanned maintenance	Nr	3,267	High	5,083	5,083	5,083	5,083	5,083	5,083
			Ref	3,976	3,976	3,976	3,976	3,976	3,976
			Low	2,869	2,869	2,869	2,869	2,869	2,869

Wholesale water outcome B: Resilient supply

Performance commitment B1: Population in centres >25,000 at risk from asset failure

Detailed definition of performance measure: Populations in centres of greater than 25,000 who are at risk of failure of the single supply source serving them. The risk relates to water supply interruptions in the event that a critical asset such as a treatment works is unable to operate or a source is contaminated. As explained in the additional detail below, this is a two stage incentive.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Pop.	288,589	288,589	288,589	9,063	9,063	9,063
Penalty collar	Pop.		308,589	308,589	69,063	69,063	69,063
Penalty deadband	Pop.		288,589	288,589	9,063	9,063	9,063
Reward deadband	Pop.		288,589	288,589	9,063	9,063	9,063
Reward cap	Pop.		268,589	268,589	0	0	0

Incentive rates

Incentive type	Incentive rate (£/person)
Penalty	£40.60
Reward	£21.21

Additional details

Necessary detail on measurement units	The total number of consumers in supply areas of more than 25,000 who are at risk of failure of the single source they are served by in extreme circumstances. PCs are the average range over the 5 years, as populations vary year on year.
Frequency of PC measurement and any use of averaging	The PC is to be measured annually
Timing and frequency of rewards/penalties	Any penalty will apply as an adjustment to revenue between 2020-21 and 2024-25
Form of reward/penalty	Revenue adjustment
Any other information or clarifications relevant to correct application of incentive	Bristol Water considers that if it does not deliver the proposed level of performance for customers, it should incur a penalty. As this measure relates to a specific scheme, the company has will apply a 2-stage incentive that changes before and after the scheme is expected to be delivered. The applied reward aims to incentivise early delivery in 2015-16 or 2016-17 and deliver additional benefits by removing the remainder of the population at risk from 2017-18 onwards.

Wholesale water outcome C: Sufficient supply

Performance commitment C1: Security of supply index (SOSI)

Detailed definition of performance measure: The Ofwat measure used to assess the security of companies' supplies. It takes into account the supply of water that the company has available and demand from customers. The security of supply index is calculated as the proportion of dry weather demand that can be met by the water available for use.

Incentive type: Reputational.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Index	100	100	100	100	100	100

Additional details

Necessary detail on measurement units	Security of supply index determined according to the Ofwat KPI definition. There are no specific units for this measure which derives an index value with a maximum score of 100.
Frequency of PC measurement and any use of averaging	The PC is to be measured and reported annually.
Timing and frequency of rewards/penalties	N/A
Form of reward/penalty	N/A
Any other information or clarifications relevant to correct application of incentive	This is a reputational incentive. For the 'Sufficient supply' outcome, the company has customer willingness to pay to reduce the length of hosepipe/temporary use bans and 2-3 week stoppages. It has included this WTP within a penalties-only financial incentive for the performance measure 'Hosepipe ban frequency' and has retained the performance measure 'Security of supply index'

	as a reputational incentive only. This approach avoids the company being penalised twice in the event of a shortage of water resources.

Performance commitment C2: Hosepipe ban frequency

Detailed definition of performance measure: The statistical probability that restrictions to customer use will be required, expressed as a return period in years for a defined severity of event.

Incentive type: Financial – penalty only.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Days	0.0	10.2	10.2	10.2	10.2	10.2
Penalty collar	Days		15.2	15.2	15.2	15.2	15.2
Penalty deadband	Days		10.2	10.2	10.2	10.2	10.2

Incentive rates

Incentive type	Incentive rate (£m/expected day of restrictions)
Penalty	0.043

Additional details

Necessary detail on measurement units	The number of expected days in the report year that water restrictions are placed based on the likelihood in any one year that restrictions on the use of hosepipes will be implemented. This is usually expressed as 1 in X years.
Frequency of PC measurement and any use of averaging	The PC is to be measured and reported annually
Timing and frequency of rewards/penalties	Any penalty will apply as an adjustment to revenue between 2020-21 and 2024-25
Form of reward/penalty	Revenue adjustment

Any other information or clarifications relevant to correct application of incentive	Maintaining a 1 in 15 year hosepipe ban frequency is delivered by a range of measures including leakage and metering. As Bristol Water has separate incentives for these impacts it has allocated the relevant benefit to these measures. Just less than 95% of the increased yield delivered by its Water Resources Plan is allocated to metering and leakage. The remainder has been allocated to this incentive. This means that the WTP value the company will use for this incentive is £42,504 per day of restriction. The remaining investment is delivered by water efficiency measures and the costs for these are allocated to the retail plan. As a result the company has not included any incremental costs for this measure. The incentive for hosepipe bans will be assessed each year based on the observed deficit. The penalty is based on expected days of hosepipe bans, not actual days.

Wholesale water outcome D: Safe drinking water

Performance commitment D1: Mean zonal compliance

Detailed definition of performance measure: Statutory indicator used by the DWI to assess overall water quality compliance across all water companies in England and Wales.

Incentive type: Financial – penalty only.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	99.96%	99.96%	99.96%	100.00%	100.00%	100.00%
Penalty collar	%		99.94%	99.94%	99.94%	99.94%	99.94%
Penalty deadband	%		99.95%	99.95%	99.95%	99.95%	99.95%

Incentive rates

Incentive type	Incentive rate (£m/0.01%)
Penalty	0.284

Additional details

Necessary detail on measurement units	This measure is based on up to 39 parameters which are determined by the DWI. Samples are collected from defined supply points and customers' taps situated in Water Quality Zones. The percentage compliance score is calculated (to three decimal places) from the number of determinants taken versus the number of determinants that failed the relevant drinking water standard in each Water Quality Zone. It is calculated by averaging the mean zonal percentage compliance from the regulatory sampling programme. Each parameter is weighted equally. The measure of success is based on current regulation and standards (including the tightening of the lead standard in 2013).
Frequency of PC measurement and any use of averaging	This PC will be measured annually (calendar year) and reported to the DWI. Performance will also be published six-monthly on the company website.
Timing and frequency of rewards/penalties	Annually
Form of reward/penalty	Revenue adjustment
Any other information or clarifications relevant to correct application of incentive	

Performance commitment D2: Construction of Cheddar treatment works – algae removal

Detailed definition of performance measure: This incentive is specific to the investment at Cheddar Treatment works which is planned to be completed in March 2020. The penalty will occur if the scheme is not implemented. The performance is based on whether the company provides a solution to substantially mitigate the risk of failure of the works due to be algal loading by 31 March 2020.

Incentive type: Financial – penalty only.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC		N/A	N/A	N/A	N/A	N/A	Solution delivered
Penalty collar			N/A	N/A	N/A	N/A	Solution not delivered
Penalty deadband			N/A	N/A	N/A	N/A	Solution delayed

Incentive rates

Incentive type	Performance levels (assessment)		Incentive rate (£m)
	Lower	Upper	
Penalty rate 1 – solution not delivered	Solution not delivered	Solution delivered	9.975
Penalty rate 2 – solution delayed	Solution delayed	Solution delayed	0.837

Additional details

Frequency of PC measurement and any use of averaging	This PC will be measured at the end of the five-year period in 2020

Timing and frequency of rewards/penalties	Any penalties will be paid through an adjustment to revenue between 2020-21 and 2024-25
Form of reward/penalty	Revenue adjustment
Any other information or clarifications relevant to correct application of incentive	As this investment will not impact on the service that customers receive during 2015-20, Bristol Water does not consider that an ODI based on observable service and customers' willingness to pay is appropriate. There is a two-stage incentive that is milestone-focused to ensure that customers are protected should it not undertake the investment. The first stage is a penalty for not implementing the scheme which is set at 50% of the proposed totex to remove the double count with the totex menu incentive. This performance is based on whether the company provides a solution to substantially mitigate the risk of failure of the works due to algal blinding by 31 March 2020. The second stage is a penalty for delaying the delivery of the scheme and this is 50% of the annualised cost for one year. We have intervened to change the penalties for late and non-delivery, reflecting a downward adjustment of allowed costs.

Wholesale water outcome E: Water is good to drink

Performance commitment E1: Negative water quality contacts

Detailed definition of performance measure: This measure relates to the number of customer contacts Bristol Water receives each calendar year about taste, odour or appearance, and is consistent with the company's reporting to the DWI, that is, it excludes reportable events.

Incentive type: Financial – rewards and penalties.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Contacts per year	2,450	2,113	1,776	1,439	1,439	1,439
Penalty collar	Contacts per year		2,505	2,505	1,494	1,494	1,494
Penalty deadband	Contacts per year		2,450	2,450	1,439	1,439	1,439
Reward deadband	Contacts per year		1,439	1,439	1,439	1,439	1,439
Reward cap	Contacts per year		1,276	1,276	1,276	1,276	1,276

Incentive rates

Incentive type	Incentive rate (£m per contact)
Penalty	0.005895
Reward	0.001230

Additional details

Frequency of PC measurement and any use of averaging	Annual
Timing and frequency of rewards/penalties	Any penalties will be paid through an adjustment to revenue between 2020-21 and 2024-25
Form of reward/penalty	Revenue adjustment
Any other information or clarifications relevant to correct application of incentive	

Wholesale water outcome F: Efficient use of resources by company

Performance commitment F1: Leakage

Detailed definition of performance measure: The leakage performance measure is defined as the amount of water that enters the distribution system but is not delivered to customers because is it lost from either the company's or customers' pipes. Leakage is measured in megalitres per day (Ml/d).

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Ml/d	48	48	47	45	44	43
Penalty collar	Ml/d		50	49	47	46	45
Penalty deadband	Ml/d		48	47	45	44	43
Reward deadband	Ml/d		44	44	44	44	43
Reward cap	Ml/d		42	42	42	42	41

Incentive rates

Incentive type	Incentive rate (£m per Ml/d)
Penalty	0.902
Reward	0.486

Additional details

Necessary detail on measurement units	The measure is based on the volume of water leaking from the company's water supply assets. The annual average is applied to give a figure for megalitres per day (Ml/d). It includes any uncontrolled losses between water treatment works and customers' internal stop taps. It does not include customers' internal plumbing losses.
Frequency of PC measurement and any use of averaging	This PC will be measured annually. The incentive will be based on average performance over the 5-year period.
Timing and frequency of rewards/penalties	Any rewards or penalties will apply as an adjustment to revenue between 2020-21 and 2024-25
Form of reward/penalty	Revenue Adjustment
Any other information or clarifications relevant to correct application of incentive	Bristol Water has a performance target of reducing leakage by 6Ml/d (2% of Distribution Input) from a target of 49Ml/d in 2014-15 to 43Ml/d by 2020. This investment is aligned with the Company's long run economic level of leakage that was assessed as part of the Water Resources Management Plan. If Bristol Water does not deliver this level of performance for customers, it will incur a penalty. It will receive a reward for outperformance of the target since reducing leakage is the third priority area for customers. The Company has included a deadband for the reward. This is to take account of the fact that its leakage performance in 2013-14 was 44Ml/d. The company must perform beyond this level before it receives a reward. The Company has applied this deadband for years 1 to 4 until its targeted performance is forecast to exceed this level in year 5. In this way it will only receive a reward for stretching performance that exceeds its observed performance levels in line with its customers' views.

Wholesale water outcome G: Efficient use of resources by customers

Performance commitment G1: Meter penetration (%)

Detailed definition of performance measure: Defined as the proportion of total properties of billed household customers that are charged for water on a measured basis.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	45.6%	50.4%	54.8%	58.8%	62.5%	65.9%
Penalty collar	%		46.4%	50.8%	54.8%	58.5%	61.9%
Penalty deadband	%		50.4%	54.8%	58.8%	62.5%	65.9%
Reward deadband	%		50.4%	54.8%	58.8%	62.5%	65.9%
Reward cap	%		54.4%	58.8%	62.8%	66.5%	69.9%

Incentives rates

Incentive type	Incentive rate (£m per %)
Penalty	0.038
Reward	0.036

Additional details

Necessary detail on measurement units	The percentage of water service billed on a measured basis of charging as a percentage of billed household customers (at the end of each financial

	year).
Frequency of PC measurement and any use of averaging	This PC will be measured annually. The incentive is assessed based on performance each year over the period 2015 to 2020.
Timing and frequency of rewards/penalties	Any rewards or penalties will apply as an adjustment to revenue between 2020-21 and 2024-25
Form of reward/penalty	Revenue Adjustment
Any other information or clarifications relevant to correct application of incentive	Bristol Water's investment is based on a forecast of the number of customers requesting a meter and the level of property turnover. In reality the actual numbers could deviate from this forecast due to external factors such as the weather and the housing market. The Company has included a penalty and a reward to allow for this potential deviation. Bristol Water has not included any deadbands for this incentive, the penalty collar and reward cap are set at ±4% of properties.

Wholesale water outcome H: Sustainable environmental impact

Performance commitment H1: Total carbon emissions

Detailed definition of performance measure: The company's total carbon emission figure, divided by the population supplied; measured as kgCO2e/person.

Incentive type: Reputational.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	kgCO2e/ person	40	32	25	23	22	20

Additional details

Necessary detail on measurement units	The measurement is the annual operational greenhouse gas emissions based on the Carbon Accounting Workbook and is expressed in kilogrammes of CO2 (carbon dioxide) equivalent divided by the population supplied.
Frequency of PC measurement and any use of averaging	This PC will be measured and reported annually
Timing and frequency of rewards/penalties	N/A
Form of reward/penalty	N/A
Any other information or clarifications relevant to correct application of incentive	Bristol Water has set a reputational incentive for total carbon emissions due to the overlap with statutory incentives within the period 2015 to 2020. This measure focuses on operational carbon emissions that are primarily due to electricity consumption. These emissions and other fuel-based emissions are incentivised through a range of mechanism and taxes, including the EU Emissions Trading Scheme costs and the Climate Change Levy costs that are passed on in energy costs and the Carbon Reduction

	Commitment tax. For the 2015-20 period these costs exceed the carbon values published by DECC. This means that operational carbon reduction is incentivised through the regulatory cost incentives and including an additional ODI would double count.

Performance commitment H2: Raw water quality of sources

Detailed definition of performance measure: This is an assessment of the quality of the company's raw water sources. The current trend shows deterioration in key surface water sources. As the Mendip lakes have a large sediment burden, Bristol Water anticipates that it will respond slowly to changes in incoming water quality due to improvements in land management in the company's catchment area. In order to provide more precise measurement of the impact of catchment actions, the company will further develop this measure in 2015-20 to consider changes in the quality of water entering these sites via tributaries in the catchment area.

Incentive type: Reputational.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC		Deteriorating	Deteriorating	Deteriorating	Marginal	Marginal	Stable

Additional details

Necessary detail on measurement units	The water quality of some of Bristol Water's sources is at risk of deterioration due to potential ingress of nutrients and/or pesticides from its catchments. The water quality is measured as improving, stable, marginal or deteriorating.
Frequency of PC measurement and any use of averaging	This PC will be measured and reported annually
Timing and frequency of rewards/penalties	N/A
Form of reward/penalty	N/A

Any other information or clarifications relevant to correct application of incentive	Bristol Water has set itself a reputational incentive for raw water quality of sources. The consequences of deteriorating raw water quality include reduced availability of water that directly impacts on its supply/demand balance. As such, the financial incentives on hosepipe ban frequency and unplanned customer minutes lost will capture the impacts on customers if the company does not perform against this measure.

Performance commitment H3: Biodiversity index

Detailed definition of performance measure: Bristol Water will carry out regular surveys at its sites to assess the level of biodiversity. This will involve quantifying the area of specific habitats available, together with their quality, importance and presence of significant species. The company will combine these measurements to create a quantitative "Biodiversity Index" for each of its sites and an aggregate Biodiversity Index for its overall landholdings. The Biodiversity Index calculation is: [Hectares of priority habitat or metres of linear habitat] x [status grade of this habitat]. This measure will be developed fully in the first year of 2015-20, following surveys the company has carried out since December 2013 and research it is now carrying out on the best way to quantify the Index

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Index	Under development	Improving	Improving	Improving	Improving	Improving

Additional details

Necessary detail on measurement units	Bristol Water will carry out regular surveys at its sites to assess the level of biodiversity. Biodiversity Index calculation is: [Hectares of priority habitat or metres of linear habitat] x [status grade of this habitat].
Frequency of PC measurement and any use of averaging	This PC will be measured and reported annually
Timing and frequency of rewards/penalties	N/a
Form of reward/penalty	N/a

Any other information or clarifications relevant to correct application of incentive	Bristol Water has a reputational incentive for its biodiversity index. As this measure is new, the company does not have a baseline against which to measure its performance. Bristol Water will develop this baseline over the 2015 to 2020 period, and therefore it does not currently have sufficient data to introduce a financial incentive for this measure during 2015-20.

Performance commitment H4: Waste disposal compliance

Detailed definition of performance measure: The environmental permitting regulations (2010) created a new framework for the management of discharges from the company's sites to ensure that they are consistent with a sustainable environmental impact. Compliance is calculated based on the results of Bristol Water's operational sampling programme, which is more extensive than that required by the Environment Agency.

Incentive type: Reputational.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC		97%	100%	100%	100%	100%	100%

Additional details

Necessary detail on measurement units	Waste disposal compliance is a proxy measure to monitor Bristol Water's management of environmental risks. The company will use a measure of its internal monitoring of discharges to the environment and calculate the compliance against the Environmental Permitting Regulations (2010) standards.
Frequency of PC measurement and any use of averaging	This PC will be measured and reported annually
Timing and frequency of rewards/penalties	N/a
Form of reward/penalty	N/a
Any other information or clarifications relevant to correct application of incentive	Bristol Water has set itself a reputational incentive for waste disposal compliance. This is because the measure targets the risk of non-compliance that could cause pollution incidents, or other risks such as health and safety incidents. The risks that the company is aiming to mitigate within its plan are high impact low probability events. If these risks

	materialise the company is likely to be fined and face statuary enforcement action, meaning that any financial incentive would represent double punishment. Also, Bristol Water does not currently have a robust WTP value for its customers that could reliably be applied to calculate a financial incentive. In line with the Environment Agency's expectations, Bristol Water must target 100% compliance with numeric discharge permits from 2015-16 onwards.

Household retail outcome G: Efficient use of resources by customers

Performance commitment G2: Per capita consumption

Detailed definition of performance measure: Defined as the average amount of water used by each of the company's household consumers each day, measured as litres per head per day (l/h/d).

Incentive type: Reputational.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	l/h/d	145.6	145.4	144.5	143.6	142.8	142.0

Additional details

Necessary detail on measurement units	The unit of measurement is post-Maximum Likelihood Estimation weighted average litres per person per day, on average over the year.
Frequency of PC measurement and any use of averaging	This PC will be measured and reported annually
Timing and frequency of rewards/penalties	N/a
Form of reward/penalty	N/a
Any other information or clarifications relevant to correct application of incentive	Bristol Water a reputational incentive for average consumption per person per day. The improvement in this measure is being driven by the company's proposals for increased meter penetration, for which it has proposed a separate financial incentive.

Household retail outcome I – Affordable bills

Performance commitment I1: Percentage of customers in water poverty

Detailed definition of performance measure: Bristol Water has defined water poverty as the percentage of households within its supply area for whom their water charges represent more than 2% of their disposable income, defined as gross income less income tax. This is different from the definition used by the Government and organisations such as the Joseph Roundtree Foundation and CCWater – that definition relates to the percentage of customers for whom their water bill, covering water and sewerage charges, represents more than 3% of their disposable income after housing costs and income tax. Because Bristol Water does not have access to the housing costs used in the Government's definition, it has had to use an alternative definition, and it took advice from one of its main local Citizens Advice Bureau to determine how best to do this.

Incentive type: Reputational.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	2.1	2.0	2.0	1.9	1.9	1.8

Additional details

Necessary detail on measurement units	The percentage of households within its supply area for whom their water charges represent more than 2% of their disposable income, defined as gross income less income tax.
Frequency of PC measurement and any use of averaging	This PC will be measured and reported annually
Timing and frequency of rewards/penalties	N/a
Form of reward/penalty	N/a
Any other information or	Bristol Water a reputational incentive for the

clarifications relevant to correct application of incentive	percentage of customers in water poverty. Bristol Water has set out three key reasons for this: 1. The percentage of customers in water poverty is partially driven by factors outside of the company's control. The general economic situation and customers' own circumstances will influence the volume of customers that are guided to social tariffs by the Citizens Advice Bureau. These factors will also influence the calculation of water bill as percentage of disposable income. 2. Bristol Water has introduced a social tariff that will contribute to the success of this measure. As the company has no evidence that customers are willing to pay for a higher social tariff a reward would not be appropriate. In terms of a penalty the revenue cap will ensure that the tariff levels are adjusted if circumstances cause the uptake of the company's social tariff to deviate from its forecasts. This means that the regulatory approach ensures that the social tariff has a cost neutral bill impact, customers are protected and a further ODI is not appropriate. 3. Water poverty is linked to customer debt as customers in water poverty are less likely to pay their bill. As increased debt is a cost to the company it has an inbuilt cost incentive to improve its performance and avoid poor performance against this measure.

Household retail outcome J – Satisfied customers

Performance commitment J1: Service Incentive Mechanism (SIM)

Detailed definition of performance measure: Ofwat measure for comparing the customer service performance of water companies in England and Wales. Includes quantitative measures relating to the number of written complaints and unwanted contacts that the company receives and a qualitative measure derived from a survey of consumers' views on the service Bristol Water has provided in response to a contact they have made. The measure also includes a SIM survey carried out four times a year by Ofwat's appointed market researcher. As the SIM for 2015-20 is currently under development Bristol Water has not proposed a target score, but aims to retain its position in the industry's top five.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Score /rank	85.3	Top 5	Top 5	Top 5	Top 5	Top 5
Penalty collar			TBC	TBC	TBC	TBC	TBC
Penalty deadband			TBC	TBC	TBC	TBC	TBC
Reward deadband			TBC	TBC	TBC	TBC	TBC
Reward cap			TBC	TBC	TBC	TBC	TBC

Incentive rates

Incentive type	Incentive rate
Penalty	Ofwat methodology
Reward	Ofwat methodology

Additional details

Necessary detail on measurement units	The measurement units will be as per Ofwat's measure for comparing the customer service performance of water companies in England and Wales.
Frequency of PC measurement and any use of averaging	This PC will be measured and reported annually.
Timing and frequency of rewards/penalties	Any rewards or penalties will be applied at the end of the regulatory period 2015-20.
Form of reward/penalty	Revenue Adjustment.
Any other information or clarifications relevant to correct application of incentive	The calculation of this PC may change following more detailed methodology information from Ofwat. Penalty or reward is determined by Ofwat.

Performance commitment J2: General satisfaction from surveys

Detailed definition of performance measure: The percentage of customers responding to the company's annual household customer tracking survey who rate their satisfaction in respect of the company's service as excellent, very good or good.

Incentive type: Reputational.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	93%	93%	93%	93%	93%	>93%

Additional details

Necessary detail on measurement units	The measure is calculated from 1,000 completed surveys with customers who may or may not have had cause to contact Bristol Water during the year. It is carried out annually by an independent market researcher in line with Market Research Society code of conduct (internationally recognised as best practice). The survey includes a question asking respondents to rate overall how satisfied they are with the services the company provides. This measure is the percentage of customers who rate the performance as good, very good or excellent.
Frequency of PC measurement and any use of averaging	This PC will be measured and reported annually
Timing and frequency of rewards/penalties	N/a
Form of reward/penalty	N/a

Any other information or clarifications relevant to correct application of incentive	This measure complements Ofwat's SIM, because it includes customers and consumers who have not had reason to contact the company during the year. Unlike the survey used for the qualitative SIM measure, the company's annual survey captures satisfaction from a random sample of all of its customers, whereas the SIM survey is limited only to those who have had cause to contact the company. The incentive is non-financial as the results of this measure are highly likely to correlate with the results of the Service Incentive Mechanism which is incentivised separately

Performance commitment J3: Value-for-money

Detailed definition of performance measure: Each month a market researcher carries out for the company a survey of 200 consumers who have contacted it about an operational issue. Within the survey respondents are asked to rate their satisfaction in terms of the value-for-money the company provides. The measure is calculated as the percentage of respondents who rate this as very good or good (using a five-point scale).

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	70	71	71	72	72	72

Additional details

Necessary detail on measurement units	The measure is calculated from 2,400 completed surveys annually (200 per month) with customers who have had cause to contact Bristol Water on an operational issue. It is carried out monthly by an independent market researcher in line with Market Research Society code of conduct (internationally recognised as best practice). Within the survey respondents are asked to rate their satisfaction in terms of the value-for-money Bristol Water provides. The measure is calculated as the percentage of respondents who rate this as very good or good (using a five-point scale).
Frequency of PC measurement and any use of averaging	This PC will be measured and reported annually
Timing and frequency of rewards/penalties	N/a
Form of reward/penalty	N/a

Any other information or clarifications relevant to correct application of incentive	The company recognises that some consumers struggle to make this assessment, often citing that they cannot compare against other water suppliers, but it has found the measure to be sufficiently well understood by most respondents to its surveys. This measure will overlap with the results of the SIM which is incentivised separately through a financial regulatory incentive.

Household retail outcome K – Easy to contact

Performance commitment K1: Ease of contact from surveys

Detailed definition of performance measure: Defined as the percentage of consumers who consider that Bristol Water is easy to contact by telephone, based on responses to a monthly telephone survey.

Incentive type: Reputational.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	96.2	96.3	96.4	96.5	>96.5	>96.5

Additional details

Necessary detail on measurement units	The measure is calculated from 2,400 completed surveys annually (200 per month) with customers who have had cause to contact Bristol Water on an operational issue. It is carried out monthly by an independent market researcher in line with Market Research Society code of conduct (internationally recognised as best practice). Within the survey respondents are asked to rate how easy it is to contact Bristol Water by telephone. The measure is calculated as the percentage of respondents who rate this as very good or good (using a five-point scale).
Frequency of PC measurement and any use of averaging	This PC will be measured and reported annually
Timing and frequency of rewards/penalties	N/a
Form of reward/penalty	N/a
Any other information or	The company has set itself a reputational incentive

clarifications relevant to correct application of incentive	for this PC. Customer effort and ease of contact is a driver of consumer satisfaction and therefore links directly to the company's SIM performance, which is incentivised separately through a regulatory financial incentive.

Household retail outcome L – Bills are accurate and easy to understand

Performance commitment L1: Negative billing contacts

Detailed definition of performance measure: Data used is a subset of the 'unwanted contacts' data collated for the quantitative measures in the SIM (Service Incentive Mechanism), calculated using a specific set of reason codes used by BWBSL for root cause analysis. An 'unwanted' customer contact is defined by Ofwat within the SIM.

Incentive type: Reputational.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Contacts	2,570	2,480	2,395	2,315	2,240	2,170

Additional details

Necessary detail on measurement units	Data used is a subset of the 'unwanted contacts' data collated for the Quantitative measures in the SIM, calculated using a specific set of reason codes used by Bristol Wessex Billing Services Ltd for root cause analysis. An 'unwanted' customer contact is defined by Ofwat within the SIM.
Frequency of PC measurement and any use of averaging	This PC will be measured and reported annually
Timing and frequency of rewards/penalties	N/a
Form of reward/penalty	N/a

Any other information or clarifications relevant to correct application of incentive	Bristol Water recognises that if it is to meet its aim of being responsive to customers, it needs to ensure that that its bills are clear and easy for customers to understand and that bills are accurate. This outcome therefore reflects the importance of this for customers and focuses on minimising the need for customers to have to contact the company because of dissatisfaction or service failure relating to the bills the company issues. Bristol Water has developed a performance measure using a subset of unwanted contacts data which is already collated for the SIM and which allows it to track its performance associated with this outcome. The measure for negative billing contact is part of the Ofwat service incentive mechanism (SIM), which is incentivised separately through a regulatory financial incentive.

Outcome delivery and reporting

In policy chapter A2, we outline a framework against which we have assessed Bristol Water's proposals in relation to outcome delivery and reporting.

The table below summarises Bristol Water's approach to the measurement, reporting and governance of outcomes and our assessment of this approach.

Table AA4.9 Bristol Water's proposals for outcome delivery and reporting

Bristol Water's proposals (extracted from June business plan)	Our assessment
Performance Commitment Reporting We will publish details of our performance against our Performance Commitments (PC) 6-monthly on our website. Annually reported data will be subject to our existing governance process for quality assurance of Annual Return and Ofwat KPIs. We will employ an appropriate assurance process prior to 6-monthly data being published on our website. This will include internal and external review. The published data will be subject to scrutiny and challenge from our local stakeholder representative group. Each PC has a designated owner, who is responsible for reporting performance data and providing appropriate commentary on performance. The definition of each PC is as set out in the relevant outcome section for each measure. Methodologies for calculation and production of data for each measure are produced and maintained by the PC owner. Our overall governance and reporting process is subject to Internal Audit within the triennial audit cycle to assess the adequacy and effectiveness of the controls in place. These reports are reported to the Audit and Risk Assurance Committee.	In our methodology statement we set out our expectation that companies should demonstrate that their proposed PCs can be measured and recorded consistently and that they will have the appropriate governance and quality assurance processes in place to achieve this. We also expect companies to be transparent with customers about their performance against their outcomes and commitments. Bristol Water has provided sufficient evidence demonstrating the approach it will undertake to ensure the PCs will be measured and reported consistently, and the proposed governance and assurance processes. Therefore, we have accepted the company's proposal and require Bristol Water to put in place its proposed processes. In time, we may develop further information requirements with regard to outcomes, as we review and change current requirements relating to performance indicators and each company's annual risk and compliance statement.

Annual Reporting We produce an Annual Data Return each year detailing our performance against key regulatory performance metrics. This report replaced the June Return that we were required to submit to Ofwat until 2011. Performance Commitment data is included within the Annual Return. The Annual Return also includes the KPIs that all companies are required by Ofwat to publish each year, along with the annual Risk and Compliance Statement. Data included in our Annual Report is subject to internal peer review, and external assurance. Until 2011 companies were required to use Reporters to verify reported data to Ofwat. Since 2012 we have continued to employ an external assurance consultancy, Mott MacDonald, in a similar role, with a duty of care to the Bristol Water Board rather than to Ofwat. Key financial data is audited by our statutory Auditor, currently Pricewaterhouse Coopers. All data owners are required to sign a quality assurance form to accompany data submissions, to confirm that data has been compiled in accordance with the stated methodology, and that the data is a true representation of the facts. Key data is subject to detailed review by executive directors, and the overall report is approved by the Board before publication. **Monthly KPI Reporting** We produce a KPI report each month for use by Directors, Senior Managers, the Board and Shareholders to monitor company performance. Performance data on all PCs is internally monitored through our monthly KPI report. The performance measures are reported within the established methodology for monthly KPIs.	

Each KPI is assigned to a line owner who is responsible for providing the data. Each KPI has a reviewer assigned to review reported performance data before submission for the monthly report. The KPIs are signed off by a Director prior to final circulation to the Senior Management team for review. A meeting is held each month for Senior Managers and Directors to review performance. KPIs are reported to our shareholders each month and to the Board ahead of each Board meeting. *(Extracted from page 185 onwards of Bristol Water's June submission business plan)*	

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We are responsible for making sure that the water sector in England and Wales provides customers with a good quality and efficient service at a fair price.

OFWAT

Ofwat
Centre City Tower
7 Hill Street
Birmingham B5 4UA

Phone: 0121 644 7500
Fax: 0121 644 7533
Website: www.ofwat.gov.uk
Email: mailbox@ofwat.gsi.gov.uk

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