

Update on Outcome Delivery Incentives (ODIs)

2015-2020 period



Introduction

Following publication of Ofwat's PR14 final determination in December 2014,¹ Thames Water has considered its totex menu choice options.

Table 1 below sets out our menu choices and the company and customer shares of changes in total expenditure (totex). The menu choices are the same as the implied menu choices from our final determination. We communicated these menu choices to Ofwat on 16 January 2015.

Table 1 – Totex menu choices

Price control	Totex menu choices	Company share of changes in totex spend (%)	Customer share of changes in totex spend (%)
Wholesale Water	95.3	50.94%	49.06%
Wholesale Wastewater	98.0	50.40%	49.60%
TTT price control	96.4	50.72%	49.28%

Source: Thames Water menu choices. Shares of totex spend calculated based on Ofwat's menu formula.

In line with Ofwat's requirements, we have re-calibrated the outcome delivery incentives (ODIs) in Ofwat's PR14 final determination for Thames Water (pages 191-269)² to be consistent with the cost-sharing rates implied by the menu choices in Table 1.

We have taken into account the clarifications and updates to the performance commitments and ODIs in the PR14 final determination since it was published on 12 December 2014. These updates were confirmed with Ofwat.

The changes to the performance commitments and ODIs are summarised in Table 2 below and highlighted in blue in the attached document, which is otherwise identical to the PR14 final determination (pages 191-269).

¹ Ofwat, "Final determinations", 12 December 2014, <http://www.ofwat.gov.uk/pricereview/pr14/finaldet>

² Ofwat, "Final price control determination notice: company-specific appendix – Thames Water", 12 December 2014

Table 2 – Changes to performance commitments and ODIs in final determination

Performance commitments	Summary of changes
WA4 – Reduced water consumption from issuing water efficiency devices to customers	Calibrated penalty incentive rate for menu choice.
WB1 – Asset Health Water Infrastructure	Calibrated penalty incentive rate for menu choice. Updated sub-measure reference levels for Planned network rehabilitation and Customer complaints discolouration and white water.
WB2 – Asset Health Water Non Infrastructure	Calibrated penalty incentive rate for menu choice. Updated sub-measure reference levels for Reservoir integrity index and Water quality complaints for chlorine and Water quality complaints for hardness.
WB3 – Compliance with drinking water quality standards – Ofwat/DWI KPI	Calibrated penalty incentive rate for menu choice.
WB6 – Security of Supply Index – Ofwat KPI	Calibrated penalty incentive rate for menu choice.
WB7 – Compliance with SEMD advice notes (with or without derogation)	Calibrated penalty incentive rate for menu choice.
WC2 - Leakage	Calibrated penalty and reward incentive rates for menu choice.
WC5 – Deliver 100% of agreed measures to meet new environmental regulations	Calibrated penalty incentive rate for menu choice.
SB1 – Asset Health Wastewater Non Infrastructure	Calibrated penalty incentive rate for menu choice.
SB2 – Asset Health Wastewater Infrastructure	Calibrated penalty incentive rate for menu choice. Updated sub-measure reference levels for Number of sewer collapses, Number of sewer blockages, Pollution incidents (cat 1-3) and Properties internally flooded.
SB3 – Properties protected from flooding due to rainfall	Incentive rates are determined by reference to actual costs, benefits and cost sharing rate when calculated. The ODI details in the FD have not been changed.
SB5 – Contributing area disconnected from combined sewers by retrofitting sustainable drainage	Calibrated reward incentive rate for menu choice.
SB6 – Compliance with SEMD advice notes, with or without derogation	Calibrated penalty incentive rate for menu choice.
SB7 – Population equivalent of sites made resilient to future extreme rainfall events	Calibrated penalty incentive rate for menu choice.
SB8 – Lee Tunnel including Shaft G	Calibrated penalty incentive rate for menu choice.
SB9 – Deephams Wastewater Treatment Works	Calibrated penalty incentive rate for menu choice. Updated incentive rate in line with Ofwat clarification.
SC3 – Sewage treatment works discharge compliance	Calibrated penalty incentive rate for menu choice.
SC8 – Deliver 100% of agreed measures to meet environmental regulations	Calibrated penalty incentive rate for menu choice.
SC9 – Reduce the amount of phosphorous entering rivers to help improve aquatic plant and wildlife	Incentive rates are determined by reference to actual costs, benefits and cost sharing rate when calculated. The ODI details in the FD have not been changed.

Source: Thames Water

Performance commitments and ODIs in detail

Wholesale water outcome A: Demonstrate to our customers and stakeholders that they can trust us, that we are easy to do business with and that we care

Performance commitment WA1: Improve handling of written complaints by increasing 1st time resolution

Detailed definition of performance measure: The percentage of written complaints relating to the wholesale water business (excluding metering) which are resolved at the first stage, without the need for escalation.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	90%	95%	95%	95%	95%	95%

Additional details

Necessary detail on measurement units	The measurement unit is the proportion of written complaints relating to water services (excluding metering) that are resolved first time, without the need for escalation.
Frequency of PC measurement and any use of averaging	PC reported at the end of each financial year and reviewed through independent assurance process.

Performance commitment WA2: Number of Written complaints per 10,000 connected properties

Detailed definition of performance measure: The number of written complaints about water operational activity per 10,000 connected properties that receive water services from Thames Water.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Number of written complaints per 10,000 connected properties	11.66	10.64	9.61	8.58	7.55	6.53

Additional details

Necessary detail on measurement units	<p>Measurement units are the number of written complaints about water operational activity per 10,000 connected properties that receive water services from Thames Water.</p> <p>The activities carried out between the wholesale water and retail price controls will be managed through a service level agreement (SLA), which will cover, among other things, information integrity and accuracy across the separate business functions.</p> <p>This is rounded to two decimal places</p>
Frequency of PC measurement and any use of averaging	PC reported at the end of each financial year and reviewed through independent assurance process.

Performance commitment WA3: Customer satisfaction surveys (Internal CSAT monitor)

Detailed definition of performance measure: The average customer satisfaction score for customer contacts relating to the wholesale water operational activity, using Thames Water's internal CSAT monitor.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Score 1:5	4.10	4.35	4.45	4.50	4.55	4.60

Additional details

Necessary detail on measurement units	Measurement unit is the average customer satisfaction score for customer contacts relating to water operational activity
Frequency of PC measurement and any use of averaging	PC reported at the end of each financial year and reviewed through independent assurance process.

Performance commitment WA4: Reduced water consumption from issuing water efficiency devices to customers

Detailed definition of performance measure: Reduced water consumption (demand) measured in Ml/d, achieved from issuing water efficiency devices to customers. The calculation of the demand reduction from these devices follows Ofwat guidelines (Ofwat – June Return Reporting Requirements, 2011) and is reported as part of the annual return.

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	Reduced demand MI/d	4.24				15.45
Penalty collar	Reduced demand MI/d					11.70
Penalty deadband	Reduced demand MI/d					15.45

Incentive rates

Incentive type	Incentive rate (£m/ Reduced demand MI/d)
Penalty	0.885 0.870

Additional details

Necessary detail on measurement units	Measurement unit is the cumulative reduction in demand (in MI/d) by the end of 2015-20 from issuing water efficiency devices to customers. The calculation of the demand reduction from these devices follows Ofwat guidelines (Ofwat – June Return Reporting Requirements, 2011) and is reported as part of the Annual Return.
Frequency of PC measurement and any use of averaging	The penalty applies to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Performance commitment WA5: Provide a free repair service for customers with a customer side leak outside of the property

Detailed definition of performance measure: The number of properties where Thames Water provides a free repair service to customers with a customer side leak outside their property. These are additional targeted properties, above the company's annual baseline number (10,000), aligned with the roll out of its progressive metering programme.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Number against target above baseline no.	10,000 baseline	1170	1450	1410	900	890

Additional details

Necessary detail on measurement units	Measurement unit is the number of properties where Thames Water provides a free repair service to customers with a customer side leak outside their property
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Wholesale water outcome B: We will provide a safe and reliable Water service that complies with all necessary standards and is available when our customers require it

Performance commitment WB1: Asset Health Water Infrastructure

Detailed definition of performance measure: The Asset Health status in each year of 2015-20, based on independently assessed performance against a basket of key indicators that represent the health of the infrastructure assets.

The Asset Health measure for water infrastructure is made on the basis of indicators of bursts, unplanned interruptions to supply, iron mean zonal non-compliance, inadequate pressure, planned network rehabilitation and customer complaints of discolouration and white 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
PC	Composite index	Stable	Stable	Stable	Stable	Stable	Stable
Penalty deadband	Composite index		Marginal	Marginal	Marginal	Marginal	Marginal
Penalty collar	Composite index		Deteriorating	Deteriorating	Deteriorating	Deteriorating	Deteriorating

Incentive rates

Incentive type	Incentive rate (£m/status decrement/year)
Penalty	4.675 4.6

Additional details

Necessary detail on measurement units	<p>Measurement unit is the Asset Health status in each year of 2015-20, based on independently assessed performance against a basket of key indicators that represent the health of the infrastructure or non-infrastructure assets, and therefore the service being provided to current and future customers.</p> <p>The Asset Health measure for water infrastructure is made on the basis of indicators of bursts, unplanned interruptions to supply, iron mean zonal non-compliance, inadequate pressure, planned network rehabilitation and customer complaints of discolouration and white water. The reference levels against which Thames Water will assess its performance are included in the composite table below.</p> <p>The method for calculating the performance of the Asset Health index will be set out in a methodology document, which will be reviewed by a suitably qualified independent expert who will report to Thames Water's Board and customer group on the reasonableness of the methodology. Any sustained challenge to the methodology, or assessment will be reported in the final assessment.</p>
Frequency of PC measurement and any use of averaging	<p>The penalty applies to performance in each of the five years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5. Performance against the commitment will be measured annually.</p>
Timing and frequency of rewards/penalties	<p>Penalties will be calculated at PR19, to be applied in 2020-25</p>
Form of reward/penalty	<p>Adjustment to revenue</p>
Any other information or clarifications relevant to correct application of incentive	<p>The penalty incentive rate applies to a single change in status, where stable to marginal and marginal to deteriorating each represent a single change in status.</p> <p>Marginal status represents the effective penalty deadband, as no penalty is earned until performance is assessed as marginal. Penalties start to occur in the event of a single year of marginal or deteriorating status with penalties applying in each year where the status is below stable.</p>

Composite index table

Sub measure	Unit	Reference levels						
		2014-15	Limits	2015-16	2016-17	2017-18	2018-19	2019-20
Total bursts	Nr	8840	Ref	8840	8840	8840	8840	8840
Unplanned interruptions to customer >12hr (DG3)	Nr	1354	Ref	1354	1354	1354	1354	1354
Iron mean zonal non-compliance	%	0.16	Ref	0.16	0.16	0.16	0.16	0.16
Inadequate pressure (DG2)	Nr	34	Ref	34	34	34	34	34
Planned network rehabilitation	Nr		Ref			650		
Customer complaints discolouration white water	Nr per 1000 pop	0.13	Ref	0.38 0.13	0.38 0.13	0.38 0.13	0.38 0.13	0.38 0.13

Source: Thames Water Performance Commitment Response – Water. June 2014

Performance commitment WB2: Asset Health Water Non Infrastructure

Detailed definition of performance measure: The Asset Health status in each year of 2015-20, based on performance against a basket of key indicators that represent the health of the non-infrastructure assets.

The Asset Health measure for water non-infrastructure is made on the basis of indicators of Disinfection Index, Reservoir Integrity Index, Drinking Water Quality Compliance Measures – Turbidity, Drinking Water Quality Compliance Measures –

Enforcement actions, Process Control Index, and Water Quality Customer Complaints for chlorine and hardness.

Incentive type: Financial – penalty only

Performance commitments

Unit		Starting level	Committed performance levels				
			2014-15	2015-16	2016-17	2017-18	2018-19
PC	Composite index	Stable	Stable	Stable	Stable	Stable	Stable
Penalty deadband	Composite index		Marginal	Marginal	Marginal	Marginal	Marginal
Penalty collar	Composite index		Deteriorating	Deteriorating	Deteriorating	Deteriorating	Deteriorating

Incentive rates

Incentive type	Incentive rate (£m/status decrement/year)
Penalty	4.675 4.6

Additional details

Necessary detail on measurement units	<p>Measurement unit is the Asset Health status in each year of 2015-20, based on independently assessed performance against a basket of key indicators that represent the health of the infrastructure or non-infrastructure assets, and therefore the service being provided to current and future customers.</p> <p>The Asset Health measure for water non-infrastructure is made on the basis of indicators of disinfection, reservoir integrity, drinking water quality compliance – turbidity and enforcement actions, process control and water quality customer complaints for chlorine, monitored complaints for hardness. The reference levels against which Thames Water will assess its performance are included in the composite table below.</p> <p>The method for calculating the performance of the Asset Health index will be set out in a methodology document, which will be reviewed by a suitably qualified independent expert who will report to Thames</p>
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	Water's Board and customer group on the reasonableness of the methodology. Any sustained challenge to the methodology, or assessment will be reported in the final assessment.
Frequency of PC measurement and any use of averaging	The penalty applies to performance in each of the five years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	<p>The penalty incentive rate applies to a single change in status, where stable to marginal and marginal to deteriorating each represent a single change in status.</p> <p>Marginal status represents the effective penalty deadband, as no penalty is earned until performance is assessed as marginal. Penalties start to occur in the event of a single year of marginal or deteriorating status, with penalties applying in each year where the status is below stable.</p>

Composite index table

Reference levels								
Sub measure	Unit	2014-15	Limits	2015-16	2016-17	2017-18	2018-19	2019-20
Disinfection index (DWI)	%		Ref	99.97	99.97	99.97	99.97	99.97
Reservoir Integrity Index	%		Ref	0.27 99.97	0.27 99.97	0.27 99.97	0.27 99.97	0.27 99.97
DWQ Compliance Measures – turbidity	Nr of Sites	1	Ref	1	1	1	1	1
Process control index	%		Ref	99.99	99.99	99.99	99.99	99.99

Sub measure	Unit	Reference levels						
		2014-15	Limits	2015-16	2016-17	2017-18	2018-19	2019-20
DWQ Compliance measures – Enforcement Actions	Nr	0	Ref	0	0	0	0	0
Water Quality complaints for: chlorine	Nr per 1000 pop		Ref	0.07 0.7	0.07 0.7	0.07 0.7	0.07 0.7	0.07 0.7
Water Quality complaints for: hardness	Nr per 1000 pop			Monitored only	Monitored only	Monitored only	Monitored only	Monitored only

Source: Thames Water Performance Commitment Response – Water. June 2014

Performance commitment WB3: Compliance with drinking water quality standards – Ofwat/DWI KPI

Detailed definition of performance measure: Compliance with drinking water quality standards – Ofwat/DWI KPI, is the mean zonal compliance in the year for water quality parameters. It is an existing KPI which is reported annually to Ofwat and 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

		Unit	Starting level	Committed performance levels				
			2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	% compliance		99.94%	99.94%	99.94%	100%	100%	100%
Penalty collar	% compliance			99.91%	99.91%	99.93%	99.93%	99.93%
Penalty deadband	% compliance			99.93%	99.93%	99.95%	99.95%	99.95%

Incentive rates

Incentive type	Incentive rate (£m/0.01 pp /year)
Penalty	3.915 3.855

Additional details

Necessary detail on measurement units	The measurement unit is the mean zonal compliance in the year, as currently reported to the DWI. Performance is rounded to the nearest two decimal places for the purpose of applying the ODI
Frequency of PC measurement and any use of averaging	The penalty applies to performance in each of the five years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Performance commitment WB4: Properties experiencing chronic low pressure (DG2)

Detailed definition of performance measure: This measure is the previous Ofwat DG2 measure, which shows the number of properties at the end of the reporting year experiencing chronic low pressure.

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. of properties	34	34	34	34	34	34

Additional details

Necessary detail on measurement units	Measurement unit is previous DG2 measure showing the number of properties at the end of the reporting year experiencing chronic low pressure
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Performance commitment WB5: Average hours lost supply per property served, due to interruptions >4hr

Detailed definition of performance measure: This is the annual, average number of hours lost supply per property served, due to interruptions >4hr, from both planned and unplanned events. A cap (20,000) applies to the number of property hours counted for any single incident.

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	Hours lost supply per property served	0.13	0.13	0.13	0.13	0.13	0.13
Penalty collar	Hours lost supply per property served		0.15	0.15	0.15	0.15	0.15
Reward cap	Hours lost supply per property served		0.10	0.10	0.10	0.10	0.10

Incentive rates

Incentive type	Incentive rate (£m/0.01 hours lost per property served/year)
Penalty	5.335
Reward	3.125

Additional details

Necessary detail on measurement units	<p>Measurement unit is the average number of hours lost supply per property served, due to interruptions >4hr, from both planned and unplanned events. A cap (20,000) applies to the number of property hours for any single incident.</p> <p>Performance will be rounded to two decimal places</p>
Frequency of PC measurement and any use of averaging	<p>The penalty applies to performance in each of the five years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5. Performance against the commitment will be measured annually.</p>

Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Performance commitment WB6: Security of Supply Index – Ofwat KPI

Detailed definition of performance measure: This is the existing annual Security of Supply (SOSI) index. This measure is reported and audited as part of the Annual Return process.

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	Index	100	100	100	100	100	100
Penalty collar	Index		97	97	97	97	97

Incentive rates

Incentive type	Incentive rate (£m/index point/year)
Penalty	2.265 2.230

Additional details

Necessary detail on measurement units	Measurement unit is the existing annual security of supply (SOSI) index. This measure is reported and audited as part of the annual return process. The calculation matches the method for current annual reporting.
Frequency of PC measurement and any	The penalty applies to performance in each of the five years of 2015-20. This will be calculated at PR19 based on actuals for

use of averaging	years 1-4 and forecasts for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Performance commitment WB7: Compliance with SEMD advice notes (with or without derogation)

Detailed definition of performance measure: Compliance with SEMD (Security and Emergency Measures Directive) Advice Notes, with or without derogation. These are the advice notes issues by Defra and written by CPNI (the Centre for Protection of National Infrastructure).

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	% compliance	100%					100%
Penalty collar	% compliance						0%

Incentive rates

Incentive type	Performance levels (%)		Incentive rate
	Lower	Upper	

Incentive type	Performance levels (%)		Incentive rate
Penalty	0%	100%	40.94% 40%-of annualised costs saved through scope reduction

Additional details

Necessary detail on measurement units	This measures compliance with the SEMD Advice Notes to deliver a secure supply of water and resilience in supply.
Frequency of PC measurement and any use of averaging	The penalty applies to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	This incentive will return 40.94% 40%-of any 2015-20 revenue as a result of reductions in scope used to estimate the SEMD cost for Thames Water's 27 June 2014 submission. This will be in addition to the 49.06% 50%-of costs returned after the totex menu reward. For the avoidance of doubt, this does not apply to cost increases or to cost reductions as a result of efficiencies. Incentives will be applied in 2020-25 on an NPV-neutral basis.

Performance commitment WB8: MI/d of sites made resilient to future extreme rainfall events

Detailed definition of performance measure: The capacity (in MI/d) of water treatment works where Thames Water has invested to protect supply from extreme weather events (defined as a 1:100 rainfall event), by the end of 2015-20.

This will be measured by the successful delivery of the solutions to protect supply from the identified sites. MI/d will be measured from the design capacity of the sites.

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 cumulative	N/a					1015
Penalty collar	MI/d cumulative						812
Reward cap	MI/d cumulative						1218

Incentive rates

Incentive type	Incentive rate (£m/MI/d cumulative)
Penalty	0.005
Reward	0.005

Additional details

Necessary detail on measurement units	Measurement unit is the capacity (in MI/d) of water treatment works where Thames Water has invested to protect supply from extreme weather events, by the end of 2015-20
Frequency of PC measurement and any use of averaging	The penalty applies to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Wholesale water outcome C: We will limit our impact on the environment and achieve a socially responsible, sustainable business for future generations, including reducing levels of leakage

Performance commitment WC1: Greenhouse gas emissions from water operations

Detailed definition of performance measure: The greenhouse gas emissions (in kilo tonnes of carbon dioxide (CO₂) equivalent) from water operations.

This performance measure takes into account all forecast movements in the use of energy and emissions, including impacts from Thames Water's wider investment programme and efficiency activities. Its specific programme is optimised at a company-wide level and then allocated to water or wastewater service based on each site-specific solution in the preferred programme. This PC is allocated 100% to Wholesale Water, being delivered solely by solutions on water sites.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Kt CO ₂ e	247.8	266.4 227.0	236.5 185.0	200.5 166.1	164.4 146.6	136.2

Additional details

Necessary detail on measurement units	Measurement unit is the greenhouse gas emissions (in kilo tonnes of carbon dioxide (CO ₂) equivalent) from water operations
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Any other information
or clarifications
relevant to correct
application of incentive

The committed performance levels are linked to actual UK emission factors, confirmed annually by Defra.

The performance commitments will be updated each year to account for changes to Defra's grid electricity emissions factors.

No other changes will be made.

Performance commitment WC2: Leakage

Detailed definition of performance measure: The annual average level of leakage, including customer supply pipe leakage, in MI/d. This is reported on an annual basis in the company's annual returns.

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	665	649	630	620	612	606
Penalty collar	MI/d		657	649	649	649	649
Reward deadband	MI/d		637	619	609	600	594
Reward cap	MI/d		626	607	596	588	582

Incentive rates

Incentive type	Incentive rate (£m/MI/d/year)
Penalty	0.450 0.445
Reward	0.270 0.265

Additional details

Necessary detail on measurement units	Measurement unit is the annual average level of leakage, in MI/d.
Frequency of PC measurement and any use of averaging	The penalty applies to annual performance in the first four years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecast for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Performance commitment WC3: Abstraction Incentive Mechanism (AIM)

Detailed definition of performance measure: This is a new measure being developed by Ofwat for an industry-wide incentive, to apply during 2015-20. Thames Water will align the measure with the detailed definition to be formed by Ofwat, which the company understands will be score-based using abstracted volume at identified sites.

Incentive type: Reputational

Performance commitments

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

Additional details

Necessary detail on measurement units	N/a – measurement units will be defined as the incentive is developed.
Frequency of PC measurement and any use of averaging	N/a – frequency of measurement will be defined as the incentive is developed.

Read:

AIM sites	Baseline / Trigger	Unit	Starting level	Committed performance levels				
			2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
New Gauge	Baseline	MI/d	Not active	Not active	89.6	89.6	89.6	89.6
	Trigger	MI/d	Not active	Not active	60.0	60.0*	60.0*	60.0*
Pangbourne	Baseline	MI/d	Not active	Not active	31.6	31.6	31.6	31.6
	Trigger	MI/d	Not active	Not active	1.02	1.02	1.02	1.02
Axford	Baseline	MI/d	Not active	Not active	Not active	7.85	7.85	7.85
	Trigger	MI/d	Not active	Not active	Not active	166	166	166

Pann Mill	Baseline	MI/d	Not active	Not active	11.4	11.4	11.4	11.4
	Trigger	MI/d	Not active	Not active	5.6	5.6	5.6	5.6
North Orpington	Baseline	MI/d	Not active	Not active	7.16	7.16	7.16	7.16
	Trigger	MI/d	Not active	Not active	11.4	11.4	11.4	11.4

*New Gauge trigger may be subject to change if the Environment Agency installs a new gauging station or flow requirements change.

Additional details

Necessary detail on measurement units	Measurement unit is MI/d abstracted at the relevant site.
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.
Form of reward/penalty	Reputational
Any other information or clarifications relevant to correct application of incentive	<p>The calculation follows the Ofwat Guidelines (February 2016) for calculating AIM performance.</p> <p>AIM performance in MI = (average daily abstraction during period when flows are at or below the trigger threshold - baseline average daily abstraction during period when flows are at or below the trigger threshold) * length of period when flows are at or below the trigger threshold.</p> <p>Normalised AIM performance = AIM performance / (baseline average daily abstraction * length of period when river flows are at or below the trigger threshold)</p> <p>In line with Ofwat's guidance, we will report both AIM performance and normalised AIM performance for each site individually and for all sites combined.</p> <p>New Gauge trigger may be subject to change if the Environment Agency installs a new gauging station or flow requirements change.</p>

Performance commitment WC4: We will educate our existing and future customers

Detailed definition of performance measure: This measures the number of children directly engaged each year through Thames Water's education programme on water supply, including working in schools, educational visits and site open days.

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. of children directly engaged	14,000	15,000	16,000	17,000	18,000	20,000

Additional details

Necessary detail on measurement units	The measurement unit is the number of children Thames Water has directly engaged each year in its water education programme.
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Performance commitment WC5: Deliver 100% of agreed measures to meet new environmental regulations

Detailed definition of performance measure: The proportion of agreed measures completed to meet new environmental regulations. Agreed measures are defined as:

- water schemes listed on NEP4; and
- low flow and drought management plan schemes.

The list of schemes currently agreed is listed in the PC Response WC5 (27 June 2014)

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	% agreed schemes completed	N/a					100%
Penalty collar	% agreed schemes completed						0%

Incentive rates

Incentive type	Incentive
Penalty	40.94% 40%-of 2015-20 costs reduced through scope reductions

Additional details

Necessary detail on measurement units	This measures compliance with the Environment Agency agreed schemes for the agreed measures to meet new environmental regulations
Frequency of PC measurement and any use of averaging	The penalty applies to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to RCV
Any other information or clarifications relevant to correct application of incentive	<p>This incentive will return 40.94% 40%-of any 2015-20 cost as a result of reductions in scope used to estimate the 27 June 2014 submission. This will be in addition to the 49.06% 50%-of costs returned after the totex menu reward. For the avoidance of doubt, this does not apply to cost increases or to cost reductions as a result of efficiencies.</p> <p>Incentives will be applied in 2020-25 on an NPV-neutral basis.</p>

Wholesale water outcome D: We will provide the level of customer service our customers require, in the most economic and efficient manner, to ensure that bills are no more than necessary

Performance commitment WD1: Energy imported less energy exported

Detailed definition of performance measure: The net reduction in energy from the grid (energy imported less energy exported) measured in gigawatt hours (GWh), achieved by improving the energy efficiency of assets and increasing self-generation percentage across water operations.

This performance measure takes into account all forecast movements in the use of energy, including impacts from Thames Water's wider investment programme and efficiency activities. The specific programme is optimised at a company-wide level and then allocated to water or wastewater services based on each site-specific solution in the preferred programme. This PC is allocated 100% to wholesale water, being delivered solely by solutions on water sites.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	GWh	505	494	483	472	472	476

Additional details

Necessary detail on measurement units	Measurement unit is the net energy imported by wholesale water operations in GWh.
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Wholesale wastewater outcome A: Demonstrate to our customers and stakeholders that they can trust us, that we are easy to do business with and that we care

Performance commitment SA1: Improve handling of written complaints by increasing first time resolution

Detailed definition of performance measure: The percentage of written complaints relating to the wholesale wastewater business which are resolved at the first stage, without the need for escalation.

Incentive type: Reputational

Performance commitments

		Starting level		Committed performance levels			
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	90%	95%	95%	95%	95%	95%

Additional details

Necessary detail on measurement units	Measurement units are the percentage of wastewater operational written complaints resolved first time.
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Performance commitment SA2: Number of Written complaints per 10,000 connected properties

Detailed definition of performance measure: The number of written complaints about wastewater operational activity per 10,000 connected properties that receive wastewater services from Thames Water.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Number of written complaints per 10,000 connected properties	8.05	7.60	7.15	6.70	6.25	5.80

Additional details

Necessary detail on measurement units	Measurement unit is the number of written complaints about wastewater operational activity per 10,000 connected properties that receive wastewater services from Thames Water. This is rounded to two decimal places.
Frequency of PC measurement and any use of averaging	PC reported at the end of each financial year and reviewed through independent assurance process.

Performance commitment SA3: Customer satisfaction surveys (Internal CSAT monitor)

Detailed definition of performance measure: The average customer satisfaction score for customer contacts relating to wastewater operational activity, using Thames Water's internal CSAT Monitor.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Score 1:5	4.30	4.55	4.60	4.65	4.65	4.70

Additional details

Necessary detail on measurement units	Measurement unit is the average customer satisfaction score for customer contacts relating to wastewater operational activity
Frequency of PC measurement and any use of averaging	PC reported at the end of each financial year and reviewed through independent assurance process.

Wholesale wastewater outcome B: We will provide a safe and reliable wastewater service that complies with all necessary standards and is available when our customers require it

Performance commitment SB1: Asset Health Wastewater Non Infrastructure

Detailed definition of performance measure: The Asset Health status in each year of 2015-20 based on independently assessed performance against a basket of key indicators that represent the health of the non-infrastructure assets.

The Asset Health measure for wastewater non-infrastructure is made on the basis of indicators of unconsented pollution incidents, the percentage of sewage treatment works discharges failing numeric consents, and the total population equivalent served by sewage treatment works failing look-up table consents.

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	Composite index	Stable	Stable	Stable	Stable	Stable	Stable
Penalty deadband	Composite index		Marginal	Marginal	Marginal	Marginal	Marginal
Penalty collar	Composite index		Deteriorating	Deteriorating	Deteriorating	Deteriorating	Deteriorating

Incentive rates

Incentive type	Incentive rate (£m/status decrement /year)
Penalty 1	4.535 4.505

Additional details

Necessary detail on measurement units	<p>The measurement unit is the Asset Health status in each year of 2015-20, based on independently assessed performance against a basket of key indicators that represent the health of the infrastructure or non-infrastructure assets, and therefore the service being provided to current and future customers.</p> <p>The Asset Health measure for wastewater non-infrastructure is made on the basis of indicators of unconsented pollution incidents, the percentage of sewage treatment works discharges failing numeric consents, and the total population equivalent served by sewage treatment works failing look-up table consents. The reference levels against which Thames Water will assess its performance are included in the composite table below. In line with the Environment Agency's expectations, Thames Water must target 100% compliance with permits to discharge treated wastewater.</p>
Frequency of PC measurement and any use of averaging	The penalty applies to performance in each year from 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecast performance for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	<p>The penalty incentive rate applies to a single change in status, where stable to marginal and marginal to deteriorating each represent a single change in status.</p> <p>Marginal status represents the effective penalty deadband, as no penalty is earned until performance is assessed as marginal. Penalties start to occur in the event of a single year of marginal or deteriorating status with penalties applying in each year where the status is below stable.</p>

Composite index table

Sub measure	Unit	Reference levels						
		2014-15	Limits	2015-16	2016-17	2017-18	2018-19	2019-20
Unconsented pollution incidents (cat 1, 2 and 3) STWs, storm tanks, pumping stations and other	Nr		Ref	27	27	27	27	27
Sewage treatment works discharges failing numeric consents %	%	1.12	Ref	0	0	0	0	0
Total population equivalent served by sewage treatment works failing look-up table consents	Population equivalent		Ref	0	0	0	0	0

Source: Thames Water Performance Commitment Response – Wastewater of June 2014 updated to reflect the Environment Agency's expectation that the company will target 100% compliance with all permits to discharge wastewater.

Performance commitment SB2: Asset Health Wastewater Infrastructure

Detailed definition of performance measure: The Asset Health status in each year of 2015-20, based on independently assessed performance against a basket of key indicators that represent the health of the infrastructure assets. The Asset Health measure for wastewater infrastructure is made on the basis of indicators of number of sewer collapses, number of blockages, unconsented category 1 to 3 pollution incidents and properties internally flooded due to other causes. This includes assets transferred under section 105A of the Water Industry Act.

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	Composite index	Stable	Stable	Stable	Stable	Stable	Stable
Penalty deadband	Composite index		Marginal	Marginal	Marginal	Marginal	Marginal
Penalty collar	Composite index		Deteriorating	Deteriorating	Deteriorating	Deteriorating	Deteriorating

Incentive rates

Incentive type	Incentive rate (£m/status decrement/year)
Penalty 1	4.535-5.6

Additional details

Necessary detail on measurement units	The measurement unit is the Asset Health status in each year of 2015-20, based on performance against a basket of key indicators that represent the health of the infrastructure or non-infrastructure assets, and therefore the service being provided to current and future customers. The reference levels against which Thames Water will assess its performance are included in the composite table below.
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Frequency of PC measurement and any use of averaging	The penalty applies to performance in each year of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecast performance for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/ penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	<p>The penalty incentive rate applies to a single change in status, where stable to marginal and marginal to deteriorating each represent a single change in status.</p> <p>Marginal status represents the effective penalty deadband, as no penalty is earned until performance is assessed as marginal. Penalties start to occur in the event of a single year of marginal or deteriorating status with penalties applying in each year where the status is below stable.</p>

Source: Thames Water Performance Commitment Response – Wastewater of June 2014

Composite index table

Sub measure	Unit	Reference levels						
		2014-15	Limits	2015-16	2016-17	2017-18	2018-19	2019-20
Number of sewer collapses	Nr	338 (legacy assets)	Ref	736 498	736 498	736 498	736 498	736 498
Number of sewer blockages	Nr	57,632 (legacy assets)	Ref	84,438 57,362	84,438 57,362	84,438 57,362	84,438 57,362	84,438 57,362
Pollution incidents (cat 1-3)	Nr of incidents	182 (legacy assets)	Ref	206 203	206 203	206 203	206 203	206 203
Properties internally flooded	Nr	848 (legacy assets)	Ref	1,077 848	1,077 848	1,077 848	1,077 848	1,077 848

Performance commitment SB3: Properties protected from flooding due to rainfall

Detailed definition of performance measure: The number of properties which receive further protection from flooding due to rainfall by the end of 2015-20, at the estimated frequency and severity of flooding as detailed in Thames Water's business plan.

The ODI is set based on annualised benefits which are determined using a matrix (Table 5 in PCR SB3, 27 June 2014) which sets out different values depending on the change in probability and severity of flooding for a particular property. The annual benefit is £20.054m; rewards are earned for delivering greater annual benefit and penalties for lesser annual benefit.

Further details on the operation of the PC and ODI (including worked examples) are provided in PCR SB3 (27 June 2014).

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	Properties protected	N/a					2127
Penalty collar	Equivalent property numbers		1459				
Reward cap	Equivalent property numbers		2753				

Incentive rates

Incentive type	Performance levels (equivalent properties protected)		Incentive rate
	Lower	Upper	
Penalty	1459	2127	Determined by reference to actual costs and benefits matrix
Reward	2127	2753	Determined by reference to actual costs and benefits matrix

Note: Incentive rates are determined by reference to actual costs, benefits and cost sharing rate when calculated. The ODI details have not been changed.

Additional details

Necessary detail on measurement units	The measurement unit for the PC is the number of properties further protected from flooding due to rainfall by the end of 2015-20. The ODI is based on the actual benefits delivered, which are presented for illustration as equivalent property numbers (further details provided below).
Frequency of PC measurement and any use of averaging	The penalty and reward apply to performance at the end of 2015-20. This will be calculated as the cumulative number of properties protected based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured at the end of the AMP period.
Timing and frequency of rewards/penalties	Rewards and penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to RCV
Any other information or clarifications relevant to correct application of incentive	<p>The ODI calculation will be based on the actual costs and benefits associated with the specific solutions delivered (for rewards) or not delivered (for penalties) against the commitment, which will depend on the type of solution, the severity of the flooding and the probability of flooding occurring.</p> <p>The process for determining incentive rates per property is defined up front, using the formula:</p> <p>Penalty or Reward incentive rate =</p> <p>(annualised incremental WTP – annualised incremental cost) + (company's totex incentive rate * incremental cost)</p>

The exact incentive rate and size of the ODI true-up will be determined by Thames Water, ex post at PR19, with necessary independent assurance provided by the Independent Experts Group. The annual willingness to pay for the ODI calculation will be determined by the annualised benefits matrix in table 5 in PCR SB3 (27 June 2014), which sets out the different values depending on the change in probability and severity of flooding for a particular property. These values are applied to both outperformance and underperformance.

The incremental costs for the ODI calculation will be based on the difference between allowed and actual costs as a result of changes in scope (for the avoidance of doubt, cost changes as a result of other factors, for example, inflation risk, would be treated outside the ODI in the totex menu).

The penalty collar is financial (set at £54m), calculated as the penalty that would be incurred at the p10 estimate of performance (1,459 equivalent properties). This corresponds to a performance scenario in which Thames Water only delivers the Counters Creek solution in its 2015-20 business plan. The reward cap is financial (set at £64m), calculated as the reward that would be earned at the P90 estimate of performance (2,753 equivalent properties). This is evaluated by applying the ex-ante penalty formula to the additional benefits and costs of P90 outputs compared to those in Thames Water's 2015-20 business plan. For the purposes of setting the penalty collar and reward cap, it is assumed that the incremental benefits and costs are equal to those of the solutions in Thames Water's 2015-20 business plan. A separate penalty for the Counters Creek scheme is discussed below.

As the reward cap and penalty collar are set in financial terms (not based directly on the number of properties), and the ODIs are based on the incremental benefits and costs of the specific outputs actually delivered, the equivalent number of properties for the penalty collar and reward cap, as shown in the PC tables above, are indicative only.

Further detail on the method for determining the rewards and penalties linked with outperformance and underperformance is set out in the table below.

Within the framework, there will be a different treatment of outputs related to the Counters Creek solution, as a result of the risks to the delivery of these outputs that are outside of Thames Water's control.

- If the Counters Creek project is cancelled and will not be delivered in AMP6 or future AMPs for reasons inside

	<p>company control the ODI penalty will follow the same method as for non-delivery of the other sewer flooding outputs. This leads to a maximum penalty of £162m.</p> <ul style="list-style-type: none">• If the Counters Creek project is cancelled and will not be delivered in AMP6 or future AMPs for reasons outside company control the ODI penalty will be limited to the allowed costs that have been avoided through non-delivery of the scheme that have not otherwise been returned to customers through the totex menu. This leads to a maximum penalty of £129m (equal to 50% of the totex underspend).• An additional penalty has been included relating to delays to the Counters Creek scheme. In the event that the entire scheme is not delivered by 2019-20, but will be delivered in a future AMP, then a penalty equivalent to half the annualised benefit of the scheme (£6.878m) will be applied in 2019-20, and each subsequent year that the scheme is not delivered. This penalty is outside of the overall cap on rewards and penalties. <p>This will be subject to specific, risk-based independent assurance, as set out in Thames Water's business plan.</p>
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Sewer flooding risk matrix (annualised benefits)

	Severity									
	Return period	Frequency last 20 yrs	Probability	Highway flooding	External property flooding	Converted basement flooding	Restricted toilet use (up to a day)	Restricted toilet use (up to a week)	Restricted toilet use (up to a month)	Internal property flooding
Probability	1:30	0	0.00	£91	£296	£417	£1,611	£1,705	£2,024	£2,023
	1:20	1	0.05	£183	£600	£840	£3,222	£3,409	£4,048	£4,080
	1:10	2	0.10	£620	£2,000	£2,800	£4,833	£5,114	£6,072	£13,600
	1:5	4	0.20	£2,166	£4,432	£6,228	£11,212	£11,864	£14,088	£30,250
	1:1	20	1.00	£31,454	£26,165	£36,713	£104,386	£110,454	£131,164	£178,321

Source: Thames Water Performance Commitment Response – Wastewater, table 5 page 157 - June 2014.

Performance commitment SB4: Number of internal flooding incidents, excluding those due to overloaded sewers (SFOC)

Detailed definition of performance measure: The number of incidents of internal other causes flooding per year on Thames Water's sewerage network including those from sewers that transferred to the company in October 2011 and pumping stations that will transfer in 2016. Other causes flooding can be caused by blockages, collapses and equipment failures (which also include 'blowbacks' during jetting).

Incentive type: Financial – reward and penalty only

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Incidents	1209	1168	1126	1085	1085	1085
Penalty collar	Incidents		1339	1339	1215	1215	1215
Penalty deadband	Incidents		1209	1209	1085	1085	1085
Reward deadband	Incidents		1085	1085	1085	1085	1085
Reward cap	Incidents		955	955	955	955	955

Incentive rates

Incentive type	Incentive rate (£m/ incidents/year)
Penalty	0.090
Reward	0.055

Additional details

Necessary detail on measurement units	The measurement unit is the number of incidents of internal other causes flooding per year on Thames Water's sewerage network including those from sewers that transferred to the company in October 2011 and pumping stations that will transfer in 2016. Other causes flooding can be caused by blockages, collapses and equipment failures (which also include 'blowbacks' during jetting). Certain mitigation events are defined under the company's assurance procedures.
Frequency of PC measurement and any use of averaging	The penalty applies to annual performance in all years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecast for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Performance commitment SB5: Contributing area disconnected from combined sewers by retrofitting sustainable drainage

Detailed definition of performance measure: The number of hectares of contributing area (that is, local impermeable area that would normally contribute to surface water run-off into a combined sewer) disconnected from the combined sewers by fitting sustainable drainage measures.

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	Hectares cumulative	N/a					20

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Penalty collar	Hectares cumulative						10
Reward cap	Hectares cumulative						50

Incentive rates

Incentive type	Incentive rate (£m/hectares cumulative)
Penalty	0.515
Reward	0.475 0.470

Additional details

Necessary detail on measurement units	The measurement unit is the number of hectares of contributing area (that is, local impermeable area that would normally allow surface water to run-off into a combined sewer) disconnected from the combined sewers by fitting sustainable drainage measures such as water butts, permeable paving, rain gardens and green roofs
Frequency of PC measurement and any use of averaging	This will be calculated as the cumulative hectares delivered based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured at the end of the AMP period.
Timing and frequency of rewards/penalties	Rewards and penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	This commitment is not applicable for separate surface/foul sewer networks and while surface water may still ultimately drain to the combined sewer, the peak flow must be substantially reduced to green field run-off rates

Performance commitment SB6: Compliance with SEMD (Security and Emergency Measures Directive) advice notes, with or without derogation

Detailed definition of performance measure: Compliance with SEMD (Security and Emergency Measures Directive) Advice Notes, with or without derogation. These are the advice notes issues by Defra and written by CPNI (the Centre for Protection of National Infrastructure).

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	% compliance	100%					100%
Penalty collar	% compliance						0%

Incentive rates

Incentive type	Incentive rate
Penalty	40.4% 40% of annualised costs saved through scope reduction

Additional details

Necessary detail on measurement units	This measures compliance with the SEMD Advice Notes to deliver a secure and resilient wastewater service.
Frequency of PC measurement and any use of averaging	This will be calculated as the cumulative percentage compliance based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured at the end of the AMP period.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Any other information or clarifications relevant to correct application of incentive

This incentive will return ~~40.4%~~ 40% of any 2015-20 revenue as a result of reductions in scope used to estimate the SEMD cost for Thames Water's 27 June 2014 submission. This will be in addition to the ~~49.6%~~ 50% of costs returned after the totex menu reward. For the avoidance of doubt, this does not apply to cost increases or to cost reductions as a result of efficiencies. Incentives will be applied in 2020-25 on an NPV-neutral basis.

Performance commitment SB7: Population equivalent of sites made resilient to future extreme rainfall events

Detailed definition of performance measure: The capacity (in population equivalent, PE) of wastewater treatment works where Thames Water has invested to protect supply from extreme weather events (defined as a 1:100 rainfall event), by the end of 2015-20.

This will be measured by the successful delivery of the solutions to protect supply from the identified sites. PE will be measured from the design capacity of the sites.

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	PE cumulative						1,700,000
Penalty collar	PE cumulative						1,360,000

Incentive rates

Incentive type	Incentive rate (£/PE cumulative)
Penalty	0.71 0.72

Additional details

Necessary detail on measurement units	The measurement unit is the cumulative capacity (in population equivalent) of wastewater treatment works made resilient to flooding by the end of 2015-20.
Frequency of PC measurement and any use of averaging	This will be calculated as the cumulative population equivalent made resilient based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured at the end of the AMP period.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Performance commitment SB8: Lee Tunnel including Shaft G

Detailed definition of performance measure: The Lee Tunnel, including Shaft G, is an AMP5 overlap scheme due for completion on 31 December 2015.

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		Deliver the scheme				
Penalty deadband		Scheme not delivered	Scheme not delivered	Scheme not delivered	Scheme not delivered	Scheme not delivered

Incentive rates

Incentive type	Incentive rate (£m/year)
Penalty – delay	£6.7m/year £6.6m/year

Additional details

Necessary detail on measurement units	In line with the special cost claim, the Lee Tunnel is due for delivery on 31 December 2015. In the event that the scheme is not completed within the 2015-16 financial year a penalty will apply in that year, and in each subsequent year, that the scheme is not delivered.
Frequency of PC measurement and any use of averaging	The PC will be assessed annually.
Timing and frequency of rewards/penalties	Penalties will be calculated annually and applied as part of the price review in 2019.
Form of reward/penalty	Adjustment to revenue

Performance commitment SB9: Deephams Wastewater Treatment Works

Detailed definition of performance measure: The Deephams wastewater treatment works is subject to a significant special cost claim.

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			Deliver the scheme			
Penalty deadband			Scheme not delivered	Scheme not delivered	Scheme not delivered	Scheme not delivered

Incentive rates

Incentive type	Incentive rate (£m)
Penalty – non-delivery	£198m £193m

Additional details

Necessary detail on measurement units	In line with the special cost claim, the investment at Deephams wastewater treatment works is due for delivery during 2016-17. In the event that the scheme does not proceed, Thames Water will return, through the ODI, half of the allowed costs plus the benefits foregone. The remaining costs will be recovered through the cost incentive mechanism.
Frequency of PC measurement and any use of averaging	The PC will be assessed at the end of the AMP period.
Timing and frequency of rewards/penalties	Penalties will be applied as part of the price review in 2019.
Form of reward/penalty	Adjustment to revenue

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

Customers are compensated for under-performance through a number of the other performance commitments and ODIs. In the event that the Deephams scheme does not proceed, the full penalty will apply minus any penalties already incurred directly as a result of underperformance related to the non-delivery of the Deephams scheme. It is for Thames Water to demonstrate these overlaps, and any double-counting, in the event that the penalty is incurred.

Wholesale wastewater outcome C: We will limit our impact on the environment and achieve a socially responsible, sustainable business for future generations, including reducing levels of leakage

Performance commitment SC1: Greenhouse gas emissions from wastewater operations

Detailed definition of performance measure: This is the greenhouse gas emissions (in kilo tonnes of carbon dioxide (CO₂) equivalent) from wastewater operations. This performance measure takes into account all forecast movements in the use of energy and emissions, including impacts from Thames Water's wider investment programme and efficiency activities. The company's specific programme is optimised at a company-wide level and then allocated to water or wastewater service based on each site-specific solution in the preferred programme. This PC is allocated 100% to wholesale wastewater, being delivered solely by solutions on wastewater sites.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Kt CO ₂ e	394.6	402.2 368.4	364.3 322.5	314.5 290.5	281.0 269.6	260.6

Additional details

Necessary detail on measurement units	The measurement unit is the greenhouse gas emissions (in kilo tonnes of carbon dioxide (CO ₂) equivalent) from wastewater operations
Frequency of PC measurement and any use of averaging	PC reported at the end of each financial year and reviewed through independent assurance process.

Table 1

Any other information or clarifications relevant to correct application of incentive	<p>The committed performance levels are linked to actual UK emission factors, confirmed annually by Defra.</p> <p>The performance commitments will be updated each year to account for changes to Defra's grid electricity emissions factors.</p> <p>No other changes will be made.</p>
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Performance commitment SC2: Total category 1-3 pollution incidents from sewage related premises

Detailed definition of performance measure: The total annual number of pollution incidents (category 1, 2 and 3) from sewage related premises, including both consented and unconsented incidents, and those from sewers that transferred to the company in October 2011 and pumping stations that will transfer in 2016. The source of information for this PC is the Environment Agency's National Incident Recording System (NIRS) database. The pollution sources for this commitment include sewage treatment works, storm tanks, combined sewer overflows, foul sewers, pumping stations, rising mains and other.

This measure does not include category 4 incidents, consistent with historical regulatory reporting to Ofwat.

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	Category 1, 2 and 3 incidents	340	340	340	340	340	340
Penalty collar	Category 1, 2 and 3 incidents		465	465	465	465	465
Penalty deadband	Category 1, 2 and 3 incidents		400	400	400	400	400

3 May 2018

Reward deadband	Category 1, 2 and 3 incidents		263	263	263	263	263
Reward cap	Category 1, 2 and 3 incidents		229	229	229	229	229

Incentive rates

Incentive type	Incentive rate (£m/incident/year)
Penalty	0.130
Reward	0.130

Additional details

Necessary detail on measurement units	The measurement unit is the total number of pollution incidents (category 1, 2 and 3) from sewage related premises, including both consented and unconsented incidents and those from sewers that transferred to the company in October 2011 and pumping stations that will transfer in 2016. The source of information for this PC is the Environment Agency's National Incident Recording System (NIRS) database. The pollution sources for this commitment include sewage treatment works, storm tanks, combined sewer overflows, foul sewers, pumping stations, rising mains and other. Certain mitigation events are defined under the company's assurance procedures.
Frequency of PC measurement and any use of averaging	The penalty applies to annual performance in all years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecast for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	Rewards in each year over which the ODI applies will be subject to the attainment of zero serious pollution incidents that year. If a category 1 or 2 pollution incident occurs in a given year of 2015-20, a reward may not be earned for performance in the same year. This 'gateway' to rewards is applicable on a year-by-year basis and the occurrence of a category 1 or 2 pollution incident in a given year of 2015-20 will not limit the ability to earn rewards in future years.

Performance commitment SC3: Sewage treatment works discharge compliance

Detailed definition of performance measure: The percentage of sewage treatment works with discharges compliant with numeric environmental permits in each year. This is an existing measure which is assessed annually by the EA through MD109 reporting.

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	% compliance		98.88%	100%	100%	100%	100%	100%
Penalty deadband	% compliance			98.88%	98.88%	98.88%	98.88%	98.88%
Penalty collar	% compliance			96.61%	96.61%	96.61%	96.61%	96.61%

Incentive rates

Incentive type	Incentive rate (£m/pp. compliance/year)
Penalty	3.845 3.820

Additional details

Necessary detail on measurement units	<p>This is the continuance of an existing measure showing the percentage of sewage treatment works with discharges compliant with numeric environmental permits in each year and is assessed annually by the EA through MD109 reporting.</p> <p>The measurement units are rounded to the nearest two decimal places and the incentive rate should be applied in proportion.</p> <p>In line with the Environment Agency's expectations, the company should meet 100% compliance with numeric permits to discharge.</p>
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Frequency of PC measurement and any use of averaging	The penalty applies to annual performance in all years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecast for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Performance commitment SC4: Water bodies improved or protected from deterioration as a result of TW activities

Detailed definition of performance measure: The number of water bodies improved or protected by catchment management solutions, to control phosphorus and other pollutants, as part of an innovative pilot programme. This measure does not directly relate to a statutory requirement and is not a formal requirement of Defra, Natural England, the DWI or the Environment Agency.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No. of water bodies improved	N/a					13

Additional details

Necessary detail on measurement units	This PC is for the number of water bodies improved by catchment management solutions to control phosphorus. This measure does not directly have a statutory requirement and is not a formal requirement of Defra, Natural England, the DWI or the Environment Agency.
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Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.
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Performance commitment SC5: Satisfactory sludge disposal compliance

Detailed definition of performance measure: The percentage compliance of the company's wastewater sludge with all relevant legislation and best practice guidance, such as The Sludge (Use in Agriculture) Regulations 1989; The ADAS Safe Sludge Matrix (2001); The Nitrates Regulations (2008; 2013); Waste Management Licensing (amendment and related provisions) Regulations 2005.

Incentive type: Reputational

Performance commitments

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

Additional details

Necessary detail on measurement units	This is an existing measure showing the proportion of the company's sludge disposal to agricultural land (in tonnes of dry solids) that is compliant with all relevant legislation and best practice guidance, such as The Sludge (Use in Agriculture) Regulations 1989; The ADAS Safe Sludge Matrix (2001); The Nitrates Regulations (2008; 2013); Waste Management Licensing (amendment and related provisions) Regulations 2005.
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Performance commitment SC6: We will educate our existing and future customers

Detailed definition of performance measure: This measures the number of children directly engaged each year through Thames Water's education programme for wastewater, including working in schools, educational visits and site open days.

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. children directly engaged	14,000	15,000	16,000	17,000	18,000	20,000

Additional details

Necessary detail on measurement units	The measurement unit is the number of children Thames Water has directly engaged each year in its wastewater education programme.
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Performance commitment SC7: Modelled reduction in properties affected by odour

Detailed definition of performance measure: This is a new measure showing the reduction in the number of properties affected by odour on a cumulative basis, assessed through odour monitoring.

Odour modelling is carried out as part of the detailed design phase of a scheme which confirms the point sources of odour and the reduction in emission rate

expected. The properties impacted are assessed by pre- and post-project odour dispersion modelling.

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	Modelled reduction in properties (cumulative)	14,311	0	793	1,771	6,593	6,593
Penalty collar	Modelled reduction in properties (cumulative)		0	0	0	0	3,874
Reward cap	Modelled reduction in properties (cumulative)		0	5,807	11,800	13,636	18,650

Incentive rates

Incentive type	Incentive rate (£/modelled reduction in properties/year)
Penalty	270
Reward	220

Additional details

Necessary detail on measurement units

This is a new measure showing the reduction in the number of properties affected by odour. This is measured using a confirmation of point and area sources via odour dispersion modelling. The ODI is applied annually to the cumulative performance in each year. So, for example, a one year delay in reducing the incidence of odour by one modelled property would incur the annual penalty rate.

Frequency of PC measurement and any use of averaging	The penalty applies in each year to annual performance in all five years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecast performance in year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	The penalty collar and reward caps represent an indicative level of performance associated with the total financial value of the penalty and reward over 2015-20. The penalty collar and reward cap are binding as a total financial magnitude of £3m and £6.66m respectively, over 2015-20 rather than as annual levels of performance. In practice, the collar and cap may be reached through a number of profiles of performance over the AMP.

Performance commitment SC8: Deliver 100% of agreed measures to meet new environmental regulations

Detailed definition of performance measure: Proportion of agreed measures completed to meet new environmental regulations. Agreed measures are defined as:

- wastewater schemes listed on NEP4, except the TTT;
- one successful application for first time sewerage;
- 11 specified WFD schemes to improve either biological oxygen demand (BOD) or ammonia discharges;
- 13 specified WFD schemes to prevent water bodies deteriorating;
- 11 specified actions to enable Artificial and Heavily Modified Water bodies under Thames Water ownership to achieve Good Ecological Potential; and
- investigations into 192 intermittent discharges suspected of contributing to WFD failures.

The TTT is not included in this measure.

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	% agreed schemes completed	N/a				100%
Penalty collar	% agreed schemes completed					Do not deliver NEP5

Incentive rates

Incentive type	Incentive rate
Penalty	40.4% 40%-of cost saved through scope reduction

Additional details

Necessary detail on measurement units	This measures compliance with the Environment Agency agreed schemes for the agreed measures to meet new environmental regulations
Frequency of PC measurement and any use of averaging	The penalty applies to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to RCV
Any other information or clarifications relevant to correct application of incentive	<p>This incentive will return 40.4% 40%-of the NEP5 2015-20 cost as a result of reductions in scope used to estimate the 27 June 2014 submission. This will be in addition to the 49.6% 50% of costs returned after the totex menu reward. For the avoidance of doubt, this does not apply to cost increases or to cost reductions as a result of efficiencies.</p> <p>If the final requirements are lower than Thames Water has anticipated, the company will return 90% of the allowed costs</p>

back to customers. If the final requirements are higher, the company will seek to first reprioritise the schemes it will deliver in 2015-20 and seek to complete the programme in the early part of 2020-25, in advance of the regulatory deadline of December 2021. If the overall level of investment is broadly equivalent but slightly different from the specific schemes Thames Water has identified, the company proposes that schemes could be swapped, as long as certain criteria are met:

- Investment has a regulatory requirement.
- The Environment Agency agrees to the change.
- The forecast cost to deliver the measure is broadly equivalent.
- Where benefits are applicable, the new scheme offers greater or equivalent benefits.

Any residual regulatory requirements can be delivered in 2020-25 or a transition period at the end of 2015-20.

Incentives will be applied in 2020-25 on an NPV-neutral basis.

Performance commitment SC9: Reduce the amount of phosphorus entering rivers to help improve aquatic plant and wildlife

Detailed definition of performance measure: The amount of phosphorus removed from rivers through the final NEP5 schemes by the end of 2015-20, measured as kilograms per day. The delivery of NEP5 schemes will be reported and signed-off independently by the Environment Agency through its annual MD109 report.

Load reductions are to be set on a theoretical basis using permitting data to overcome seasonal, weather and measurement impacts and thereby keeping it transparent and simple to regulate. Where no permitted phosphorus limit exists, the assumed final effluent concentration will be considered to be 6 mg/l. This is the average final effluent discharge concentration of phosphorus across all measured sites where no phosphorus limit currently exists in the permit. Thames Water proposes that the Environment Agency verifies the assumed load reductions.

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	Kg removed/ day	N/a					59.3 151.8
Penalty collar	Kg removed/ day						0
Reward cap	Kg removed/ day						199

Incentive rates

Incentive type	Incentive rate
Penalty	<p>Determined by reference to actual costs and benefits using reliable projections as soon as available (and to be included in annual report on outcomes performance no later than 2016-17)</p> <p>Determined by reference to actual costs and benefits on completion of the price control period as the penalty rate will be a function of our actual performance against the restated performance commitment reflecting the costs and benefits foregone of any units (kg/d) not delivered.</p>
Reward	<p>Determined by reference to actual costs and benefits using reliable projections as soon as available (and to be included in annual report on outcomes performance no later than 2016-17)</p> <p>Determined by reference to actual costs and benefits on completion of the price control period as the penalty rate will be a function of our actual performance against the restated performance commitment reflecting the costs and benefits foregone of any units (kg/d) not delivered.</p>

Note: Incentive rates are determined by reference to actual costs, benefits and cost sharing rate when calculated. The ODI details have not been changed.

Additional details

Necessary detail on measurement units	<p>The measurement unit is kg/day of phosphorus removed from rivers through the final NEP5 schemes, by the end of 2015-20. Delivery of NEP5 schemes will continue to be reported and signed-off independently by the Environment Agency through its annual MD109 report. Thames Water proposes that the Environment Agency would also verify the assumed load reductions.</p>
Frequency of PC measurement and any use of averaging	<p>The penalty and reward apply to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually after the final requirements are confirmed in January 2016.</p>

Timing and frequency of rewards/penalties	Rewards and penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to RCV
Any other information or clarifications relevant to correct application of incentive	<p>The ODIs are based on the actual costs and benefits associated with the specific solutions delivered against the commitment, which will depend on the type of solution and the benefits delivered through P reduction.</p> <p>During the 2016-17 financial year, the company will restate the committed performance level in line with the expectations of the final NEP5 as confirmed by the Environment Agency; reward caps and penalty collars will remain unchanged.</p> <p>The company will also state the expected benefits of the final NEP5 programme. The annual benefits delivered will be determined by the same method for calculating the benefits of the 2015-20 programme.</p> <p>The ODIs are based on the actual costs and benefits associated with the specific solutions delivered against the commitment, which will depend on the type of solution and the benefits delivered through P reduction.</p> <p>During the 2016-17 financial year, the company has restated the committed performance level in line with the expectations of the final NEP5 as confirmed by the Environment Agency; reward caps and penalty collars remain unchanged.</p> <p>The expected benefits of the final NEP5 programme are stated below. The annual benefits delivered have been determined by the same method for calculating the benefits of the 2015-20 programme.</p> <p>The final NEP5 programme of phosphorus removal from rivers equates to 59.3kg/day by March 2020. This revised target delivers £2.062m annualised benefit for £31.591m totex (annualised cost of £1.105m) by the end of AMP6. To return the company share of totex saved through this scope reduction back to customers, a downward RCV adjustment of £7.269m will need to be made at PR19 (all amounts in 2012-13 prices). This will be on top of any reward or penalty for actual performance under this performance commitment.</p>

Wholesale wastewater outcome D: We will provide the level of customer service our customers require, in the most economic and efficient manner, to ensure that bills are no more than necessary

Performance commitment SD1: Energy imported less energy exported

Detailed definition of performance measure: This is the net reduction in energy from the grid (energy imported less energy exported) measured in gigawatt hours (GWh), achieved by improving the energy efficiency of assets and increasing the self-generation percentage across wastewater operations.

This performance measure takes into account all forecast movements in the use of energy, including impacts from Thames Water's wider investment programme and efficiency activities. The specific programme is optimised at a company-wide level and then allocated to water or wastewater service based on each site-specific solution in the preferred programme. This PC is allocated 100% to wholesale wastewater, being delivered solely by solutions on wastewater sites.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	GWh	457	428	392	329	303	295

Additional details

Necessary detail on measurement units	The measurement unit is the net energy imported by wholesale wastewater operations in gigawatt hours (GWh).
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Thames Tideway Tunnel price control outcome: Thames Water is committed to improving outcomes for customers and for the environment, notably by intercepting significant sewage discharges into the tidal River Thames, working together with the IP to ensure the timely and cost-efficient delivery of the TTT project

Performance commitment T1: Thames Water will limit the extent of delays on the overall programme timeline

Detailed definition of performance measure: Thames Water will work positively to limit the extent of delays on the project. This PC has three strands:

- A. Successful procurement of the Infrastructure Provider.
- B. Acquisition of land rights for the project (subject to planning permission).
- C. Completion of construction activities and timely availability of sites to the IP.

For the avoidance of doubt, we do not expect customers to pay twice if the IP undertakes work that falls within Thames Water's scope of activities for the TTT. We expect that if the IP undertakes any work within Thames Water's scope, this would be arranged either contractually between the IP and Thames Water as a private commercial arrangement; or will involve a variation of the Preparatory Works Notice or Project Specification Notice.

If it is dealt with contractually, the IP would undertake the work on Thames Water's behalf as part of its non-regulated activities, and we will expect Thames Water to remunerate the IP for any such work from its allowed revenue under the TTT Control, in the same way as it would remunerate any other contractor undertaking work on its behalf. If it is dealt with through a change to the Preparatory Works Notice or Project Specification Notice, this would be a Relevant Change of Circumstance, and we will ensure that customers do not pay twice.

Performance commitments: T1A – Successful procurement of the Infrastructure Provider

Incentive type: Reputational

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Status		IP award (according to the project timetable)				

Thames Water has stated in its representation that its view is that the IP's licence award would be by 1 July 2015.

Performance commitments: T1B – Thames Water will fulfil its land related commitments in line with the TTT programme requirements.

Incentive type: Reputational

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC			Acquire land access rights in line with programme in the development consent order (DCO) and programme timetable to be agreed with Ofwat.				

Additional details

Necessary detail on measurement units

Thames Water will monitor and report against the extent of delays to acquisition of land rights. Thames Water will publish information from its planning permission and/or its programme timetable setting out by when rights must be acquired. We understand that this timetable may be impacted by the outcome of the DCO (which Thames Water received in September 2014). Thames Water will need to update this now that it has received the DCO.

Performance commitments: T1C – Completion of category 2 and 3 construction works and timely availability of sites to the IP.

Incentive type: Financial – penalty only

		Starting level	Committed performance levels				
Unit		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Cumulative number of sites	0	8 0	10 0	20 5	21 17	23* 24
Penalty deadband	Cumulative number of sites		8 0	10 0	20 5	21 17	23* 24
Penalty collar	Cumulative number of sites		0	0	0	0	0

*As Shad Thames is currently scheduled to be delivered in a subsequent AMP it has been removed from the Table, reducing the number of sites to be completed in this AMP from 24 to 23.

The final delivery profile will be agreed after the award of the Main Works contracts, once Thames Water has completed the process to optimise the programme.

Incentive rates

Incentive type	Incentive rate (status)
Penalty	£3.4 million per site, a year. (Applied on a pro rata month by month basis)

Additional details

Necessary detail on measurement units	<p>Thames Water will monitor the extent of programme delays.</p> <p>To monitor the delivery of T1C, Thames Water will publish details from Appendix 5 annex 4—Detailed information on construction activities (submitted on 27 June 2014), setting out the category 2 and 3 activities by year and providing further site-specific details for example, when the site needs to be vacated for the IP to begin work. Costs and details of category 1 works have been redacted from the published document for reasons of commercial confidentiality. This delivery profile is currently subject to change as it undergoes a process of optimisation. The final delivery profile will be confirmed no later than the award of the IP contract.</p> <p>Following an assessment of special cost claims across all companies and having applied a consistent</p>
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approach for incentives relating to special cost claims across all companies that recognises the benefits foregone if companies do not deliver, we have increased the value of the penalty from the draft determination and penalties will be incurred at each site for each year of delay.

The proposed ODI is the primary regulatory mechanism for incentivising Thames Water to undertake its construction activities on the TTT in a manner that meets the expected timetable for the project. Thames Water is currently in discussions with stakeholders about the development of an Alliance Agreement for the TTT project, and the company expressed concerns in its representation that the agreement could result in double jeopardy and distort incentives.

To the extent that Thames Water is able to demonstrate that double jeopardy has occurred for the element of the Alliance Agreement that is specific to the delay of the construction sites to which this ODI relates, Thames Water may request that we net off the penalty incurred through the Alliance agreement from this PC.

Ofwat will receive regular reporting on the Alliance Agreement via the Liaison Committee, and therefore expects to have some degree of oversight of penalties under this agreement. These reports will be assessed by the independent technical assessor, and the Alliance Agreement. Alliance objectives and alliance commitments may not be changed without Ofwat's consent. We will make an assessment at PR19 of any information put forward by Thames Water.

We have intervened to introduce a mechanism to recover costs for customers in the event of non-delivery of category 2 and 3 works if Thames Water does not undertake the project. The maximum amount recovered will equal the agreed expenditure for the work (£227 million), and will enable the costs to be passed back to customers in circumstances where the work has been cancelled for reasons outside of the company's control.

Frequency of PC measurement and any use of averaging	PC reported at the end of each financial year and reviewed through independent assurance process.
Timing and frequency of rewards/penalties	Penalties will be calculated annually and applied to the total five-year position in 2015-20 as part of PR19.
Form of reward/penalty	RCV adjustment
Any other information or clarifications relevant to correct application of incentive	<p>The penalty rate is based on our view of the annualised average incremental cost per site of the category 2 and 3 works uplifted with estimate of infraction fines (in respect of financial sanctions that the European Court of Justice could apply in the context of infringement proceedings against the UK) as proxy for benefits foregone.</p> <p>The delay penalty will apply to each site for each year of delay. This results in an incentive penalty per site of £3.4 million a year. In the event that all sites were delayed until 2020-21, the maximum incentive penalty would be £156 million.</p> <p>As set out above, any site-specific penalties for delays incurred in 2015-20 by Thames Water, specifically relating to its activities, through the Alliance Agreement may be netted off against the penalty incurred through the ODI, subject to sufficient regulatory oversight.</p>

Read

<p>Necessary detail on measurement units</p>	<p>Thames Water will monitor the extent of programme delays. To monitor the delivery of T1C, Thames Water will publish an update on its website of the above delivery profile, setting out the cumulative Enabling Works (category 2) and System Works (category 3 activities) completed each year.</p> <p>Thames Water have provided further site-specific details in relation to each site including the specific dates when the site needs to be delivered or made available for the Tideway to begin work to both Ofwat and Tideway in agreeing this revised profile.</p> <p>Delivery or completion of the Thames Water scope of works on the individual sites shall be established by handover of the site to Tideway. If Tideway does not accept handover of a site, Ofwat will determine whether the Thames Water scope of works may be reasonably considered to have been completed. Where Tideway will not occupy a site, then completion of the scope of works within the agreed Thames Water scope will establish the reference point for site completion.</p> <p>Following an assessment of special cost claims across all companies and having applied a consistent approach for incentives relating to special cost claims across all companies that recognises the benefits foregone if companies do not deliver, Ofwat have increased the value of the penalty from the draft determination and penalties will be incurred at each site for each year of delay. The application of these penalties have been further revised below.</p> <p>This ODI is the primary regulatory mechanism for incentivising Thames Water to undertake its construction activities on the Thames Tideway Tunnel in a manner that meets the expected revised timetable for the project.</p> <p>Thames Water expressed concerns in its initial representations that the Alliance Agreement for the TTT project could result in double jeopardy and distort incentives. The final Alliance Agreement does</p>
	<p>not contain any penalties for Programme Incentives (only cost incentives) and so the question of double jeopardy does not arise in respect of access dates.</p> <p>Ofwat will receive regular reporting on the Alliance Agreement via the Liaison Committee, and therefore expects to have some degree of oversight of penalties under the Alliance Agreement. These reports will be assessed by the independent technical assessor; and the Alliance Agreement. Alliance objectives and alliance commitments may not be changed without Ofwat's consent. Ofwat will make an assessment at PR19 of any information put forward by Thames Water.</p> <p>Ofwat have intervened to introduce a mechanism to recover costs for customers in the event of non- delivery of category 2 (Enabling Works) and 3 (System Works) works if Thames Water does not undertake the project. The maximum amount recovered will equal the agreed expenditure for the work (£227 million), and will enable the costs to be passed back to customers in circumstances where the work has been cancelled for reasons outside of Thames Water's control.</p>

Frequency of PC measurement and any use of averaging	PC reported at the end of each financial year and reviewed through independent assurance process.
Timing and frequency of rewards/penalties	Penalties will be calculated annually and applied to the total five-year position in 2015-20 as part of PR19.
Form of reward/penalty	RCV adjustment
Any other information or clarifications relevant to correct application of incentive	The penalty rate is based upon Ofwat's view of the annualised average incremental cost per site of the category 2 (Enabling Works) and Category 3 (System) works uplifted with estimate of infraction fines (in respect of financial sanctions that the European Court of Justice could apply in the context of infringement proceedings against the UK) as proxy for benefits foregone. The delay penalty will apply to each site for each year of delay. The delay penalty shall be calculated on a pro rata month by month basis of £283,333 commencing one month after the end of the month of the date of delivery of the site agreed with Ofwat (in accordance with the revised profile set out above). This results in an incentive penalty per site of £3.4 million a year. In the event that all sites were delayed until 2020-21, the maximum incentive penalty would be £156 million.

Performance commitment T2: Thames Water will engage effectively with the IP, and other stakeholders, both in terms of integration and assurance

Detailed definition of performance measure: Thames Water and the IP will need to work effectively together to achieve a successful outcome for the project. Thames Water will need to work closely with the IP, and other stakeholders, including through reporting to the liaison committee, to seek to deliver its activities on a timely and efficient basis.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
Unit		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Status	N/a	Engage effectively with IP and other stakeholders	Engage effectively with IP and other stakeholders	Engage effectively with IP and other stakeholders	Engage effectively with IP and other stakeholders	Engage effectively with IP and other stakeholders

Additional details

Necessary detail on measurement units	<p>Thames Water will monitor delivery of this commitment using the following measures:</p> <ul style="list-style-type: none"> In assessing and reporting performance against this commitment, Thames Water will seek views from the IP and other relevant parties including any Independent Expert appointed by the IP, Ofwat and Defra. Thames Water will develop a standard approach to obtain this information, and commence monitoring from the date of the IP award.
Frequency of PC measurement and any use of averaging	PC reported at the end of each financial year.
Any other information or clarifications relevant to correct application of incentive	A summary of the results will be published annually.

Performance commitment T3: Thames Water will engage with its customers to build understanding of the Thames Tideway Tunnel project. Thames Water will liaise with the IP on its surveys of local communities impacted by construction.

Detailed definition of performance measure: Thames Water will undertake a programme of ongoing engagement with our customers and collaborate with water-only companies to understand and measure customers' views. The company will also liaise with the IP in relation to its surveys of communities impacted by its (the IP's) construction sites.

Incentive type: Reputational

Performance commitments – To be determined

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

Additional details

Necessary detail on measurement units	<p>Thames Water will design and commission suitable customer research to understand and measure customer views, including on key indicators such as awareness of the TTT, understanding of why it is needed, support for the project, acceptability of bill impacts and their perceived affordability.</p> <p>Thames Water will collaborate with the water-only companies and licensed retail suppliers operating in its region to develop a joined up communications strategy.</p> <p>Thames Water will consider the overall customer base as well as more local issues.</p> <p>The PC should be determined during 2015-20 based on the outcomes of this work on the ongoing research and communications strategy.</p>
Frequency of PC measurement and any use of averaging	A summary of the results will be published at least annually.

Household retail outcome A: Improving customer service by doing the basics excellently and by getting things 'right first time'

Performance commitment RA1: Minimise the number of written complaints received from customers

Detailed definition of performance measure:

The number of written complaints relating to charging and billing, per 10,000 connected properties.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Number of written complaints per 10,000 connected properties	16	16	17	18	17	15

Additional details

Necessary detail on measurement units	<p>The measurement unit is the number of written complaints relating to charging and billing, per 10,000 connected properties.</p> <p>Thames Water has allocated written complaints based on the CCWater allocations in its 2012-13 complaints report. The allocation between household and non-household is based on Thames Water's finance cost allocation (94% household and 6% non-household).</p> <p>This is rounded to the nearest integer.</p>
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Performance commitment RA2: Improve handling of written complaints by increasing first time resolution

Detailed definition of performance measure:

The proportion of written complaints relating to charging and billing that are resolved at the first stage, without the need for escalation

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	90%	95%	95%	95%	95%	95%

Additional details

Necessary detail on measurement units	<p>This measures the proportion of written complaints relating to charging and billing that are resolved at the first stage, without the need for escalation.</p> <p>Thames Water has allocated written complaints based on the CCWater allocations in its 2012-13 complaints report. The allocation between household and non-household is based on Thames Water's finance cost allocation (94% household and 6% non-household).</p> <p>This is rounded to the nearest percentage.</p>
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Performance commitment RA3: Improve customer satisfaction of retail customers – charging and billing service

Detailed definition of performance measure:

The average customer satisfaction score (from a scale of 1 to 5) for the charging and billing services by the household retail business, using Thames Water's internal CSAT monitor.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Mean score out of 5	4.40	4.45	4.55	4.45	4.60	4.65

Additional details

Necessary detail on measurement units	<p>The measurement unit is the customer satisfaction score (out of 1 to 5) for the charging and billing services.</p> <p>This is based on the average customer score from Thames Water's internal CSAT monitor, which is based on 'resolved contacts' aligned with SIM in 2010-15. The coding of customer feedback to charging and billing services is done in the internal CSAT tool and is quality checked each month.</p> <p>This is rounded to two decimal places.</p>
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Performance commitment RA4: Improve customer satisfaction for retail customers – operations contact centre

Detailed definition of performance measure:

The average customer satisfaction score (from a scale of 1 to 5) for the operational contact services by the household retail business, using Thames Water's internal CSAT monitor.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Mean score out of 5	4.40	4.45	4.52	4.57	4.60	4.65

Additional details

Necessary detail on measurement units	<p>The measurement unit is the customer satisfaction score (out of 1 to 5) for the operational contact centre.</p> <p>This is based on the average customer score from Thames Water's internal CSAT monitor, which is based on 'resolved contacts' aligned with SIM in 2010-15. The coding of customer feedback to operational contact centre is done in the internal CSAT tool and is quality checked each month.</p> <p>This is rounded to two decimal places.</p>
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Performance commitment RA5: Increase the number of bills based on actual meter reads (in cycle)

Detailed definition of performance measure:

The proportion of household customers' bills (for water only, wastewater only, and water and wastewater customers) that are based on actual meter reads in cycle (that is, meter read is conducted in the same financial year as the bill is issued).

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	85%	96%	96%	96%	96%	96%

Additional details

Necessary detail on measurement units	This measurement unit is the proportion of household customers' bills (for water only, wastewater only, and water and wastewater customers) that are based on actual meter reads in cycle (that is, meter read is conducted in the same financial year as the bill is issued).
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Performance commitment RA6: Service incentive mechanism (SIM)

Detailed definition of performance measure: SIM score as defined in Ofwat's SIM guidance and updated in IN13/03.

Incentive type: Reward and penalty

Performance commitments

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

Additional details

Necessary detail on measurement units	Ofwat determined reward and penalty incentive
Frequency of PC measurement and any use of averaging	Annual
Timing and frequency of rewards/penalties	Penalties and rewards will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to Revenue
Any other information or clarifications relevant to correct application of incentive	Ofwat determined reward and penalty incentive

Household retail outcome B: Offer a choice of easy to use contact options

Performance commitment RB1: Implement new online account management for customers supported by web-chat

Detailed definition of performance measure:

The delivery of the new online self-serve channel. Delivery is measured by the 'go live' date being achieved by the end of the relevant financial year (that is, 31 March). 'Go Live' is defined as it being used to bill customers, update accounts, capture contacts, record payments, and for online account management that Thames Water's customers can sign up for to use the new service. It will also provide the functionality to deliver alternative tariffs.

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	Status	Limited online	Limited online	Limited online	New online self-serve channel	Online self-serve channel	Online self-serve channel
Penalty collar	Status						CRMB billing system not commissioned nor on track for 2020-25 delivery
Penalty deadband	Status					CRMB billing system does not 'go live'	CRMB billing system does not 'go live'

Incentive rates

Incentive type	Incentive rate (£/status)
Penalty	£6.5m in each of years 4 and 5
Penalty	Additional £20.5m applicable in year 5 (total 2015-20 allowed cost in ACTS adjustment plus premium)

Additional details

Necessary detail on measurement units	The measurement unit is the delivery of the new online self-serve channel. Delivery is measured by the 'go live' date being achieved by the end of the relevant financial year (that is, 31 March).
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	<p>This commitment is fully enabled by the system and has a commitment to 'Go Live' as being by the end of 2017-18. 'Go Live' would be defined as it being used to bill customers, update accounts, capture contacts, record payments, and for online account management that Thames Water's customers can sign up for to use the new service. It will also provide the functionality to deliver alternative tariffs.</p> <p>Failure of the system to 'go live' will incur a penalty of £6.5m in each of years 4 and 5, based on the annualised benefit value to customers.</p> <p>In addition, an ODI penalty of up to a maximum of the allowed 2015-20 cost (depreciation charge net of opex savings, which is equal to £18.6m) plus a 10% premium to ensure that Thames Water has an incentive to deliver the system, resulting in a maximum penalty of £20.5m.</p> <p>The plan will be to roll-out the system to all customers, with 'go live' being the start of this roll-out to customers.</p> <p>The ODI therefore works as follows under four possible outcomes:</p>

1. The system 'goes live' in 2015-20 (that is, by 31 March 2020), roll out to all customers has started in 2015-20, and a plan is available to complete the roll out in 2020-25
No ODI penalty for year 5. £6.5m penalty applies in year 4 if 'go live' date is after 31st March 2019.
2. The system 'goes live' in 2015-20 but to a lower specification than planned (for example, limited functionality, or the plan is to roll out the system to only a subset of customers)
ODI penalty to return appropriate portion of allowed 2015-20 cost (plus 10% premium). Penalty is calculated by Thames Water and verified by an independent third party, in line with approach to independent assurance for all ODIs. In addition, £6.5m penalty in year 4 if 'go live' date is after 31 March 2019.
3. The system does not 'go live' in 2015-20, due to unforeseen reasons outside reasonable management control (for example, legislative or market changes, significant contractual dispute), but Thames Water can demonstrate mitigating actions and is on track for full system roll out in 2020-25
£6.5m penalty to compensate customers for lost benefit for both years 4 and year 5. Need to ensure 2020-25 funding to deliver the system does not double-count 2015-20 funding. This is subject to third party verifications and assurance, in line with approach to independent assurance for all ODIs
4. The system does not 'go live' in 2015-20, where: (i) this is due to reasons within reasonable management control; or (ii) Thames Water is not on track for full system roll out in 2020-25
ODI penalty of £20.5m (that is, equal to allowed 2015-20 depreciation net of opex savings plus 10% premium). This is subject to third party verifications and assurance, in line with approach to independent assurance for all ODIs. In addition, £6.5m penalty for both years 4 and year 5 to compensate customers for the lost benefit of the system.

Performance and the financial ODI will be assured independently; Thames Water will report performance in a transparent manner to its customers, stakeholders and

	Customer Group. Thames Water will publish progress against this PC on an annual basis, providing transparency to customers and ensuring incentives for the company remain current.
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Household retail outcome C: Improving cash collection from those that can pay and helping those that are struggling to pay

Performance commitment RC1: Increase the number of customers on payment plans

Detailed definition of performance measure:

The percentage of customers (water only, wastewater only, and water and wastewater) paying their bill using a direct debit payment plan.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	52%	53%	54%	54%	57%	60%

Additional details

Necessary detail on measurement units	This measures the percentage of customers (water only, wastewater only, and water and wastewater) paying their bill using a direct debit payment plan.
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.

Performance commitment RC2: Increase cash collection rates

Detailed definition of performance measure: The percentage of cash collected from the billing in that year. This includes all household customers.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	88.6%	89.0%	89.4%	89.7%	89.6%	90.4%

Additional details

Necessary detail on measurement units	The measurement unit is the percentage of cash collected from the billing in that year. This includes all household customers.
Frequency of PC measurement and any use of averaging	PC reported at end of each financial year and reviewed through independent assurance process.