

August 2014

**Setting price controls for 2015-20**  
**Draft price control determination notice:**  
**company-specific appendix – Severn Trent Water**



**OFWAT**

## Contents

Overview	2
A1 Draft determination – at a glance	4
A2 Wholesale water	8
A3 Wholesale wastewater	22
A4 Household retail	32
A5 Non-household retail	41
A6 Appointee financeability and affordability	44
Annex 1: Wholesale costs	55
Annex 2: Household retail price control	61
Annex 3: Reconciling 2010-15 performance	63
Annex 4: Outcomes, performance commitments and outcome delivery incentives	81

## Overview

This appendix sets out the details of the draft determination of price controls that are specific to Severn Trent Water. Our draft determination is based on Severn Trent's business plan as submitted by 27 June and its responses to our subsequent queries.

The revisions that Severn Trent made to its business plan have many strengths. Importantly, the company has addressed a number of our concerns that were identified in the risk-based review around its core Birmingham Resilience Scheme. Although we have some outstanding concerns about the risk of failure, we agree that there is a strong case for improving the resilience of supply to Birmingham. We have therefore made this draft determination on the basis of two scenarios – one including the EVA and the other excluding the scheme. We have also made some targeted interventions in relation to the retail control and in relation to wastewater costs, whereby the company was more than 5% *under* our cost threshold. There are also some further interventions designed to safeguard customers' interests, in particular around outcomes and the associated delivery incentives which are common to all companies.

It should be noted that in order for the price controls to protect the interests of consumers, we consider that – in accordance with their licence obligations – companies must act in an economic and efficient manner in all circumstances. For the avoidance of doubt, this obligation overrides any individual incentive element.

This draft determination sets out the draft allowed revenues and K factors for Severn Trent, along with what they mean for average customer bills. We have summarised this information in the 'DD at a glance section'. The draft determination also sets out:

- the outcomes we expect the company to deliver under each price control;
- the costs we are assuming the company will incur and, where appropriate, the assumptions we have made to arrive at the allowed revenue for each price control;
- the adjustments we are making to the wholesale water and wastewater price controls to reflect the company's performance in 2010-15; and
- our assumptions on risk and reward, including the uncertainty mechanisms that form part of each price control.

As part of this price review, we stated in '[Setting price controls for 2015-20 – final methodology and expectations for companies' business plans](#)' (our 'final methodology statement') that we would be setting separate price controls for wholesale and retail elements of the appointee business. We explained that these separate controls would be binding, confirmed through the modifications 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. The revenue allowance for each price control is determined by the costs specific to that particular price control. This means that companies cannot cross-subsidise between controls in terms of costs or revenues, which gives important benefits for providing more effective incentives. It also supports the development of the relevant markets and in particular those provided for by the Water Act 2014.

We have made this draft determination in accordance with our final methodology statement and our statutory duties. We have also had regard to relevant guidance from the UK Government, and where appropriate Welsh Government, and the principles of best regulatory practice to be transparent, accountable, proportionate, consistent and targeted.

This draft determination is structured on an element-by-element basis and is separated into:

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

In each area, we have set out the relevant information after our interventions – that is, our draft determination. In those areas in which we have intervened, we discuss the difference between our view and the company view further in the specific annexes where appropriate.

At the appointee level, this draft determination sets out our view of the company's financeability over the period 2015-20.

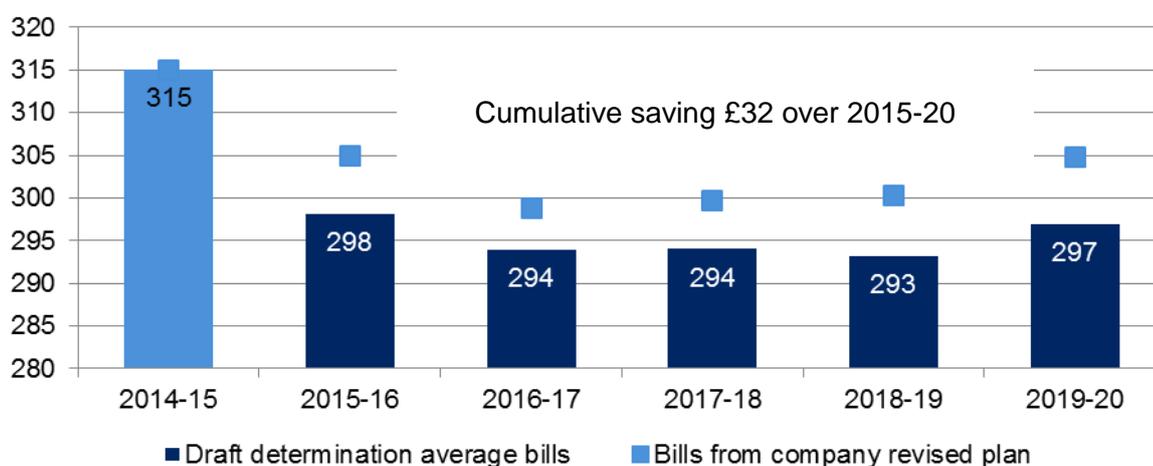
Annexes 1 to 4 form part of the draft price control determination.

## A1. Draft determination – at a glance

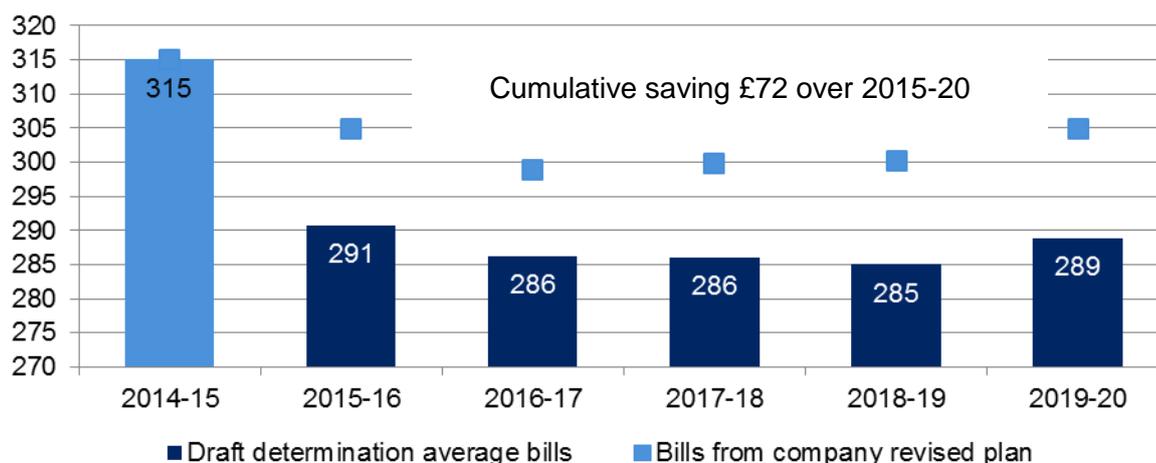
In this section we set out what the draft determination means:

- for customers, with respect to the average bills they will pay and the outcomes that the company will deliver in return; and
- for the company, with respect to the allowed costs/expenditure, return on regulatory equity (RoRE) range; financial ratios (under the notional structure) and the interventions we made to the company's revised plan.

### Combined average household bill (£) – including core Birmingham resilience scheme



### Combined average household bill (£) – excluding core Birmingham resilience scheme



**Note.** The “bills from company revised plan” is based on the data submitted by the company in its business plan but projected using our financial model, thereby ensuring consistency with the draft determination projection. As a consequence the company’s proposed bills illustrated above may not necessarily be the same as those described in the revised business plan.

## Outcomes

Wholesale water	Wholesale wastewater
We provide water that is good to drink	We will safely take your waste away
We will ensure water is always there when you need it	We will have the lowest possible charges
We will have the lowest possible charges	We will protect our local environment
We will protect our local environment	We will protect the wider environment
We will protect the wider environment	We will make a positive difference in the community
We will make a positive difference in the community	
Retail	
We will provide you with excellent customer service	
We will help you if you struggle	

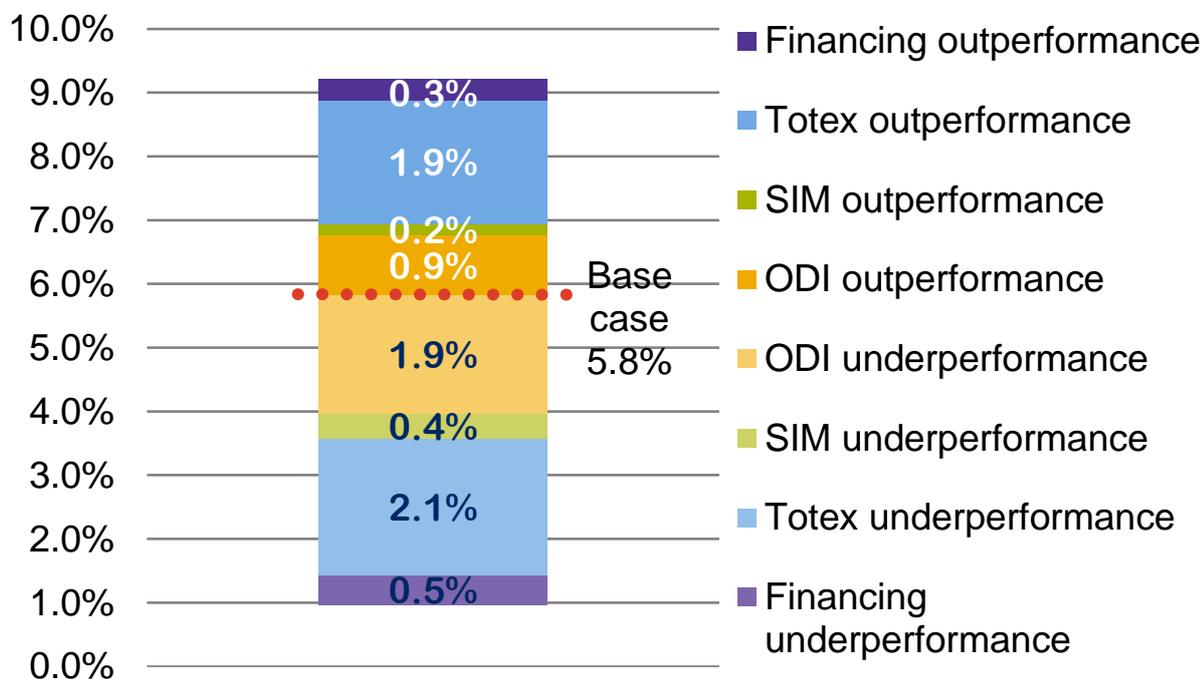
## Allowed costs/expenditure<sup>1</sup>

	Including core Birmingham resilience		Excluding core Birmingham resilience	
	Water	Wastewater		
Wholesale				
Totex – 2015-20 total (£m)	2,807.0	2,736.9	2,624.9	2,736.9
Allowed weighted average cost of capital (%)	3.70%	3.70%	3.70%	3.70%
Allowed wholesale revenue in 2015-20 (£m)	3,032.5	3,273.4	2,871.6	3,270.8
Retail	Household	Non-household	Household	Non-household
Cost allowance – 2015-20 total (£m)	530.0		530.0	
Margin (%)Retail allowed revenue (£m)	1.0%	2.5%	1.0%	2.5%
Retail allowed revenue (£m)	588.7	139.4	587.3	138.1
Average bill per household customer – retail component only (£)	32		32	

### Notes:

1. Wholesale figures in 2012-13 prices and retail figures in nominal prices – this is consistent throughout this draft determination unless otherwise stated

## RoRE ranges – Appointee



## Ofwat's calculation of notional financeability ratios

Financial ratios for notional company	Financial ratio calculations based on our draft determination (average 2015-20)	
	Including core Birmingham resilience	Excluding core Birmingham resilience
Cash interest cover	3.12	3.11
Adjusted cash interest cover ratio (ACICR) – base case (average over five years)	1.60	1.59
Funds from operations/debt	9.91%	9.89%
Retained cash flow/debt	7.26%	7.24%
Gearing	63.03%	62.83%
Dividend cover (profit after tax/dividends paid)	1.25	1.24
Regulatory equity/regulated earnings for the regulated company	17.32	17.38
RCV/EBITDA	10.23	10.26

## Summary of interventions

<p><b>Outcomes</b></p> <ul style="list-style-type: none"> <li>• <b>Cap:</b> We have imposed an overall cap and collar on outcome delivery incentives of +/- 2% of RoRE.</li> <li>• <b>Horizontal check:</b> We made some performance commitments more stretching, introduced deadbands, adjusted a penalty deadband and collar and removed serious pollution incidents from a performance measure and ODI.</li> <li>• <b>Bottom-up analysis:</b> We made some performance commitments more stretching, amended a reward, adjusted deadbands, and increased penalty and incentive rates. We also removed a performance commitment and reinstated another.</li> <li>• We adjusted two ODIs to better protect customers against late delivery and non-delivery of the Birmingham resilience scheme.</li> </ul>	<p><b>Wholesale Costs</b></p> <ul style="list-style-type: none"> <li>• The company proposed wholesale water totex of £2,930 in its plan, which is £136m above our draft determination threshold of £2,794m (including an allowance for its core resilience scheme, which is referred to as scenario A). If we exclude the core resilience scheme (scenario B) the gap is £379m or 13%.</li> <li>• The company proposed wholesale wastewater totex of £2,658m in its plan. Our (pre-cap) draft determination threshold is £3,000m, giving rise to a difference (in the company's favour) of 11%. As explained in our <a href="#">wholesale water and wastewater technical appendix</a> we have applied a cap of 5%, resulting in a draft determination threshold of £2,791m</li> <li>• We rejected some of the company's wholesale cost adjustments, or only partially allowed them. We also made some adjustments to reflect our modelling approach.</li> </ul>
<p><b>Reconciling 2010-15 performance</b></p> <ul style="list-style-type: none"> <li>• We have increased the scale of the adjustments related to 2010-15 performance which has reduced the revenue requirement by £60 million.</li> <li>• We have increased the amount of serviceability shortfall compared to that proposed by the company which has resulted in a further downwards RCV adjustment of £57 million.</li> </ul>	<p><b>Retail</b></p> <ul style="list-style-type: none"> <li>• We have rejected the company's proposed adjustment for bad debt driven by deprivation and bill size (household).</li> <li>• We have removed the company's proposed allowance for input price pressures (non-household).</li> <li>• We have reallocated some of the company's costs, and adjusted the price base of its retail costs.</li> </ul>
<p><b>Risk and reward</b></p> <ul style="list-style-type: none"> <li>• We have strengthened the customer protection mechanism for delivery of the Birmingham resilience scheme through two penalty only ODIs.</li> </ul>	<p><b>Financeability and Affordability</b></p> <ul style="list-style-type: none"> <li>• We have not intervened in this area.</li> </ul>

## A2. Wholesale water

### A2.1 Company outcomes, performance commitments and delivery incentives

#### A2.1.1 Outcomes, performance commitments and incentives

In the [outcomes technical appendix](#), we discuss our approach to outcomes for the wholesale and retail controls.

We summarise the outcomes, performance commitments and outcome delivery incentives for the wholesale water control for Severn Trent Water in Table A2.1 below.

We are intervening to impose an overall cap and collar on outcome delivery incentives for the 2015-20 period, thereby limiting total rewards and penalties. The maximum rewards for outperformance will be limited to +2% of RoRE and maximum penalties for underperformance are limited to -2% of RoRE. This will help ensure that the overall package of delivery incentives is calibrated to provide meaningful financial incentives and protect customers. There are a small number of specific exclusions from the cap/collar and these relate to the Birmingham resilience ODIs.

In addition, for some performance commitments and incentives types, we have intervened to change the underlying performance level or incentives. These interventions are listed in Table A2.1 below. Full detail of the wholesale water outcomes, performance commitments and incentives is provided in annex 4.

**Table A2.1 Wholesale water outcomes, performance commitments and incentives**

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
We provide water that is good to drink	Number of complaints about drinking water quality	Reward and penalty	<b>Horizontal check:</b> We made the performance commitment more stretching and introduced deadbands

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Compliance with drinking water quality standards	Penalty only	<b>Horizontal check:</b> We made the performance commitment more stretching and adjusted the penalty deadband and collar
	Asset stewardship – number of sites with coliform failures	Penalty only	<b>Bottom-up analysis:</b> We made the performance commitment more stretching
	Successful catchment management schemes	Reward and penalty	<b>Bottom-up analysis:</b> We made the performance commitment more stretching and amended the incentive such that a reward can only be earned if the largest scheme is successfully delivered
We will ensure water is always there when you need it	Resource efficiency (amount of water we take out of the environment)	Non-financial incentive	No intervention
	Leakage levels	Reward and penalty	No intervention
	Speed of responses in repairing leaks (% fixed within 24 hours)	Reward and penalty	No intervention
	Number of minutes customers go without supply each year	Reward and penalty	<b>Bottom-up analysis:</b> We made the performance commitment more stretching and adjusted the deadbands

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Percentage of customers with resilient supplies (those that benefit from a second source of supply)	Reward and penalty	No intervention
	Asset stewardship (mains bursts)	Penalty only	No intervention
	Customers at risk of low pressure	Reward and penalty	<b>Bottom-up analysis:</b> We made the performance commitment more stretching
	Restrictions on use	Reward and penalty	<b>Bottom-up analysis:</b> We reduced the reward incentive rate
	Birmingham resilience – timing delays	Penalty only	<b>Bottom-up analysis:</b> We increased the penalty to reflect the loss of net benefits to customers associated with a delay, We introduced a year 3 progress milestone
	Birmingham resilience – non-delivery	Penalty only	<b>Bottom-up analysis:</b> We increased the incentive rate to reflect the loss of benefits to customers. We introduced a year 3 progress milestone
	Community risk	Penalty only	<b>Bottom-up analysis:</b> We have removed this performance commitment
We will have the lowest possible charges	Customers rating our services as good value for money (based on tracker survey)	Reward and penalty	No intervention

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
We will protect our local environment	Improvements in river water quality against WFD criteria – water	Reward and penalty	No intervention
	Asset stewardship: environmental compliance	Non-financial incentive	No intervention
	Biodiversity	Non-financial incentive	No intervention
	Sites with eel protection at intakes	Non-financial incentive	<b>Bottom-up analysis:</b> We have reinstated this performance measure
We will protect the wider environment	Size of our carbon footprint – water	Reward and penalty	No intervention
We will make a positive difference in the community	Improved understanding of our services through education – company total	Non-financial incentive	No intervention

### A2.1.2 Outcome delivery and reporting

In the [assurance technical appendix](#), we set out our proposed framework for the form and level of reporting, monitoring and assurance we will seek from companies during the five year regulatory period 2015-20 in relation to the delivery of their commitments for the price review. This sets out three levels of assurance and the opportunities available for a company to improve its category status through the finalisation of the price controls and during the regulatory period itself.

We are satisfied with the company's proposals for self reporting. But consistent with the commentary in our assurance technical annex, we will need to consider the categorisation of the company for assurance purposes at the final determination.

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

## **A2.2 Calculating the wholesale water price control**

### **A2.2.1 Core Birmingham resilience scheme**

Water customers consistently place the highest possible priority on safe and reliable water suppliers. It is therefore one of the key responsibilities of water companies to deliver resilient supplies of clean and safe water to their customers. It is also a key responsibility of a water company to ensure that local communities' safety is maintained. This means that if a company considered that there were unacceptable risks of a high impact failure in water supplies or to the safety of local communities the company should take immediate steps to mitigate and reduce these risks – and not wait until the start of a new price control period before taking action.

In its December business plan Severn Trent Water proposed to spend £448<sup>1</sup> million to improve the resilience of the water supply to Birmingham. This expenditure was spread across 2015-20 and 2020-25. Our assessment under the Risk-based review identified a number of challenges to this scheme, in particular the size of the proposed solution and the quality of evidence to support the proposed options available.

In its revised business plan, Severn Trent Water has proposed to spend £265<sup>2</sup> million over 2015-20, with no further expenditure after 2020 proposed at this time, to improve the resilience of supply to Birmingham. The proposed solution would enable the Elan Valley aqueduct (EVA) to be taken off line for extended periods of time for maintenance and would also provide an alternative source of water in the event of a catastrophic failure.

In assessing the revised plan we recognise that Severn Trent Water has listened and responded to our challenges. This is best reflected by the changes in the solution it

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<sup>1</sup> A total of £609 million proposed inclusive of the investment to address community risks

<sup>2</sup> In addition, the Severn Trent plan includes £12m transitional expenditure over 2010-15 for the EVA scheme to reflect the action being undertaken before the start of the new price control.

has put forward which seek to make greater use of existing sources to provide Birmingham with improved resilience. These changes have substantially reduced the cost of the resulting solution.

Based on our detailed analysis of Severn Trent Water's business plan submission, we agree that there is a strong case for improving the resilience of supply to Birmingham. The EVA has been in existence for over a hundred years, and Severn Trent Water has provided clear and compelling evidence of asset deterioration. In addition, the company has demonstrated that a loss of supply of water to Birmingham is not acceptable to its customers.

However, when assessing the need for the preferred solution we have some outstanding concerns relating to the company's assumption on the likelihood of risk of failure of the EVA. In particular, we are seeking to better understand the balance of probabilities associated with the failure of the EVA and how this intersects with the net benefits of the proposed solution.

In its revised business plan, Severn Trent Water has calculated an aggregated gross risk of failure across the 77 individual EVA assets. This has generated a relatively high level of failure and strong cost benefit case. Although Severn Trent Water has conducted additional sensitivity testing on the risk of failure, and the subsequent impact on the cost-benefit, for us to accept the proposed costs for the scheme it is important that Severn Trent Water provides:

- a full analysis of the costs and benefits of its proposals over an appropriate range of risks, which should encompass failure rates for low probabilities which may make the proposed scheme not cost beneficial;
- a review of the overall level of risk, including an explanation of the gross and net risk associated with the EVA (that is, Severn Trent Water should clearly explain how its management of the asset reduces the risk of catastrophic failure);
- further Board assurance regarding the range of risks and that it is in the interests of its customers to proceed with the proposed solution;
- an explanation of how the risk of not carrying out the preferred scheme makes the risk unacceptable for customers, and demonstrating how the scope of the preferred scheme reduces the risk of failure to acceptable levels and results in a tolerable impact on customers in the event of asset failure
- further customer engagement around the residual level of risk that will exist.

Given the size and potential impact of the Birmingham resilience scheme (approximately an additional £8 on the average annual bill) and our concerns, for the purposes of draft determination we have modelled two scenarios. Scenario A

assumes that the solution identified in the revised business plan is demonstrated to be fully cost beneficial. It is important to be clear that if the 'need' analysis shows that a lower cost scheme is more appropriate to manage the risk then the cost threshold would not be adjusted in full. Scenario B does not allow for any adjustment to Severn Trent Water's cost threshold for Birmingham resilience. We expect Severn Trent Water to provide the additional evidence as part of their representations on this draft determination, which would allow us to allow an appropriate level of funding for an improvement to the resilience of the EVA.

The annual figures set out in the remainder of this section relate to scenario A described above. Total figures for 2015-20 are provided for both scenario A and scenario B where appropriate.

### **A2.2.2 Calculating allowed wholesale water expenditure**

Our approach to calculating allowed wholesale expenditure is set out in the [wholesale water and wastewater technical appendix](#).

In Severn Trent's revised plan the company proposed wholesale water totex of £2,930m over 2015-2020 (compared to £2,806m in its December plan). We calculated the draft determination threshold at £2,794 (or 2,551m excl. EVA), giving rise to a difference of £136m or 5% (or £379m (13%%) excl. Birmingham core resilience). We did consider making a further £118m in adjustments to our threshold (net of implicit allowances), however the company did not provide sufficient evidence to support these claims.

It should be noted that the actual gap faced by the company against our totex threshold is smaller than that implied by the gap. This is because the use of menus and our approach to setting baselines reduces the difference faced by the company. The difference between the company's plan and the amount it would ultimately recover from customers is only 2.3% (under scenario A whereby we include EVA core resilience).

The proposed wholesale water allowed expenditure for Severn Trent Water is detailed in Table A2.2 below. We provide a further breakdown of some of the calculations in annex 1. Further information about our assessment of each claim is set out in the [populated version of draft determination initial cost threshold models](#).

**Table A2.2 Wholesale water allowed expenditure (£ million)**

	2015-16	2016-17	2017-18	2018-19	2019-20	Total 2015-20 (A)	Total 2015-20 (B)
Draft determination cost threshold						2,794.3	2,551.5
Costs excluded from menu						83.2	83.2
Menu cost baseline <sup>1</sup>	488.9	548.1	577.7	572.7	523.9	2,711.1	2,468.3
Company's view of menu costs <sup>2</sup>						2,849.9	2,849.9
Implied menu choice						105.1	115.5
Allowed expenditure from menu	495.1	555.1	585.1	580.0	530.6	2,745.8	2,563.7
Costs excluded from menu	16.9	16.6	16.6	16.6	16.6	83.2	83.2
Total allowed expenditure <sup>3</sup>	512.0	571.6	601.7	596.6	547.1	2,829.0	2,646.9
Less pension deficit repair allowance	4.4	4.4	4.4	4.4	4.4	22.0	22.0
<b>Totex for input to PAYG</b>	<b>507.6</b>	<b>567.2</b>	<b>597.3</b>	<b>592.2</b>	<b>542.7</b>	<b>2,807.0</b>	<b>2,624.9</b>

**Notes:**

1. Menu baseline is equal to the draft 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 minus costs for items excluded from the menu.
3. Includes pension deficit repair allowance.

### **A2.2.3 Calculation of revenues: pay as you go (PAYG) and regulatory capital value (RCV)-run off**

Table A2.3 shows the company's proposed PAYG ratios and associated totex recovery for wholesale water, which we have used as the basis for this draft determination.

**Table A2.3 Severn Trent Water wholesale water PAYG ratios**

	2015-16	2016-17	2017-18	2018-19	2019-20	Total (A)	Total (B)
Totex (£m)	507.6	567.2	597.3	592.2	542.7	2,807.0	2,624.9
PAYG %	67.3%	60.5%	57.2%	57.0%	61.8%	60.7%	60.7%
Resulting PAYG (£m)	341.6	343.0	341.4	337.3	335.4	1,698.7	1,588.5

Table A2.4 shows the RCV run-off amounts included within the wholesale water charge. This reflects a run-off rate of 3.42% for the RCV as at 31 March 2015 and 23 years for the totex additions to the RCV over 2015-20.

**Table A2.4 Severn Trent Water wholesale water RCV run-off (£ million)**

	2015-16	2016-17	2017-18	2018-19	2019-20	Total (A)	Total (B)
Run-off of 2015 RCV	116.7	112.7	108.8	105.1	101.5	544.8	544.8
RCV run-off of totex additions	3.6	12.1	22.5	33.6	43.7	115.5	108.0
Total RCV run-off	120.3	124.8	131.4	138.7	145.2	660.3	652.8

#### **A2.2.4 Return on the RCV**

Our risk and reward guidance set out a single industry cost of capital for both wholesale water and wastewater services of 3.7%. The company has accepted this guidance and so we have used a cost of capital of 3.7% in this draft determination. This results in a return on capital of £669.5 million over 2015-20.

Table A2.5 shows our calculation of the opening RCV at 1 April 2015 taking account of the adjustments for 2010-15 performance discussed in section A2.2.5 below. The average RCV, set out in Table A2.6 for each year, takes into account totex additions to the RCV determined by the PAYG ratio and RCV run-off.

**Table A2.5 Severn Trent Water wholesale water opening RCV (£ million)**

	2015-16
Closing RCV 31 March 2015	3,408.9
Land sales	-11.3
Adjustment for actual expenditure 2009-10	73.8
Adjustment for actual expenditure 2010-15 <sup>1</sup>	16.7
Net adjustment from logging up, logging down and shortfalls	-80.6
Other adjustments	0.0
Opening RCV 1 April 2015	3,407.5

**Note:**

1. The adjustment for actual expenditure 2010-15 is explained further in annex 3 as part of the capital expenditure incentive scheme (CIS) adjustment.

**Table A2.6 Severn Trent Water wholesale water return on RCV (£ million)**

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening RCV	3407.5	3453.2	3552.7	3677.3	3793.4
RCV additions (from totex)	166.0	224.2	255.9	254.8	207.4
Less RCV run-off	120.3	124.8	131.4	138.7	145.2
Closing RCV	3453.2	3552.7	3677.3	3793.4	3855.5
Average RCV (year average)	3430.4	3503.0	3615.0	3735.3	3824.4
Return on capital	126.8	129.5	133.7	138.1	141.4

**A2.2.5 Reconciling 2010-15 performance**

Our approach to reconciling 2010-15 performance is set out in the [wholesale water and wastewater technical appendix](#).

The company proposed adjustments to the opening RCV and allowed revenue for the wholesale water services to reconcile performance in 2010-15. We have intervened and as a result the revenue adjustments for wholesale water have changed from -£12.3 million to -£35.8 million. We summarise these interventions and quantify the resulting adjustments within this draft determination in Table A2.7 below. The impact on the opening RCV of 2010-15 adjustments is shown in Table A2.5. As

noted in the table above, we have applied -£80.6m in (net) adjustments arising from logging up, logging down and shortfalls. It should be noted that the company proposed a shortfall of -£27.7m, however we have intervened and applied a shortfall of -£56.1m – this relates to (i) unplanned interruption to supply exceeding 12 hours; and (ii) water treatment works coliforms non-compliance. Further information on our interventions and rationale is set out in annex 3.

**Table A2.7 Severn Trent Water wholesale water revenue adjustments to reflect 2010-15 performance (£ million)**

Area	Intervention	Why we did it	Total 2010-15 (£m)
Service incentive mechanism (SIM)	There are no interventions in this area	n/a	0.0
Revenue correction mechanism (RCM)	<p>We have intervened in the following areas.</p> <ul style="list-style-type: none"> <li>• Back billing</li> <li>• Tax</li> <li>• FD09 assumptions</li> <li>• Number of households billed</li> </ul>	<p>We have concerns as to whether the back billing amounts being put forward by the company are compliant with RAG4.04 and IN11/04 and so have disallowed these claims. We also have some minor issues on Tax and FD09 assumptions</p>	10.8
Opex incentive allowance (OIA)	The interventions we made did not change the overall result for the company	n/a	0.0
Capital expenditure incentive scheme (CIS)	<p>Our interventions are as follows.</p> <ul style="list-style-type: none"> <li>• We have calculated the revenue adjustment using Ofwat's published CIS true-up model.</li> <li>• We have used Ofwat's discount rates.</li> <li>• We have profiled the revenue</li> </ul>	<p>The company has used its own approach to calculating the revenue adjustment. Aspects where the approach is different are:</p> <ul style="list-style-type: none"> <li>• indexation treatment in the financing adjustment;</li> <li>• annuity calculation;</li> <li>• discount values; and</li> <li>• tax adjustment.</li> </ul> <p>We have applied Ofwat's</p>	-46.6

Area	Intervention	Why we did it	Total 2010-15 (£m)
	adjustment using the same approach as the company. <ul style="list-style-type: none"> <li>We have included our view of the applicable change protocol amounts.</li> </ul>	published methodology.	
Other adjustments	There are no other adjustments in this area		0.0
<b>Total</b>			<b>-35.8</b>

### A2.2.6 Calculation of allowed revenue

We set out the calculation of the allowed revenue for Severn Trent Water's wholesale water control in Table A2.8.

Overall, we consider that the company's wholesale water revenue allowance should be £595.9 million in 2015-16, increasing by 4.2% to £620.8 million in 2019-20.

Following industry agreement with HMRC in October 2013 on the tax treatment of capital expenditure on water and sewerage treatment works, Severn Trent Water expects to receive a one-off tax credit of around £44m and proposes to use the credit to make a one-off repair payment to its defined benefit pension scheme. We note that a number of other companies are proposing to share this gain with customers, therefore prior to final determinations we require Severn Trent Water to provide evidence that it has engaged with its Customer Challenge Group and received their agreement about the company's proposed use of the tax credit specifically.

**Table A2.8 Severn Trent Water wholesale water allowed revenue (£ million)**

	2015-16	2016-17	2017-18	2018-19	2019-20	Total (A)	Total (B)
Totex	507.6	567.2	597.3	592.2	542.7	2807.0	2624.9
PAYG ratio	67.30%	60.47%	57.15%	56.97%	61.79%	-	-
Totex additions to the RCV	166.0	224.2	255.9	254.8	207.4	1108.3	1036.4

	2015-16	2016-17	2017-18	2018-19	2019-20	Total (A)	Total (B)
RCV (year average)	3430.4	3503.0	3615.0	3735.3	3824.4	-	-
<b>Wholesale allowed revenue build up:</b>							
PAYG <sup>1</sup>	346.0	347.4	345.8	341.7	339.8	1720.7	1610.4
Return on capital	126.8	129.5	133.7	138.1	141.4	669.5	663.6
RCV run-off	120.3	124.8	131.4	138.7	145.2	660.3	652.8
Tax <sup>2</sup>	10.0	4.6	0.8	0.0	0.0	15.5	11.1
Income from other sources	-12.3	-12.4	-12.5	-12.6	-12.7	-62.5	-62.5
Reconciling 2010-15 performance	-7.2	-7.2	-7.2	-7.2	-7.2	-35.8	-35.8
Ex ante additional menu income	-3.2	-3.6	-3.8	-3.7	-3.4	-17.7	-50.6
<b>Capital contributions from connection charges and revenue from infrastructure charges</b>	15.3	15.9	16.5	17.1	17.7	82.5	82.5
<b>Final allowed revenues</b>	<b>595.9</b>	<b>599.1</b>	<b>604.6</b>	<b>612.1</b>	<b>620.8</b>	<b>3032.5</b>	<b>2871.6</b>

**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.

## A2.3 Uncertainty mechanisms

We outline our approach to uncertainty mechanisms in the [risk and reward technical appendix](#). In Table A2.9 below, we set out Severn Trent Water’s proposed wholesale water uncertainty mechanisms and our assessment of these proposals.

**Table A2.9 Severn Trent Water proposals for wholesale water uncertainty mechanisms**

Severn Trent Water proposals	Our assessment
Severn Trent Water proposed an uncertainty mechanism for water business rates with a sharing rate of 75% customer and 25% company.	We consider that the materiality, comparability and control over risk criteria for water business rates are met. We have included a 75%:25% uncertainty mechanism for all companies consistent with our prior guidance and earlier draft determinations. The specific text of this Notified Item and the rationale for its inclusion in the draft determination is set out in the <a href="#">risk and reward technical appendix</a> .
Severn Trent Water proposed an uncertainty mechanism to protect customers regarding the Birmingham Resilience scheme.	Following dialogue with Ofwat this was withdrawn and replaced by two ODIs.

## A3. Wholesale wastewater

### A3.1 Outcomes, performance commitments and incentives

In the [outcomes technical appendix](#), we discuss our approach to outcomes for the wholesale and retail controls.

We summarise the outcomes, performance commitments and outcome delivery incentives for the wholesale wastewater control for Severn Trent Water in table A3.1.

Similar to the wholesale water control, we are intervening to impose an overall cap and collar on outcome delivery incentives for the 2015-20 period, thereby limiting total rewards and penalties. The maximum rewards for outperformance will be limited to +2% of RoRE and maximum penalties for underperformance are limited to -2% of RoRE. This will help ensure that the overall package of delivery incentives is calibrated to provide meaningful financial incentives and protect customers.

In addition for some performance commitments and incentives types we have intervened to change the underlying performance level or incentives. These interventions are listed in Table 3.1 below. Full detail of the wholesale water outcomes, performance commitments and incentives is provided in annex 4.

**Table A3.1 Wholesale wastewater outcomes, performance commitments and incentives**

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
We will safely take your waste away	Number of internal sewer flooding incidents	Reward and penalty	No intervention
	Number of external sewer flooding incidents	Reward and penalty	No intervention
	Partnership working	Reward and penalty	No intervention

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Asset stewardship: blockages	Penalty only	<b>Bottom-up analysis:</b> We made the performance commitment more stretching
	Statutory obligations (Section S101a schemes connectable properties)	Non-financial incentive	No intervention
We will have the lowest possible charges	Customers rating our services as good value for money (based on Tracker survey)	Reward and penalty	No intervention
We will protect our local environment	Improvements in river water quality against WFD criteria – wastewater	Reward and penalty	No intervention
	Number of pollution incidents	Reward and penalty	<b>Horizontal check:</b> We made the performance commitment more stretching and introduced deadbands. Also, in order to ensure that Severn Trent Water cannot earn rewards in connection with its performance on serious pollution incidents (for which they could be prosecuted), we removed serious pollution incidents from the performance measure and ODI
	Asset stewardship: Environmental compliance	Penalty only	No intervention

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Biodiversity (based on SSSIs at favourable status)	Reward and penalty	No intervention
	Sustainable sewage treatment	Reward and penalty	No intervention
	Serious pollution incidents	Non-financial incentive	No intervention
	Overall environmental performance	Reward and penalty	No intervention
We will protect the wider environment	Size of our carbon footprint – wastewater	Reward and penalty	No intervention
We will make a positive difference in the community	Improved understanding of our services through education – company total	Non-financial incentive	No intervention

### A3.1.1 Outcome delivery and reporting

In the [assurance technical appendix](#), we set out our proposed framework for the form and level of reporting, monitoring and assurance we will seek from companies during the five year regulatory period 2015 -2020 in relation to the delivery of their commitments for the price review. This sets out three levels of assurance and the opportunities available for a company to improve its category status through the finalisation of the price controls and during the regulatory period itself.

We are satisfied with the company's proposals for self-reporting. But consistent with the commentary in our assurance technical annex, we will need to consider the categorisation of the company for assurance purposes at the final determination.

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

## A3.2 Calculating the wholesale wastewater price control

### A3.2.1 Calculating allowed wholesale wastewater expenditure

Our approach to calculating allowed wholesale expenditure is set out in the [wholesale water and wastewater technical appendix](#).

In Severn Trent's revised plan the company proposed wholesale wastewater totex of £2,658m over 2015-2020 (compared to £2,657 in its December plan). We calculated the basic cost threshold (after additions) at £3,000m, giving rise to a difference of £342m or 11% below the threshold. This included making adjustments for the National Environmental Programme Phase 5. However, in line with our policy we have applied a 5% cap on the threshold, which results in a revised draft determination threshold of £2,791m (£209m lower than would occur without a cap). The proposed wholesale wastewater allowed expenditure for Severn Trent Water is detailed in Table A3.2 below.

A further breakdown of some of the calculations is provided in annex 1. Further information about our assessment of each claim is set out in the [populated version of draft determination initial cost threshold models](#).

**Table A3.2 Wholesale wastewater allowed expenditure (£ million)**

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Draft determination cost threshold						2,790.8
Costs excluded from menu						20.5
Menu cost baseline <sup>1</sup>	486.9	565.8	589.9	586.0	541.8	2770.3
Company's view of menu costs <sup>2</sup>						2635.3
Implied menu choice						95.1
<b>Allowed expenditure from menu</b>	480.9	558.9	582.8	578.8	535.2	2736.5
Costs excluded from menu	4.4	4.0	4.0	4.0	4.0	20.5
<b>Total allowed expenditure<sup>3</sup></b>	485.3	562.9	586.8	582.8	539.2	2757.0

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Less pension deficit repair allowance	4.0	4.0	4.0	4.0	4.0	20.1
<b>Totex for input to PAYG</b>	<b>481.3</b>	<b>558.9</b>	<b>582.8</b>	<b>578.8</b>	<b>535.2</b>	<b>2736.9</b>

**Notes:**

1. Menu baseline is equal to the draft 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 minus costs for items excluded from the menu.
3. Includes pension deficit repair allowance.

We have adapted our draft determination threshold by capping our view of the cost threshold at 5% above the company plan view of totex for wastewater.

**A3.2.2 Calculation of revenues: PAYG and RCV-run off**

Table A3.3 shows the company's proposed PAYG ratios and associated totex recovery for wholesale wastewater, which we have used as the basis for this draft determination.

**Table A3.3 Severn Trent Water wholesale wastewater PAYG ratios**

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Totex (£m)	481.3	558.9	582.8	578.8	535.2	2736.9
PAYG %	63.0%	53.1%	50.1%	48.7%	53.8%	53.8%
Resulting PAYG (£m)	303.3	297.0	291.8	281.8	288.2	1462.1

Table A3.4 shows the RCV run-off amounts included within the wholesale wastewater charge. This reflects a run-off rate of 5.02% for the RCV as it stands on 31 March 2015 and 23 years for the totex additions to the RCV over 2015-20.

**Table A3.4 Severn Trent Water wholesale wastewater RCV run-off (£ million)**

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Run-off of 2015 RCV	195.0	185.2	175.9	167.1	158.7	881.8
RCV run-off of totex additions	3.9	13.4	25.5	38.2	50.1	131.0
Total RCV run-off	198.8	198.6	201.3	205.3	208.7	1012.8

### A3.2.3 Return on the RCV

As discussed in section A2.2.4, the company has accepted our risk and reward guidance and so we have used a cost of capital of 3.7% in this draft determination. This results in a return on capital of £736.8 million over 2015-20.

Table A3.5 shows our calculation of the opening RCV at 1 April 2015 taking account of the adjustments for 2010-15 performance discussed in section A3.2.4 below. The average RCV, set out in Table A3.6 below for each year, takes into account the proportion of totex additions to the RCV determined by the PAYG ratio and RCV run-off.

**Table A3.5 Severn Trent Water wholesale wastewater opening RCV (£ million)**

	2015-16
Closing RCV 31 March 2015	3956.6
Land sales	-13.1
Adjustment for actual expenditure 2009-10	63.2
Adjustment for actual expenditure 2010-2015 <sup>1</sup>	-98.8
Net adjustment from logging up, logging down and shortfalls	-28.5
Other adjustments <sup>2</sup>	4.3
Opening RCV 1 April 2015	3883.8

**Note:**

1. The adjustment for actual expenditure 2010-15 is explained further in annex 3 as part of the CIS adjustment.
2. 'Other adjustments' are in respect of an incorrect logging down adjustment made at PR09

**Table A3.6 Severn Trent Water wholesale wastewater return on RCV (£ million)**

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening RCV	3883.8	3863.0	3926.2	4015.8	4107.5
RCV additions (from totex)	178.0	261.9	290.9	297.0	247.0
Less RCV run-off	198.8	198.6	201.3	205.3	208.7
Closing RCV	3863.0	3926.2	4015.8	4107.5	4145.8
Average RCV (year average)	3873.4	3894.6	3971.0	4061.7	4126.7
Return on capital	143.2	144.0	146.8	150.2	152.6

### A3.2.4 Reconciling 2010-15 performance

Our approach to reconciling 2010-15 performance is set out in the [wholesale water and wastewater technical appendix](#).

The company proposed adjustments to the opening RCV and allowed revenue for the wholesale wastewater services to reconcile performance in 2010-15. We have intervened and as a result the revenue adjustments for wholesale wastewater have changed from -£0.5 million to -£37.2 million. These interventions and the resulting adjustments within this draft determination are summarised in table A3.7 below. The impact on the opening RCV of 2010-15 adjustments is shown in Table A3.5 above. As noted in the table, we have applied -£28.5m in (net) adjustments arising from logging up, logging down and shortfalls. It should be noted that the company did not propose a serviceability shortfall and therefore we have intervened and applied a shortfall of -£28.8m – this relates to (i) pollution incidents; and (ii) sewer blockages. Further information on our interventions and rationale is set out in annex 3.

**Table A3.7 Severn Trent Water wholesale wastewater revenue adjustments to reflect 2010-15 performance (£ million)**

Area	Intervention	Why we did it	Total 2010-15
Service incentive mechanism (SIM)	There are no interventions in this area	n/a	0.0
Revenue correction mechanism (RCM)	<p>We have intervened in the following areas.</p> <ul style="list-style-type: none"> <li>• Back billing</li> <li>• Tax</li> <li>• FD09 assumptions</li> <li>• Number of households billed</li> </ul>	<p>We have concerns as to whether the back billing amounts being put forward by the company are compliant with RAG4.04 and IN11/04 and so have disallowed these claims. We also have some minor issues on Tax and FD09 assumptions.</p>	-25.6

Area	Intervention	Why we did it	Total 2010-15
Opex incentive allowance (OIA)	<p>We have rejected the company's proposed pension adjustments and the effective tax rate figure of 20% it used in calculating the proposed incentive allowance.</p> <p>We challenged the company's proposed logging up opex adjustments for private sewers.</p>	<p>For consistency with the expected methodology we published in 'Setting price controls for 2015-20 – further information on reconciling 2010-15 performance' April 2014 and to ensure consistency with the approach adopted by other companies.</p> <p>To maintain consistency with the approach we applied in our Interim Determination of K for Thames Water.</p>	9.3
Capital expenditure incentive scheme (CIS)	<p>Our interventions are as follows:</p> <ul style="list-style-type: none"> <li>• We have calculated the revenue adjustment using Ofwat's published CIS true-up model.</li> <li>• We have used Ofwat's discount rates</li> <li>• We have profiled the revenue adjustment using the same approach as the company.</li> <li>• We have included our view of the applicable change protocol amounts.</li> </ul>	<p>The company has used its own approach to calculating the revenue adjustment.</p> <p>Aspects where the approach is different are:</p> <ul style="list-style-type: none"> <li>• indexation treatment in the financing adjustment;</li> <li>• annuity calculation;</li> <li>• discount values and</li> <li>• tax adjustment.</li> </ul> <p>We have applied Ofwat's published methodology.</p>	-20.9

Area	Intervention	Why we did it	Total 2010-15
Other adjustments	There are no other adjustments in this area		0.0
<b>Total</b>			<b>-37.2</b>

### A3.2.5 Calculation of allowed revenue

The calculation of the allowed revenue for Severn Trent Water's wholesale wastewater control is shown in Table A3.8.

Overall, we consider that Severn Trent Water's wholesale wastewater revenue allowance should be £675.8 million in 2015-16, decreasing by 3.3% to £653.8 million in 2019-20.

As outlined in section A2.2.6, prior to final determinations we require Severn Trent Water to provide evidence that it has engaged with its Customer Challenge Group and received their agreement about the company's proposed use of its expected tax credit.

**Table A3.8 Severn Trent Water wholesale wastewater allowed revenue (£ million)**

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Totex	481.3	558.9	582.8	578.8	535.2	2736.9
PAYG ratio	63.0%	53.1%	50.1%	48.7%	53.8%	-
Totex additions	178.0	261.9	290.9	297.0	247.0	1274.8
RCV (year average)	3873.4	3894.6	3971.0	4061.7	4126.7	-
<b>Wholesale allowed revenue build up:</b>						
PAYG <sup>1</sup>	307.3	301.0	295.9	285.8	292.2	1482.2
Return on capital	143.2	144.0	146.8	150.2	152.6	736.8
RCV run-off	198.8	198.6	201.3	205.3	208.7	1012.8
Tax <sup>2</sup>	24.2	16.4	10.5	5.0	5.4	61.5
Income from other sources	-4.9	-5.0	-5.1	-5.2	-5.2	-25.2
Reconciling 2010-15	0.0	-9.3	-9.3	-9.3	-9.3	-37.2

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
performance						
Ex ante additional menu income	2.9	3.4	3.5	3.5	3.2	16.5
<b>Capital contributions from connection charges and revenue from infrastructure charges</b>	4.2	4.7	5.2	5.7	6.2	25.9
<b>Final allowed revenues</b>	<b>675.8</b>	<b>653.8</b>	<b>648.9</b>	<b>641.0</b>	<b>653.8</b>	<b>3273.4</b>

**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.

### A3.3 Uncertainty mechanisms

We outline our approach to uncertainty mechanisms in the [risk and reward technical appendix](#). In Table A3.9 below, we set out Severn Trent Water's proposed wholesale wastewater uncertainty mechanisms and our assessment of these proposals.

**Table A3.9 Severn Trent Water proposals for wholesale wastewater uncertainty mechanisms**

Severn Trent Water proposals	Our assessment
Severn Trent Water did not propose any uncertainty mechanisms beyond those that will already form part of the regulatory framework for 2015-20.	

## A4. Household retail

### A4.1 Company outcomes, performance commitments and delivery incentives

In the [outcomes technical appendix](#), we discuss our approach to outcomes for the wholesale and retail controls.

We summarise the outcomes, performance commitments and outcome delivery incentives for the household retail control for Severn Trent Water in Table A4.1 below.

We have not intervened to change any underlying performance level or incentives. Full detail of the household retail outcomes, performance commitments and incentives is provided in Annex 4.

**Table A4.1 Household retail outcomes, performance commitments and incentives**

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
We will provide you with excellent customer service	Customer satisfaction with their service (based on a customer survey)	Non-financial incentive	No intervention
	Customers' experience of dealing with us (based on Ofwat's SIM)	Reward and penalty	No intervention
We will help you if you struggle	Number of customers helped by a review of their tariff and water usage and/or supported by our social fund	Non-financial incentive	No intervention
	% of customers who do not pay	Non-financial incentive	No intervention

Notes:

### A4.1.1 Outcome delivery and reporting

In the [assurance technical appendix](#), we set out our proposed framework for the form and level of reporting, monitoring and assurance we will seek from companies during the five year regulatory period 2015-2020 in relation to the delivery of their commitments for the price review. This sets out three levels of assurance and the opportunities available for a company to improve its category status through the finalisation of the price controls and during the regulatory period itself.

We are satisfied with the company's proposals for self-reporting. But consistent with the commentary in our assurance technical annex, we will need to consider the categorisation of the company for assurance purposes at the final determination.

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

## A4.2 Costs

Our approach to the household retail control is set out in [the household retail technical appendix](#).

### A4.2.1 Allocation of costs

In Table A4.2 below, we summarise our assessment of Severn Trent Water's cost allocation methodology.

**Table A4.2 Our assessment of Severn Trent Water's cost allocation methodology**

Area assessed	Assessment
No potential material misallocations	Fail
Adequate assurance provided	Fail
Reconciliation to regulatory accounts and December business plan provided	Pass
Correct price base used	Fail

Whilst reviewing the company's cost allocations, we also noted that the company had submitted tables R3 and R4 in 2013-14 outturn prices. This is not in line with our guidance and we have amended our models to deflate the company's household and non-household costs to 2012-13 base year prices.

We will use the company's cost allocations between retail and wholesale and household and non-household to set our draft determination, with the exception of its allocation of first visit to the customer / investigatory visit costs. In its 13 June business plan submission, the company had allocated all of these costs (totalling £5.03m in 2013-14 prices) to retail. We did not believe that this was correct so we queried the company on this allocation, re-iterating our guidance in this area in our query.

Following our query the company moved £4.56m (90.66%) of the £5.030m costs (in 2013-14 prices) from retail to wholesale in its updated 4 July tables – leaving £0.47m in retail. This included the £1.117m costs where there was follow-on work and 88% or £3.443m of the costs where there wasn't follow-on work. We were satisfied with the allocation of the £1.117m where follow-on work was required to wholesale. However, we did not consider that the company provided sound justification for moving £3.443m (in 2013-14 prices) of the costs where no follow on work was required to wholesale. We have assumed that costs where no follow-on work is required would be retail in nature. So we have moved £3.346m (£3.443m deflated to 2012-13 prices) from wholesale water to retail in our models. We have prorated the adjustment between household and non-household using an 89.6%:10.4% split as per the company's initial allocation. This has resulted in £2.998m (in 2012-13 prices) being added to the household controls per year or £14.992m (in 2012-13 prices) over the control period. It has resulted in £0.348m (in 2012-13 prices) being added to the non-household controls per year or £1.740m (in 2012-13 prices) over the control period.

We made this as a flat adjustment to each year of the control period. We recognise that this is an assumption, and may contain a degree of inaccuracy. We will request that the company provides us with a more accurate forecast as part of its representations.

We wrote to the company on 30 July highlighting some concerns that we had with their cost allocation submission. In response to this letter, the company provided us with a copy of the external assurance report over its cost allocations. We can confirm that, subject to ratification by Ofwat Board post draft determination, we believe that this assurance report addresses the concerns that we had in this area.

## A4.2.2 Adjustments

In Table A4.3 below, we outline Severn Trent Water’s proposed average cost to serve (ACTS) adjustments and our assessment of these proposals. The adjustments proposed by Severn Trent and Ofwat are quantified in Table A4.4.

Our approach to assessing adjustment claims is set out in the [household retail technical appendix](#).

**Table A4.3 Severn Trent Water proposals for ACTS adjustments**

		Adjustment assessment criteria			
Adjustment	Value (£m over 2015-20)	Materiality	Beyond efficient management control	Impact company in materially different way	Value of adjustment appropriate
Bad debt	25.9	Fail	n/a	n/a	n/a

In its revised business plan submission, Severn Trent Water sought an ACTS adjustment for bad debt based on deprivation and bill size. The total value of the adjustment was £25.9m. This is higher than the £15.7m sought by Severn Trent Water in its original business plan submission in December.

Ofwat rejects Severn Trent Water’s proposal for an ACTS adjustment for bad debt based on deprivation and bill size. Severn Trent Water’s proposed adjustment value (£25.9m) includes £14.6m of bad debt costs that it incorrectly allocated to the adjustment value (to reflect “one-off” bad debt costs excluded from the ACTS cost base). Instead, these costs have been reallocated to base costs and considered by us as part of the general movement in the ACTS cost base (‘new costs’). Ofwat has not assessed the evidence supporting Severn Trent Water’s new costs (including the £14.6m) as they were only identified as being material at the end of our assessment process, due to a late modelling change following the correction of the price base of Severn Trent Water’s retail costs. For the purpose of the draft determination we have simply added these costs to Severn Trent Water’s ACTS cost base. However, we will review the evidence supporting these costs before setting the final determination.

Removing this £14.6m from Severn Trent Water's proposed ACTS adjustment reduces the adjustment value to approximately £10.9m, which is immaterial (1.9% of retail opex and depreciation) and hence is not allowed.<sup>3</sup> It should be noted that this amount related primarily to changes in nominal bill size and thus is more appropriately treated as an input price pressure (IPP) adjustment. Nevertheless this fact does not change our assessment – the amount is immaterial, and rejected, and thus not added back onto Severn Trent Water's ACTS cost base.

**Table A4.4 Household retail adjustments (£ million, nominal prices)**

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
<b>Adjustments proposed in Severn Trent Water's business plan</b>						
Doubtful debt	3.425	3.880	4.973	6.051	7.549	25.878
Pension deficit repair costs	0.724	0.724	0.724	0.724	0.724	3.621
Outcome A: We will provide you with excellent customer service	0.236	0.746	1.136	1.333	1.268	4.720
Outcome B: We will help you when you struggle	0.969	0.937	0.906	0.877	0.850	4.539
<b>Adjustments included in business plan</b>	<b>5.354</b>	<b>6.288</b>	<b>7.739</b>	<b>8.984</b>	<b>10.392</b>	<b>38.757</b>
<b>Adjustments included in draft determination</b>						
Doubtful debt	£0.0m allowed as an adjustment and £14.6m added on to new costs					
Pension deficit repair costs	0.786	0.786	0.786	0.786	0.786	3.930

<sup>3</sup> Note that the adjustment value of £25.9m is stated in 2013-14 prices. The £10.9m relates to an adjustment for IPP and so has not been rebased from this value. The remaining £15m relates to new costs and so has been rebased from £15m in £2013-14 prices to £14.6m in 2012-13 prices.

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Outcome A: We will provide you with excellent customer service	Not included as adjustment – forms part of new cost					
Outcome B: We will help you when you struggle	Not included as adjustment – forms part of new costs					
<b>Adjustments included in draft determination</b>	<b>0.786</b>	<b>0.786</b>	<b>0.786</b>	<b>0.786</b>	<b>0.786</b>	<b>3.930</b>

**Note:**

There will be no indexation for retail price controls.

**A4.2.3 New costs**

As set out in the [household retail technical appendix](#), our methodology allows for the possibility of a modification to be made to a company's cost to serve for new costs. Severn Trent Water included new costs for schemes that could result in a modification being made in its business plan. These costs are related to "Outcome A: We will provide you with excellent customer service", "Outcome B: We will help you when you struggle" and £14.6m that has been incorrectly allocated to the bad debt adjustment claim.

Ofwat has not assessed these costs further as they were only identified as being material at the end of our assessment process, due to a late modelling change following the correction of the price base of Severn Trent Water's retail costs. For the purpose of the draft determination we have simply added these costs to Severn Trent Water's ACTS cost base. However, we will review the evidence supporting these costs before setting the final determination.

The modification for new costs included in this draft determination are quantified in Table A4.5.

**Table A4.5 New household retail costs (£/customer)**

	Value
Modification made to 2013-14 CTS for ACTS calculation	0.60

**Note:**

There will be no indexation for retail price controls from this 2012-13 price base.

### A4.3 Calculating the allowed revenues

Using the average industry allowances per customer, and the projected customer numbers in the company's revised business plan, we have calculated the total allowed household retail revenues, including the efficiency challenge and the household retail net margin.

#### A4.3.1 Net margins

Table A4.6 below shows the household retail net margin over 2015-20.

**Table A4.6 Household retail net margins (%)**

	2015-16	2016-17	2017-18	2018-19	2019-20
Household retail net margin	1.00%	1.00%	1.00%	1.00%	1.00%

Table A4.7 below sets out the components of the allowed household retail revenue.

**Table A4.7 Components of the allowed household retail revenue (nominal prices)**

	2013-14	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Company cost to serve (£/customer)</b>						
Unmetered single service customers	21.32					
Unmetered water and wastewater customers	27.71					
Metered water only customers	28.75					
Metered wastewater only customers	21.78					
Metered water and wastewater customers	35.14					
<b>Industry average cost to serve (£/customer)</b>						
Unmetered single service customers	20.73					
Unmetered water and wastewater customers	26.78					

	2013-14	2015-16	2016-17	2017-18	2018-19	2019-20
Metered water only customers				24.04		
Metered wastewater only customers				33.21		
Metered water and wastewater customers				26.95		
<b>Allowed cost to serve<sup>1</sup> (£/customer)</b>						
Unmetered single service customers		19.22	19.87	20.26	20.36	20.48
Unmetered water and wastewater customers		24.99	25.83	26.33	26.46	26.62
Metered water only customers		26.07	26.56	26.65	26.41	26.53
Metered wastewater only customers		19.85	20.49	20.87	20.96	21.08
Metered water and wastewater customers		31.84	32.52	32.88	32.72	32.88
<b>Total allowed (£ million)</b>						
Cost to serve (excluding net margin)		100.9	104.5	107.0	108.0	109.6
Forecast household wholesale charge (including forecast RPI <sup>2</sup> ) <sup>3</sup>		1,372.1	1,396.2	1,444.5	1,490.5	1,562.1
Household retail revenue (including an allowance for the net margin) <sup>4</sup>		112	116	119	120	122

**Notes:**

There will be no indexation for retail price controls.

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.
4. This number is indicative as allowed revenue will depend upon actual customer numbers.

## A4.4 Uncertainty mechanisms

We outline our approach to uncertainty mechanisms in the [risk and reward technical appendix](#). In Table A4.8 below, we set out Severn Trent Water’s proposed household retail uncertainty mechanisms and our assessment of these proposals.

**Table A4.8 Severn Trent Water proposals for household retail uncertainty mechanisms**

Severn Trent Water proposals	Our assessment
Severn Trent Water did not propose any uncertainty mechanisms beyond those that will already form part of the regulatory framework for 2015-20.	n/a

## A5. Non-household retail

In the [non-household retail technical appendix](#), we outline our overall approach to the non-household retail price control. Further information regarding our observations on companies' proposals for their non-household retail price controls is set out in [IN 14/14: 2014 price review – non-household customer engagement ahead of draft determination representations](#).

In this chapter, we provide details of Severn Trent Water's non-household retail draft determination.

### A5.1 Indicative non-household retail total revenue

Table A5.1 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.

**Table A5.1 Indicative non-household retail total revenue price control including net margins (£ million, nominal prices)**

	Units	2015-16	2016-17	2017-18	2018-19	2019-20
Indicative non-household retail total revenue price control including net margins	£m	26	26	28	29	30

**Note:**

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

### A5.2 Net margins

The company proposed net margins that summated in aggregate to 2.5%. This is in line with our risk and reward guidance. We have therefore accepted the company's proposals.

### A5.3 Cost proposals

Below we set out our interventions on the company's costs, including for:

- consistency with existing policy, including for example ensuring that companies cost information is presented in a consistent price base and pension deficit costs are presented as per our stated policy; and
- cost escalation, including for example material new investments or increases in costs or requests for input cost allowances.

The table requirements stipulated the use of 2012-13 prices. The company did not deflate its costs; therefore we have deflated its submission from 2013-14 prices to 2012-13 prices.

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.

This resulted in the company's proposals being adjusted from £0.466 million over the control period to £0.630 million.

In its business plan submission, the company allocated £5.030 million – all of its initial investigations / first visits to the customer costs – to retail. We queried this with the company as we did not consider that this was in accordance with our guidance, which stated that these costs should only be included in retail where the initial investigation / first visit to the customer was not the result of a network issue. Following our query, the company moved £4.560 million (90.66%) of the £5.030 million costs to wholesale in its updated tables provided to us on 4 July – leaving £0.470 million in retail.

In a query response the company stated that £3.914 million was associated with initial investigations / first visits to the customer that did not require any follow on work. We consider that this work should be allocated to retail. We therefore made a £3.443 million adjustment to the company's revised data tables (that is, the difference between the £3.914 million, and the £0.470 million already allocated to retail).

We then prorated the adjustment between household and non-household using an 89.6%:10.4% split, as per the company's initial allocation. This resulted in £0.358

million being added to the non-household retail controls per year – that is, £1.790 million over the control period, or £1.740 million adjusting for price base.

We made this as a flat adjustment to each year of the control period. We recognise that this is an assumption, and may contain a degree of inaccuracy. We therefore request that for the company to provide us with a more accurate forecast as part of its representations.

The company included an allowance for input price pressures. In its business plan the company provided a forecast of wage inflation. This analysis was undertaken at a high level, with the data sources unreferenced. No forecasts were provided for the non-labour costs the company incurs. No detail was provided on the activities the company plans to undertake to manage these costs, or any assessment of the company's current levels of efficiency. No evidence was provided as to why the net margin was insufficient for covering input price risks. Consequently, we concluded that the claim was not supported by sufficient evidence.

We requested through a query for the company to provide the exact figures of the associated allowance. The company provided these relative to a 2015-16 base, but we subsequently requested these to be shown relative to a 2013-14 base; these were not provided. We therefore have derived what we think the company has included – that is input price inflation of 1.5% per year, or £4.870 million across the control period. We adjusted the company's proposals by this amount. We recognise that this is an assumption, and may contain a degree of inaccuracy. We therefore request for the company to provide us with a more accurate forecast as part of its representations.

In total, this resulted in the company's proposed costs being adjusted from £91.998 million over the control period to £86.487 million.

However, we also note that the company's opex in 2013-14 is significantly higher than the preceding three years. As part of its representations we request for the company to provide us with a clear explanation of the cost increase, and to explain why the increase should not be treated as an exceptional one-off event.

## A6. Appointee

In this section we discuss at an appointee level:

- bills and k factors;
- return on regulated equity;
- financeability; and
- affordability

### A6.1 Bills and K factors

As described in section A2.2.1, for the purposes of draft determination we have modelled two scenarios.

- Scenario A assumes that the core Birmingham resilience solution identified in the company's June plan is demonstrated to be fully cost beneficial. Under this scenario an additional £243 million is added to the water basic cost threshold.
- Scenario B does not allow for any adjustment to Severn Trent Water's cost threshold for investment to improve resilience in Birmingham.

Table A6.1a and A6.1b below set out the allowed revenues we have assumed in our draft determination under both scenarios for Severn Trent Water to deliver its:

- statutory duties;
- outcomes; and
- associated performance commitments.

They also set out the average customer bills on the basis of the draft determination.

**Table A6.1a Severn Trent Water's draft determination (Scenario A) – K factors, allowed revenues and customer bills <sup>A</sup>**

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Wholesale water – allowed revenues (£m) <sup>1</sup>	595.9	599.1	604.6	612.1	620.8	3,032.5

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Wholesale water – K (%) <sup>2</sup>	0.00%	0.55%	1.02%	1.05%	1.22%	-
Wholesale wastewater – allowed revenues (£m)	675.8	653.8	648.9	641.0	653.8	3,273.4
Wholesale wastewater <sup>2</sup> – K (%)	0.00%	-3.26%	-0.66%	-1.39%	1.81%	-
Retail household allowed revenue (£m)	111.9	115.8	118.7	120.1	122.2	588.7
Retail non-household expected revenue (£m)	25.7	26.3	28.1	29.1	30.2	139.4
Average household bill – water (£)	163	164	166	167	169	-
Average household bill – wastewater (£)	152	147	146	143	146	-
Average household bill – combined (£) <sup>3, 4</sup>	298	294	294	293	297	-

**Notes:**

- A. Wholesale figures in 2012-13 prices and retail figures in nominal prices
  1. The allowed revenue for our draft 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.
  2. As discussed in the [wholesale water and wastewater technical appendix](#), K is set to zero for 2015-16 for wholesale water and wastewater because there are no directly equivalent wholesale revenues for 2014-15 (on account of the new price review structure). As such, there is no reference point against which to express a change in K.
  3. The average combined household bill is not equal to the sum of the average household water bill and the average household wastewater bill due to the use of the economies of scope factor in the household retail price control.
  4. It should be noted 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 Severn Trent Water's household and non-household customer base. In practice, this will depend upon the structure of wholesale charges implemented by Severn Trent Water.

**Table A6.1b Severn Trent Water’s draft determination (Scenario B) – K factors, allowed revenues and customer bills<sup>A</sup>**

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Wholesale water – allowed revenues (£m) <sup>1</sup>	565.5	567.2	572.0	579.4	587.6	2,871.6
Wholesale water – K (%) <sup>2</sup>	0.00%	0.31%	0.95%	1.10%	1.23%	-
Wholesale wastewater – allowed revenues (£m)	675.8	653.8	648.3	639.9	652.9	3,270.8
Wholesale wastewater <sup>2</sup> – K (%)	0.00%	-3.25%	-0.74%	-1.49%	1.84%	-
Retail household allowed revenue (£m)	111.7	115.6	118.4	119.8	121.9	587.3
Retail non-household expected revenue (£m)	25.5	26.1	27.8	28.9	29.9	138.1
Average household bill – water (£)	156	156	158	159	161	-
Average household bill – wastewater (£)	152	147	145	143	145	-
Average household bill – combined (£) <sup>3, 4</sup>	291	286	286	285	289	-

**Notes:**

- A. Wholesale figures in 2012-13 prices and retail figures in nominal prices
1. The allowed revenue for our draft 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.
  2. As discussed in the [wholesale water and wastewater technical appendix](#), K is set to zero for 2015-16 for wholesale water and wastewater because there are no directly equivalent wholesale revenues for 2014-15 (on account of the new price review structure). As such, there is no reference point against which to express a change in K.
  3. The average combined household bill is not equal to the sum of the average household water bill and the average household wastewater bill due to the use of the economies of scope factor in the household retail price control.

4. It should be noted 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 Severn Trent Water's household and non-household customer base. In practice, this will depend upon the structure of wholesale charges implemented by Severn Trent Water.

We note that customer bills in the regulatory period from 2020 will be affected by Severn Trent 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.

Severn Trent Water has also proposed that the financial rewards and penalties associated with a number of its performance commitment could be applied within the 2015-20 regulatory period. This means that its customers' bills could vary over the period from those set out above.

For a company to be able to recover outcome rewards between price controls we would need to change its licence. In order for us to consider this proposal further, we therefore require the company to propose a draft licence modification that would enable its proposed approach. The company should consider how any modification would ensure that it remains within the overall cap and collar on outcome delivery incentives for the 2015-20 period that we are setting. We also require the company to demonstrate that its customers support the idea of their bills varying during the period to reflect the company's performance. If we accept the company's proposed approach we will formally consult on a licence change before we make our final determination.

## A6.2 Return on regulated equity range

We set out our approach to calculating the expected range in RoRE in the [risk and reward technical appendix](#). The whole company RoRE range, based on RoRE information provided by Severn Trent Water, and reflecting our interventions on ODIs, is shown in Table A6.2 below.

**Table A6.2 Whole company RoRE range**

	Lower bound (%) (appointee)	Upper bound (%) (appointee)
Overall	-4.8%	+3.4%
ODIs	-1.9%	+0.9%

	Lower bound (%) (appointee)	Upper bound (%) (appointee)
Totex	-2.1%	+1.9%
Financing	-0.5%	+0.3%
SIM	-0.4%	+0.2%

**Commentary:**

The whole company RoRE range is from 1.0% to 9.2%, with a base case of 5.8%, with overall impacts from -4.8% to +3.4%.

The totex range from -2.1% to +1.9% has been modelled by Severn Trent Water by combining the macro scenario variables as set out in the PwC guidance with additional totex over/under performance based on external benchmarks. Its methodology has been appropriately evidenced and the range equates to -5.5% to +5.0% of totex, which is in line with other companies. The overall range is acceptable.

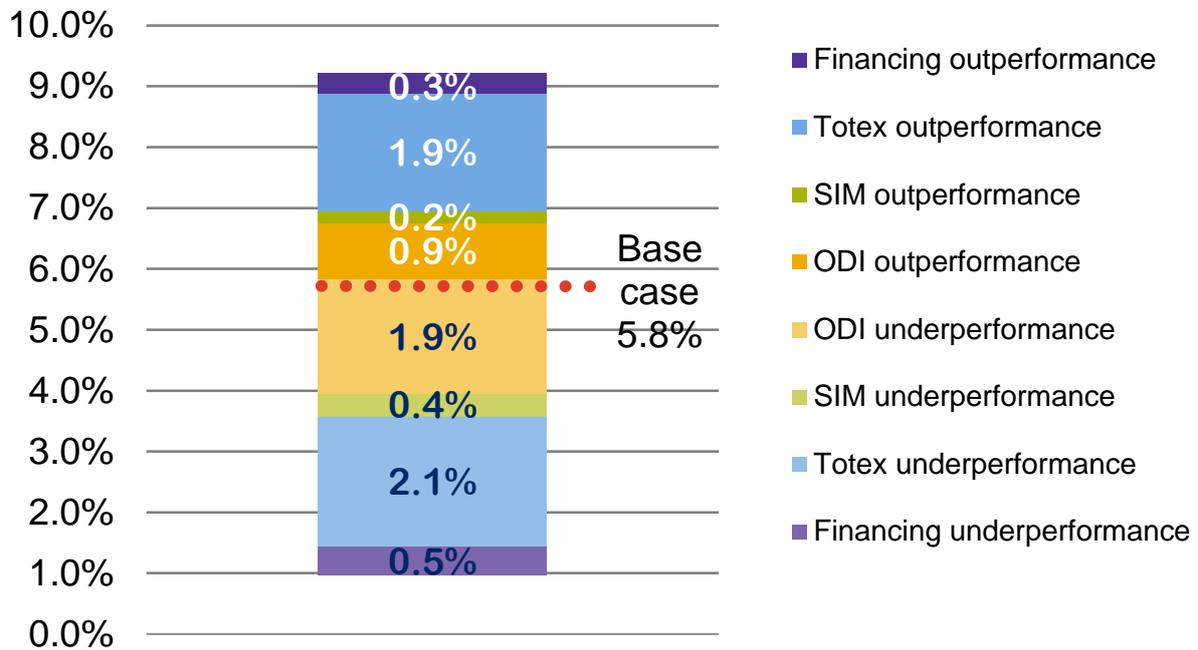
The ODI range proposed by Severn Trent Water was from -1.4% to +1.0%. We have adjusted this to -1.9% to +0.9% to take account of the interventions discussed in Annex 4 taking into account Severn Trent Water's submissions. The adjustment includes, in the downside case, an assumption that the Birmingham resilience scheme suffers a timing delay of one year and incurs a penalty of £52m.

Severn Trent Water has assessed financing impacts using a scenario of +/- 100 basis points on the cost of new debt with the downside case compounded by a credit downgrade adding a further 40 basis points to the cost of new debt. The resulting RoRE impacts of -0.5% to +0.3% appear reasonable.

SIM impacts have been estimated by Severn Trent Water using an assumption of maximum rewards and penalties (+0.5% to -1% of revenue). We consider this to be appropriate.

The composition of the RoRE range for Severn Trent Water at an appointee level is shown in Figure A6.1 below.

**Figure A6.1 Severn Trent Water RoRE range – appointee**



**Source:**

Ofwat calculations based on the Ofwat risk assessment tool provided by Severn Trent Water on 4 July 2014.

### A6.3 Financeability

We have compared the financial ratios provided by Severn Trent Water and our calculation of its financial ratios implied by the company’s business plan proposals submitted on 27 June, when both are prepared on a notional basis. We illustrate these in Table A6.3 below. The final columns of Table A6.3 set out the financeability ratios based on our draft determination revenues and costs for both Scenario A and Scenario B described above in section A2.2.1.

**Table A6.3 Company and Ofwat financial ratio calculations based on the company business plan and financial ratios based on our draft determination**

Financial ratios for notional company	Financial ratio calculations based on the company business plan (average 2015-20)		Financial ratio calculations based on our draft determination (average 2015-20)	
	Company calculation	Ofwat calculation	Scenario A	Scenario B
Cash interest cover (ICR)	3.11	3.12	3.12	3.11
Adjusted cash interest cover ratio (ACICR) – base case (average over five years)	1.55	1.60	1.60	1.59
Funds from operations(FFO)/debt	9.72%	9.92%	9.91%	9.89%
Retained cash flow/debt	7.10%	7.28%	7.26%	7.24%
Gearing	62.15%	62.94%	63.03%	62.83%
Dividend cover (profit after tax/dividends paid)	1.20	1.26	1.25	1.24
Regulatory equity/regulated earnings for the regulated company	16.52	17.33	17.32	17.38
RCV/EBITDA	10.56	10.22	10.23	10.26

**Commentary:**

**Financial ratios:** Severn Trent Water's current rating is BBB+ (S&P) and A3 (Moody's). Ratios on a notional basis appear consistent with the company's target credit rating of Baa1/BBB+.

To maintain financeability while accepting the lower weighted average cost of capital (WACC) proposed in our risk and reward guidance the company has proposed two measures.

- A 15% lower base dividend in its actual structure, which will improve cash flows in the actual structure but will not affect the notional structure as this is based our notional dividend. We note our notional dividend is lower than Severn Trent Water's proposed actual dividend taking account of this reduction.
- Using a financeability adjustment (by increasing the proportion of totex recovered in period through PAYG).

The financial ratios on a notional basis for our draft determinations are similar to Severn Trent Water's calculations for its business plan. We therefore consider that the draft determinations are financeable based on its notional capital structure.

#### **Change in PAYG:**

The company's change in PAYG rates brings forward around £200m in revenue over the period, or 3% of total revenue. Severn Trent Water states that if it did not adjust PAYG then there would be a risk that the credit ratings might be cut by a further notch with FFO/debt up to 1% lower and ACICR between 0.1 and 0.2 points lower. Severn Trent Water considers that this approach has long term customer benefits by reducing the cost of debt by around 0.3%. The change in the PAYG rate partly offsets the impact of the lower allowed WACC, however around 60% of the benefit is passed through to customers.

#### **Customer support:**

In its report the CCG expresses its support for the revised PAYG ratios and agrees that they have been set in a way that appropriately balances the interests of current and future customers.

**Proposed intervention.** We do not propose to intervene.

The company has demonstrated customer benefits from proposed PAYG adjustments since December and has CCG support for this approach. However, we note the company provided additional information on the benefits for customers following request for further information. We consider that this information (and focus on notional as opposed to actual financeability) should be used as the basis for better informed engagement with customers following our draft determination and their views should be reflected in any representations on the draft determination.

Table A6.4 sets out the PAYG and RCV run-off rates which shows revenue has been brought forward to 2015-20 compared to the December plan and the impact that this has on RCV growth and longer term affordability and financeability.

**Table A6.4 Impact on the longer term**

	PAYG rate	RCV run-off	RCV growth % 1 April 2015 to 31 March 2020
Company December plan	54.4%	4.28%	10.5%
Company June plan	57.2%	4.22%	9.5%
Draft determination – Scenario A	57.2%	4.22%	9.7%
Draft determination – Scenario B	57.2%	4.22%	8.9%

## A6.4 Affordability

Table A6.5 sets out the change in household bill profile between the company's December and June business plans and the draft determinations.

**Table A6.5 Household bill profile**

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Company December plan	316	306	306	305	305	304
Company June plan	315	305	300	300	300	303
Ofwat calculation for June plan	315	305	299	300	300	305
Ofwat calculation for draft determinations – Scenario A	315	298	294	294	293	297
Ofwat calculation for draft determinations – Scenario B	315	291	286	286	285	289

Companies have not necessarily used the same method of calculating household bills as Ofwat – for example, we have included economies of scope for household retail when calculating combined water and sewerage bills. So the Ofwat calculations (lines 3, 4 and 5 of Table A6.5) are not directly comparable to the company plans (lines 1 and 2 of Table A6.5).

Table A6.6 sets out the reasons why this draft determination is assessed as affordable. It describes key changes in relation to Severn Trent Water's December business plan that we assessed as affordable.

**Table A6.6 Business plan affordability assessment**

	<b>Commentary</b>
<b>Acceptability</b>	<p>Severn Trent Water's customer engagement, carried out in support of its December submission, found that the business plan was considered acceptable by 88% of customers.</p> <p>In its June submission, the company's proposed average bills are around 1% lower than those in the December plan. There is no evidence that there has been any reduction in the scope or scale of the service package being offered. It is therefore reasonable to conclude that the company's plan remains acceptable to the majority its customers. Table 6.5 compares the average household bill profiles that the company submitted in December 2013 and June 2014.</p>
<b>Identification of affordability issues and appropriate support measure</b>	<p>In its December submission, the company proposed an appropriate range of measures designed to help those customers identified as having affordability problems, including the use of social tariffs, meter promotion and trust funds. Its aim is to increase the number of customers in receipt of assistance from around 18,500 in 2014-15 to 50,000 by 2020.</p> <p>In the revised submission, the company reiterated its commitment to widening the coverage of its affordability measures. There is no indication that there has been any reduction in scale or scope of these measures.</p>
<b>Longer-term affordability</b>	<p>In its December plan, the company demonstrated a robust approach to ensuring that its proposals were affordable to customers in the longer term. Although the company did not directly ask customers about long term affordability, it consulted about future preferences in its acceptability research, and concluded that 88% of customers expressed a desire for the same level of bills now and in the future. In response to these findings, Severn Trent Water stated that its cost recovery tools had been set in order to avoid intergenerational disparities.</p> <p>In its June plan, the company increased its 2015-20 and 2020-25 PAYG ratios from its December plan. The CCG has expressed support for the revised PAYG ratios.</p>

	Commentary
<p><b>Longer-term affordability – ODI’s</b></p>	<p>The company has revisited its package of ODIs for the June submission, and has increased the associated rewards and penalties. The company provides evidence that the impact on customers’ bills of even the maximum level of rewards will be more than offset by the new, lower bills proposed in the June plan. Therefore, the impact of ODI’s is not expected to negatively impact customers’ acceptability of the plan. The company undertook dedicated ODI acceptability research as part of its June submission, which found that most customers considered the amended ODI package to be broadly acceptable.</p> <p>The CCG is broadly supportive of the company’s response to our RBR feedback on its ODI package, but has highlighted concerns around the company’s intention to apply ODIs in period, and that the complex nature of the revised ODI package may be difficult to successfully communicate to customers. The CCG also questions the appropriateness of having rewards set against serious pollution incidents and hosepipe bans, and notes that the rewards in general are weighted towards wastewater in a way which may not be proportionate.</p>

## Annex 1 Wholesale costs

### Establishing draft determination thresholds

Our approach to establishing draft determination thresholds is outlined in the [wholesale water and wastewater technical appendix](#).

In the tables below, we provide some information on the company-specific numbers that support these calculations. As discussed in section A2.2.1, for the purposes of draft determination we have modelled two scenarios:

- Scenario A assumes that the core Birmingham resilience solution identified in the company's June plan is demonstrated to be fully cost beneficial.
- Scenario B does not allow for any adjustment to Severn Trent Water's cost threshold for investment to improve resilience in Birmingham.

Further information about our assessment of each claim is set out in the populated version of draft determination initial cost threshold models.

**Table AA1.1 Movement from basic cost threshold to draft determination menu threshold for wholesale water totex (£ million)**

Basic cost threshold	Policy additions <sup>1</sup>	Unmodelled costs adjustment	Deep dive	Draft determination threshold	Deep dives fully or partially not added <sup>2</sup>
2,251.0	300.5	0.0	Scenario A – 242.9 Scenario B – 0	Scenario A – 2,794.3 Scenario B – 2,551.5	<b>Scenario A – 118</b> <b>Scenario B – 361</b>

**Note:**

1. See Table AA1.2 below
2. Deep dives are net of implicit allowances. A value of zero means deep dives are wholly covered by IAs. Includes unmodelled cost of £53m not included in table AA1.4

**Table AA1.2 Policy additions to the wholesale water basic cost threshold (£ million)**

Business rates	Pension deficit payments	Third party costs	Open market costs <sup>1</sup>	Net v gross adjustments	Total
215.2	22.0	60.9	2.5	0.0	<b>300.5</b>

**Note:**

1. Of this amount, **£0.364m** relates to 2014-15 open market costs.

**Table AA1.3 Comparison of company wholesale water totex with the draft determination threshold and 2010-15 totex (£ million)**

Plan	DD threshold	Gap <sup>1</sup>	Plan v 2010-15
2,930.3	Scenario A – 2,794.3 Scenario B – 2,551.5	Scenario A – 135.9 Scenario B – 378.8	419.3

**Note:**

1. 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 AA1.4 Summary of wholesale water deep dive assessments**

Company proposal		Assessment				DD allowance	
Claim	Amount sought	Implicit allowance	Need	CBA	Robust costs	Assessment	Amount allowed
Birmingham resilience – main scheme <sup>1</sup>	264.7	21.8	Scenario A – Partial pass Scenario B – Fail	Pass	Pass	Scenario A – Accept Scenario B – Reject	Scenario A - 242.9 Scenario B – 0
Non-infrastructure Maintenance	528.4	528.4	n/a	n/a	n/a	Reject	0
Birmingham resilience – community risk	71.1	5.9	Fail	Fail	Pass	Reject	0

Company proposal		Assessment				DD allowance	
Claim	Amount sought	Implicit allowance	Need	CBA	Robust costs	Assessment	Amount allowed
Birmingham resilience – maintenance (Bleddfa plus maintenance related elements)	42.7	42.7	n/a	n/a	n/a	Reject	0
Supply Demand – Additional Resources	30.3	0	Pass	Pass	n/a	Partially accept	0 <sup>1</sup>
Catchment Management	19.7	19.7	n/a	n/a	n/a	Reject	0

**Note:**

1. For this adjustment, while the amount allowed is £0, £14m has been added to the basic cost threshold through the model.

**Table AA1.5 Movement from basic cost threshold to draft determination threshold for wholesale wastewater totex (£ million)**

Basic cost threshold	Policy additions <sup>1</sup>	Unmodelled costs adjustment	Private sewage pumping stations	NEP5	Deep dive	Draft determination threshold	Deep dives fully or partially not added <sup>2</sup>
2,633.5	164.0	-17.3	36.2	183.2	-208.8 (Cap on totex)	2,790.8	None

**Note:**

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 IAs

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

Business rates	Pension deficit payments	Third party costs	Open market costs <sup>1</sup>	Net v gross adjustments	Total
141	20	0	2.7	-	164

**Note:**

1. Of this amount, £0.394 million relates to 2014-15 open market costs

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

Plan	DD threshold	Gap <sup>1</sup>	Plan v 2010-15
2,658.1	2,790.8	-132.7	185.4

**Note:**

1. This gap will not equal the deep dives fully or partially not added in Table AA1.5 if the company's claims for special treatment in the costs thresholds are not equal to the gap.

**Table AA1.8 Summary of wholesale wastewater deep dive assessments**

Company proposal		Assessment				DD allowance	
Claim	Amount sought	Implicit allowance	Need	CBA	Robust costs	Assessment	Amount allowed
NEP Phase 5 Water Framework Directive	204.52	0	Pass	Pass	Partial pass	Partially accept	183.25
Capping	-	0	n/a	n/a	n/a	Accept	(208.83)

## Annex 2 Household retail revenue modification

We outline our approach to revenue modification in the household retail price control in the [household retail technical appendix](#).

Table AA2.1 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 AA2.2 sets out the baseline number of customers.

**Table AA2.1 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	21.33	22.01	22.47	22.63	22.84
Unmetered wastewater only customer	21.33	22.01	22.47	22.63	22.84
Unmetered water and wastewater customer	27.73	28.62	29.21	29.42	29.69
Metered water only customer	28.93	29.43	29.56	29.36	29.59
Metered wastewater only customer	22.02	22.70	23.15	23.30	23.51
Metered water and wastewater customer	35.33	36.03	36.47	36.37	36.67

**Note:**

There will be no indexation for retail price controls.

**Table AA2.2 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	147.3	144.0	140.9	137.7	134.7
Unmetered wastewater only	453.1	443.8	434.3	424.9	415.6
Unmetered water and wastewater	1672.2	1635.4	1599.3	1563.7	1528.7
Metered water only	116.0	120.7	125.6	130.5	135.6

Number of customers	2015-16	2016-17	2017-18	2018-19	2019-20
Metered wastewater only	251.1	262.9	274.9	287.1	299.2
Metered water and wastewater	1241.7	1292.2	1343.9	1396.7	1450.7

## Annex 3 Reconciling 2010-15 performance

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 the [wholesale water and wastewater technical appendix](#).

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

As part of the draft determination of the 2010-15 adjustments we have undertaken detailed calculations within our models for the RCM, OIA, CIS and serviceability shortfalls. Whilst we have covered an explanation of our interventions within this annex, each model covers the detail of the specific calculation. Similarly, our detailed calculations behind the midnight adjustments such as land sales (but excluding those relating to the Change protocol) are contained within the RCV midnight adjustment model. A copy of any of these models are available on request.

Table AA3.1 below compares the company's view of the required revenue adjustments included in its revised business plan for each of the incentive tools for water and wastewater services, with our own view. Our view reflects our understanding of the company's performance using these incentives, based on information provided in its revised business plan and subsequent query responses. 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 Revenue adjustments 2015-20 (£ million)**

	Water service		Wastewater service	
	Company view	Ofwat view	Company view	Ofwat view
Service incentive mechanism (SIM)	0.000	0.000	0.000	0.000
Revenue correction mechanism (RCM)	20.121	10.818	-15.053	-25.635
Opex incentive allowance – post-tax (OIA)	0.000	0.000	19.374	9.331
Capital expenditure incentive scheme (CIS)	-30.225	-46.610	-4.829	-20.896
Tax refinancing benefit clawback	0.000	0.000	0.000	0.000

	Water service		Wastewater service	
	Company view	Ofwat view	Company view	Ofwat view
Other tax adjustments	0.000	0.000	0.000	0.000
Equity injection clawback	0.000	0.000	0.000	0.000
Other adjustments	-2.212	0.000	0.000	0.000
<b>Total wholesale legacy adjustments</b>	<b>-12.316</b>	<b>-35.793</b>	<b>-0.508</b>	<b>-37.200</b>

**Notes:** Totals may not add up due to rounding.

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 for both water and wastewater can be seen in Table AA3.15. 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 A2.5 and Table A3.5.

## Service incentive mechanism (SIM)

We provide our view of each company's SIM reward/penalty in the technical appendix: 'Summary of 2010-2015 SIM rewards/penalties for the whole industry'

Table AA3.2 provides the annualised rewards from the company's SIM performance.

**Table AA3.2 SIM annualised rewards (£ million)**

		2015-16	2016-17	2017-18	2018-19	2019-20	Total
Water	Company view	0	0	0	0	0	0
	Ofwat view	0.000	0.000	0.000	0.000	0.000	0.000
Wastewater	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

## Revenue correction mechanism (RCM)

This draft determination includes our view of the company's RCM annualised adjustment amounts as detailed in Table AA3.3 below. Table AA3.4 summarises our interventions in relation to Severn Trent Water's proposed 2010-15 RCM adjustments.

**Table AA3.3 RCM annualised adjustments for 2015-20 (£ million)**

		2015-16	2016-17	2017-18	2018-19	2019-20	Total
Water	Company view	4.024	4.024	4.024	4.024	4.024	20.121
	Ofwat view	2.164	2.164	2.164	2.164	2.164	10.818
Wastewater	Company view	-3.011	-3.011	-3.011	-3.011	-3.011	-15.053
	Ofwat view	-5.127	-5.127	-5.127	-5.127	-5.127	-25.635

**Table AA3.4 Interventions on proposed 2010-15 RCM adjustments**

Area of intervention	What we did	Why we did it
Backbilling amounts	Our assumptions for the draft determination did not include the back billed amounts claimed by the company.	<p>We have concerns as to whether the back billing amounts being put forward by the company are compliant with RAG4.04 and IN11/04</p> <p>The company has not demonstrated that:</p> <ul style="list-style-type: none"> <li>• it has calculated the amounts in accordance with the overall principal that it is the lesser of: <ul style="list-style-type: none"> <li>i. the future extra revenue billed up to March 2015 as a result of correcting historical under billing; or</li> <li>ii. the associated back billing;</li> </ul> </li> <li>• it has received all outstanding back-billed amounts due from the customer;</li> <li>• it has claimed for back billed amounts where the inaccuracy of the charging is the customer's fault; or</li> <li>• it has taken a reasonable, fair and appropriate</li> </ul>

Area of intervention	What we did	Why we did it
		<p>approach for the back-billed amounts claimed.</p>
Tax	<p>Our assumptions for the draft determination include our view of the way tax is taken into account in the RCM model as per previously published documents on the RCM.</p> <p>Our assumptions for the corporation tax rate applied in the RCM model are the same as HMRC's published tax rates for each year.</p>	<p>The company does not agree with our approach on tax in the RCM. It has made an adjustment to deduct tax from the billing incentive element of the RCM in its calculated RCM. It has also applied a corporation tax rate of 20% across all years in its populated RCM model.</p> <p>For our assumptions for the draft determination, we did not accept the company's proposed alternative approach on how tax is taken into account in the RCM model. Our approach on tax in the RCM remains unchanged from previously published documents on the RCM.</p> <p>Our assumptions for the corporation tax rate applied in the RCM model at the draft determination are the same as HMRC's published tax rates for each year.</p>
FD09 assumptions	<p>Our assumptions at the draft determination include our view of the FD09 assumptions.</p>	<p>There are inconsistencies between the company's and our view of the FD09 assumptions used in the company's populated RCM model.</p> <p>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.'</p> <p>The company has used a PR09 discount rate of 5.1% which is not consistent with its FD09 of 4.5% for the company.</p>

Area of intervention	What we did	Why we did it
Number of households billed	Our assumptions for the draft 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.  Our assumptions for the draft determination correct the company's data inconsistencies.

## Operating expenditure incentive allowance (OIA)

Table AA3.5 below summarises the company's view and our view of the incentive allowances for 2015-20. Table AA3.6 summarises our interventions in relation to Severn Trent Water's proposed 2010-15 OIA adjustments.

**Table AA3.5 Operating expenditure incentive allowances for 2015-20 (£ million)**

		2015-16	2016-17	2017-18	2018-19	2019-20	Total
<b>Water service</b>							
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
<b>Wastewater service</b>							
Incentive allowance (post-tax)	Company view	19.374	0.000	0.000	0.000	0.000	19.374
	Ofwat view	9.331	0.000	0.000	0.000	0.000	9.331

**Table AA3.6 Interventions on proposed 2010-15 OIA adjustments**

Area of intervention	What we did	Why we did it
FD09 assumptions (both services)	We have added back the FD09 pension deficit allowances to the FD09 expectation assumptions used in the calculation.	For consistency with the expected methodology we published in <a href="#">‘Setting price controls for 2015-20 – further information on reconciling 2010-15 performance’</a> April 2014 and to ensure consistency with the approach adopted by other companies, we included the company’s original FD09 assumptions.
Adjustment to actual opex to account for pensions both services)	We included all of the company’s pension deficit repair costs.	For consistency with the expected methodology we published in <a href="#">‘Setting price controls for 2015-20 – further information on reconciling 2010-15 performance’</a> April 2014, to ensure consistency with the approach adopted by other companies and to the benefit of customers.
Effective tax rate (both services)	Based on the company’s query response, we amended the company’s effective tax rate from 20% to 0%.	For consistency with guidance published in <a href="#">‘Setting price controls for 2015-20 – further information on reconciling 2010-15 performance’</a> April 2014, we reflected the company’s actual tax rate in 2013-14 of -1.5% by resetting this to zero.
Private sewers logging up opex	We reflected savings arising from avoided abortive visits and we excluded employment costs linked to mandatory build standards forecast in 2014-15.	To maintain consistency with the approach we applied in our Interim Determination of K for Thames Water.

## Change protocol (logging up, logging down and shortfalls)

Table AA3.7 and Table AA3.8 below summarise Severn Trent Water's view and our baseline view of total adjustments to:

- capex included in the CIS reconciliation; and
- the FD09 opex assumptions used in the calculation of the opex incentive revenue allowances.

Table AA3.9 summarises our interventions in relation to Severn Trent Water's proposed change protocol adjustments.

**Table AA3.7 Summary of post-efficiency capex for logging up, logging down and shortfalls included in the CIS reconciliation (£ million)**

2009-10 to 2014-15 – post-efficiency capex	Water service		Wastewater service		Total service	
	Company view	Ofwat view	Company view	Ofwat view	Company view	Ofwat view
Logging up (two-sided)	0.000	0.000	42.636	32.788	42.636	32.788
Logging down (two-sided)	0.000	0.000	-15.723	-19.699	-15.723	-19.699
Shortfalls (one-sided)	-24.406	-24.418	-12.810	-12.810	-37.216	-37.2280

### Notes:

1. Includes two-sided adjustments from the PR09 agreed overlap programme as set out in Table AA3.13.
2. We exclude shortfalls for serviceability from the CIS reconciliation, but instead make direct adjustments to the RCV in 2015-16. We do this to allow the actual capex the company incurred in seeking to maintain serviceability, to be reflected in the rewards or penalties earned through the scheme, and also to ensure customers are not required to pay for the regulatory output the company has failed to deliver.

**Table AA3.8 Summary of post-efficiency opex for logging up, logging down and shortfalls included in the opex incentive allowance calculation (£ million)**

2009-10 to 2014-15 – post-efficiency opex	Water service		Wastewater service		Total service	
	Company view	Ofwat view	Company view	Ofwat view	Company view	Ofwat view
Logging up	0.000	0.000	33.300	31.646	33.300	31.646
Logging down	0.000	0.000	0.000	0.000	0.000	0.000

2009-10 to 2014-15 – post-efficiency opex	Water service		Wastewater service		Total service	
	Company view	Ofwat view	Company view	Ofwat view	Company view	Ofwat view
Shortfalls	0.000	-0.019	0.000	0.000	0.000	-0.019
Shortfalls for serviceability	0.0	0.0	0.0	0.0	0.0	0.0

Table AA3.9 Interventions on proposed 2010-15 change protocol adjustments

Area of intervention	What we did	Why we did it
SEMD output delays – Shortfall	We have applied a challenge to the shortfall proposed. We have included opex in our assessment. The company proposed a shortfall of £1.558m (capex). We have assessed the total shortfall to be £1.576m (capex) and £0.020m (opex). In post efficiency terms these values are £1.314m (capex) and £0.019m (opex).	The shortfall represents the variance to FD09 assumptions for the SEMD programme, in particular, for delays to the Alarm Monitoring Centre. These delays mean that the outputs will not be delivered until after 2015. Our assessment is based upon values assumed for FD09 indexed (using COPI for capex and RPI for opex) to 2012-13 prices.
WTW and the strategic grid: Frankley/EVA – Shortfall	There are no interventions for this scheme. We are accepting the company's proposed shortfall values.	There are no interventions for this scheme. We are accepting the company's proposed shortfall values
Sewer flooding outputs not delivered – Logging down	The company proposed a £19.887m log down for sewer flooding outputs not met (register position). This was offset by additional outputs in the period 2005-10 that were logged down at PR09. In post efficiency terms this total value is £19.699m  There are no interventions for this scheme. We are accepting the company's proposed logging down claim	There are no interventions for this scheme. We are accepting the company's proposed logging down claim  We have accepted the proposed adjustment to the log down at PR09 in order to reflect improved performance in the period 2005-10. This will be reflected as a midnight RCV adjustment (£4.321m).

Area of intervention	What we did	Why we did it
<p>Newark sewerage strategy delays – Shortfall</p> <p>Private sewers – logging up</p>	<p>There are no interventions for this scheme. We are accepting the company's proposed shortfall</p> <ul style="list-style-type: none"> <li>• We have applied a 28% challenge to the collapse related capex</li> <li>• We have applied a challenge (£2.201m) to the capex associated with upgrading pumping stations.</li> <li>• Employment costs linked to mandatory build standards have been excluded from 2014-15 (£0.271m)</li> <li>• Opex has been reduced over the last 3.5 years (£1.442m)</li> <li>• In post efficiency terms the logging up claim now comprises £32.788m (capex) and £31.646m (opex)</li> </ul>	<p>There are no interventions for this scheme. We are accepting the company's proposed shortfall</p> <p>We have reduced the collapse related capex by 28% in order to bring normalised capex / collapse to the industry unweighted average.</p> <p>We have applied a challenge to the Capex in relation to upgrading pumping stations for 2014-15. Our challenge reflects a more realistic estimate of the number of pumping stations to be upgraded. We have assumed 105 pumping stations which is the same as the number forecast by the company in each of the years 2015-16 to 2019-20.</p> <p>Opex has been reduced over last 3.5 years (£1.442m) in order to reflect savings arising from avoided abortive visits. Employment costs linked to mandatory build standards have been excluded from 2014-15 (£0.271m). These adjustments are consistent with the approach we applied in our 2013 Interim Determination of K for Thames Water</p>

## Service standard outputs

The final determination supplementary reports in 2009 contained defined project(s) where the primary output was the service standard specified<sup>4</sup>. These outputs were set out to recognise that companies may decide to prioritise investment differently in order to achieve the service output in a more innovative and efficient manner, while still holding the company to account for the benefits to customers and the environment.

Where companies have not reported progress on these service standards, we would have expected them to demonstrate achievement of the service standards to both customers and Ofwat as part of the price review process.

We have considered applying shortfalls equal to the cost of the FD09 project(s) with defined service standards. However, in many cases there is some evidence that the projects and activities have been delivered, but there is a lack of compelling evidence that the service standards specified have been achieved.

**For the purposes of these draft determinations, we will not applying shortfalls on this issue conditional upon this information being provided as part of companies' draft determination representations.** We would expect companies to respond to this issue in their representations. If they do not provide adequate evidence to demonstrate achievement of the service standards set out, then they should assume that we will apply a shortfall equal to the costs assumed for the project(s) at FD09 within our final determinations in December 2014.

## Serviceability performance

Table AA3.10 below summarises our serviceability assessments for Severn Trent Water and Table AA3.11 quantifies the value and impact of any serviceability

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<sup>4</sup> In the final determination 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. The service standard output is the primary output. 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."

shortfall on the RCV. Table AA3.12 summarises our interventions in relation to Severn Trent Water's proposed adjustments for serviceability.

**Table AA3.10 Serviceability assessments for 2010-15<sup>1</sup>**

		2010-11	2011-12	2012-13	2013-14	2014-15 <sup>2</sup>
Water infrastructure	Company view	Stable	Marginal	Stable	Marginal	Marginal
	Ofwat view	Marginal	Marginal	Marginal	Marginal	Marginal
Water non infrastructure	Company view	Stable	Stable	Stable	Marginal	Marginal
	Ofwat view	Stable	Stable	Stable	Marginal	Deteriorating
Wastewater infrastructure	Company view	Stable	Stable	Stable	Marginal	Marginal
	Ofwat view	Stable	Marginal	Marginal	Marginal	Marginal
Wastewater non-infrastructure	Company view	Stable	Stable	Stable	Stable	Stable
	Ofwat view	Stable	Marginal	Stable	Stable	Stable

**Notes:**

1. Assessments are based on actual and forecast performance submitted in the company's revised business plans.
2. Assessments for 2014-15 are based on forecast data and are subject to review once actual performance data becomes available.

**Table AA3.11 Impact of serviceability shortfalls on the RCV (£ million)**

2009-10 to 2014-15		Water	Wastewater	Total
Amount subtracted from RCV	Company view	27.7	0.0	27.7
	Ofwat view	56.1	28.8	84.9

**Table AA3.12 Interventions on proposed 2010-15 serviceability adjustments**

Area of intervention	What we did	Why we did it
Unplanned interruption to supply exceeding 12 hours	<p>For the purposes of the draft determination, we have accepted the company's offered shortfall adjustment of £10m (pre efficiency) for marginal performance on this indicator.</p> <p>We would expect the company to demonstrate its latest performance as part of its representations and in advance of the final determination.</p>	<p>The company has had two breaches of the upper control limit (UCL) in 2010-11 and 2011-12. The 2014-15 forecast is also above the UCL. The remaining two years' performance over 2015-20 are also close to the UCL. The company has acknowledged the marginal performance and offered a shortfall. Our calculated shortfall adjustment for draft determination assumptions is higher than what the company offered. However, as the performance has improved and been sustained since 2011-12, we are accepting the company's offered shortfall adjustment of £10m to their RCV.</p>
Water treatment works coliforms non-compliance	<p>For the purposes of the draft determination, we have calculated a scale of shortfall that is greater than that offered by the company. The company's proposed shortfall was £20m, we have calculated a shortfall of £54.1m (£45.1m post efficiency) for marginal performance in this indicator.</p> <p>In accordance with our shortfall calculation methodology, the shortfall (which has been applied for the years 2011-12, 2013-14</p>	<p>The company has exceeded the upper control limit in 2011-12, 2013-14 and the 2014-15 forecast. The company has acknowledged marginal performance and offered a shortfall. However, we do not consider the company's own valuation of the shortfall to be sufficient for the level of failure. The assumed shortfall is based on our shortfall calculation methodology.</p> <p>We would expect the company to</p>

Area of intervention	What we did	Why we did it
	and 2014-15) has not been capped; the scaling factor <sup>5</sup> for these years is below 2 standard deviations. The overall scale of the shortfall does not exceed 50% of the sub-service capital expenditure and therefore no further cap has been applied.	demonstrate its latest performance as part of its representations and in advance of the final determination.
Pollution incidents	<p>For the purposes of the draft determination we have assumed a shortfall adjustment of £13.6m (£13.5m post efficiency) for not achieving the target for this indicator by 2015.</p> <p>We would expect the company to demonstrate its latest performance as part of its representations and in advance of the final determination.</p>	<p>The company did not offer a shortfall for failing to achieve the target by 2015 with respect to pollution incidents. At FD09 we assumed £13.6m (pre-efficiency) for a target of 181 by 2015. The company position for 2013-14 is 292 and the company is forecasting 217 for 2014-15 which does not reflect the current trend in performance. Therefore, for the purposes of the draft determination we have assumed a shortfall adjustment for the recovery of all FD09 allowed expenditure.</p>
Sewer blockages	<p>For the purposes of the draft determination we have assumed a shortfall adjustment of £15.2m (£15.3m post efficiency) for marginal performance in this indicator.</p> <p>In accordance with our shortfall calculation methodology the shortfall (which has been applied</p>	<p>The company has exceeded the upper control limit from 2010-11 to 2012-13. Performance was also close to the upper control limit in 2013-14. This is after removing the impact from PDaS (private drains and sewers). The company acknowledges a continuing adverse trend and accepts</p>

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<sup>5</sup> Shortfall calculation methodology is detailed within technical appendices A5

Area of intervention	What we did	Why we did it
Sewage treatment works population equivalent non-compliance	<p>for the years 2011-12, 2012-13) has not been capped; the scaling factor<sup>6</sup> for these years is below 2 SDs. The overall scale of the shortfall does not exceed 50% of the sub-service capital expenditure and therefore no further cap has been applied</p> <p>For the purposes of the draft determination we have assumed that no intervention is required.</p> <p>This is conditional upon the performance in 2014-15 being improved to a position such that it is considered stable. We may consider a shortfall adjustment if this is not achieved.</p>	<p>performance is 'marginal'. However, the company has not offered a shortfall. For the purpose of the draft determination, taking into account the impact from PDaS, we have assumed a shortfall of £15.2m.</p> <p>We would expect the company to demonstrate its latest performance as part of its representations and in advance of the final determination.</p> <p>The company has twice exceeded the upper control limit in 2010-11 and 2011-12. Performance in 2013-14 is also close to the upper control limit. The company has forecast 2014-15 to outturn at the reference level. We may consider a shortfall adjustment if this is not achieved.</p> <p>We would expect the company to demonstrate its latest performance as part of its representations and in advance of the final determination</p>

**Notes:** The shortfall calculation methodology is detailed in the [wholesale water and wastewater technical appendix](#).

## The 2009 agreed overlap programme

As the company did not propose an overlap programme at PR09, our FD09 did not contain any agreed projects that would need to be reviewed in this price review.

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<sup>6</sup> Shortfall calculation methodology is detailed within technical appendices A5

Therefore, we have not assessed any scheme progress or costs under this mechanism. Table AA3.14 confirms this position and Table AA3.13 below confirms the zero assumptions included in this draft determination.

**Table AA3.13 PR09 agreed overlap programme adjustments and assumptions (£ million)**

		2010-15		2015-20	
		Two-sided adjustment for inclusion in the CIS		Expenditure forecasts to complete the projects	
		Capex	Opex	Capex	Opex
Water service	Company view	0.000	0.000	0.000	0.000
	Ofwat view	0.000	0.000	0.000	0.000
Wastewater service	Company view	0.000	0.000	0.000	0.000
	Ofwat view	0.000	0.000	0.000	0.000

**Table AA3.14 Interventions on proposed 2010-15 PR09 agreed overlap programme adjustments**

Area of intervention	What we did	Why we did it
The company did not propose an overlap programme at PR09.	n/a	n/a

## Capital expenditure incentive scheme (CIS)

Table AA3.15 provides details of the CIS ratios and performance incentive. It also gives the:

- monetary amounts of the CIS performance reward or penalty;
- true-up adjustment to 2015-20 allowed revenues; and
- midnight adjustment to the closing 2014-15 RCV.

Table AA3.16 then sets out the profiled values of the revenue adjustments in each year 2015-20.

Table AA3.15 Legacy true-up adjustments

		Water service	Wastewater service	Total service
<b>Restated FD09 CIS bid ratio</b>	Company view	104.610	103.340	-
	Ofwat view	104.308	103.868	-
<b>Outturn CIS ratio</b>	Company view	107.753	98.245	-
	Ofwat view	107.442	98.952	-
<b>Incentive reward/penalty (%)</b>	Company view	-2.009	0.544	-
	Ofwat view	-1.953	0.376	-
<b>Reward/penalty (£m)</b>	Company view	-22.088	7.564	-14.524
	Ofwat view	-21.539	5.188	-16.352
<b>Adjustments to 2015-20 revenue (£m)</b>	Company view	-30.225	-4.829	-35.054
	Ofwat view	-43.401	-19.457	-62.858
<b>CIS adjustment to RCV (£m)</b>	Company view	-7.718	-98.501	-106.219
	Ofwat view	-7.718	-98.501	-106.219

**Commentary:**

Severn Trent Water have used its own approach to calculating the revenue adjustment. Aspects where the approach is different are:

- indexation treatment in the financing adjustment;
- annuity calculation;
- discount values and
- tax adjustment.

We have applied the published methodology. In carrying out our assessment, we have:

- calculated the revenue adjustment using Ofwat's published CIS true-up model.
- used Ofwat's discount rates
- profiled the revenue adjustment using the same approach as the company
- included our view of the applicable change protocol amounts.

**Notes:**

The restated FD09 CIS bid ratio takes account of the adjustments for the change protocol (Table AA3.7) and the 2009 agreed overlap programme (Table AA3.13).

The reward/(penalty) calculation 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.

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 draft determination.

**Table AA3.16 Profiled revenue adjustments from the CIS reconciliation (£ million)**

		2015-16	2016-17	2017-18	2018-19	2019-20	Total
Water	Company view	-6.045	-6.045	-6.045	-6.045	-6.045	-30.225
	Ofwat view	-9.322	-9.322	-9.322	-9.322	-9.322	-46.610
Wastewater	Company view	-0.966	-0.966	-0.966	-0.966	-0.966	-4.829
	Ofwat view	-4.179	-4.179	-4.179	-4.179	-4.179	-20.896

## Other adjustments

Table AA3.17 below confirms the assumptions included in this draft determination with respect to the following adjustments:

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

**Table AA3.17 Other adjustments 2015-20 (£ million)**

	Water service		Wastewater service		Commentary
	Company view	Ofwat view	Company view	Ofwat view	
Tax refinancing benefit clawback	0.000	0.000	0.000	0.000	
Other tax adjustments	0.000	0.000	0.000	0.000	
Equity injection clawback	0.000	0.000	0.000	0.000	

	Water service		Wastewater service		Commentary
	Company view	Ofwat view	Company view	Ofwat view	
Other adjustments	-2.212	0.000	0.000	0.000	We have applied an upwards 'other adjustment' of £4.3m to Severn Trent Water's wastewater RCV in respect of an incorrect PR09 logging down adjustment.

## Annex 4 Outcomes, performance commitments and outcome delivery incentives

This chapter sets out in detail the performance commitments and outcome delivery incentives (ODIs) for the company's wholesale water, wholesale wastewater and household retail outcomes, presented in that order.

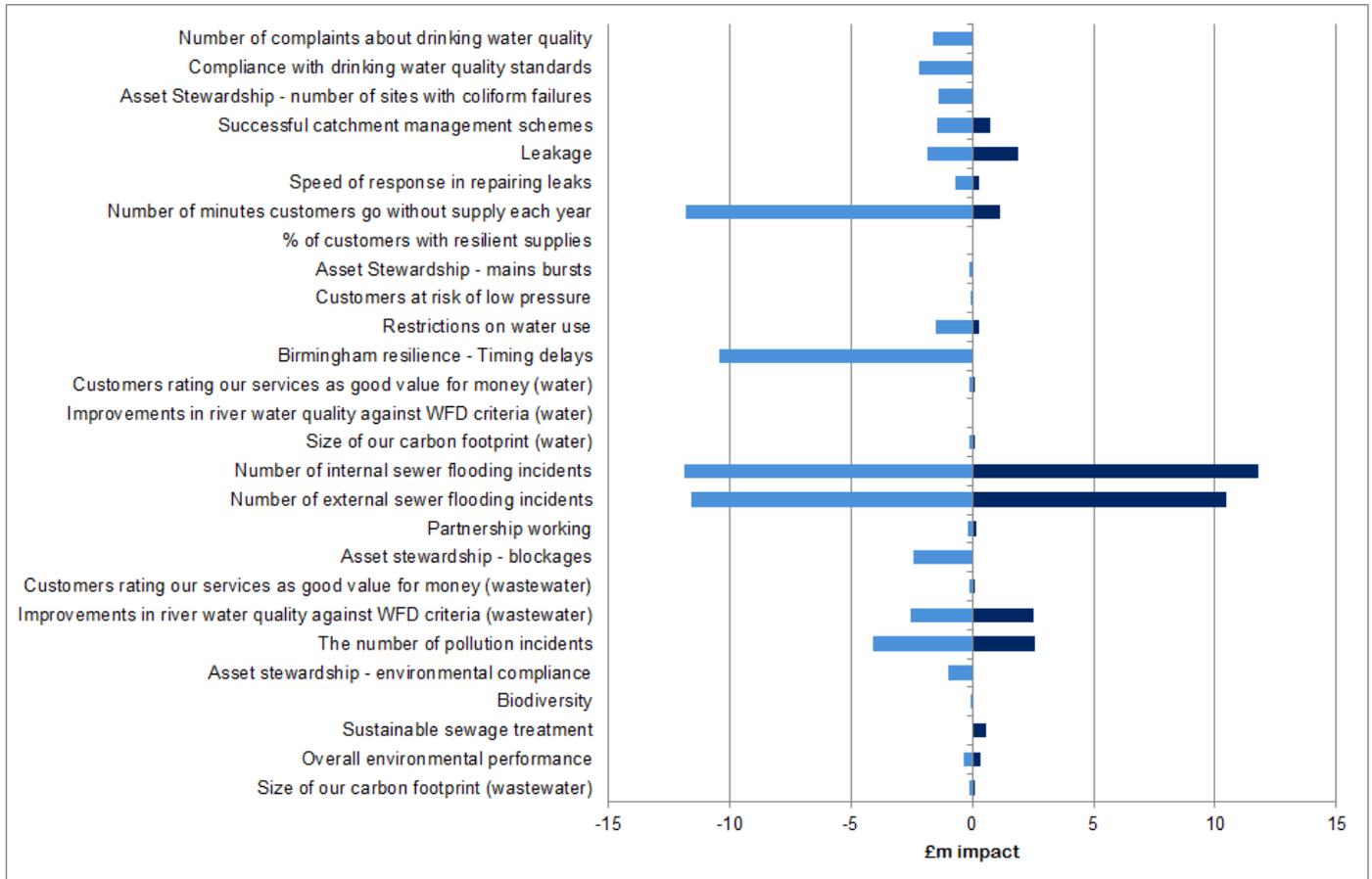
The two figures below first provide an overview of these performance commitments and ODIs. Table AA4.1 shows the balance between reward and penalty, penalty only and reputational incentives in the package of incentives for the company and figure AA4.1 shows the potential financial impact of each of the financial incentives.

**Table AA4.1 The composition of the proposed package of ODIs**

	Reward and penalty	Penalty only	Non-financial incentive
Wholesale water	11	5	5
Wholesale wastewater	10	2	3
Household retail	1	0	3
Total	22	7	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 5 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 AA4.1 Overview of financial ODIs



As explained in the [outcomes technical appendix](#), we are proposing the introduction of an aggregate cap on rewards and collar on penalties from the outcome delivery incentives. Details of how the cap/collar will operate are set out in section A5 of the [outcomes technical appendix](#).

There are a small number of specific exclusions from the cap/collar. For Severn Trent, the exclusions are as follows:

- W-B9 Timing delays on Birmingham resilience scheme
- W-B10 Non-delivery of the outcome of the Birmingham resilience scheme

Tables AA4.2, AA4.3 and AA4.4 set out a more detailed explanation of our interventions in the company’s wholesale water, wholesale wastewater and household retail outcomes

Table AA4.2 Summary of interventions on wholesale water outcomes, performance commitments and incentives

PC/ODI affected	What we did	Why we did it
W-A1 Number of complaints about drinking water quality	<p>Following horizontal consistency check, reduce PC level to 9,925 complaints in years 3, 4 and 5</p> <p>Also, adjust PC level in year 2 and introduce deadbands to reflect upper quartile adjustments.</p>	<p><b>Horizontal consistency check</b></p> <p>As set out in the <a href="#">outcomes technical appendix</a> we have set the performance commitment level at upper quartile for all companies' drinking water complaints performance commitments in years 3, 4 and 5. We have also set reward and penalty deadbands consistent with the approach set out in the <a href="#">outcomes technical appendix</a>.</p>
W-A2: Compliance with drinking water quality standards	<p>Following horizontal consistency check, increase PC level and penalty deadband in years 3, 4 and 5 to 100% and 99.96% respectively</p> <p>Also, move the penalty collar up to 99.92% in years 3, 4 and 5</p>	<p><b>Horizontal consistency check</b></p> <p>As set out in the <a href="#">outcomes technical appendix</a> we have set the performance commitment level at 100% compliance for all companies' mean zonal compliance performance commitment in years 3, 4 and 5. We have also set penalty deadbands at 99.96% to reflect upper quartile performance, with allowance for some uncertainty and company-specific factors.</p> <p>We have also moved the penalty collar up to 99.92% in years 3, 4 and 5 so that the maximum penalty remains as proposed by Severn Trent Water</p> <p>The Company has defined Outcome Delivery Incentives for drinking water quality compliance with a penalty at less than 100%. This penalty represents an incentive to the company to not reduce its compliance with water quality measures. This threshold represents the point at which financial incentives will be applied to the company through the price setting process. All companies are subject to drinking water quality obligations regulated by the DWI, which are the</p>

PC/ODI affected	What we did	Why we did it
		<p>overriding statutory obligations that a water company must comply with as part of their 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.</p>
<p>W-A3 Asset stewardship – number of sites with coliform failures</p>	<p>Lower performance commitment level to &lt;8 between 2015-16 and 2017-18, reducing to &lt;6 in both 2018-19 and 2019-20.</p>	<p><b>Performance commitment level not sufficiently justified</b></p> <p>The proposed level for coliform failures has not sufficiently reflected the shortfalling performance over 2015-20. We therefore reduced the PC to better reflect this.</p>
<p>W-A4 Successful catchment management schemes</p>	<p>Increased performance commitment to 14 out of 18 successful schemes</p> <p>Amended the incentive such that a reward can only be earned if the largest scheme (River Severn) is successfully delivered</p>	<p><b>Performance commitment level not sufficiently justified</b></p> <p>Severn Trent Water have not explained why it cannot achieve successful engagement in more than 9 catchments. Severn Trent Water state that it is a new measure so no track record is provided but they also say that it is set at 50% because of their experience. No evidence is provided as to their experience of a success rate.</p> <p>Of the 18 schemes included in Severn Trent Water's business plan 50% of the net benefits associated with this performance commitment are delivered by 1 scheme. It would not be appropriate therefore for Severn Trent Water to earn rewards without delivering this scheme successfully</p>
<p>W-B4 Number of minutes customers go without supply</p>	<p>Following horizontal consistency check, reduce PC level to 10 minutes in year 3</p> <p>Also, adjust PC level in years 1 and 2 and adjust deadbands to</p>	<p><b>Horizontal consistency check</b></p> <p>As set out in the <a href="#">outcomes technical appendix</a> we have set the performance commitment level at upper quartile for all companies' supply interruptions performance commitments in years 3, 4 and 5. We have also adjusted deadbands consistent with the approach</p>

PC/ODI affected	What we did	Why we did it
	reflect upper quartile adjustments.	described in the <a href="#">outcomes technical appendix</a> .
W-B7 Customers at risk of low pressure	Reduced the performance commitment level to 250 properties on the DG2 register per year	<p><b>Performance commitment level not sufficiently justified</b></p> <p>Severn Trent Water proposed that the performance commitment should be set at 300 which is the average since 2005 (excluding outliers), due to the risks related to the number of properties that will be added to the register.</p> <p>However, the company has delivered levels below 300 for the last 4 years despite increases in the number of additions in various years. Insufficient evidence has been provided to demonstrate this level of service cannot be continued.</p> <p>Therefore, we propose setting the PC at 250. This is towards the upper bound of the last 4 years and approximately the average of the last 5 years. We considered the use of deadbands but believe this change in performance commitment represents an appropriate balance between customer protection and risks on the company and the use of deadbands is inconsistent with Severn Trent Water's general approach.</p>
W-B8 Restrictions on use	Reduced the reward incentive rate to £1.36m (5 year total) for zero hosepipe bans over the 5 year period	<p><b>Reward incentive rate not justified</b></p> <p>In its updated submission, Severn Trent Water proposed to reduce the reward rate from £7.5m to £2.46m. This figure is estimated by adjusting WTP to account for the asymmetric risk of a ban (as per our feedback) but also to increase it to account for costs the company may incur in order to avoid a ban.</p> <p>However, Severn Trent Water is funded for the costs to include near</p>

PC/ODI affected	What we did	Why we did it
		<p>misses and the ODI compensates them for the additional costs they incur in order to avoid a ban. Therefore it is not appropriate to increase the reward rate above that set using WTP, hence we propose to reduce the rate.</p> <p>Furthermore, the CCG raised specific concerns about the presence of rewards for this PC. We believe that the significant reduction of the reward rate makes it an acceptable reward and penalty ODI but we expect Severn Trent Water to re-engage with the CCG on the new proposals.</p>
<p>W-B9 Timing delays on Birmingham resilience scheme</p>	<p>Timing delay penalty increased to £52m per year delayed to reflect the loss of net benefits, based on Severn Trent Water’s estimates, to customers associated with the delay</p> <p>Total penalty weighted across the three projects based on proportions of costs</p> <p>Introduce year 3 progress milestone</p>	<p><b>Insufficient customer protection</b></p> <p>Severn Trent Water state that the timing delay penalty is only there so that customers are no worse off from the delay. It is not there to incentivise delivery as it states it is already incentivised to deliver it as quickly as possible to eliminate the potential risks to the company if there is a long-term interruption.</p> <p>However, we do not believe this sufficiently compensates customers from the sustained risk to supply that they suffer from delays. We therefore propose setting the incentive at 50% of the total equivalent annualised net benefits across all three projects for each year of delay. The full incentive has been proportioned across the three projects based on costs. This will primarily be based on full delivery, but we have also included a progress milestone in year 3 to ensure robust monitoring of delivery. If necessary this also allows penalties to be determined and applied at PR19 if timing delays become evident</p>

PC/ODI affected	What we did	Why we did it
<p>W-B10 Non-delivery of the outcome of the Birmingham resilience scheme</p>	<p>Follow Severn Trent Water's approach to determining the extent of under-delivery for each of the three alternative supply schemes but increase incentive rate by 50% of the overall benefit:cost ratio (3.75), based on Severn Trent Water's estimates, to reflect the loss of benefits to customers</p> <p>Introduce year 3 progress milestone</p>	<p><b>Insufficient customer protection</b></p> <p>Severn Trent Water proposes that it will determine the size of the incentive to be returned to customers based on the extent to which it has delivered the increased capacity (tested within 3 years of scheme completion). However, it proposes the incentive to be returned to customers will reflect the proportion of costs relating to the particular scheme rather than the loss of benefits to customers. We therefore propose that the company's approach to determining the incentive is followed but the size of the incentive should be inflated by 50% of the overall benefit:cost ratio to reflect the loss of benefits to customers (adjusted for totex efficiency sharing). This adjustment brings the incentive estimating approach in line with that used by Severn Trent Water in determining its other ODIs</p> <p>We have also included a progress milestone in year 3 to ensure robust monitoring of delivery. If necessary this also allows penalties to be determined and applied at PR19 if under-delivery becomes evident</p>
<p>Overall caps and collars</p>	<p>Replaced Severn Trent Water's proposed overall caps and collars with standard overall caps and collars (+/-2% of RoRE)</p>	<p><b>Horizontal consistency</b></p> <p>Severn Trent Water has not, in general, proposed a cap on individual incentives. However, it proposes overall caps / collars on the impact on revenue of a single year's performance of -£21m to +£15m for Wholesale Water (2012-13 prices), which represents about -1.6% to +1.2% of RoRE. It is equivalent, in terms of the annual impact on the average household bill, to about -£5.50 to + £4. However, consistent with the approach set out in the <a href="#">outcomes technical appendix</a> that we have taken for all companies, we have replaced Severn Trent Water's</p>

PC/ODI affected	What we did	Why we did it
		proposed caps and collars with the standard industry wide caps (+/- 2% of RoRE).

**Table AA4.3 Summary of interventions on wholesale wastewater outcomes, performance commitments and incentives**

PC/ODI affected	What we did	Why we did it
S-A4 Asset stewardship – blockages	Reduced the performance commitment level to <50,470 blockages in 2015-16 reducing to <48,900 in 2019-20	<p><b>Performance commitment level not sufficiently justified</b></p> <p>The number of blockages in the PC once increased to account for blockages on transferred assets is higher (that is, worse) than the poorest performance during 2010-15. Also, despite the incremental totex to deliver a reduction the performance commitment stays the same throughout the period.</p> <p>We have therefore reduced the PC to better reflect 2010-15 performance while accounting for a reasonable level of uncertainty – increased from 2010-15 to reflect transferred assets. We also reduce the PC throughout the period 2015-20 to reflect the reduction in blockages associated with the incremental totex.</p>
S-C2 Total pollution incidents	<p>Following horizontal consistency check, we have:</p> <p>Removed serious pollution incidents (categories 1 and 2) from the performance measure and ODI;</p> <p>Reduced PC level to 556</p>	<p><b>Horizontal consistency check</b></p> <p>As set out in the <a href="#">outcomes technical appendix</a>, following discussions with the Environment Agency, we have determined that it would be inappropriate to have financial rewards on serious pollution incidents (categories 1 and 2). We have therefore removed serious pollution incidents from this measure so it now focuses solely on categories 3</p>

PC/ODI affected	What we did	Why we did it
	<p>category 3 and 4 incidents in years 3, 4 and 5;</p> <p>Adjusted PC levels in years 1 to 2 and introduced deadbands to reflect upper quartile adjustments.</p>	<p>and 4. Serious pollution incidents will be reported through the separate non-financial ODI – C6: Serious pollution incidents</p> <p>As set out in the <a href="#">outcomes technical appendix</a> we have set the performance commitment level at upper quartile for all companies' pollution incidents performance commitments in years 3, 4 and 5. We have also set performance commitments in years 1 to 2 and introduced deadbands consistent with the approach described in the <a href="#">outcomes technical appendix</a>.</p>
Overall caps and collars	Replaced Severn Trent Water's proposed overall caps and collars with standard overall caps and collars (+/-2% of RoRE)	<p><b>Horizontal consistency</b></p> <p>Severn Trent Water has not, in general, proposed a cap on individual incentives. However, it proposes overall caps / collars on the impact on revenue of a single year's performance of +/-£38m for Wholesale Waste Water (2012-13 prices), which represents about +/-2.6% of RoRE. This is equivalent, in terms of the annual impact on the average household bill, to about +/-£8. However, consistent with the approach set out in the <a href="#">outcomes technical appendix</a> that we have taken for all companies we have replaced Severn Trent Water's proposed caps and collars with the standard industry wide caps (+/-2% on RoRE)</p>

**Table AA4.4 Summary of interventions on household retail outcomes, performance commitments and incentives**

PC/ODI affected	What we did	Why we did it
n/a	n/a	n/a

## Outcome delivery and reporting

In the [outcomes technical appendix](#), we outline a framework against which we have assessed Severn Trent Water’s proposals in relation to outcome delivery and reporting.

The table below summarises Severn Trent Water’s proposed approach to the measurement, reporting and governance of outcomes and our assessment of this approach.

**Table AA4.5 Severn Trent Water’s proposals for outcome delivery and reporting**

Severn Trent Water proposals	Our assessment
<p>In the June Submission, Severn Trent Water states that it operates a “Three Lines of Defence model” in the company covering processes and controls, oversight and independent assurance.</p> <p>For each performance commitment, the company proposes to capture the measure using their core systems (for example, SAP) and report it using a standard reporting template. The company states it has assigned an accountable Director and responsible General Manager (GM) for each measure. For each measure, there will be a Process Description Template (PDT) to record how the performance will be measured.</p> <p>The company commits to monitor and review the measures on a weekly, monthly and quarterly basis using their existing hierarchy of performance reporting. This includes quarterly Board updates, monthly updates to Executive leadership teams and daily/weekly operational updates at an individual team level, as well as continued engagement with the Water Forum (CCG). The performance against the risk and reward mechanism will also be reviewed by the Board and the CCG quarterly.</p>	<p>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.</p> <p>Severn Trent 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.</p> <p>We are satisfied with the company’s proposals for self reporting. But consistent with the commentary in our assurance technical annex, we will need to consider the categorisation of the company for assurance purposes at the final determination.</p> <p>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</p>

Severn Trent Water proposals	Our assessment
<p>The company proposes to continue using its existing approach of engaging independent assurance from both Internal Audit and independent external assurance providers for the measures over 2015-20.</p> <p>The company also states it will introduce a Measure of Success to enable their progress to be transparently reported to customers. The company also commits that its performance against the commitments, and the associated incentive rewards and penalties will be published annually and that it will engage with key local stakeholders on the company's performance.</p>	<p>statement.</p>

In the remainder of this section, we provide the following information on each performance commitment we are proposing as part of this draft determination.

- The name and detailed definition of the performance commitment;
- The type of incentive;
- The performance commitment level;
- For financial incentives;
  - the limits on rewards and penalties (caps and collars) and neutral zones (deadbands) as applicable<sup>7</sup>; and
  - the incentive rates;
- Additional details on the measure; and
- 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.

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<sup>7</sup> In general, the cap or collar is the level of service at which the maximum penalty or reward occurs and a deadband is the level of service at which the incentive first applies. However, where a greater than or less than symbol precedes the figure this denotes that the maximum or initial incentive only occurs if service is greater than or less than this level.

We have intervened in relation to a number of performance commitments proposed by the company. Where our intervention is to remove the performance commitment in question, details and reasoning are provided in Table AA4.6. Where our intervention is to add a performance commitment in question, details and reasoning are provided in Table AA4.7. Where we have amended the company’s proposed incentive but retained the performance commitment, we have intentionally set out our interventions below using a ~~strike through~~. What this means is that we have rejected the proposal that has been struck through and instead we have either used a different value or not included a value at all (for example, in the case of some rewards).

Severn Trent Water will be able to finalise its proposed menu choice and affected ODI calibrations following our consideration of responses to these proposals.

**Table AA4.6 Performance commitments proposed by the company that we have removed from this draft determination**

Performance commitment	Reason for its removal
<b>Wholesale water</b>	
W-B11 Community risk	This performance commitment and its associated outcome delivery incentive are based on Severn Trent’s proposed costs for the Community risk element of the Birmingham resilience scheme. As we have not approved the costs of this scheme we are provisionally rejecting the performance commitment pending the company resubmitting costs for the scheme which we can approve.

**Table AA4.7 Performance commitments that we have added to this draft determination**

Performance commitment	Reason for its addition
<b>Wholesale water</b>	
W-D4 Sites with eel protections	<p>Following clarification dialogue, Severn Trent Water has proposed to remove the PC as improvements will not be delivered until after 2015-20. The company has indicated that it would be appropriate to introduce financial incentives around delivery at PR19.</p> <p>We propose reintroducing the PC, with a non-financial incentive, as it still reflects associated incremental totex. This will help improve transparency of progress and ensure an appropriate incentive is considered at PR19.</p>

## Wholesale water outcome A: We will provide water that is good to drink

### Performance commitment W-A1: Number of complaints about drinking water quality

#### Detailed definition of performance measure:

The total number of complaints about discolouration, taste and odour per year. A consumer contact about drinking water quality is any communication about drinking water quality initiated by a consumer living or working in the area supplied by the water company by phone, letter, email, in person, or website request form (repeat contacts and incidents are excluded). The measure is calendar 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	No.	13,000	11,900	10,950 <del>11,800</del>	9,925 <del>11,700</del>	9,925 <del>11,600</del>	9,925 <del>11,500</del>
Penalty deadband	No.		11,900	11,800	9,925	9,925	9,925
Reward deadband	No.		9,925	9,925	9,925	9,925	9,925

#### Incentive rates

Incentive type	Performance levels (No.)		Incentive rate (£/No./year)
	Lower	Upper	
Penalty	9,925 <del>11,501</del>		900
Reward		9,925 <del>11,899</del>	900

## Additional details

Necessary detail on measurement units	The definition is in line with DWI reporting on rate of contacts for appearance, taste and odour and illness. Performance reporting will be on a calendar year basis, in line with reporting to DWI for example, performance reporting for 2015-16 will be in relation to 2015 calendar year performance.
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually each financial year
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	Reward applies below 9,925 complaints. Penalty applies above 11,800 complaints in 2015-16, decreasing to 9,925 by 2019-20 <del>Reward or penalty applies above or below 11,900 complaints in 2015-16, decreasing to 11,500 by 2019-20</del>

## Performance commitment W-A2: Compliance with drinking water quality standards

### Detailed definition of performance measure:

The mean zonal percentage compliance from the regulatory sampling programme, as calculated by the DWI.

**Incentive type:** Financial – penalty only.

## Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	99.95	99.97	99.97	100 <del>99.97</del>	100 <del>99.97</del>	100 <del>99.97</del>
Penalty collar	%		99.91	99.91	99.92 <del>99.91</del>	99.92 <del>99.91</del>	99.92 <del>99.91</del>
Penalty deadband			99.945	99.945	99.96 <del>99.945</del>	99.96 <del>99.945</del>	99.96 <del>99.945</del>

## Incentive rates

Incentive type	Performance levels (%)		Incentive rate (£/%/year)
	Lower	Upper	
Penalty	99.91	99.96 <del>99.945</del>	£174m

## Additional details

Necessary detail on measurement units	The calculation will be as set out in the DWI publication "Calculation and composition of indices published in the Chief Inspector's Report", May 2013. Performance reporting will be on a calendar year basis, in line with reporting to DWI for example, performance reporting for 2015-16 will be in relation to 2015 calendar year performance.
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Penalty applied annually each financial year
Form of reward/penalty	Adjustment to revenue

Any other information or clarifications relevant to correct application of incentive

## Performance commitment W-A3: Asset stewardship – number of sites with coliform failures

### Detailed definition of performance measure:

The number of water treatment works which had coliform detections in final water regulatory samples.

**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	No.	Stable	<8	<8	<8	<6	<6
			<10	<10	<10	<8	<8

### Incentive rates

Incentive type	Performance levels (No.)		Incentive rate (£/No./year)
	Lower	Upper	
Penalty	6	8	£463,000

### Additional details

Necessary detail on measurement units	In the event of a major change in sampling regime (+/->50% change in sampling frequency) the target will be adjusted.
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through

	the successor to Water Forum.
Timing and frequency of rewards/penalties	Penalty applied on the basis of four-year average performance to 2018-19. Actual penalty that will apply is therefore 4 x the annual penalty rate in the incentive rates table above
Form of reward/penalty	Adjustment to opening RCV at start of AMP7.
Any other information or clarifications relevant to correct application of incentive	The value in the incentive rate table above for penalty is the value for 2018-19 to 2019-20. In the first three years the penalty applies for performance over 7.9. Performance for the four-year average will be assessed against an average penalty level of $\geq 8.5$ $\geq 6.5$ .

## Performance commitment W-A4: Successful catchment management schemes

### Detailed definition of performance measure:

The number of catchment management schemes which succeed in changing farming infrastructure and practices.

**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	No.					14 9	

### Incentive rates

Incentive type	Performance levels (%)		Incentive rate (£m/scheme)
	Lower	Upper	
Penalty	0	<14	£1.2m

Incentive type	Performance levels (%)		Incentive rate (£m/scheme)
		≤9	
Reward	>14	≥9	£1.2m

### Additional details

Necessary detail on measurement units	n/a
Frequency of PC measurement and any use of averaging	Progress on the performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty to be applied after assessment of performance to 2018-19. Payment may be made earlier if the total number of schemes shown to be successful is above the target at an earlier date.
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	<p>Success will be measured by KPIs relating to the proportion of farmers changing their infrastructure and practices, since changes in water quality would not be generally observable in the period.</p> <p>KPIs will be specific to each catchment.</p> <p>For a reward to be earned Severn Trent must successfully deliver the River Severn catchment management scheme</p>

## Wholesale water outcome B: We will ensure water is always there when you need it

### Performance commitment W-B1: Resource efficiency (distribution input per customer)

#### Detailed definition of performance measure:

The total volume of water Severn Trent Water puts into distribution, divided by household population.

**Incentive type:** Reputational.

#### Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Litres per person per day	229	225	222	219	216	213

#### Additional details

Necessary detail on measurement units	n/a
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

## Performance commitment W-B2: Leakage

### Detailed definition of performance measure:

The total level of leakage, including customer supply pipe leakage, expressed in megalitres per day (MI/day).

**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	MI/d	450	444	439	434	429	424

### Incentive rates

Incentive type	Performance levels		Incentive rate (£m / MI/d / year )
	Lower	Upper	
Penalty 2	>450		£0.2m
Penalty 1	424	450	£0.125m
Reward		444	£0.125m

### Additional details

<b>Necessary detail on measurement units</b>	Total leakage is the sum of distribution losses and supply pipe losses in Megalitres per day (MI/d). It includes any uncontrolled losses between the treatment works and the customer's stop tap. It does not include internal plumbing losses.
<b>Frequency of PC measurement and any use of averaging</b>	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
<b>Timing and frequency of rewards/penalties</b>	Reward or penalty applied annually for each financial year

<b>Form of reward/penalty</b>	Adjustment to revenue
<b>Any other information or clarifications relevant to correct application of incentive</b>	<p>The higher penalty rate only applies if the average for the four years to 2018-19 exceeds 450 MI/d.</p> <p>Reward or penalty applies below or above 444 MI/d in 2015-16, decreasing to 424 MI/d by 2019-20.</p> <p>If any methodology changes have a material impact on the calculation, outturn figures will be adjusted so that the incentive applies to the underlying change in leakage.</p>

## Performance commitment W-B3: Speed of response in repairing leaks

### Detailed definition of performance measure:

The percentage of visible leaks (reported by customers or detected by the company's teams) on Severn Trent Water's network that it repairs within 24 hours, where it can do so safely and without unduly disrupting customers.

**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	%	50%	70%	80%	90%	95%	100%
Penalty deadband	%		60%	70%	80%	85%	90%

### Incentive rates

Incentive type	Performance levels		Incentive rate (£ / % / year )
	Lower	Upper	
Penalty	0%	90%	£25,000

Incentive type	Performance levels		Incentive rate (£ / % / year )
Reward	70%	100%	£25,000

### Additional details

Necessary detail on measurement units	n/a
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	Reward applies above 70% in 2015-16, rising to 95% in 2018-19. No scope for reward in 2019-20. Penalty applies at 60% in 2015-16, rising to 90% in 2019-20.

## Performance commitment W-B4: Number of minutes customers go without supply each year

### Detailed definition of performance measure:

The average number of minutes that customers are without water supply each year, due to planned and unplanned interruptions to supply of over 3 hours.

**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	Minutes	15	13.3 13.6	11.7 12.2	10 10.8	9.4	8

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Penalty deadband	Minutes		14.5	14.0	10 <del>13.5</del>	10 <del>13</del>	10 <del>12.5</del>
Reward deadband	Minutes		10.00	10.00	10.00	9.40	8.00

### Incentive rates

Incentive type	Performance levels		Incentive rate (£m / minute / year )
	Lower	Upper	
Penalty 2	>28.7		£1.2m
Penalty 1	10.0 <del>12.5</del>	28.7	£1.1m
Reward		10.0 <del>13.6</del>	£1.1m

### Additional details

Necessary detail on measurement units	The calculation of reward or penalty will use the actual number of minutes calculated to 2 decimal places.  Total minutes from interruptions of over 3 hours is divided by the number of properties (domestic and non-domestic) connected for water supply.
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year
Form of reward/penalty	Adjustment to revenue

**Any other information or clarifications relevant to correct application of incentive**

Reward applies below 1043.6 minutes in 2015-16, falling to 8 minutes by 2019-20.

Penalty rate 1 applies at above 14.5 minutes by 2015-16, falling to above 1042.5 minutes in 2019-20.

The impact of any individual incident will be limited to 5 minutes.

**Performance commitment W-B5: % of customers with resilient supplies (those that benefit from a second source of supply)****Detailed definition of performance measure:**

The percentage of customers for whom there is more than one source of water which can be used to provide supplies.

**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	No.	77.0%					77.7%

**Incentive rates**

Incentive type	Performance levels		Incentive rate (£ / % / year )
	Lower	Upper	
Penalty	0%	77.7%	£354,000
Reward	77.7%	100%	£354,000

## Additional details

Necessary detail on measurement units	Performance delivery will be assessed against the change in this measure on a consistent basis – the effect of any methodology changes will not be included.
Frequency of PC measurement and any use of averaging	Progress on the performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Five-year reward or penalty to be applied after assessment of performance to 2018-19, based on expected delivery to 2019-20.
Form of reward/penalty	Adjustment to opening RCV at start of AMP7.
Any other information or clarifications relevant to correct application of incentive	Second supplies delivered through the Birmingham resilience scheme will not count towards this performance commitment

## Performance commitment W-B6: Asset stewardship – mains bursts

### Detailed definition of performance measure:

The total number of mains bursts in a financial year, measured by the number of repairs to water mains.

**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	No.	Stable	<7,758	<7,758	<7,758	<7,758	<7,758

## Incentive rates

Incentive type	Performance levels		Incentive rate (£/burst/year)
	Lower	Upper	
Penalty	7,758		£2,333

## Additional details

Necessary detail on measurement units	Mains bursts include all physical repair work to mains from which water is lost which is attributable to pipes, joints or joint material failures or movement. Maintenance work on valve packings, hydrant seals, air valves, and valve, hydrant, washout and air valve replacements are excluded. Third party damage is excluded.
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Penalty applied on the basis of four-year average performance to 2018-19.
Form of reward/penalty	Adjustment to opening RCV at start of AMP7.
Any other information or clarifications relevant to correct application of incentive	

## Performance commitment W-B7: Customers at risk of low pressure

### Detailed definition of performance measure:

The number of connected properties that have received, and are likely to continue to receive, pressure below the reference level when demand for water is at a normal level.

**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	No.	300	250	250	250	250	250
			300	300	300	300	300

### Incentive rates

Incentive type	Performance levels		Incentive rate (£ /No./year)
	Lower	Upper	
Penalty	251 304		£790
Reward	0	249 299	£790

### Additional details

Necessary detail on measurement units	The reference level of service is a flow of 9 litres/minute at a pressure of 10 metres head on the customer's side of the main stop tap. The reference level applies to a single property.
Frequency of PC measurement and any use of averaging	Progress on the performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year.
Form of reward/penalty	Adjustment to revenue.
Any other information or clarifications relevant to correct application of incentive	

## Performance commitment W-B8: Restrictions on water use

### Detailed definition of performance measure:

The number of water restrictions in place on customers in a five-year period.

**Incentive type:** Financial – reward and penalty.

### Performance commitments

	Starting level	Committed performance levels					
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	0	0	0	0	0	0

### Incentive rates

Incentive type	Performance levels		Incentive rate (£m/year)
	Lower	Upper	
Penalty 2	2		£3.75m
Penalty 1	1	1	£1.5m
Reward	0	0	£0.272m £0.492m

### Additional details

Necessary detail on measurement units	The number of Temporary Use Bans, as defined in the Flood and Water Management Act 2010 and the Water Use (Temporary Use Ban) Order 2010, imposed in a five-year period.
Frequency of PC measurement and any use of averaging	Progress on the performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.

<b>Timing and frequency of rewards/penalties</b>	<p>Five-year penalty applied in full in the year after a water restriction is applied. Five-year reward to be applied after assessment of performance to 2018-19, based on expected delivery to 2019-20.</p> <p><del>Reward or penalty applied annually for each financial year. Any reward would be reversed in full in the year after a water restriction is applied.</del></p>
<b>Form of reward/penalty</b>	Adjustment to revenue.
<b>Any other information or clarifications relevant to correct application of incentive</b>	<p>If restrictions on use are imposed in a part of Severn Trent's area in the five-year period:</p> <ul style="list-style-type: none"> <li>• No reward will be earned.</li> <li>• The penalty will be scaled by the population of the affected area as a proportion of the total population in the Severn Trent Water area.</li> </ul>

## Performance commitment: W-B9 Timing delays on Birmingham resilience scheme

### Detailed definition of performance measure:

Delivery of the Birmingham resilience scheme will be measured in terms of completion of the following projects:

- A new 117 MI/d pumping station on the River Severn
- A 117 MI/d pipeline to Frankley WTW
- An upgrade to Frankley Water Treatment Works to allow it to treat 237 MI/d of river water

There will be separate incentive rates for each of these parts of the scheme.

**Incentive type:** Financial – Penalty only

### Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Pumping station						Progress milestone	Completion

Pipeline					Progress milestone		Completion
Treatment works upgrade					Progress milestone		Completion

### Incentive rates

Incentive type	Performance levels (No.)		Incentive rate (£/No./year)
	Lower	Upper	
Penalty 1 (Pumping station)	Non-completion		£8.40m <del>See description below</del>
Penalty 2 (Pipeline)	Non-completion		£23.25m <del>See description below</del>
Penalty 3 (Treatment works)	Non-completion		£20.35m <del>See description below</del>

### Additional details

Necessary detail on measurement units	
Frequency of PC measurement and any use of averaging	Delivery will be assessed at 31 <sup>st</sup> March 2020 and annually thereafter until completion. Progress will be assessed at 31 <sup>st</sup> March 2018.
Timing and frequency of rewards/penalties	Penalties will be paid out for delay in 2021-22 if the scheme is not complete by 31 <sup>st</sup> March 2020. If the progress milestone shows delays are occurring then penalty will apply at PR19.
Form of reward/penalty	Annual payments will be made, or an adjustment at price reviews.
Any other information or clarifications relevant to correct application of incentive	At the PR19 submission the company will propose an adjustment to the wholesale water revenue requirement, if delays are known in time, for example through the 2017-18 progress milestone. If delays are known earlier we may make an earlier adjustment; if later, then we will make an adjustment during AMP7. Penalty rate, as set out in incentive rates table above, will apply for each year delivery is delayed by. The adjustment will be made by calculating the

difference in NPV of financing costs for that component (return on capital and depreciation on the non-PAYG portion of FD totex) between the revised timing and original projections. Adjustment calculated to exclude double-counting of menu and other effects

Will not apply to any components of scheme removed from the final determination including their effect on the functioning of the overall scheme.

These adjustments may be split between adjustments in annual price controls (via a K-abatement), and adjustments at price reviews.

## Performance commitment: W-B10 Non-delivery of the outcome of the Birmingham resilience scheme

### Detailed definition of performance measure:

The success of the scheme in terms of delivering resilience to customers will be assessed by measuring the capacity delivered by the components of the project. If a lower capacity is delivered then the penalty will be proportionate to the shortfall in capacity. The components are:

- A new 117 MI/d pumping station on the River Severn
- A 117 MI/d pipeline to Frankley WTW
- An upgrade to Frankley Water Treatment Works to allow it to treat 237 MI/d of river water

**Incentive type:** Financial – penalty only

### Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Pumping station						Progress milestone	Completion
Pipeline						Progress milestone	Completion
Treatment works						Progress	Completion

upgrade					milestone		
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### Incentive rates

Incentive type	Performance levels (No.)		Incentive rate (£/Ml/d)
	Lower	Upper	
Penalty 1 (Pumping station)	117 Ml/d		£0.98m <del>£0.26m</del>
Penalty 2 (Pipeline)	117 Ml/d		£2.70m <del>£0.72m</del>
Penalty 3 (Treatment works)	237 Ml/d		£2.37m <del>£0.63m</del>

### Additional details

Necessary detail on measurement units	A tolerance of 5% will be allowed for Ml/d targets, in view of the limitations in accuracy of the calculation for example, because of metering error.
Frequency of PC measurement and any use of averaging	Delivery will be assessed on completion of the scheme. Progress will be assessed at 31st March 2018
Timing and frequency of rewards/penalties	Payment may be made through adjustments at price reviews, or through changes to price controls in period. . If the progress milestone shows under-delivery is likely then penalty will apply at PR19.
Form of reward/penalty	.
Any other information or clarifications relevant to correct application of incentive	<p>After the scheme has been completed, any proportion of substantive non-delivery will be assessed and included in either PR19 or PR24, or in annual adjustments to price controls.</p> <p>If under-delivery is identified as being likely before scheme completion, for example through the 2017-18 progress milestone, an earlier adjustment may be made at PR19.</p> <p>For each of the scheme components, the penalty, as set out in the incentive rates table above, will be</p>

	<p>based on the proportion of the output not delivered, applied to the net present value of the totex amount included in FD.</p> <p>Any necessary adjustments will be made to exclude double-counting of other ODIs, menu and other effects.</p> <p>The ODI will not apply to any components of the scheme removed from the final determination including their effect on the functioning of the overall scheme.</p>
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### Performance commitment: W-B11 Community risk

This performance commitment and its associated outcome delivery incentive are based Severn Trent’s proposed costs for the Community risk element of the Birmingham resilience scheme. As we have not approved the costs of this scheme we are provisionally rejecting the performance commitment pending the company resubmitting costs for the scheme which we can approve.

#### Detailed definition of performance measure:

~~The removal of risk will be assessed in terms of delivery of the community risk schemes specified in the company’s business plan against the targeted change in risk reduction that they deliver.~~

**Incentive type:** Financial – penalty only

#### Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC						Scheme 1	
							Scheme 2
							Scheme 3
							Scheme 4

**Incentive rates**

Incentive type	Performance levels (No.)		Incentive rate (£ / percent of targeted risk reduction not achieved)
	Lower	Upper	
Penalty 1 (scheme 1)	100%		£0.334m
Penalty 2 (scheme 2)	100%		£0.414m
Penalty 3 (scheme 3)	100%		£0.123m
Penalty 4 (scheme 4)	100%		£0.174m

**Additional details**

Necessary detail on measurement units	<del>If the schemes proposed to remove risks change from the company's business plan proposals, the company will have to demonstrate whether the same risk reduction has been achieved.</del>
Frequency of PC measurement and any use of averaging	<del>Delivery will be assessed after scheme completion, or if the company decides not to proceed with the scheme.</del>
Timing and frequency of rewards/penalties	<del>One-off for each scheme</del>
Form of reward/penalty	<del>The penalty will be through an NPV neutral adjustment to RCV.</del>
Any other information or clarifications relevant to correct application of incentive	<del>The company will report on progress and any efficiencies made on these schemes to the successor to the Water Forum, and discuss options on how to reinvest any efficiency savings. The company will seek to prioritise investment in other community risk schemes but would also consider other options. Any necessary adjustments will be made to exclude double-counting of menu and other effects. Will not apply to any components of scheme removed from the final determination including their effect on the functioning of the overall scheme.</del>

## Wholesale water outcome C: We will have the lowest possible charges

### Performance commitment W-C1: Customers rating our services as good value for money

#### Detailed definition of performance measure:

The percentage of customers rating Severn Trent Water's services as good or very good value for money, as measured by its quarterly Customer Satisfaction Survey.

**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%	47%	47%	52%	53%	55%
Penalty deadband	%		37%	37%	42%	43%	45%

#### Incentive rates

Incentive type	Performance levels		Incentive rate (£/year)
	Lower	Upper	
Penalty	0%	45%	£125,000
Reward	47%	100%	£125,000

#### Additional details

Necessary detail on measurement units	The annual score will be the average of the survey results for the year.
Frequency of PC measurement and any use of averaging	Progress on the performance commitment measured, assured and reported on an annual basis and

	reviewed through the successor to Water Forum.
<b>Timing and frequency of rewards/penalties</b>	Reward or penalty applied annually for each financial year
<b>Form of reward/penalty</b>	Adjustment to revenue.
<b>Any other information or clarifications relevant to correct application of incentive</b>	<p>A consistent methodology will be applied in conducting the survey, and any necessary changes in approach will be reviewed by the Water Forum.</p> <p>Reward applies above 47% in 2015-16, rising to 55% by 2019-20. Penalty applies below 37% in 2015-16, rising to 45% by 2019-20.</p> <p>The reward / penalty is split equally between wholesale water and wholesale wastewater. £125,000 is the wholesale water allocation.</p>

## Wholesale water outcome D: We will protect our local environment

### Performance commitment W-D1: Improvements in river water quality against WFD criteria

#### Detailed definition of performance measure:

The number of WFD classification improvements Severn Trent Water delivers attributable to improvements in flow, with a point scored for each classification improvement.

**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	No.						31

#### Incentive rates

Incentive type	Performance levels		Incentive rate (£/year)
	Lower	Upper	
Penalty	0	30	£150,000
Reward	32		£150,000

## Additional details

<p><b>Necessary detail on measurement units</b></p>	<p>An improvement will be included in delivery of the performance commitment if the company has delivered the appropriate water company contribution, as agreed with the Environment Agency, towards an improvement in WFD classification, with a point scored for each classification improvement.</p> <p>The company will report annually on both length of river improved and the number of water bodies improved.</p>
<p><b>Frequency of PC measurement and any use of averaging</b></p>	<p>Reward or penalty applied in 2019-20, with five years' reward / penalty based on number of improvements delivered to 2018-19 and expected performance in 2019-20.</p>
<p><b>Timing and frequency of rewards/penalties</b></p>	<p>Adjustment to revenue.</p>
<p><b>Form of reward/penalty</b></p>	<p>Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.</p>
<p><b>Any other information or clarifications relevant to correct application of incentive</b></p>	<p>In the event of an Interim Determination for changes in WFD obligations, the incentive will be adjusted to take into account any impact on price controls, to avoid double-counting.</p> <p>WFD sewage treatment improvements are included in wholesale wastewater.</p>

## Performance commitment W-D2: Asset stewardship – environmental compliance

### Detailed definition of performance measure:

This measure relates to compliance with four environmental measures, one of which relates to water:

- % of sewage treatment works passing their numeric consents.
- % of actions raised from EA regulatory site audits (actions raised as a % of total site visits).

- % of sites that do not exceed their 90<sup>th</sup>ile flow on sewage treatment works or maximum daily flow on water treatment works.
- % of sites compliant with their abstraction permits.

**Incentive type:** Reputational (Financial incentive applies to wastewater).

### Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	Stable	>95.3%	>95.3%	>95.3%	>95.3%	>95.3%

### Additional details

Necessary detail on measurement units	<p>Performance reporting will be on a calendar year basis, in line with reporting to the Environment Agency, for example, performance reporting for 2015-16 will be in relation to 2015 calendar year performance.</p> <p>Performance is an unweighted average of the four measures.</p>
Frequency of PC measurement and any use of averaging	<p>Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.</p>
Any other information or clarifications relevant to correct application of incentive	<p>Financial incentive attributed to wastewater, as three of the four measures, and the greatest potential variability in performance, relates to wastewater.</p> <p>The commitments will be adjusted if there is any material change to the Environment Agency's definitions or approach to measurement.</p>

## Performance commitment W-D3: Biodiversity

### Detailed definition of performance measure:

The number of hectares of designated areas improved, measured through improvements made to Sites of Special Scientific Interest (SSSIs) on Severn Trent Water's land and Severn Trent Water's contribution to improving other designated areas in its region such as Special Areas of Conservation (SACs).

**Incentive type:** Reputational (Financial incentive applies to Waste Water).

### Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Hectares	334					409

### Additional details

Necessary detail on measurement units	Performance delivery will be assessed against the change in this measure on a consistent basis – the effect of any methodology changes will not be included.  The performance commitment is for the total number of hectares improved, that is, there is an increase of 75 hectares in the area which is in a favourable or improving condition.
Frequency of PC measurement and any use of averaging	Progress on performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	Reward or penalty attributed to wastewater because, although water contributes to this measure, incremental spend is in wastewater.

## Performance commitment W-D4: Sites with eel protection at intakes

### Detailed definition of performance measure:

The number of schemes delivered to provide eel protection at intakes

**Incentive type:** Reputational

### Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.						

### Additional details

Necessary detail on measurement units	
Frequency of PC measurement and any use of averaging	This measure relates to delivery of 20 improvements in 2020-21. Progress will be reported during AMP6. Progress on performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

## Wholesale water outcome E: We will protect the wider environment

### Performance commitment W-E1: Size of our carbon footprint

#### Detailed definition of performance measure:

Total net annual greenhouse gas emissions of the water regulated business.

**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	ktCO <sub>2</sub> e	229	228	224	222	220	216

#### Incentive rates

Incentive type	Performance levels		Incentive rate (£/ktCO <sub>2</sub> e/year)
	Lower	Upper	
Penalty	216		£14,630
Reward	0	228	£14,630

#### Additional details

Necessary detail on measurement units	Measured on a financial year basis
Frequency of PC measurement and any use of averaging	Progress on performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year
Form of reward/penalty	Adjustment to revenue.

Any other information or clarifications relevant to correct application of incentive

This is the total net annual greenhouse gas emissions of the water regulated business. It includes all the company's direct carbon emissions and the carbon savings resulting from the renewable energy it generates and exports.

The target was set using the 2013 grid electricity emissions factor and Severn Trent Water will measure its success against the target using the 2013 factor. It will, however, also continue to report emissions each year in line with the latest emissions factors as normal.

Reward / penalty applies at below / above 228 ktCO<sub>2</sub>e in 2015-16, falling to 216 ktCO<sub>2</sub>e by 2019-20.

## Wholesale water outcome F: We will make a positive difference in the community

### Performance commitment W-F1: Improved understanding of our services through education

#### Detailed definition of performance measure:

The number of people benefiting from the company total education programme including workshops, school lessons, site visits, etc.

**Incentive type:** Reputational.

#### Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	75,000	155,000	160,000	140,000	120,000	125,000

#### Additional details

Necessary detail on measurement units	Commitment is a company total.
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

## Wholesale wastewater outcome A: We will safely take your wastewater away

### Performance commitment S-A1: Number of internal sewer flooding incidents

#### Detailed definition of performance measure:

The number of times customer properties are flooded internally due to a failure on Severn Trent Water's sewer network (including sewers transferred in 2011) in the financial year. This includes both flooding due to capacity issues on its pipes and those due to other causes such as blockages.

**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	No.	1,031	1,014	989	960	927	892

#### Incentive rates

Incentive type	Performance levels (No.)		Incentive rate (£/No./year)
	Lower	Upper	
Penalty	893		£42,000
Reward	0	1,013	£42,000

#### Additional details

Necessary detail on measurement units	Internal flooding is flooding from a public sewer which enters a building or passes below a suspended floor. This includes flooding of cellars, conservatories, porches, stairwells of flats, and integral garages.
Frequency of PC measurement	Performance commitment measured, assured and

and any use of averaging	reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	The measure excludes flooding caused by exceptionally severe weather (greater than a 1 in 20 year return period). Reward or penalty applies at below / above 1,014 incidents in 2015-16, falling to 892 incidents by 2019-20.

## Performance commitment S-A2: Number of external sewer flooding incidents

### Detailed definition of performance measure:

The number of times customer properties are flooded externally due to a failure on Severn Trent Water's sewer network (Including sewers transferred in 2011) in the financial year. This includes both flooding due to capacity issues on its pipes and those due to other causes such as blockages.

**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	No.	7,714	7,639	7,548	7,447	7,336	7,220
Reward deadband	No.		7,452	7,452	7,447	7,336	7,220

### Incentive rates

Incentive type	Performance levels (No.)	Incentive rate (£/No./year)
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Incentive type	Performance levels (No.)		Incentive rate (£/No./year)
	Lower	Upper	
Penalty	7,221		£19,400
Reward	0	7,451	£19,400

### Additional details

Necessary detail on measurement units	External flooding includes flooding to buildings which are not occupied, such as detached garages and sheds.
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	<p>The measure excludes flooding caused by exceptionally severe weather (greater than a 1 in 20 year return period) and flooding to highways and other areas.</p> <p>Reward applies at below 7,452 incidents in 2015-16, falling to 7,220 incidents by 2019-20.</p> <p>Penalty applies at above 7,639 incidents in 2015-16, falling to 7,220 incidents by 2019-20.</p>

## Performance commitment S-A3: Partnership working

### Detailed definition of performance measure:

The number of projects where Severn Trent Water works in collaboration with other recognised public and not-for-profit organisations to help drive wider benefits for the community, in terms of reducing flooding, reportable on a financial year basis.

**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	No.	7					21

## Incentive rates

Incentive type	Performance levels (No.)		Incentive rate (£/No./year)
	Lower	Upper	
Penalty		20	£60,000
Reward	22		£60,000

## Additional details

Necessary detail on measurement units	n/a
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied on the basis of the total number of projects delivered in the five-year period. Five-year reward / penalty to be assessed in 2018-19 on delivery to date and expected delivery in 2019-20.
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	<p>The criteria to be met for a partnership output are:</p> <ul style="list-style-type: none"> <li>• Multiple organisations.</li> <li>• Multiple flooding issues addressed, with quantifiable benefit.</li> <li>• Multiple funding sources.</li> <li>• Timing of individual partner projects is co-ordinated, or one joint scheme is delivered.</li> </ul>

## Performance commitment S-A4: Asset stewardship – Blockages

### Detailed definition of performance measure:

The total number of sewer blockages on Severn Trent Water's sewer network (including sewers transferred in 2011) reported on a financial year basis.

**Incentive type:** Financial – penalty only.

### Performance commitments

	Unit	Starting level	Committed performance levels				
			2014-15	2015-16	2016-17	2017-18	2018-19
PC	No.	Marginal	<50,470 <del>56,410	<50,078 <del>56,410	<49,685 <del>56,410	<49,293 <del>56,410	<48,900 <del>56,410

### Incentive rates

Incentive type	Performance levels (No.)		Incentive rate (£/No./year)
	Lower	Upper	
Penalty	48,900 <del>56,410</del>		£2,079

### Additional details

Necessary detail on measurement units	A blockage is an obstruction in a sewer which causes a reportable problem (not caused by hydraulic overload), such as flooding or discharge to a watercourse, unusable sanitation, surcharged sewers or odour.
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Penalty applied on the basis of four-year average performance to 2018-19.
Form of reward/penalty	Adjustment to opening RCV at start of AMP7.

Any other information or clarifications relevant to correct application of incentive

Penalty applies at 50,470 blockages in 2015-16, falling to 48,900 blockages by 2019-20.

## Performance commitment S-A5: Statutory obligations (Section 101A schemes)

### Detailed definition of performance measure:

The total number of connectable properties, identified as polluting or likely to pollute, associated with new Section 101A schemes over the five years to 2019-20.

**Incentive type:** Reputational.

### Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	595					312

### Additional details

Necessary detail on measurement units	Commitment is for a five-year total. The 2014-15 figure includes all connectable properties, not just those polluting or likely to pollute.
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

## Wholesale wastewater outcome B: We will have the lowest possible charges

### Performance commitment S-B1: Customers rating our services as good value for money

#### Detailed definition of performance measure:

The percentage of customers rating Severn Trent Water's services as good or very good value for money, as measured by its quarterly Customer Satisfaction Survey.

**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%	47%	47%	52%	53%	55%
Penalty deadband	%		37%	37%	42%	43%	45%

#### Incentive rates

Incentive type	Performance levels		Incentive rate (£/year)
	Lower	Upper	
Penalty	0%	45%	£125,000
Reward	47%	100%	£125,000

#### Additional details

Necessary detail on measurement units	The annual score will be the average of the survey results for the year.
Frequency of PC measurement and any use of averaging	Progress on the performance commitment measured, assured and reported on an annual basis and

	reviewed through the successor to Water Forum.
<b>Timing and frequency of rewards/penalties</b>	Reward or penalty applied annually for each financial year.
<b>Form of reward/penalty</b>	Adjustment to revenue.
<b>Any other information or clarifications relevant to correct application of incentive</b>	<p>A consistent methodology will be applied in conducting the survey, and any necessary changes in approach will be reviewed by the Water Forum.</p> <p>Reward applies above 47% in 2015-16, rising to 55% by 2019-20. Penalty applies below 37% in 2015-16, rising to 45% by 2019-20.</p> <p>The reward or penalty is split equally between Wholesale Water and Wholesale Waste Water – £125,000 is the Waste Water allocation.</p>

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## Wholesale wastewater outcome C: We will protect our local environment

### Performance commitment S-C1: Improvements in river water quality against WFD criteria

#### Detailed definition of performance measure:

The number of WFD classification improvements Severn Trent Water delivers attributable to improvements in flow, with a point scored for each classification improvement.

**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	No.						202

#### Incentive rates

Incentive type	Performance levels		Incentive rate (£/year)
	Lower	Upper	
Penalty	0	201	£150,000
Reward	203		£150,000

#### Additional details

Necessary detail on measurement units	Performance will be measured with reference to modelled discharge permit requirements, as determined through reference to EA catchment permitting models. ODI improvements will be deemed to have been delivered on the date that the revised EA permit to discharge is issued. Where several separate projects are required in combination to
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	<p>deliver an outcome, delivery of the ODI points will be recorded at the date when the last permit is issued.</p> <p>The scoring system is on the basis of 1 point per classification change up to good ecological status per parameter improved.</p> <p>The company will report annually on both length of river improved and the number of water bodies improved.</p>
<b>Frequency of PC measurement and any use of averaging</b>	Reward or penalty applied in 2019-20, with five years' reward / penalty based on number of improvements delivered to 2018-19 and expected performance in 2019-20.
<b>Timing and frequency of rewards/penalties</b>	Adjustment to revenue in 2019-20.
<b>Form of reward/penalty</b>	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
<b>Any other information or clarifications relevant to correct application of incentive</b>	<p>An improvement will be included in delivery of the performance commitment if the company has delivered the appropriate water company contribution, as agreed with the Environment Agency, towards an improvement in WFD classification, with a point scored for each classification improvement.</p> <p>In the event of an Interim Determination for changes in WFD obligations, the incentive will be adjusted to take into account any impact on price controls, to avoid double-counting.</p> <p>WFD flow improvements are included in wholesale water.</p>

## Performance commitment S-C2: The number of pollution incidents

### Detailed definition of performance measure:

The total number of category 3 and 4 pollution incidents attributable to Severn Trent Water assets (including sewers transferred in 2011).

**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	No.	703	654	606	556	556	556
		<del>711</del>	<del>774</del>	<del>735</del>	<del>711</del>	<del>672</del>	<del>567</del>
Penalty deadband	No.		703	703	556	556	556
Reward deadband	No.		556	556	556	556	556

### Incentive rates

Incentive type	Performance levels		Incentive rate (£/year)
	Lower	Upper	
Penalty	557 <del>568</del>		£53,900
Reward	0	555 <del>765</del>	£53,900

### Additional details

Necessary detail on measurement units	Performance reporting will be on a calendar year basis, in line with reporting to the Environment Agency, for example, performance reporting for 2015-16 will be in relation to 2015 calendar year performance.
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year.

Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	<p>The step up in 2015-16 reflects the impact of increased monitoring on the sewerage network.</p> <p>Reward or Penalty applies above or below 703774 incidents in 2015-16, falling to 556567 by 2019-20. Rewards apply below 556 in each year.</p> <p>The commitments will be adjusted if there is any material change to the Environment Agency's definitions or approach to measurement.</p>

## Performance commitment S-C3: Asset stewardship – environmental compliance

### Detailed definition of performance measure:

This four-part measure relates to compliance with the company's sewage treatment and abstraction permits and includes:

- % of sewage treatment works passing their numeric consents
- % of actions raised from EA regulatory site audits (actions raised as a % of total site visits)
- % of sites that do not exceed their 90%ile flow on sewage treatment works or maximum daily flow on water treatment works
- % of sites compliant with their abstraction permits.

**Incentive type:** Financial –penalty only.

## Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	Stable	>95.3	>95.3	>95.3	>95.3	>95.3

## Incentive rates

Incentive type	Performance levels (%)		Incentive rate (£/%/year)
	Lower	Upper	
Penalty		95.3%	£1.4m

## Additional details

Necessary detail on measurement units	Performance reporting will be on a calendar year basis, in line with reporting to the Environment Agency, for example, performance reporting for 2015-16 will be in relation to 2015 calendar year performance. Performance is an unweighted average of the four measures.
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied on the basis of four-year average performance to 2018-19.
Form of reward/penalty	Adjustment to opening RCV at start of AMP7.
Any other information or clarifications relevant to correct application of incentive	The commitments will be adjusted if there is any material change to the Environment Agency's definitions or approach to measurement.

## Performance commitment S-C4: Biodiversity

### Detailed definition of performance measure:

The number of hectares of designated areas improved, measured through improvements made to Sites of Special Scientific Interest (SSSIs) on Severn Trent Water's land and its contribution to improving other designated areas in its region such as Special Areas of Conservation (SACs).

**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	No.	334					409

### Incentive rates

Incentive type	Performance levels		Incentive rate (£/hectare/year)
	Lower	Upper	
Penalty	0	409	£937
Reward	409		£937

### Additional details

Necessary detail on measurement units	<p>Performance delivery will be assessed against the change in this measure on a consistent basis – the effect of any methodology changes will not be included.</p> <p>The performance commitment is for the total number of hectares improved, that is, there is an increase of 75 hectares in the area which is in a favourable or improving condition.</p>
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.

Timing and frequency of rewards/penalties	Reward or penalty applied in 2019-20, with five years' reward / penalty based on number of improvements delivered to 2018-19 and expected performance in 2019-20.
Form of reward/penalty	Adjustment to revenue.
Any other information or clarifications relevant to correct application of incentive	

## Performance commitment S-C5: Sustainable sewage treatment

### Detailed definition of performance measure:

This measure is the number of works where future capital investment is avoided by the development of innovative solutions to reduce capacity pressures at Sewage Treatment Works to accommodate growth.

**Incentive type:** Financial – reward only.

### Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.						0

### Incentive rates

Incentive type	Performance levels		Incentive rate (£/works/year)
	Lower	Upper	
Reward	1		£28,000

## Additional details

Necessary detail on measurement units	The above incentive rate is for a notional 1,000 population equivalent capacity increase avoided. The incentive would be scaled up or down for each works according to the scale of the capacity increase avoided.
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward applied in 2019-20, with five years' reward based on number of improvements delivered to 2018-19 and expected performance in 2019-20.
Form of reward/penalty	Adjustment to revenue.
Any other information or clarifications relevant to correct application of incentive	No solutions yet available for inclusion in Severn Trent Water's plan, so the performance commitment is zero.

## Performance commitment S-C6: Serious pollution incidents

### Detailed definition of performance measure:

The number of pollution incidents (Categories 1 and 2) attributable to Severn Trent Water assets (including sewers transferred in 2011).

**Incentive type:** Reputational.

### Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	8	8	6	4	2	0

## Additional details

Necessary detail on measurement units	Measured on a calendar year basis
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	The commitments will be adjusted if there is any material change to the Environment Agency's definitions or approach to measurement.

## Performance commitment S-C7: Overall environmental performance

### Detailed definition of performance measure:

This is a basket of environmental measures to assess overall performance, and includes the following measures in the basket:

- improvements in river water quality against WFD criteria
- asset stewardship – environmental compliance
- total number of pollution incidents
- biodiversity improvements

**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	No. of targets met						3

## Incentive rates

Incentive type	Performance levels		Incentive rate (£/target/year)
	Lower	Upper	
Penalty	0	2	£480,000
Reward	4	4	£480,000

## Additional details

Necessary detail on measurement units	Measurement is number of measures on or above target. Pollution incidents and environmental compliance are measured on a calendar year basis in line with reporting to the Environment Agency.
Frequency of PC measurement and any use of averaging	Performance will be assessed in 2018-19, on average performance over the period, including expected performance in 2019-20 for biodiversity and WFD improvements. Pollution incidents and environmental compliance will be assessed to 2018.
Timing and frequency of rewards/penalties	Reward or penalty applied in 2018-19.
Form of reward/penalty	Adjustment to revenue in 2019-20.
Any other information or clarifications relevant to correct application of incentive	Penalty = £2.4m (five-year total) per target not achieved Reward = £2.4m for achieving all four targets.

## Wholesale wastewater outcome D: We will protect the wider environment

### Performance commitment S-D1: Size of our carbon footprint

#### Detailed definition of performance measure:

Total net annual greenhouse gas emissions of the wastewater regulated business.

**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	ktCO <sub>2</sub> e	259	248	245	238	237	242

#### Incentive rates

Incentive type	Performance levels		Incentive rate (£/ktCO <sub>2</sub> e/year)
	Lower	Upper	
Penalty		242	£14,630
Reward	248	0	£14,630

#### Additional details

Necessary detail on measurement units	Measured on a financial year basis
Frequency of PC measurement and any use of averaging	Progress on performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year

<b>Form of reward/penalty</b>	Adjustment to revenue.
<b>Any other information or clarifications relevant to correct application of incentive</b>	<p>This is the total net annual greenhouse gas emissions of the wastewater regulated business. It includes all the company's direct carbon emissions and the carbon savings resulting from the renewable energy it generates and exports.</p> <p>The target was set using the 2013 grid electricity emissions factor and Severn Trent Water will measure its success against the target using the 2013 factor. It will, however, also continue to report emissions each year in line with the latest emissions factors as normal.</p> <p>Reward / penalty applies at below / above 248 ktCO<sub>2</sub>e in 2015-16, falling to 242 ktCO<sub>2</sub>e by 2019-20.</p>

## Wholesale wastewater outcome E: We will make a positive difference in the community

### Performance commitment S-E1: Improved understanding of our services through education

#### Detailed definition of performance measure:

The number of people benefiting from the company total education programme including workshops, school lessons, site visits, etc.

**Incentive type:** Reputational.

#### Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	75,000	155,000	160,000	140,000	120,000	125,000

#### Additional details

Necessary detail on measurement units	Commitment is a company total.
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

## Household retail outcome A: We will provide you with excellent customer service

### Performance commitment R-A1: Customer satisfaction with their service (based on a survey)

#### Detailed definition of performance measure:

Performance as measured by the UK Customer Satisfaction Index, from a survey independently conducted by the Institute of Customer Service.

**Incentive type:** Reputational.

#### Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Ranking	Median	Median	Median	Upper Quartile	Upper Quartile	Upper Quartile

#### Additional details

Necessary detail on measurement units	
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

## Performance commitment R-A2: Customers' experience of dealing with us (based on Ofwat's SIM)

### Detailed definition of performance measure:

As set out by Ofwat in “Service incentive mechanism (SIM) for 2015 onwards – conclusions”.

**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	Ranking	Median	Upper Quartile	Upper Quartile	Upper Quartile	Upper Quartile	Upper Quartile

### Incentive rates

Incentive type	Performance levels		Incentive rate
	Lower	Upper	
Penalty			Determined by Ofwat
Reward			Determined by Ofwat

### Additional details

Necessary detail on measurement units	Determined by Ofwat
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis.
Timing and frequency of rewards/penalties	End of period
Form of reward/penalty	

Any other information or clarifications relevant to correct application of incentive

## Household retail outcome B: We will help you if you struggle

### Performance commitment R-B1: Number of customers helped by a review of their tariff and water usage and/or supported by our social fund

#### Detailed definition of performance measure:

Includes customers helped by WaterSure, Severn Trent Water’s new social tariff, metering (where advised for customers having difficulty in paying) and water health check support.

**Incentive type:** Reputational.

#### Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	11,500	35,000	50,000	50,000	50,000	50,000

#### Additional details

Necessary detail on measurement units	
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

## Performance commitment R-B2: % of customers who do not pay

### Detailed definition of performance measure:

Household bad debt divided by total household revenue, as reported in the Annual Accounts.

**Incentive type:** Reputational.

### Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	2.69	2.7	2.7	2.7	2.7	2.7

### Additional details

Necessary detail on measurement units	
Frequency of PC measurement and any use of averaging	Performance commitment measured, assured and reported on an annual basis.
Timing and frequency of rewards/penalties	
Form of reward/penalty	
Any other information or clarifications relevant to correct application of incentive	

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Printed on 75% minimum de-inked post-consumer waste paper  
August 2014

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