December 2019

PR19 final determinations

PR19 final determinations: Severn Trent Water final determination

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About this document

This document supports the 'Notification of the final determination of price controls for Severn Trent Water' and sets out further details about the final determination price control, service and incentive package for Severn Trent Water for 2020 to 2025. All figures in this document are in 2017-18 prices except where otherwise stated.

The final determination documentation sets out:

- the outcomes for Severn Trent Water to deliver;
- the allowed revenue that Severn Trent Water can recover from its customers; and
- how we have determined allowed revenues based on our calculation of efficient costs and the allowed return on capital.

This final determination is in accordance with our PR19 methodology (as updated), our statutory duties[1] and the UK Government's statement of strategic priorities and objectives for Ofwat[2]. We have also had regard to the principles of best regulatory practice, including the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted.

Our final determination carefully considers all of the representations we received from companies and stakeholders on our draft determination and takes account of the most up-to-date information available where appropriate. Where appropriate, we explicitly set out our response to points and issues raised by respondents. Where information was provided late and we have not been able to take full account of this in the final determination, this is explicitly stated.

There are four appendices to this document on cost efficiency, outcomes performance, past delivery, allowed revenue and, where relevant, additional information. For all documents related to the Severn Trent Water final determination, please see the final determinations webpage. Where we reference other documents related to our final determinations we do not include the 'PR19 final determinations' prefix to the document title, for documents relating to our initial assessment of plans or draft determinations the full document title is referenced.

If Severn Trent Water accepts our final determination, it will be accepting that it has adequate funding to properly carry out the regulated business, including meeting all its statutory and regulatory obligations, and to deliver the outcomes within its final determination.

[1] See the 'Policy summary' for more information.
[2] See 'UK Government priorities and our 2019 price review final determinations' for more information.

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Amendment	Date
Table 3.7 Page 39 – Amendments made to figures. • Grants and contributions before the deduction of income offset (£m) Network plus – Water amended from £320.2 million to £243.4 million, for Network plus – Wastewater amended from £103.5 million to £86.4 million. • Net allowed totex subject to cost sharing reconciliation Network plus – Water amended from £2,006.1 million to £2,082.8million, for Network plus – Wastewater amended from £2,574.3 million to £2,591.5 million	18 May 2020

1 Summary

The water sector faces challenges of climate change, a growing population and increasing customer expectations, while improving affordability of an essential service. The 2019 price review (PR19) enables and incentivises companies to address these challenges both in 2020-25 period and longer term.

To do this the sector needs to innovate and challenge itself to deliver better performance for customers and the environment. Companies need to engage and work with customers and other companies, the supply chain and with other stakeholders.

Our PR19 methodology sets out a framework for companies to address the challenges facing the sector with a particular focus on improved service, affordability, increased resilience and greater innovation.

Severn Trent Water was awarded fast track status at the initial assessment of plans on 31 January 2019. We expect fast track companies to demonstrate leadership on delivering positive outcomes for customers and the environment. Severn Trent Water has benefitted from its plan receiving fast track status. The company has been able to start implementing its plan ahead of 2020-25. The company receives a financial reward of £18 million, in recognition that the company produced a high quality plan which included a number of ambitious, innovative and sector-leading proposals to make customer's bills affordable and provide support for vulnerable customers.

As Severn Trent Water is a fast track company we published our draft determination early on 11 April 2019. Our draft determination for Severn Trent Water was based on our detailed review of the business plan submitted to us on 3 September 2018 and the company agreeing to our initial assessment of plans interventions on 11 February 2019. Severn Trent Water confirmed that it partly opted out of the early certainty principle (for three performance commitments and deadbands on common performance commitments) which meant that it only had early certainty on specified components of its outcomes and cost allowance at draft determination.

The company and other stakeholders made representations on our fast track draft determination by 24 May 2019. The company also made representations on our slow track and significant scrutiny draft determinations by 30 August 2019. Our final determination carefully considers all of the representations we received from companies and stakeholders on our draft determination and takes account of the most up-to-date information available where appropriate. We consider the changes we have made in our final determination are in line with our statutory duties.

1.1 What our final determination includes

This section sets out the overall shape of our final determination for Severn Trent Water, covering the customer bill profile, costs, outcomes for customers and allowed revenues. More detail is provided in the following sections of this document.

Bill profile

Our final determination for Severn Trent Water will cut average bills by 8.9% in real terms in the 2020-25 period compared to the company's proposed 5.2% reduction. Table 1.1 below sets out the difference in bill profile between the company's business plan submission in September 2018, our draft determination and the final determination. Average bills are lower than proposed by Severn Trent Water, reflecting our view of efficient costs and a reduction in the allowed return. Further details on bills are set out in section 6.

Table 1.1: Bill profile for 2020-25 before inflation

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Company September 2018	£343	£326	£331	£333	£331	£325
Draft determination	£343	£327	£327	£327	£327	£327
Final determination	£343	£336	£330	£324	£318	£313

Costs

Our final determination allows wholesale totex of £6,203.4 million. This is:

- £191.0 million higher than in our draft determination and
- £25.4 million lower than stated in the company's representation on our draft determination.

Our final determination allows Severn Trent Water £864 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £471 million to improve the environment by efficiently delivering its obligations as set out in the Water Industry National Environment Programme (WINEP);
- £107 million to improve resilience;
- £96 million for supply-demand balance schemes delivering long-term drought resilience;

- £67 million for its metering programme;
- £37 million to address raw water deterioration; and
- £11 million to improve the quality of drinking water including its taste, odour and colour.

We make an additional allowance of £42.5 million in our final determination for strategic water resource development to support the delivery of long-term drought resilience. We allow the company to recover atypical diversions costs, such as those associated with High Speed 2, outside of the price control, which the company estimates as £96 million during 2020-25.

Further details on our cost allowances are set out in section 3.

Outcomes for customers

Our final determination package includes a full set of performance commitments, specifying the minimum level of service that Severn Trent Water must commit to deliver for customers and the environment under this price review. These sit alongside the company's statutory and licence requirements. Each performance commitment also has a financial or reputational incentive to hold the company to account for delivery of these commitments.

Further details of key performance commitments are set out in table 1.2 below and in section 2.

Table 1.2: Key performance commitments for Severn Trent Water

Area	Measure
Key common performance commitments	• At least 15% leakage reduction from PR14 performance commitment levels[3] • 4% reduction in per capita consumption by 2024-25 • 29% reduction in pollution incidents by 2024-25 to 19.5 incidents per 10,000 km of waste network • 21% reduction in internal sewer flooding incidents by 2024-25 to 1.34 incidents per 10,000 sewer connections • 43% reduction in water supply interruptions by 2024-25 to 5 minutes
Bespoke performance commitments	• 8% reduction in external sewer flooding incidents by 2024-25 • 7% reduction in public sewer flooding by 2024-25 • 5% reduction in sewer blockages by 2024-25 • 5% reduction in water quality complaints by 2024-25 • 64.5% customer satisfaction for value for money by 2024-25 • 43% of customers get help to pay when they need it by 2024-25 • 96% customers with an enhanced level of resilient supplies by 2024-25
Overall incentive package	Overall, the likely range of returns from outcome delivery incentive package in our final determination equates to a return on regulatory equity range of -2.83% (P10) to +1.90% (P90).

Note the calculations behind these numbers are outlined in the 'Severn Trent Water - Outcomes performance commitment appendix'.

Allowed revenues

Our final determination sets allowances for total revenue or average revenue for each of the price controls. Table 1.3 shows the allowed revenues in the final determination across each price control. Further details on our calculation of allowed revenues are set out in section 4.

[3] Please note that the figures in the tables of the 'Severn Trent Water - Outcomes performance commitment appendix' which relate to this performance commitment reflect that it is measured on a three-year average and show a 14.3% reduction from 2019-20 baseline levels on a three-year average basis.

Table 1.3: Allowed revenue, 2020-25 (£ million)

	Water Resources	Network plus- - water	Network plus - wastewater	Bioresources	Wholesale total	Residential retail	Total
Company view of allowed revenue (£m)	387.2	3,400.0	3,350.7	406.0	7,544.0	461.0	**8,005.0**
Final allowed revenues (£m)	420.1	3,088.4	3,403.8	385.8	7,298.1	479.2	**7,777.3**

Note retail revenue is the sum of the margin, retail costs, and adjustments. The bioresources and residential retail controls are average revenue controls. We have included forecast revenue (in real terms) for these controls to illustrate the total revenue across all controls.

The draft determinations for fast track companies, published in April 2019, included the 'early view' allowed return on capital, rather than the lower return allowed for slow track draft determinations published in July 2019. As set out in the 'Allowed return on capital technical appendix', we are updating our assessment of the allowed return on capital for Severn Trent Water's final determination. The allowed return is 2.96% (on a CPIH basis, 1.96% on a RPI basis) at the appointee level. After adjustment for the retail margin, the allowed return on capital for the wholesale price controls is 2.92% (on a CPIH basis, 1.92% on a RPI basis), a reduction of 0.38 percentage points from our fast track draft determination, reflecting our assessment of market evidence. The allowed retail margin for the household retail control remains at 1.0%, consistent with the draft determination.

Severn Trent Water's Regulatory Capital Value (RCV) growth in 2020-25 is 3.8% and 62% of its RCV will be indexed to CPIH in 2025. We accept Severn Trent Water's approach to cost recovery through its proposed choice of pay-as-you-go rates (which provides greater headroom in the financial ratios compared with our draft determination) and its proposal to bring forward a full transition to CPIH through an adjustment to RCV run-off rates is supported by customer preferences.

We consider that Severn Trent Water's final determination is financeable on the basis of the notional structure, based on a reasonable allowed return on capital. The determination is sufficient to deliver its obligations and commitments to customers. Further detail on our assessment of financeability is set out in section 5.

Putting the sector in balance

We have encouraged companies to take greater account of customers' interests – and to transparently demonstrate that they are doing so in the way they finance themselves, pay dividends to their shareholders, and determine performance related executive pay. Severn Trent Water commits to meeting the expectations set out in our 'Putting the sector in balance position statement'.

The company confirmed it would implement our default gearing outperformance mechanism within its business plan. Under its actual financial structure, Severn Trent Water expects to maintain gearing below the level that would trigger sharing payments under the gearing outperformance sharing mechanism in 2020-25.

To meet our expectations, the company will need to demonstrate to stakeholders that dividends and performance related executive pay policies are substantially aligned to its performance for customers. We expect the company will need to revise its proposed base dividend yield for 2020-25 to take account of the lower allowed return in our final determination and our revised expectations for a reasonable base dividend yield that we set out in the 'Aligning risk and return technical appendix'.

In the 'Putting the sector in balance' position statement we also encouraged companies to adopt a voluntary sharing mechanism, particularly where, for example, companies outperform our cost of debt assumptions. The company does not propose a mechanism on sharing the benefits on the cost of debt, however the company proposes to fund a technical academy with an investment of £2 million per year and is creating a new community dividend, comprising of employee volunteering time and donations to the Trust Fund.

We provide further detail on these issues in section 7.

1.2 Representations on the draft determination

All companies and stakeholders were invited to make representations on our fast track draft determinations by 24 May 2019 and on our slow track and significant scrutiny draft determinations by 30 August 2019. More detail about the issues raised in the representations by the company and our consideration of these issues can be found elsewhere in this document, the technical appendices and other documents published alongside our final determinations. Table 1.4 highlights the key points made by Severn Trent Water in both its May and August representations together with any further submissions after that date and a summary of our response to each of those points.

Table 1.4: Company representation

Key point in Severn Trent Water representation	Summary of our response
Severn Trent Water explains its concern about the overall package and balance of risk and return (related to cost of capital, implications for notional financeability and handling of capital and operational expenditure in our models).	Our final determination documents set out our view that the final determinations are financeable, demonstrate an appropriate balance of risk and return and incentivise delivery of the outcomes important to customers. Taking account of company representations, we have adjusted our approach to the calculation of the mix of operating and capital expenditure following our totex interventions. More explanation is provided in our 'Securing cost efficiency technical appendix'.
Severn Trent Water explains that the revaluation of business rates during 2020-25 may cause windfall gains for some companies (and losses for others). The company propose the use of the Valuation Office Agency's revised rateable values and applying a true-up mechanism with a sharing rate.	We are including a PR24 reconciliation mechanism for business rates to address the uncertainty around potential Valuation Office Agency valuations while giving the company an incentive to take steps to influence the factors over which it has some control. The cost variance to the company's PR19 cost allowance will be subject to a 75 (customer share):25 (company share) symmetrical sharing rate in the totex reconciliation at PR24. This means that the company will still be incentivised to manage costs efficiently, whilst receiving appropriate protection against material cost increases. Conversely, customers will receive a benefit if outturn costs are lower than the allowance levels we have set.
Severn Trent Water comments on what it considers to be sector wide issues: • water supply interruptions (stating that the performance commitment level, which was 3 minutes for all draft determinations, should be adjusted to remove optimism bias in company forecasts for 2020-25; and • the service incentive mechanism (SIM) outcome delivery incentive underperformance payment (stating that the financial incentive payment is disconnected from company performance in 2019-20). The company also comments on: • the compliance risk index underperformance payment (stating that the measure is not yet robust and that the company has demonstrated improving performance on the compliance risk index); and	We adjust the 2024-25 performance commitment level for water supply interruptions from 3 minutes to 5 minutes, with an amended glidepath, taking account of evidence provided by the company as well as wider evidence, to calibrate the stretch of the performance commitment for an efficient company. The service incentive mechanism financial incentives are based on average performance between the four years from 2015-16 to 2018-19, and applied to residential retail revenues for the five years from 2020-21 to 2024-25. The SIM will not operate in 2019-20 as a financial incentive as confirmed in our PR19 methodology. We amend the fast track draft determination underperformance rate for the compliance risk index performance commitment to that implied by our draft determination methodology for slow track and significant

• the mains repairs and unplanned outage at water treatment works performance commitment levels (suggesting that they should be adjusted to bring them into line with companies that were not awarded fast track status).	scrutiny companies. We amend the deadband to a score of 2.00 across all years, reducing the risk of underperformance payments in the last three years of the 2020-25 period. On the mains repairs performance commitment we make changes that apply industry wide to ensure the levels take account of historical levels of performance and the implications of leakage reduction level for mains repairs. We set a flat median performance commitment level for unplanned outage at water treatment works through the price review period since the company is already performing better than this level.
Severn Trent Water targets a BBB+ credit rating for both its notional and actual financial structures. The company says that its plan is financeable at its target credit rating of BBB+ on its actual and notional capital structure provided that its fast track draft determination is updated for the slow track draft determination allowed return on capital (2.1% on an RPI basis) and additional totex allowance, and its representations on additional RCV run-off are allowed. The company sets out that it strongly disagrees with a further reduction in the allowed return on capital for the final determination.	We have carefully considered all of our duties, in particular our financing functions and consumer protection duties, and are satisfied that our final determination fulfils our duties in the round. Our assessment of notional financeability for the final determination is made in the context of changes made to the draft determination in our final determination. We consider the company's final determination is financeable on the basis of the notional structure based on the allowed revenues which include a reasonable allowed return on capital. The final determination is sufficient to ensure the company will be in a position to deliver its obligations and commitments to customers. It is the company's responsibility to maintain financial resilience under its actual financial structure and it must bear the risks associated with its choice of capital and financing structure. We use an allowed return on capital based on updated market evidence, as set out in our 'Allowed return on capital technical appendix'.

We also received representations on Severn Trent Water's draft determination from other stakeholders as shown in table 1.5, which shows a summary of our response to company-specific comments. Representations from some other stakeholders relate to all companies and are described in the relevant technical appendices. More detail about the issues raised in the representations by stakeholders can be found elsewhere in this document, the technical appendices and other documents published alongside our final determinations.

Table 1.5: Stakeholder representations

Stakeholder representations	Summary of our response
The Environment Agency's response to the fast-track determinations sets out expectations that fast-track companies would make a step change in internal sewer flooding, and deliver agreed Water Industry National Environment Programmes by 2024.	Our final determination sets a 21% reduction in internal sewer flooding incidents by 2024-25 for Severn Trent Water and includes a £471 million cost allowance to support the company's Water Industry National Environment Programme.
The Consumer Council for Water (CCWater) completed customer acceptability on Severn Trent Water's draft determination. The results indicated that the plan was acceptable to 74% of uninformed customers (and 69% of informed customers). CCWater completed further customer acceptability testing following our publication of the non-fast track determinations.	We note the results of the CCWater's customer acceptability testing on Severn Trent's business plan.
Invesco, an investor in Severn Trent Water, has the following concerns. • The proposed cost of equity is low and any further reductions would be hard to justify. • Our use of the Capital Asset Pricing Model (CAPM) suggests investor risk in the water sector is increasing given public scrutiny, nationalisation risks and the downward trajectory for allowed returns.	Our allowed return on capital is estimated using the well-established approach of using the CAPM, and is aligned with City analyst expectations. Our nominal allowed return on equity (6.3%) is only slightly below the median return for FTSE 100 companies over the past three years (7.6%). This lower return is unsurprising for a sector characterised by low demand risk, inflation protection and predictable and stable revenues. See 'Allowed return on capital technical appendix'.

1.3 Key changes from the draft determination

Our final determination carefully considers the representations we received from companies and stakeholders on our fast track draft determinations on 24 May 2018 and on our slow track and significant scrutiny draft determinations on 30 August 2019. It also takes account of the most up-to-date information available where appropriate. Changes to overall revenue and costs allowances are set out in table 1.6.

Table 1.6: Difference in cost and revenue allowance final to draft determination

	Draft determination	Final determination
Allowed revenues (£m, 2017-18 CPIH deflated)	7,916.1	7,777.3
Wholesale cost allowance[1] (£m, 2017-18 CPIH deflated)	6,012.4	6,203.4
Retail cost allowance (£m, nominal)	490.5	492.2
Wholesale allowed return[2] (% - CPIH basis)	3.30%	2.92%

[1] Note that we include pension deficit recovery costs in the wholesale cost allowances we present in table 1.6 above and in table 3.1 later in this document. At the draft determination we published cost allowances excluding pension deficit recovery costs. The numbers we show here as the draft determination allowances can be calculated by adding the pension deficit recovery costs from draft determination table 3.2 to draft determination table 3.1 total allowances. Our decisions on individual elements of the totex allowance are set out in section 3.
[2] The allowed retail margin for the household retail control remains at 1.0%, consistent with the draft determination.

Significant changes from the draft determination for Seven Trent Water are:

- overall, we allow a higher cost allowance than at our draft determination and total revenue allowances reduce due mainly to a reduction in allowed returns;
- our capital expenditure enhancement allowance, excluding growth, increases by £64 million;
- we amend our approach to the mix of operating and capital expenditure to better reflect the impact of our interventions to cost allowances;
- on the mains repairs performance commitment level, we apply industry wide changes to ensure performance commitment levels take account of historical levels of performance and the implications of leakage reduction levels for mains repairs;
- our revenue allowance now includes Severn Trent Water's contribution to the innovation competition of £28.4 million;
- we revise our approach to calculating grants and contributions;
- we revise our notional dividend yield to 3.00% and apply a dividend growth of 1.18% in our notional financeability assessment for Severn Trent Water. This takes account of the allowed cost of equity in the final determination;
- as for the draft determination, we accept Severn Trent Water's approach to cost recovery through its proposed choice of pay-as-you-go rates and its proposal to bring forward a full transition to CPIH through an adjustment to RCV run-off rates, we consider no further revenue advancement is necessary for purposes of notional financeability;

- we expect the company will need to reduce its proposed base dividend yield for 2020-25 to take account of the lower allowed return in our final determination and our revised expectations for a reasonable base dividend yield; and
- we revise Severn Trent Water's average bill profile from a large reduction upfront followed by flat real terms bills, to have a smaller reduction upfront, followed by a gradually falling real bill over 2020 – 25.

2 Outcomes

Key changes from the draft determination

The key changes made to the outcomes elements of the draft determination are:

- On mains repairs, we make changes that apply industry wide to ensure levels take account of historical levels of performance and the implications of leakage reduction levels for mains repairs.
- We adjust the water supply interruptions 2024-25 level to five minutes, with an amended glidepath in the first four years, taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company.
- We amend the deadband on the compliance risk index (which measures compliance with the Drinking Water Inspectorate's (DWI's) water quality standards) to a score of 2.00 throughout the period reducing the risk of underperformance payments in the last three years of the 2020-25 period. This allows more flexibility in performance to take into account the uncertainty created by the ban on the use of metaldehyde, which has been overturned by the High Court and also aligns with the median level of company performance.

Throughout PR19, we have been asking companies to:

- make stretching performance commitments to their customers;
- have stronger incentives to deliver on their commitments; and
- better reflect resilience in their commitments

The outcomes framework is a key component in driving companies to focus on delivering the objectives that matter to today's customers, future customers and the environment in the 2020-25 period and beyond. Outcomes define the service package that companies should deliver for their customers and their incentives to do this.

There are two key elements of the outcomes framework: performance commitments and outcome delivery incentives. Performance commitments specify the services that customers should receive and set out in detail the levels of performance that the companies commit to achieve within the five year period from April 2020 to March 2025. Outcome delivery incentives are the reputational and financial incentives that companies have, to deliver on their performance commitments to customers. They specify the financial or reputational consequences for companies of outperformance or underperformance against each of these commitments (they are referred to as

‘out’ where there is a payment to the company for better than committed performance, ‘under’ where there is a payment to customers where there is worse than committed performance, or ‘out-and-under’ incentives, depending on their design).

Most outcome delivery incentives will be settled at the end of each year to bring incentive payments closer to the time of delivery of the service (‘in-period’ incentives) and some will be settled once at the end of the five year period (‘end-of period’ incentives). The outcomes framework gives companies the freedom to innovate and explore to find the most cost-effective way of delivering what matters to their customers.

Severn Trent Water’s current performance is mixed – with a high performing wastewater business but underperforming water business. It is the 6th poorest performing company on service incentive mechanism.

Its outcome delivery incentive package in its September 2018 business plan was not balanced between its water and wastewater business:

- There was large scope for outperformance on wastewater performance commitments due to an inappropriate top down adjustment of rates on sewer flooding; and
- Lack of customer protection for customers, both in terms of low underperformance payments, largely on its water performance commitments and a lack of overall protection for greater than expected outperformance.

Our fast track draft determination rebalanced the package overall and provided additional customer protection by both increasing stretch, reducing scope for outperformance and increasing or introducing underperformance payments.

The company took early certainty on outcomes except for on compliance risk index, water supply interruptions and unplanned outage as well as on deadbands on common performance commitments. Therefore some changes made at draft determination for companies who were slow track or significant scrutiny implied changes to Severn Trent Water’s fast track determination.

In its representations, the company highlights four key issues, on water supply interruptions levels, mains repairs, compliance risk index and unplanned outage.

On water supply interruptions, the company challenges the scale of the challenge and highlights that the sector would largely be subject to underperformance payments even with 50% improvement. The company proposes an alternative approach to calculating performance commitment levels. We adjust the water supply interruptions 2024-25 level to five minutes, with an amended glidepath in the first

four years, taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company.

On mains repairs, the company is concerned that the performance levels required on mains repairs and the interaction with leakage reduction leave it with significant risk of outcome delivery incentive underperformance payments. We have considered the evidence provided by companies of the link between increasing proactive mains repairs and reducing leakage although the link is not precisely quantifiable. We increase the performance commitment levels for mains repairs by a reducing percentage, for all companies, in all years, reducing the stretch. The aim is to allow all companies the flexibility to deliver the step change in leakage reduction, allowing more flexibility in the earlier years to use proactive mains repairs to reduce leakage. Our slow track draft determination implied that we would intervene in mains repairs levels for this company, setting the level at the average of the best three years' performance. At final determination, we amend the base levels of mains repairs to an average of the best five years' performance, which provides a more representative level and ensures companies maintain good performance to improve the overall health of their assets over the longer-term.

The company also challenges having significant financial outcome delivery incentives on the compliance risk index and in particular the decision implied by the slow track draft determination to increase its underperformance rate. The company considers the measure is immature and subjective and is disconnected from views of customers. The compliance risk index is not a new obligation – but a different way to express performance against the longstanding statutory requirement to supply drinking water that is 100% compliant with statutory obligations 100% of the time and we consider that this is valued by customers. However we consider that a deadband should allow for some fluctuation in performance whilst providing a strong incentive to minimise compliance failures.

We amend the deadband on the compliance risk index to a score of 2.00 throughout the period reducing the risk of underperformance payments in the last three years of the 2020-25. This allows more flexibility in performance to take into account the uncertainty created by the ban on the use of metaldehyde being overturned by the High Court and also aligns with the median level of current company performance. We consider the company has poor comparative performance and failed on the equivalent measure, mean zonal compliance, in PR14, therefore in line with our methodology we set its underperformance rate for compliance risk index to industry average.

On unplanned outage, the company requests a glidepath in the first four years of the period to the 2024-25 median value. The company has better performance than the 2024-25 median level in 2017-18 and 2018-19. Although the measure is relatively new we cannot see why changes in data would increase the company's performance level to such an extent that a glidepath is required. Therefore we set a

flat median level throughout the period consistent with our approach for companies who have similar current performance.

The outcomes framework sits in the broader context of the company's statutory and licence requirements for service delivery. Independently of the outcomes framework, each company also has to ensure that it complies with its legal obligations, or risk enforcement action. If a company's performance falls below the level set for a performance commitment (irrespective of the existence of any deadband or collar), we will consider whether this is indicative of wider compliance issues to the detriment of consumers and whether enforcement action, with the potential for remedial and fining measures, is warranted.

Please see the 'Delivering outcomes for customers policy appendix' for further details on our policy decisions on cross-cutting issues such as common performance commitments and outcome delivery incentive rates.

2.1 Customer engagement

In our PR19 methodology we set out our expectations that companies should demonstrate ambition and innovation in their approach to engaging customers as they develop their business plans. This includes direct engagement with customers to develop a package of performance commitments and outcome delivery incentives.

We expected customer challenge groups to provide independent challenge to companies and independent assurance to us on: the quality of a company's customer engagement and the degree to which this is reflected in its business plan.

We continued our assessment of customer engagement evidence following each company's submission of its representations to our draft determination in August 2019. We find variability in both the quality of engagement undertaken by companies and the extent to which customers' views are reflected in company proposals.

In its September 2018 business plan, Severn Trent Water provided evidence to demonstrate elements of high-quality customer engagement. However, we highlighted some areas of concern in our initial assessment of the company's plan, such as insufficient evidence that customer valuation research has been robustly designed and implemented. The company had also provided insufficient evidence to demonstrate that it has implemented a well-reasoned and objective approach to using the results of its customer research in setting its outcome delivery incentive rates (triangulating). Further, Severn Trent Water had provided insufficient evidence to justify material adjustments to the triangulated marginal benefit values used in its outcome delivery incentive rates for certain performance commitments.

Our interventions were limited in relation to Severn Trent Water's performance commitments on the basis of the customer engagement research that the company submitted in its representations in response to our fast track draft determinations. This is because the company complied with all of the actions that we set out in our initial assessment of plans by amending its outcome delivery incentive rates or removing outperformance payments where they did not align with high quality customer engagement research. However, we intervened to set the company's outcome delivery incentive rate in relation to main repairs to align with our reasonable range given the company had not provided sufficient evidence to justify the high outperformance rate.

In its representations to our draft determination, Severn Trent Water states that we have taken an asymmetric approach in intervening on the outcome delivery incentive rate for mains repairs that is contrary to its willingness to pay customer engagement research. We do not apply the same methodology to outperformance and underperformance outcome delivery incentive rates on non-customer facing performance commitments (including mains repairs). Given the low number of companies proposing outperformance payments for these performance commitments, we do not consider it feasible to create a reasonable range for the assessment. Our assessment of outperformance rates is checking whether the rate is larger than the underperformance rate (this is set out in our 'PR19 Daft Determinations: Delivering outcomes for customers policy appendix'). We therefore do not accept that our interventions should be symmetrical on outperformance and underperformance rates.

The company's customer challenge group did not submit any representations to our fast track draft determination.

We set out in our PR19 methodology that we expect companies to reflect their customers' preferences in the levels they propose for performance commitment levels and outcome delivery incentives. We also expected companies to challenge the level of stretch in their performance commitments against a range of approaches (for example, against comparative and historical information). In our PR19 methodology we also expected companies to use customer valuations to set outcome delivery incentive rates and noted that we would compare these valuations and rates and challenge companies where appropriate. Therefore, when making our decisions, we have taken into account several factors in setting our final determination outcome delivery incentive rates including the quality of customer evidence provided. Our suite of final determination documents explains the rationale for our decisions, including the evidence used to inform our decisions.

2.2 Performance commitments and outcome delivery incentives

Severn Trent Water's performance commitments and outcome delivery incentives for the 2020-25 period are listed in table 2.2 and table 2.3. The full details of these performance commitments and outcome delivery incentives are set out in the 'Severn Trent Water - Outcomes performance commitment appendix'.

The key changes we are making in the final determination are set out in table 2.1[4] below. 'Severn Trent Water – Delivering outcomes for customers final decisions' sets out our final decisions in terms of changes to our draft determination for the company's performance commitments and outcome delivery incentives, having considered stakeholder and company representations to our draft determination.

Table 2.1: Summary of key changes to draft determinations on outcomes

Key changes
Increasing the water supply interruptions 2024-25 level (making it easier to achieve) to five minutes, with an amended glidepath in the first four years taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company
Amending the performance commitment levels for mains repairs by a reducing percentage, for all companies, in all years, reducing the stretch. The aim is to allow all companies the flexibility to deliver the step change in leakage reduction, allowing more flexibility in the earlier years to use proactive mains repairs to reduce leakage. At final determination, we amend the base levels of mains repairs to an average of the best five years' performance, which provides a more representative level and ensures companies maintain good performance to improve the overall health of their assets over the longer-term.
Amending the deadband on the compliance risk index to a score of 2.00 throughout the period reducing the risk of underperformance payments in the last three years of the 2020-25. This allows more flexibility in performance to take into account the uncertainty created by the ban on the use of metaldehyde being overturned by the High Court and also aligns with the median level of current company performance.
Amending the unplanned outage level to median of 2.34% for the 2020 – 2025 period since the company is already performing better than this level.
Accepting the company's revised performance commitment levels in relation to risk of drought, as these align to the latest version of the company's Water Resource Management Plans.
Removing the aggregate cap in relation to number of water meters installed as no customer benefits are identified in its inclusion.
Accepting the company's proposal to decrease its outcome delivery incentives in relation to abstraction incentive mechanism as there is sufficient and convincing evidence that the changes will provide more targeted incentives between the two sites that the performance commitment applies to.
Amending the performance commitment definitions in relation to non-household void properties to ensure that in-period determinations take into account the financial consequences of any retail

[4] Please note, table 2.1 focuses on policy changes and does not include changes made to correct errors in our draft determinations or changes made as a consequence of other amendments such as updating enhanced outcome delivery incentive rates for amendments to standard outcome delivery incentive rates using the same methodology and approach as at draft determinations.

Key changes
market mechanism which may be developed, for example, under the Market Performance Framework in the 2020-25 period. We said in the PR19 methodology that, in order to maintain the integrity of the regulatory framework, we would retain the flexibility to make changes, in exceptional circumstances, to specified components of outcomes which are subject to the early certainty principle. This represents such an exception because it protects the company's customers from paying twice for the same service through outperformance payments in the event that a retail market mechanism comes into effect during the 2020-25 period.

Table 2.2: Summary of performance commitments: common performance commitments

Name of common performance commitment	Type of outcome delivery incentive			
	Financial			Reputational
	Under	Out	In-period	
Water quality compliance (CRI) [PR19SVE_H01]	X		X	
Water supply interruptions [PR19SVE_G01]	X	X	X	
Leakage [PR19SVE_G02]	X	X	X	
Per capita consumption [PR19SVE_G03]	X		X	
Mains repairs [PR19SVE_G04]	X	X	X	
Unplanned outage [PR19SVE_G05]	X		X	
Risk of severe restrictions in a drought [PR19SVE_G06]				X
Priority services for customers in vulnerable circumstances [PR19SVE_E02]				X
Internal sewer flooding [PR19SVE_F01]	X	X	X	
Pollution incidents [PR19SVE_F02]	X	X	X	
Risk of sewer flooding in a storm [PR19SVE_F04]				X
Sewer collapses [PR19SVE_F03]	X	X	X	
Treatment works compliance [PR19SVE_C01]	X		X	
C-MeX: Customer measure of experience [PR19SVE_D01]	X	X	X	
D-MeX: Developer services measure of experience [PR19SVE_D02]	X	X	X	

Table 2.3: Summary of performance commitments: bespoke performance commitments

Name of common performance commitment	Type of outcome delivery incentive				
	Financial				Reputational
	Under	Out	In-period	End of period	
Reducing residential void properties [PR19SVE_A01]		X	X		
Reducing residential gap sites [PR19SVE_A02]					X
Reducing business void and gap site supply points [PR19SVE_A03]		X	X		
Value for Money [PR19SVE_A04]					X
Inspiring our customers to use water wisely [PR19SVE_B01]	X	X	X		
Improvements in WFD criteria [PR19SVE_C02]	X	X		X	
Biodiversity (Water) [PR19SVE_C03]	X	X	X		
Biodiversity (Waste) [PR19SVE_C04]	X	X	X		
Satisfactory sludge use and disposal [PR19SVE_C05]	X		X		
Help to pay when you need it [PR19SVE_E01]					X
External sewer flooding [PR19SVE_F05]	X	X	X		
Sewer blockages [PR19SVE_F06]	X	X	X		
Public sewer flooding [PR19SVE_F07]	X	X	X		
Green communities [PR19SVE_F08]	X	X	X		
Collaborative flood resilience [PR19SVE_F09]	X	X		X	
Speed of response to visible leaks [PR19SVE_G07]	X	X	X		
Persistent low pressure [PR19SVE_G08]	X	X	X		
Abstraction Incentive Mechanism (AIM) [PR19SVE_G09]	X	X	X		
Resilient supplies [PR19SVE_G10]	X	X		X	
Resolution of low pressure complaints [PR19SVE_G11]	X	X	X		
Increasing water supply capacity [PR19SVE_G12]	X			X	
Number of water meters installed [PR19SVE_G13]	X	X	X		

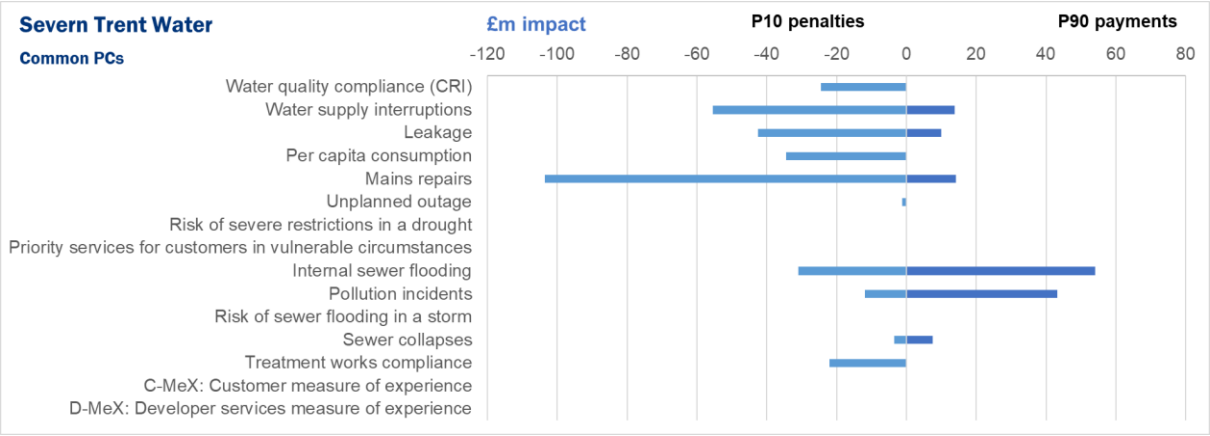
Name of common performance commitment	Type of outcome delivery incentive				
	Financial				Reputational
	Under	Out	In-period	End of period	
Water quality complaints [PR19SVE_H02]	X	X	X		
Farming for Water [PR19SVE_H03]	X	X		X	
Protecting our schools from lead [PR19SVE_H04]	X	X		X	

Figure 2.1 and figure 2.2 provide an indication of the financial value of each of Severn Trent Water's outcome delivery incentives (taking into account the impact of our final determination decisions) showing how much the company would have to return to customers if it underperformed to the P10 level and how much the company would gain if it outperformed to the P90 level. The P90 is the performance threshold at which there is only a 10% chance of outturn performance being better. The P10 is the performance threshold at which there is only a 10% chance of outturn performance being worse.

The figures cover common and bespoke commitments respectively. The estimates are based on the company's own view of the plausible bounds of performance submitted in February 2019 submission. Where we have changed service levels for performance commitments, we have amended these estimates so that the distance between the service level and estimate remains the same.

Our analysis has built on the estimates companies have provided, but there is a range of plausible estimates of what may happen in plausible worst case (P10) and plausible best case (P90). There is inherent uncertainty in forecasting these parameters and the figures presented should be seen as indicative of the likely range of financial impacts for each performance commitment.

Figure 2.1: Projected P10 underperformance payments and P90 outperformance payments for common performance commitments over 2020-25 (£ million)



Note P10 underperformance payments and P90 outperformance payments for C-Mex: Customer measure of experience and D-Mex: Developer services measure of experience are not shown in this figure but are shown in Table 5.1 below.

Figure 2.2: Projected P10 underperformance payments and P90 outperformance payments for bespoke performance commitments over 2020-25 (£ million)

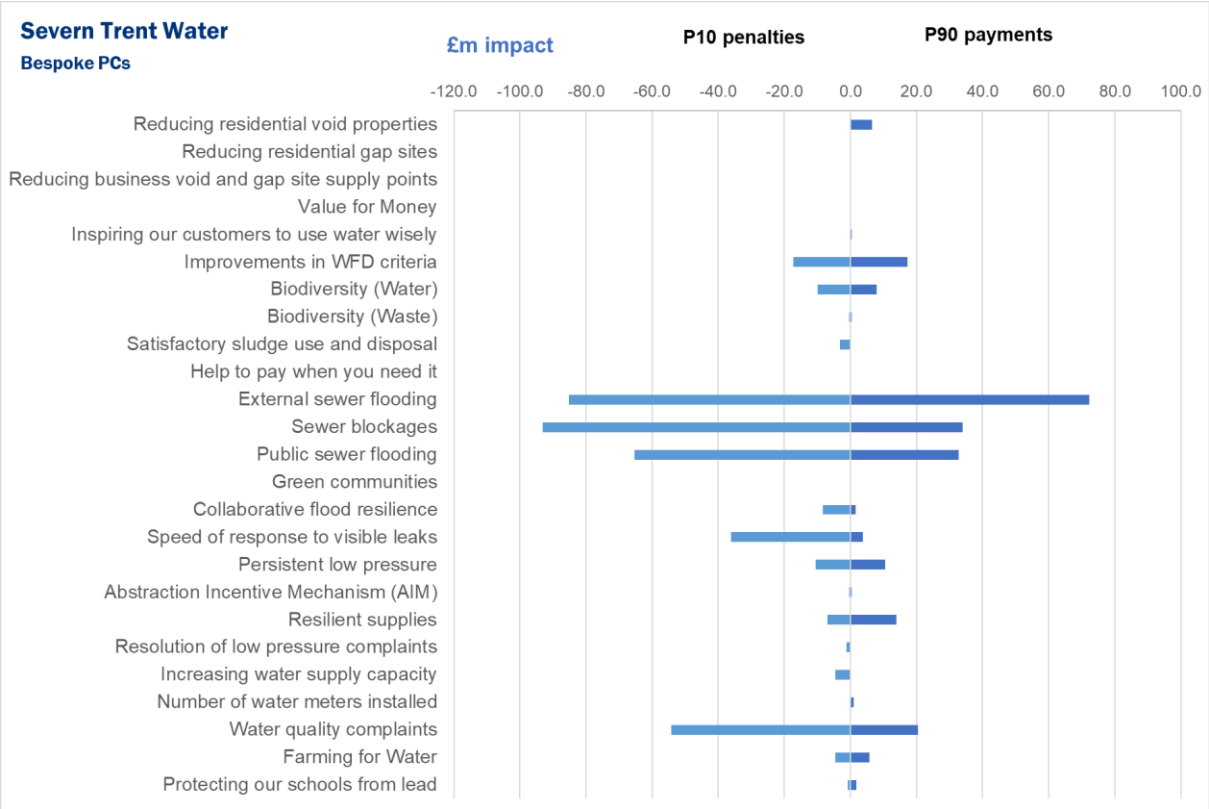


Table 2.4 provides an indication of the financial value of the overall package at the upper and lower extreme levels of performance (expressed as a percentage point impacts on RoRE (return on regulatory equity)) and the overall impact of our final determination decisions Further information on how we have calculated these values is set out in the 'Delivering outcomes for customers policy appendix'.

Table 2.4: Impact of draft determination and final determination decisions on RoRE range

	Draft determination		Final determination	
	% of 5 year regulatory equity		% of 5 year regulatory equity	
	P10	P90	P10	P90
Severn Trent Water	-3.9	1.7	-2.83	1.90

The figures in the above tables are estimates. In the PR19 methodology we said that we expect companies to propose approaches to protect customers in case their

outcome delivery incentive payments turn out to be much higher than expected. We asked companies, in our initial assessment of business plans 'PR19 initial assessment of plans: Delivering outcomes for customers policy appendix', to put in place additional protections for customers where we considered protections were not adequate.

We are applying caps and collars to financially material and/or highly uncertain performance commitments and allowing caps and collars on other performance commitments where company proposals are supported by high quality customer engagement. Where, through these reasons, the vast majority of companies have caps and collars on a common performance commitment, we will apply caps and collars to all companies.

We are applying a standard sharing mechanism for all companies, where 50% of outperformance payments that exceed 3% of return on regulatory equity (RoRE) in any year are shared with customers through bill reductions in the following year. We set out further detail of the mechanism in the 'Delivering outcomes for customers policy appendix'.

In our PR19 methodology, we decided to replace the existing service incentive mechanism (SIM) with two new common performance commitments to incentivise companies to provide an excellent experience for residential customers (our customer measure of experience, or C-MeX) and developer services customers (our developer services measure of experience, or D-MeX). C-MeX and D-MeX will operate from April 2020 and incentivise companies to improve their performance relative to other water companies and the wider economy.

We set out further details on how C-MeX and D-MeX will operate in the 2020-25 period, including any changes from draft determinations, in the 'Customer measure of experience (C-MeX) and developer services measure of experience (D-MeX) policy appendix'.

2.3 Delivering a framework for resilience in the round

Resilience is one of our four themes for PR19. We set out our expectations for water companies' business plans in our PR19 methodology.[5] Overall Severn Trent Water's September 2018 business plan falls short of demonstrating that the company has applied an integrated resilience framework that will deliver resilience in the round. It does however provide evidence of good customer engagement on risks to service and mitigation options and some good examples of corporate resilience risk mitigation through its cyber security and future skills gaps enhancements. The

[5] The 2015 resilience task and finish group report, 'Resilience in the round' document and PR19 methodology together set out the guiding principles with respect to long-term resilience.

company's business plan also incorporates uncertainty in its planning and subsequent development of efficient options through an adaptive pathways approach.

We recognise that it may take some time for companies to fully understand best practice approaches to resilience in the round and implementing a systems-based approach to resilience. In our initial assessment of business plans, we set Severn Trent Water an action (SVE.LR.A2) to develop a resilience action plan which demonstrates that it has a framework in place to deliver resilience in the round, and to submit this to us by 22 August 2019. We expected the resilience action plan to build upon the feedback that we provided following our initial assessment of the business plan.

Overall, Severn Trent Water's resilience action plan falls short of our expectations in many areas. In particular, we are concerned that:

- the company does not clearly demonstrate how its action plan is informed by an understanding of baseline maturity, a concern which we also raised in our initial assessment of the company's business plan. We expect the company to clearly demonstrate how its action plan is influenced by an understanding of their baseline maturity;
- the company does not provide a line of sight between gaps in maturity identified, risks to resilience, planned mitigations and its package of outcomes. We expect the resilience action plan to demonstrate how systems will be developed to provide a clear link between risks to resilience, maturity improvements and mitigations and the ability to deliver its package of outcomes; and
- the company's action plan lacks the detail on resource requirements and accountability for delivery of specific elements of the plan to give us confidence that a robust plan is in place for the company to deliver an integrated resilience framework. We expect the resilience action plan to provide sufficient detail to demonstrate a robust path to implementing the company's action plan, including clear governance and accountable owners for actions.

Overall, Severn Trent Water, along with the sector, has further work to do to implement a fully integrated resilience framework. The company should continue to work with the sector, with Ofwat, and across sectors to incorporate best practice and address the concerns highlighted about its resilience framework above. Ofwat plans to engage the sector through its strategy to encourage further joint development of resilience approaches to accelerate best practice through the industry. We also may consider the progress companies have made as part of assessing company business plans in the 2024 price review.

3 Cost allowances

Key changes from the draft determination

- Our final determination allowance for Severn Trent Water is £6,203.4 million for the wholesale services. This compares with £6,012.4 million at draft determination. In retail, our final determination allowance is £492.2 million, compared with £490.5 million at draft determination.
- Our base allowance is affected by a number of changes we have made since Severn Trent Water's draft determination:
  - we expand our definition of base costs to include costs that are driven primarily by population growth;
  - we move from a capex to a totex assessment of enhancement activities;
  - we change our approach to forecasting several of the explanatory factors in our econometric models;
  - we include company outturn data from 2018-19 in our econometric models;
  - we exclude non-section 185 diversions costs (i.e., diversions other than those required by section 185 of the Water Industry Act 1991) from our econometric models and allow companies to recover related income outside the price control, from the relevant transport authority;
  - we strengthen the catch-up challenge applied to wholesale modelled base costs. We use the 4th placed company in wholesale water and the 3rd placed company in wholesale wastewater as an efficiency benchmark, rather than the upper quartile company at draft determinations;
  - we reduce the frontier shift challenge from 1.5% per year to 1.1% per year, but we extend to all wholesale base costs.
- We make a total of £19.6 million downward adjustment to our base allowance for water and wastewater network plus. The adjustment is due to a relatively low forecast of population growth in 2020-25 in the company's supply area.

Throughout price review 2019 we set out that we expect companies to demonstrate an increase in cost efficiency. In our final determinations, we set a cost-outcomes package that provides a strong incentive for companies to invest and operate efficiently and at the same time deliver a marked improvement in their level of performance, particularly on outcomes that matter to customers and the environment. Our cost-outcomes package is demanding but achievable. It will incentivise companies to innovate, which will pave the way for a more efficient, higher performing sector, with more meaningful, trusted relationship with customers.

Severn Trent Water submitted a business plan for 2020-25 that is broadly efficient and at a similar level to its historical expenditure. We challenge the company's enhancement proposals to ensure customers pay only for efficient costs. Our allowance for Severn Trent Water is higher than at draft determination.

Our approach to setting total expenditure (totex) allowances is detailed in our publication 'Securing cost efficiency technical appendix'. In addition to challenging companies to be more efficient we have also, where appropriate, set safeguards to protect customers if specific investments are not delivered as planned.

In the 'Severn Trent Water – Cost efficiency final determination appendix' we provide more detailed information on our cost challenge for enhancement expenditure, our allowance for cost adjustment claims and transitional expenditure and our unit cost adjustments related to uncertain schemes in WINEP.

3.1 Allowed expenditure for wholesale services

Table 3.1 shows total expenditure (totex) allowances by year and by wholesale price control for the period 2020-25. We phase our allowed totex over 2020-25 using the company business plan totex profile.

Table 3.1: Totex1 by year for wholesale controls, 2020-25 (£ million, 2017-18 CPIH deflated prices)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total	Company August 2019 - total
Water Resources	68.0	71.4	80.6	92.5	84.2	396.8	367.2
Water network plus	533.6	558.5	539.0	522.7	513.6	2,667.4	2,875.0
Wastewater network plus	557.2	582.3	585.9	577.0	520.6	2,823.0	2,669.7
Bioresources[2]	67.3	66.5	64.4	61.8	56.2	316.2	317.0
Total	**1,226.2**	**1,278.7**	**1,270.0**	**1,254.0**	**1,174.4**	**6,203.4**	**6,228.8**

[1] Totex includes all costs. This includes pension deficit recovery costs, third party costs, operating lease adjustments, allowances related to the development of strategic regional water resource solutions and costs that are assumed to be recovered through grants and contributions.

[2] The bioresources control is an average revenue control. The totex allowance in our draft determination is based on a forecast level of tonnes of dry solids.

Table 3.2 sets out the components of our totex allowance. The main components are base and enhancement costs. Base expenditure refers to routine, year on year costs, which companies incur in the normal running of their business to operate, maintain and incrementally improve service to customers. Enhancement expenditure refers to investment for the purpose of enhancing the capacity or quality of service beyond base level.

For final determinations, we expand the scope of costs included in base expenditure beyond that of the fast track draft determination. Our base costs include operating and maintenance costs. In addition, our base costs for wholesale water include costs associated with the connection of new developments (i.e. new developments and new connection costs) and costs for addressing low pressure. Our base costs for wholesale wastewater include new connections and growth, growth at sewage treatment works and costs to reduce flooding to properties that were previously assessed as enhancement expenditure.

We adjust allowed costs to reflect a change in the accounting treatment of leases as discussed in section 8.4 of the 'Securing cost efficiency technical appendix'. We use the adjustment to operating costs that the company proposed in its business plan.

Our draft determination allowance included all revenues and costs in relation to diversions. This approach was criticised by companies who said that it did not take into account forecast step changes in diversions costs for some companies as a result of large infrastructure projects such as High Speed 2 (HS2). Following our draft determinations consultation, we exclude revenue relating to diversions other than those required by section 185 of the Water Industry Act 1991 ('non-section 185 diversions').

Non-section 185 diversions costs are included in table 3.2. Companies will be able to recover most of the non-section 185 diversions costs directly, usually from transport authorities, outside of the price control. This is in addition to our total revenue allowance.

Table 3.2: Totex by wholesale price control and type of cost, 2020-25 (£ million, 2017-18 CPIH deflated prices)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Base expenditure	280.2	2,183.1	2,332.6	311.0	5,106.9
Enhancement expenditure	59.6	352.2	452.1	-	864.0
Operating lease adjustment	-0.2	-1.3	-0.1	-0.0	-1.5
Gross allowed totex for calculation of cost sharing rates	**339.7**	**2,534.1**	**2,784.6**	**310.9**	**5,969.4**
Strategic regional water resources solutions and other cash items	42.5	-	-	-	42.5
Third party costs	11.1	27.3	3.4	-	41.8
Non section 185 diversions	-	79.1	17.1	-	96.2
Ex-ante cost sharing adjustment	-	-	-	-	-
Gross totex	**393.2**	**2,640.5**	**2,805.2**	**310.9**	**6,149.9**
Grants and contributions after adjustment for income offset[1]	-	174.5	99.5	-	274.0
Net allowed totex used in PAYG calculation	**393.2**	**2,466.0**	**2,705.7**	**310.9**	**5,875.9**
Pensions deficit recovery costs[2]	3.5	26.9	17.8	5.2	53.4
Total	**396.8**	**2,492.9**	**2,723.5**	**316.2**	**5,929.4**

[1] Includes price control and non-price control grants and contributions.
[2] We are displaying pension deficit recovery costs separately as they are not included in the calculation for PAYG (see section 4).

Movement in allowed wholesale expenditure between draft and final determinations

Table 3.3 compares our totex allowance at final determination to our allowance at draft determination. The table only includes base and enhancement expenditure.

That is, it excludes pension deficit recovery costs, third party costs, and costs for strategic regional water resources development where relevant.

Following the change in approach to non-section 185 diversions costs discussed above, for final determinations, our allowance also excludes non-section 185 diversions costs of the amount stated against these cost in table 3.2. Our draft determinations allowance does not exclude these costs.

Table 3.3 also provides the company's requested costs in its September 2018 submission, and its revised requested costs in August 2019, in response to our draft determinations for slow-track companies. Table 3.4 provides further detail.

Table 3.3: Totex by service, 2020-25 (£ million, 2017-18 CPIH deflated prices)

Price Control	Company September 2018	Company August 2019	Draft determination allowance	Final determination allowance
Wholesale water	3,172.3	3,091.1	2,832.6	2,875.2
Wholesale wastewater	2,960.1	2,942.5	3,069.6	3,095.7
Total	**6,132.4**	**6,033.6**	**5,902.2**	**5,970.9**

Table 3.4: Totex by type of cost, 2020-25 (£ million, 2017-18 CPIH deflated prices)

	Draft determination allowance	Final determination allowance
Base expenditure	4,680.9	5,106.9
Growth	421.6	
Enhancement[1]	799.7	864.0
- Environmental obligations (WINEP)	423.7	471.3
- Supply-demand balance and metering enhancement	168.5	162.2
- Resilience enhancement	107.2	107.2
- Other enhancement	100.3	123.4

[1] For fast track draft determinations, enhancement allowances were capital expenditure (capex) and not totex

3.2 Wholesale base expenditure

Table 3.5 shows a comparison between the company's requested and our allowed base expenditure.

Table 3.5: Base expenditure, 2020-25 (£ million, 2017-18 CPIH deflated prices)

Price Control	Company August 2019	Final determination allowance
Water Resources	277.4	280.2
Water Network plus	2,178.3	2,183.1
Wastewater Network plus	2,122.6	2,332.6
Bioresources	284.9	311.0
Total	**4,863.3**	**5,106.9**

Note company business plan base costs exclude enhancement opex.

For final determinations, we retain our approach of including growth related expenditure in our base econometric models. We have also made an adjustment depending on whether the company operates in an area with a relatively high or low forecast of population growth, relative to the historical average for the sector. This follows representations made at draft determinations that the models did not adequately compensate for companies with a high growth forecast. We also consider that the models overcompensate for companies that operate in an area with a low growth forecast. We consider that using the symmetrical adjustment approach set out in our PR19 methodology best accommodates for these factors.

As the population growth forecast in Severn Trent Water for the period 2020-25 is lower than the historical average growth rate in the sector, we make a downward adjustment of approximately £6.9 million to the company's wholesale water base allowance, and a downward adjustment of approximately £12.7 million to its wholesale wastewater base allowance. More details of our approach can be found in the 'Securing cost efficiency technical appendix'.

For developer services Severn Trent Water claims that our initial assessment of plans growth model did not provide a reliable view of costs and that the modelled outputs would create significant charging and revenue recovery problems. It did not agree that arrangements to allow for differences between forecast and outturn were sufficiently flexible. We revise our approach to modelling developer services costs for the final determination and introduce a new mechanism to true-up for variances in the number of new properties. This follows the approach we set out in 'PR19 draft determinations: Our proposed approach to regulating developer services' (July 2019). More details of our analysis can be found in the 'Securing cost efficiency technical appendix'.

Severn Trent Water disagrees with our approach of not making an allowance for changes in business rates due to revaluations. We recognise the uncertainty and limited company control over the level of business rates after a revaluation. For final determinations, we maintain our approach to setting business rates allowances without an allowance for revaluations but, to address the risk and limited controllability, we allow for an uncertainty mechanism – see section 4.4.5 for more details. Our approach to setting allowances for business rates is set out in the 'Securing cost efficiency technical appendix'.

3.3 Enhancement expenditure

For wholesale enhancement expenditure we challenge the scope of work, the evidence provided to support solution options and the efficient delivery of programmes. We cost benchmark with the rest of the industry where we appropriate.

Table 3.6 summarises our allowances for enhancement expenditure.

Table 3.6: Enhancement expenditure, 2020-25 (£ million, 2017-18 CPIH deflated prices)

Price Control	Company August 2019	Final determination allowance
Water Resources	74.9	59.6
Water Network plus	560.4	352.2
Wastewater Network plus	508.1	452.1
Bioresources	26.9	-
Total	**1,170.3**	**864.0**

Our final determination allows Severn Trent Water £864 million to invest in improvements to service, resilience and the environment. This is an increase from the equivalent draft determination capex enhancement allowance, excluding growth, of £799 million.

Key parts of this allowance are:

- £471 million to improve the environment by efficiently delivering its obligations as set out in the whole Water Industry National Environment Programme;
- £107 million to improve resilience;
- £96 million for supply-demand balance schemes delivering long-term drought resilience;
- £67 million for its metering programme;

- £37 million to address raw water deterioration; and
- £11 million to improve the quality of drinking water including its taste, odour and colour.

Below we discuss key areas of our determination on enhancement cost proposals. Our document 'Severn Trent Water - Cost efficiency final determination appendix' sets out in more detail the cost allowances by investment area for each price control, and we give full reasoning in our published cost assessment models (enhancement feeder models and cost claims feeder models).

Security

We disallowed these costs at draft determination as Severn Trent Water presented insufficient evidence to justify this expenditure. The company does not provide any further representation in this area so we maintain our draft determination decision.

Supply-demand balance enhancement

Subsequent to fast track draft determination, we update the industry median unit cost for short term supply-demand balance (non-leakage) enhancement to £1.2 million per Ml/d, based on additional information provided by companies. As this is lower than Severn Trent Water's specified unit cost of £1.67 million per Ml/d, for final determination we allow £84.7 million for this component compared to the requested £117.9 million. To reflect the fact that Severn Trent Water is efficient in its metering enhancement costs, requesting £7.5 million less than our model outputs, we make a balancing adjustment to allow an additional £7.5 million across supply-demand balance and metering enhancement. Our allowance for development of long-term supply schemes is unchanged from draft determination (£3.3 million) and this results in a total supply-demand balance enhancement allowance at final determination of £95.6 million.

Leakage

We expect an efficient company to achieve its stretching performance commitments from our base allowance. Only where the company's performance commitment goes beyond the industry forecast upper quartile leakage performance, we make an enhancement allowance for leakage reduction. As Severn Trent Water does not achieve upper quartile performance, we reduce the £0.5 million allowance made at draft determination (as a result of removing the 15% funding threshold in our final determination assessment) and do not allow any of the £30.4 million requested under enhancement. In 'Securing cost efficiency technical appendix' we set out our policy on the funding of leakage reduction costs, including how we derive the upper quartile threshold for leakage enhancement costs.

Addressing deteriorating raw water quality

The company requests £60.8m to address the adverse impacts of changing raw water quality. We consider only those schemes where we find evidence of support from the Drinking Water inspectorate. We challenge the costs where we find no information as to size of works involved to quantify the scale of work required and where costs are to replace existing assets at the end of their life as we consider this to be base activity. We note that the company seeks an opex allowance to operate the enhanced treatment works processes. We do not allow such costs because we have a treatment complexity variable in our base models. We discuss this in the 'Securing cost efficiency technical appendix'. We allow Severn Trent Water £37.1m in this area and this is unchanged since draft determination.

Resilience

There are elements of the requested investment that we consider to be base activities and we do not allow these as resilience enhancements. For the remaining investments, Severn Trent Water does not always fully evidence how it determines its preferred options and so we apply an optioneering challenge to those cases. For final determination, we assess the requested £12.0 million opex for the Birmingham Resilience Scheme and we do not make an allowance for it as we consider it is a base cost relating to maintenance of the scheme. As a result, we maintain our draft determination allowance of £107.2 million for final determination.

Strategic water resource development

We make an additional allowance, in our final determination for strategic water resource development to support the delivery of long-term drought resilience. We set out our policy on funding of these strategic solutions in the 'Strategic regional water resource solutions appendix'. We make an allowance of £42.5 million available for Severn Trent Water to develop strategic regional solutions in association with other companies. Based on the representations, we accept that Severn Trent Water and United Utilities should be funded to develop some of these solutions individually as they impact significantly on their in-house asset base. Although the funding is now allowed to each company individually, we expect these solutions to be progressed consistently and transparently through the gated development process.

3.4 Cost sharing

In the water resources, water network plus and the wastewater network plus controls we have a cost sharing arrangement. In these controls, when a company overruns its totex allowance, the additional cost incurred above our allowance will be shared between its investors and customers. When a company spends less than its totex allowance, it will share the benefits with customers.

Table 3.7 sets out the cost sharing rates for PR19 and net totex that is subject to these rates at the end of the 2020-25 period. On the basis that Severn Trent Water accepted our cost allowances in the round as part of the fast track draft determinations, we set the cost sharing rates at 50%.

For final determination we introduce an uncertainty mechanism for business rates and abstraction charges. Under the uncertainty mechanism these costs are subject to different cost sharing rates. We discuss the uncertainty mechanism in section 4.4.5. Our allowance for business rates and abstraction charges costs are excluded from table 3.7.

Table 3.7: Cost sharing rates for 2020-25 and totex for end-of-period reconciliation

	Water resources	Network plus – water	Network plus – wastewater
Cost sharing rate for out and underperformance	50%		50%
Grants and contributions before the deduction of income offset (£m) [6]	-	243.4	86.4
Abstraction charges and business rates (£m)	76.3	207.9	106.8
Net allowed totex subject to cost sharing (£m) [7]	263.4	2,082.8	2,591.5

3.5 Allowed expenditure in residential retail

Table 3.8 sets out our total expenditure allowance for residential retail. Our allowance does not include any of our allowed pension deficit recovery costs. These costs have been wholly allocated to wholesale controls.

Based on our benchmarking analysis, we assess Severn Trent Water's cost proposals for 2020-25 in residential retail as efficient. Our overall approach rewards efficient business plans. As a consequence, Severn Trent Water receives an expenditure allowance that is higher than it requests in its business plan.

[6] Amendment made to Grants and contributions before the deduction of income offset (£m) Network plus – water and Network plus – wastewater.
[7] Amendment made to Net allowed totex subject to cost sharing allocation (£m) Network plus – water and Network plus – wastewater.

Table 3.8: Expenditure, residential retail, 2020-25 (£ million, nominal)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Residential retail	96.2	97.3	98.5	99.6	100.7	492.2
Company view	91.9	95.0	93.8	89.9	91.4	462.0

Note the residential retail control is an average revenue control. Allowed cost and the associated allowed revenue is based on a forecast of the number of customers. There will be an end-of-period true up based on the actual number of connected households.

3.6 Direct procurement for customers

We set out in our PR19 methodology that we expect company business plans to consider direct procurement for customers where this is likely to deliver the greatest value for customers. Direct procurement for customers promotes innovation and resilience by allowing new participants to bring fresh ideas and approaches to the delivery of key projects. Companies are to consider direct procurement for customers for discrete, large-scale enhancement projects expected to cost over £100 million, based on whole-life totex.

Severn Trent Water's business plan identifies several potential strategic regional water resource solutions that may be suitable for direct procurement for customers including the River Severn to River Thames transfer. We expect these schemes and any other major schemes which may arise due to significant changes to Severn Trent Water's business plan to be reviewed against the direct procurement for customers criteria, as detailed in the PR19 methodology. If the criteria are met, we expect Severn Trent Water to undertake further work to review detailed costs and commitments to ensure delivery is via the most efficient route, and to assess delivery via direct procurement for customers, to ensure that customers receive the best value.

4 Calculation of allowed revenue

Key changes from the draft determination

The key changes we are making to the calculation of allowed revenue in the draft determination are:

- We allow £7,777.3 million of revenue across all price controls for Severn Trent Water in the final determination, compared to £7,916.1 million in the draft determination and £8,005.0 million in the company's September 2018 business plan.
- The allowed return on capital for the wholesale price controls is 2.92% (on a CPIH basis, 1.92% on a RPI basis), a reduction of 0.38 percentage points from our fast track draft determination, based on our assessment of market evidence. The allowed retail margin for the household retail control remains at 1.0%, consistent with the draft determination.
- As a fast track company, our determination includes a reward equivalent to a return of 10 basis points on regulatory equity.
- As for the draft determination, we accept Severn Trent Water's approach to cost recovery through its proposed choice of pay-as-you-go rates and its proposal to bring forward a full transition to CPIH through an adjustment to RCV run-off rates. We retain Severn Trent Water's pay-as-you-go rates in our final determinations which provides greater headroom than in the draft determination.
- We remove the uplift to RCV run-off rates applied to the water network plus control in the draft determination to bring revenue forward and consider for the final determination no revenue advancement is necessary for purposes of notional financeability.
- Allowed revenue includes Severn Trent Water's contribution to the innovation competition.
- We revise our approach to calculating grants and contributions.
- We reflect Severn Trent Water's latest information on its actual performance in 2018-19 and expected performance in 2019-20 from its 15 July submission.
- We are increasing revenue by including an outperformance payment of £6.8 million in 2019-20 for performance commitment S-C5 (sustainable sewage treatment). Severn Trent Water provides sufficient evidence that it has delivered an innovative scheme that has avoided future investment to accommodate growth. The reward of this outperformance payment is conditional on the company not requesting additional funds to accommodate growth up to 2030 at either its Rugby or Finham sewage treatment works.

- Our final determination includes finalised scores for 2018-19 in the residential retail service incentive mechanism. This reduces revenue by £15.7 million compared to the zero values we included in the draft determination for the fast track companies.

This section sets out the calculation of allowed revenue for each of the price controls, based on our assessment of efficient costs. We set out in section 4.1 the components of allowed revenue for each of the price controls. We then set out information relevant to the calculation of the components of that allowed revenue in sections 4.2 and 4.4.

4.1 Allowed revenue

We calculate revenue separately for each of the wholesale controls and for the residential retail control. We set out the calculation of five year revenues for each of these controls in this section.

4.1.1 Wholesale controls

For the wholesale controls (that is water resources, water network plus, wastewater network plus and bioresources), allowed revenue is calculated based on the following elements, not all elements are applicable to all wholesale controls as set out in table 4.1.

- Pay as you go (PAYG) – this reflects the allocation of our efficient totex baseline to costs that are recovered from revenue in 2020-25. The proportion of totex not recovered from PAYG is added to the regulatory capital value (RCV) which is recovered over a longer period of time.
- Allowed return on capital – this is calculated based on our assessment of the allowed return on capital multiplied by the average RCV for each year.
- RCV run-off – this reflects the amount of RCV that is amortised from the RCV in the period of the price control.
- PR14 reconciliations – this reflects the application of out/underperformance payments from PR14 through revenue adjustments in 2020-25.
- Fast track reward - fast-track companies are awarded a financial reward for achieving fast-track status. We retain the approach adopted at the draft determination to provide an award equivalent to 0.1% of return on regulatory equity.

- Corporation tax allowance – this is estimated from projected corporation tax rates, profit forecasts and assumed levels of tax relief contained in our financial model for the draft determination.
- Grants and contributions – this represents revenue that we expect to be received from developers in respect of work undertaken by companies to service new developments. It includes income from connection charges, infrastructure charges and s185 diversion recharges. The total grants and contributions amount deducted from totex may not agree to this amount, as we only include grants and contributions income relating to the price control here (some income is outside the price control).
- Non-price control income – income from charges excluded from the price controls. For example, this includes bulk supplies, standpipes, unmeasured cattle troughs, and other services. In a change from our draft determination, we also now include diversions recharges which are in respect of the New Roads and Street Works act 1991 activities and other non-section185 diversions. We deduct the forecast income from these charges from the allowed revenue, because costs relating to these charges are included in the calculation of allowed revenue.
- Innovation competition – this represents the additional revenue that the company will collect from its customers for the purpose of a collectively funded innovation competition for the period 2020-25. The amount each company's customers will contribute will be proportionate to individual company revenue at draft determinations. We expect the revenue collected from customers to be ring-fenced and administered so that it will not be used for purposes other than the innovation competition.
- Revenue re-profiling – this reflects the change in revenue in 2017-18 prices as a result of adjustments made to annual revenues to smooth the final bill profile consistent with customer preferences. The financial model calculates revenue adjustments on a net present value (NPV) neutral basis.

We set out the calculation of the allowed revenue for Severn Trent Water's wholesale controls in table 4.1. We summarise the total of the build up of allowed revenue as five year totals, however our financial model calculates the allowed revenue on an annual basis for the purposes of our draft determination. We state the allowed revenue for each price control on an annual basis in section 6.

We explain how we calculate PAYG, RCV run-off and the allowed return on capital in section 4.2, the revenue adjustments for PR14 reconciliations in section 4.3, and other elements of allowed revenue in section 4.4.

Table 4.1: Calculation of allowed revenue (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total – final determination	Total - draft determination
Pay as you go	282.6	1,535.9	1,555.7	125.7	3,500.0	3,353.6
RCV run-off	94.3	951.5	1,047.9	177.6	2,271.4	2,333.3
Allowed return on capital	47.9	514.4	503.1	65.5	1,131.0	1,310.6
Revenue adjustments for PR14 reconciliations	13.0	-5.7	142.0	0.1	149.5	92.9
Fast track reward	0.8	8.9	8.6	0.0	18.4	18.4
Tax	14.0	23.4	78.9	17.0	133.3	144.4
Grants and contributions after adjustment for income offset (price control)	0.0	97.8	82.4	0.0	180.1	269.3
Deduct non-price control income	-32.4	-50.2	-28.0	0.0	-110.6	-110.6
Innovation competition	0.0	13.8	14.6	0.0	28.4	0.0
Revenue re-profiling	-0.2	-1.4	-1.5	-0.2	-3.3	1.5
Final allowed revenues	**420.1**	**3,088.4**	**3,403.8**	**385.8**	**7,298.1**	**7,413.4**

We set out the calculation of allowed revenue for each wholesale control on an annual basis in the 'Severn Trent Water - Allowed revenue appendix' in tables 1.1 to 1.4.

In our new strategy for regulating water and wastewater companies in England and Wales, we highlight that innovation is crucial for meeting the challenges the sector faces.

The adoption of innovative approaches is key to delivering long-term resilience and great customer service at an affordable price, and the sector will need to step up and increase innovation in order meet the strategic challenges it faces in a cost-effective and sustainable way. We also want to see companies work more effectively together and with their supply chain to better tackle these challenges.

Our outcomes and total expenditure approach facilitate this innovation, by giving companies the flexibility and freedom to adopt innovative means of delivering services. We are promoting innovation by setting Severn Trent Water stretching outcome performance commitments and the cost efficiency challenge according to the performance of the leading companies.

Our outcome delivery incentives approach means that companies have to return money to customers where they fall short, but it also gives companies the opportunity to earn additional financial payments if they successfully improve performance and deliver for customers above and beyond the level expected of most companies. This encourages companies to look for innovative ways of delivering better services to customers and improving the environment.

However, as well as our existing package of measures which encourages companies to innovate individually, we have been considering how we can stimulate innovation more widely in the sector and encourage collaborative innovation initiatives.

In our new strategy consultation[8], we explored options for customer-funded interventions designed to drive innovation to benefit customers in the longer-term. Having reviewed the responses to the consultation, we are publishing our decision in 'Driving Transformational Innovation in the Water Sector' alongside the PR19 final determinations, confirming that we are making up to £200m available for innovation activities for the period 2020-25 through the introduction of an innovation competition. We will work together with companies and other stakeholders in the sector to set up a competition which will effectively drive innovation in the sector to the benefit of customers across England and Wales.

4.1.2 Residential retail control

For the residential retail control, allowed revenue is calculated as:

[8] Ofwat's emerging strategy: Driving transformational innovation in the sector.

- Retail cost to serve – this reflects our efficient view of costs per customer for the retail business.
- Net margin on wholesale and retail activities – this is calculated based on the wholesale revenue applicable to residential retail customers, plus the retail cost to serve, with a net margin applied. Net margins are calculated excluding any adjustments to residential retail (see table 4.2 below) – the full calculation is set out in our financial models.
- Our methodology set out an early view of the retail margin that applies for the retail price controls. This was used by Severn Trent Water in its business plan and is unchanged in our final determinations.

Allowed revenue for the residential retail control is set on a nominal basis. We present the make-up of the allowed revenue in nominal prices in table 4.2.

Table 4.2: Retail margins, 2020-25 (nominal price base)

	Draft determination	Final determination
Total wholesale revenue - nominal (£m)	7,927.3	7,875.3
Proportion of wholesale revenue allocated to residential (%)	75.9%	75.9%
Residential retail costs (£m)	490.5	492.2
Total retail costs (£m)	**6,507.3**	**6,469.8**
Residential retail net margin (%)	1.0%	1.0%
Residential retail net margin (£m)	**65.7**	**65.1**
Residential retail adjustments (£m)[1]	1.4	-27.2
Residential retail revenue (£m)[2]	**557.6**	**530.1**

[1] Residential retail adjustments for the PR14 residential retail service incentive mechanism and residential retail revenue reconciliations are set out in table 4.11. The figures in table 4.2 are in nominal prices, and the figures in 4.11 are in 2017-18 FYA CPIH deflated prices. The difference between the two tables is due to the difference in price bases.
[2] Residential retail revenue is the sum of the net margin, retail costs, and adjustments. Company view may not sum as this may include other adjustments.

We set out the calculation of residential retail revenue on an annual basis in the 'Severn Trent Water - Allowed revenue appendix' in table 1.5.

4.2 Cost recovery now and in the long term for the wholesale controls

Our totex cost allowances are sufficient to meet an efficient company's operating and capital expenditure. Companies recover this expenditure either in period from current customers using PAYG or add it to the RCV and recover from future generations of customers using the RCV run-off rates. Consistent with our methodology, we assess how each company's choice of PAYG and RCV run-off rates reflect the levels of proposed expenditure, bill profiles, affordability and customer views relevant to the short and the long term.

To determine the allowed revenue, the PAYG rate is applied to the totex allowance for each wholesale control for each year of the price control. The proportion of the totex allowance that is not recovered in PAYG is added to the RCV and recovered from customers in future periods. For the final determinations we revise our approach to the calculation of PAYG rates to better reflect the source of changes we make to costs claimed by companies as a result of our totex cost assessment. Our revised approach follows a process of further consultation with companies following the submission of representations on the draft determination. We explain our revised approach in 'Securing cost efficiency technical appendix'.

In this section we set out our approach to calculating the PAYG rates, the RCV to which the allowed return on capital is applied and the RCV run-off rates.

4.2.1 PAYG in allowed revenue

We calculate total PAYG totex for each year of each wholesale price control based on the totex allowance for each year multiplied by the relevant PAYG rate for that year. To this we add allowed pension deficit recovery costs to derive total PAYG revenue.

We summarise in table 4.3 the average PAYG rates across 2020-25 for each wholesale control, and the calculation of total PAYG revenue. The PAYG rates shown in the table are a weighted average across the five years 2020-25, the annual PAYG revenue and PAYG rates for each wholesale control are shown in the 'Severn Trent Water - Allowed revenue appendix', tables 2.1 to 2.4.

To PAYG totex we add the allowed costs for pension deficit recovery set out in table 3.2 to derive the total amount to be recovered in 2020-25 for each price control.

Table 4.3: PAYG allowances for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Totex allowance (£m)	393.2	2,466.0	2,705.7	310.9	**5,875.9**
Final determination PAYG rate (%)	71.0%	61.2%	56.8%	38.8%	**58.7%**
Pay as you go totex (£m)	279.1	1,509.0	1,537.9	120.5	**3,446.6**
Pension deficit recovery cost (£m)	3.5	26.9	17.8	5.2	**53.4**
Total pay as you go (£m)	**282.6**	**1,535.9**	**1,555.7**	**125.7**	**3,500.0**

Table 4.4: PAYG rates for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources
Original company plan (%)	71.1%	61.2%	56.8%	38.7%
Draft determination (%)	71.1%	61.2%	56.8%	38.7%
Final determination (%)	71.0%	61.2%	56.8%	38.8%
The PAYG and RCV run-off rates are averages across five years. We set out the annual PAYG rates in the 'Severn Trent Water - Allowed revenue appendix'. Changes to totex allowances can result in small changes to the average PAYG rates presented in the table above.				

Taking account of company representations, we have revised our approach to the calculation of the mix of operating and capital expenditure following our totex interventions.

In order to calculate the mix of operating and capital expenditure we follow the approach set out in 'Securing cost efficiency technical appendix'. We set out how we apply the technical intervention in the 'Aligning risk and return technical appendix' and we have published our calculation of the PAYG rates for each company alongside our determinations.

For the draft determination we applied the PAYG rates Severn Trent Water proposes in its business plan. We did not apply the technical intervention to Severn Trent Water's PAYG rates as the company's approach to setting PAYG rates is reflective of, but not mechanistically linked to, measures of the structure of costs over time (in particular operating costs and infrastructure renewal expenses). The company sets out these should remain relatively stable over time and adjusted only in response to relatively clear and significant changes to that structure. Severn Trent Water does not comment on PAYG rates in its representations. We maintain the approach we adopted and the company's PAYG rates for the final determination.

We are not adjusting PAYG rates on the basis of our financeability assessment. We set out our financeability assessment in section 5.2.

4.2.2 Opening RCV adjustments

As part of its business plan Severn Trent Water proposed allocations of the RCV for both water resources and bioresources price controls based on Ofwat guidance. We are allocating the company's RCV between the existing wholesale controls and these new controls in accordance with the proportions proposed by Severn Trent Water.

We make reconciliation adjustments ('midnight adjustments') related to the company's performance against incentive mechanisms from previous price reviews and for land sales in order to determine the opening RCV for the period of the PR19 controls. We also adjust the RCV upwards to reflect a change in the accounting treatment of leases, which causes some assets formerly recognised as operating leases to be recognised on the company's Balance sheet. In doing so, we follow the approach set out in IN 18/09 Guidance for reporting operating leases in PR19 business plans. We use the adjustment proposed in the company business plan.

Table 4.5: Opening RCV, 1 April 2020 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources
RCV – 31 March 2020	4,438.6		4,730.8	
% of RCV allocated by control	8.40%	91.60%	89.28%	10.72%
RCV – 31 March 2020	372.7	4,066.0	4,223.8	507.0
Midnight adjustments to RCV	4.8	47.3	-292.2	-
Midnight adjustments relating to operating leases	0.5	2.5	0.5	0.0
Opening RCV – 1 April 2020 (before fast track reward)	**377.9**	**4,115.7**	**3,932.1**	**507.0**

4.2.3 Allowed return on capital

Companies are allowed a return on the RCV, equal to the allowed wholesale return on capital.

Severn Trent Water business plan incorporates the early view allowed return on capital for the wholesale price controls of 3.30% - CPIH deflated (2.30% - RPI deflated) that we state in the PR19 methodology. We maintained the early view allowed return on capital for draft determinations for fast track companies. We set out in 'PR19 draft determinations: Overview of fast-track companies' draft determinations' that we would update the allowed return on capital for slow track draft determinations and final determinations.

The allowed return on capital for the wholesale price controls in our final determinations is 2.92% – CPIH deflated (1.92% – RPI deflated). We set out the basis for the allowed return on capital in our 'Allowed return on capital technical appendix'.

The PR19 methodology confirmed we are transitioning to CPIH as our primary inflation index from 2020. At 1 April 2020, we will index 50% of RCV to RPI; the rest, including totex that is added to the RCV, will be indexed to CPIH. Table 4.6 and table 4.7 set out the opening and closing balance for each component of RCV as of 1 April 2020 and 1 April 2025 respectively.

The PR19 methodology confirms our protection of the value of the RCV as at 31 March 2020 across each of the wholesale price controls. This applies to the RCV that is defined as 'RPI inflated RCV' and 'CPIH inflated RCV' in tables 4.8 and 4.9; this RCV is run-off (or amortised) over time. Totex that is added to the RCV from 1 April 2020 is stated as 'post 2020 investment'.

In determining the 'Allowed return on capital' revenue building block, we apply the relevant deflated allowed return on capital to the average RCV for the year for each component (RPI inflated, CPIH inflated and post 2020 investment). This results in an allowed return on capital for each wholesale control over the period 2020-25 as set out in table 4.8.

Table 4.6: Opening RCV by wholesale control for each component of RCV, 1 April 2020 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	188.9	2,057.9	1,966.0	253.5	**4,466.4**
CPIH inflated RCV	188.9	2,057.9	1,966.0	253.5	**4,466.4**
Other adjustments	-	-	-	-	**-**
Total RCV	**377.9**	**4,115.7**	**3,932.1**	**507.0**	**8,932.7**

Table 4.7: Closing RCV by wholesale control for each component of RCV, 31 March 2025 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	152.7	1,671.5	1,538.9	181.2	**3,544.3**
CPIH inflated RCV	153.7	1,671.0	1,553.7	182.7	**3,561.1**
Post 2020 investment	99.2	864.2	1,039.5	165.9	**2,168.8**
Other adjustments	-	-	-	-	**-**
Total RCV	**405.5**	**4,206.6**	**4,132.2**	**529.8**	**9,274.2**

Note the allowed return on capital for each year of the price control for each wholesale control is shown in the 'Severn Trent Water - Allowed revenue appendix' in tables 4.1 to 4.4.

Table 4.8: Allowed return on capital by wholesale control for each component of RCV, 2020-25 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	16.4	178.7	167.8	20.7	**383.6**
CPIH inflated RCV	24.9	271.6	255.7	31.6	**583.9**
Post 2020 investment	6.6	64.1	79.6	13.3	**163.6**
Other adjustments	-	-	-	-	**-**
Allowed return on capital	**47.9**	**514.4**	**503.1**	**65.5**	**1,131.0**
Company September 2018–return on capital	**54.9**	**600.2**	**581.0**	**76.2**	**1,312.3**

Note allowed return on capital is calculated by multiplying the annual average RCV for each element of RCV (RPI inflated, CPIH inflated and post 2020 investment) by the wholesale WACC for each control. The allowed return on capital for each year of the price control for each wholesale control is shown in the 'Severn Trent Water - Allowed revenue appendix' in tables 4.1 to 4.4.

4.2.4 RCV run-off

RCV run-off is the proportion of the RCV which is recovered in the 2020-25 period. Companies are able to propose different run-off rates for RPI inflated and CPIH inflated RCV and also, for the water resources and bioresources controls, for post 1 April 2020 investment. Table 4.9 sets out the resultant RCV run-off revenue for each component of RCV for each wholesale control.

Table 4.9: RCV run-off on the RCV (5 year) (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
CPIH inflated RCV	35.2	386.9	412.3	70.8	**905.3**
RPI inflated RCV	44.1	471.8	507.4	82.3	**1,105.5**
Post 2020 investment	15.0	92.8	128.3	24.5	**260.5**
Total RCV run-off	**94.3**	**951.5**	**1,047.9**	**177.6**	**2,271.4**

Note total RCV run-off is calculated by multiplying the opening RCV by the relevant RCV run-off rate for each element of RCV (RPI inflated, CPIH inflated and post 2020 investment) by the RCV run-off rate for each control (50% of run-off is applied to post 2020 investment in the year of additions).

Severn Trent Water bases its RCV run-off rates on current cost depreciation of the underlying assets within each control over the long term. In its business plan it proposes two adjustments to RCV run-off rates, (i) an increase to RCV run-off rates for RCV inflated by RPI to replicate the impact of full transition of the final determination to a CPIH basis, and (ii) an increase to RCV run-off rates for all wholesale controls to improve the financeability of the notional company. In the draft determination, we applied Severn Trent Water's RCV run-off rates with a reduced uplift for financeability applied just to the water network plus control. In its representations, the company requests a further uplift of 0.8% to RCV run-off rates for notional financeability to reflect the lower allowed return on capital between fast track and slow track draft determinations.

For the final determination, we maintain the same approach for RCV run-off rates including the uplift to give the effect of full CPIH transition. However, following our assessment of notional financeability, we do not consider an adjustment for financeability is required (section 5.2). As such, RCV run-off rates for the water network plus control are 0.2 per cent lower than for the draft determination.

Table 4.10 sets out the average RCV run-off rates across 2020-25 for each wholesale control proposed in the company's business plan and for our draft and final determinations.

Table 4.10: RCV run-off rates for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources
Company September 2018 (%)	4.92%	4.64%	5.23%	6.73%
Draft determination (%)	4.75%	4.67%	5.06%	6.50%
Final determination (%)	4.76%	4.47%	5.05%	6.57%

Note RCV run-off (%) reflects the average of the rates applied to the CPIH and RPI inflated RCV components across the 5 years 2020-25.

The annual rates for each wholesale control are set out in the 'Severn Trent Water - Allowed revenue appendix' in table 5.1 to table 5.4. Changes to totex allowances and the resultant additions to RCV each year for individual controls can result in small changes to the average RCV run-off rates presented in the table above.

4.3 PR14 reconciliations

In PR14, we set mechanisms to incentivise companies to do the right thing for their customers. These financial incentives cover cost efficiency, outcomes performance, revenue forecasting (wholesale and retail), customer service (the service incentive mechanism), water trading and land sales. It is important to reconcile the financial impacts of these mechanisms in PR19 to ensure that customers only pay for the service the company delivers.

We are also applying adjustments to reflect performance in the final year of the 2010 to 2015 period, which could not be fully taken into account in PR14, and the inflation correction to the RCV from the capital expenditure incentive scheme (CIS). These adjustments apply to the RCV (the 'midnight adjustment') and revenue for the 2020-25 period. These adjustments are made in line with the 'PR14 reconciliation rulebook'.

We are publishing models for each of these reconciliations, and for the overall RCV and revenue adjustments on our website. 'Severn Trent Water - Accounting for past delivery final decisions' provides a detailed explanation of all policy interventions we are making in the models. Table 4.11 summarises our interventions. Table 4.12 sets out the resulting adjustments to revenue and the RCV. The 'Severn Trent Water - Accounting for past delivery appendix' sets out how these adjustments are allocated across controls and how the RCV adjustment feeds into the midnight adjustments to RCV set out in table 4.5.

The 'Accounting for past delivery technical appendix' sets our further details on our reconciliation of PR14 incentives, the residential and business retail service incentive mechanisms and our deliverability assessment.

For outcome delivery incentives, the information we use to reflect performance in 2019-20 is based on the company's latest expectations. Final figures for 2019-20 will not be able to be taken into account in PR19. We set out in the 'PR14 reconciliation rulebook' that we plan to complete the reconciliation for 2019-20 outcome delivery incentives at PR24 for 2025-30 so that we use final information.

However, most outcome delivery incentives for the 2020-25 period are in period and will have been reconciled before this date. In light of this we consider it would be more appropriate to complete this reconciliation in the autumn of 2020 and apply any change to bills for 2021-22 as part of the new in-period process. We are designating all of the financial PR14 performance commitments as being in-period for this purpose. Any adjustment between the 2019-20 forecast and actual figures should be modest and we do not expect a significant impact on bills. If, contrary to expectations the bill impact is more significant, we expect companies to take measures to smooth the impact for their customers. The new PR19 mechanism to share benefits with customers from unexpected high outcome delivery incentive payments in a year will not apply to PR14 outcome delivery incentives. Instead the PR14 protection that caps the impact across the five years 2015-20 will apply.

The above applies equally to the company's 2015-20 in period outcome delivery incentives and we use forecast information for 2019-20 to reconcile these outcome delivery incentives. For the avoidance of doubt, no application is required in 2019 for in period determinations.

Table 4.11: Reconciliation of PR14 incentives, interventions (2017-18 prices, unless otherwise stated)

Incentive	Intervention(s)
Outcome delivery incentives	We are intervening to include an outperformance payment of £5.890 million (2012-13 prices) in 2019-20 for performance commitment S-C5 (sustainable sewage treatment). Severn Trent Water provides sufficient evidence that it has delivered an innovative scheme not previously employed in the UK, that has avoided future investment to accommodate growth. The reward of this outperformance payment is conditional on the company not requesting additional funds to accommodate growth up to 2030 at either its Rugby or Finham sewage treatment works. We are also intervening to include minor outcome delivery incentive adjustments for W-B7 (customers at risk of low pressure) to ensure consistency with Severn Trent Water's 2019 annual performance report. We are also intervening to allocate revenue between PR19 price controls in line with the allocation confirmed with the company.

Incentive	Intervention(s)
	Overall, our interventions increase the water revenue adjustment at the end of the 2015-20 period from - £4.773 million to - £4.878 million and the wastewater revenue adjustment from £152.938 million to £159.714 million.
Residential retail revenue	We are intervening to round the company's modification factor figures to 2 decimal places to ensure consistency with the 'PR14 reconciliation rulebook'. We are including updated weighted average modification factors for allowed retail service revenue per unmeasured and measured water customers in 2018-19 and 2019-20. We are doing this because the PR14 modification factors were different for Severn Trent Water and Dee Valley Water unmeasured and measured water customers and it is appropriate to use a weighted average for the merged company. We are also intervening to revert the reforecast customer numbers to the values submitted in the company's September 2018 business plan submission rather than accept Severn Trent Water's changes to historical forecast data, as we consider this would undermine the incentive to provide accurate forecasts. Overall, our minor interventions reduce the total residential retail revenue payment at the end of the 2015-20 period from - £7.487 million to - £7.485 million.
Wholesale revenue forecasting incentive mechanism	No interventions required.
Totex	We are intervening to change the 'Sewerage: Final menu choice' figure to full decimal accuracy as calculated in the PR14 populated final determination models. Our minor intervention reduces the wastewater totex RCV adjustment at the end of the period from - £198.016 million to - £198.008 million and the wastewater revenue adjustment from - £20.259 million to - £20.179 million.
Land sales	No interventions required.
Residential retail service incentive mechanism	We are intervening to set Severn Trent Water's residential retail service incentive mechanism adjustment to -2.52% of residential retail revenue to reflect its performance from 2015-16 to 2018-19. This equates to - £15.692 million in total revenue over the period. This reduces revenue relative to the company's estimate of the mechanism's impact and is driven by updating our analysis to take account of companies' finalised scores for 2018-19.
PR09 blind year adjustments	No interventions required.

Table 4.12: Reconciliation of PR14 incentives, 2020-25 (£ million, 2017-18)

Incentive	RCV adjustments		Revenue adjustments	
	Company view[1]	Ofwat view[1]	Company view[1]	Ofwat view[1]
Outcome delivery incentives	-4.8	-4.8	148.2	154.8
Residential retail revenue	N/A	N/A	-7.5	-7.5
Wholesale revenue forecasting incentive mechanism	N/A	N/A	-24.2	-24.2
Totex	-70.2	-70.2	14.2	14.2
Land sales	-25.6	-25.6	N/A	N/A
Residential retail service incentive mechanism	N/A	N/A	0.0	-15.7
PR09 blind year adjustments[2]	-139.5	-139.5	-5.5	-5.5
Water trading	N/A	N/A	0.0	0.0
Other adjustments	0.0	0.0	0.0	0.0
Total	-240.1	-240.1	125.1	116.1

[1] The company view is based on data from the 15 July 2019 company submissions. It does not reflect impacts of the subsequent representations. The Ofwat view is based on the 15 July 2019 company submissions and takes account of representations and any interventions we are making.
[2] PR09 blind year adjustments includes the CIS RCV inflation correction. We show these separately in 'Severn Trent Water - Accounting for past delivery appendix'.
[3] Total post profiling is the total revenue over the period, taking account of the time value of money and the company's choices of how it wishes to apply revenue adjustments either in the first year or spread over a number of years.

4.4 Other allowed revenue

Other components of allowed revenue are:

- The fast track reward;
- Corporation tax allowance – this is estimated from projected corporation tax rates, profit forecasts and assumed levels of tax relief contained in our financial model for the final determination.
- Grants and contributions – this represents revenue that we expect to be received from developers in respect of work undertaken by companies to service new developments.

- Non-price control income – this forecast income is deducted from the total allowed revenues, as this revenue is not recovered from the charges covered by the price control – but is expected to cover some of the costs included in the calculation of the price control.

Table 4.13: Calculation of other allowed revenue (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Fast track reward	0.8	8.9	8.6	0.0	**18.4**
Tax	14.0	23.4	78.9	17.0	**133.3**
Grants and contributions (price control)	0.0	97.8	82.4	0.0	**180.1**
Deduct non-price control income	-32.4	-50.2	-28.0	0.0	**-110.6**

4.4.1 Fast track reward

In our draft determination we allowed Severn Trent Water a financial reward equivalent to 10 basis points on the return on regulatory equity to recognise the quality of its business plan, as part of its fast-track status. Severn Trent Water requested that this reward is split evenly between the water and wastewater controls. Our approach is to calculate the reward using total RCV and spread the reward across water and wastewater in accordance with the opening RCV. We retain this approach for the final determination.

4.4.2 Taxation

We calculate a tax allowance reflecting the corporation tax that the company expects to pay in 2020-25. We calculate the tax allowance using our financial model based on the projected taxable profits of the appointed business and the current and enacted UK corporation tax rates and associated reliefs and allowances as at 30 September 2019. Any future changes to tax rates and allowances will be taken account of in the tax reconciliation model, further details are set out in the ‘Aligning risk and return technical appendix’.

Severn Trent Water provided information in data tables relevant to the calculation of the expected tax charge. As we apply the same tax information to our final determination as used for the draft determination, any movement in the resulting tax allowance is driven by differences in taxable profits, which are as a result of our interventions in other areas.

Table 4.14: Tax (£ million) – Breakdown by price control

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Tax	14.0	23.4	78.9	17.0	133.3

4.4.3 Grants and contributions

Companies receive grants and contributions from developers towards company expenditure to:

- reinforce the network as a consequence of new properties being connected;
- connect a new property (e.g. the meter and connection pipe);
- provide new water mains or public sewers (i.e. requisitions); and
- move an existing main or sewer or other apparatus at the request of a third-party (i.e. diversions).

Grants and contributions (price control)

Grants and contributions before the deduction of income offset allowances (i.e. 'gross' grants and contributions) are used to calculate net totex for cost sharing and within the developer services reconciliation adjustment, as explained in 'Our approach to regulating developer services'.

Grants and contributions after the deduction of income offset allowances (i.e. 'net' grants and contributions) are used to calculate net totex for use in the financial modelling. This ensures that income offset allowances, that are funded by existing customers rather than developers, are captured within net totex that is used to calculate pay-as-you-go revenue and RCV additions. Developer services costs that are funded by developers are excluded from net totex, and are instead treated as grants and contributions within the financial model (as shown in tables 3.2 and 4.1).

Our approach to calculating 'gross' and 'net' grants and contributions is outlined in the 'Cost efficiency technical appendix'. The main difference from draft determinations is that we no longer estimate a cost recovery rate for each company.

The starting point for each calculation is 'gross' grants and contributions reported in companies' business plans. To arrive at 'net' grants and contributions we deduct company-specific income offset allowances rather than assume a common recovery rate for all companies. We also apply the modelled base cost efficiency challenge to grants and contributions to ensure alignment between grants and contributions and cost assessment.

Table 4.15 below shows our assumed amounts of 'gross' grants and contributions (price control) that is used to calculate net totex for cost sharing.

Table 4.15: Grants and contributions before the deduction of income offset allowances (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Grants & contributions (price control; before deduction of income offset allowances)	0.0	243.4	86.4	0.0	329.8

Table 4.16 below shows our assumed amounts of 'net' grants and contributions (price control) that is captured within net totex that is used to calculate pay-as-you-go revenue and RCV additions.

Table 4.16: Grants and contributions after the deduction of income offset allowances (price control) (£ million) – breakdown by price control and category

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Grants & contributions (price control)	0.0	97.8	82.4	0.0	180.1

Grants and contributions (non-price control)

For final determinations, we set non-section 185 diversions income outside of the price control, as explained in 'Our approach to regulating developer services'.

Table 4.17 below shows our assumed amounts of grants and contributions (non-price control) that are made up of non-section 185 diversions income.

Table 4.17: Grants and contributions (non-price control) (£ million) – breakdown by price control and category

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Grants & contributions (non-price control)	0.0	76.8	17.1	0.0	93.9

4.4.4 Non-price control income

Non-price control income is income from the excluded charges defined in licence condition B. For example, it includes bulk supplies, standpipes, unmeasured cattle troughs, and other services. For the final determination we confirm that diversions which are not requested under section 185 of the Water Industry Act 1991, for example, works under the New Roads and Street Works Act 1991 or those associated with High Speed 2, are also excluded from the price control. These are capital contributions and so do not get shown in tables 4.1 and 4.18.

This is deducted from the total allowed revenues, as this revenue is not recovered from the charges covered by the price control – but is expected to cover some of the costs included in the calculation of the price control. We have reviewed the company forecast of 'non-price control income' and use this in the final determination.

Table 4.18: Non-price control income (£ million) – Breakdown by price control

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Non-price control income	-32.4	-50.2	-28.0	0.0	-110.6

Note negative numbers represent a deduction from the allowed revenue.

4.4.5 Uncertainty mechanisms

Given the range of risk mitigation measures included in price controls, the PR19 methodology said that final determinations would only include bespoke uncertainty

mechanisms where robust and compelling evidence was presented for that item. Severn Trent Water proposes a PR24 reconciliation mechanism for business rates, using a 75 (customer) / 25 (company) sharing approach.

We are including a PR24 reconciliation mechanism for business rates in our final determination for Severn Trent Water along with all other companies because:

- There is uncertainty about business rates costs because the Valuation Office Agency (VOA) will be carrying out revaluation exercises during 2020-25, and increases (or decreases) in cost levels could be material.
- Companies can only exercise limited control over cost levels by engaging with the VOA and, possibly, by considering the business rate implications of asset development choices.

We are also including a PR24 reconciliation mechanism for Environment Agency abstraction licence costs in our final determination for Severn Trent Water along with all other companies serving England[9] because:

- The Environment Agency expects to consult on changes to its basis for setting abstraction licence fees during 2020 meaning that there is material uncertainty about company cost levels in 2020-25.
- Companies can only exercise limited control over cost levels by engaging with the consultation process and providing accurate information when required for licence fee setting purposes.

In each case, the cost variance to the company's PR19 cost allowance will be subject to a 75 (customer share):25 (company share) symmetrical sharing rate in the totex reconciliation at PR24. This means that the company will still be incentivised to manage costs efficiently, whilst receiving appropriate protection against material cost increases. Conversely, customers will receive a benefit if outturn costs are lower than the allowance levels we have set.

[9] The Environment Agency's responsibilities apply only to England.

5 Risk analysis and financeability

Key changes from the draft determination

The key changes made to the risk analysis and financeability elements of the draft determination are:

- For the final determination, we apply our view of a sector risk range for totex, C-Mex, D-Mex and financing costs (including embedded debt) as part of our assessment of risk ranges for our final determination. We also apply updated views on risk ranges for outcome delivery incentives, determined under our Outcomes Framework.
- We revise our notional dividend yield to 3.00% and apply a dividend growth of 1.18% in our notional financeability assessment for Severn Trent Water. This takes account of the allowed cost of equity in the final determination.
- We revise our approach to pension deficit recovery costs in our financial modelling of the notional company to match cash out flow for pensions deficit recovery costs to the allowed funding.
- As for the draft determination, we accept Severn Trent Water's approach to cost recovery through its proposed choice of pay-as-you-go rates and its proposal to bring forward a full transition to CPIH through an adjustment to RCV run-off rates. Retaining Severn Trent Water's pay-as-you-go rates in our final determinations provides greater headroom than in the draft determination. We consider no further revenue advancement is necessary for purposes of notional financeability.

We consider the final determination is financeable on the basis of the notional capital structure.

Severn Trent Water is responsible for ensuring it delivers its obligations and commitments in the context of its choice of capital and financing structure. We will monitor the commitments and assurances the company provides about its proposals to maintain financial resilience in 2020-25.

In this section we discuss the possible range of returns for the notional financial structure. In section 5.1 we present the risk ranges of our final determinations for Severn Trent Water. We comment also on the financeability of the final determination and any adjustments that we have made to the bill profile in section 5.2. We comment on financial resilience of the actual company structure in section 5.3.

5.1 Risk analysis

The PR19 methodology set out that we expect companies to demonstrate a clear understanding of financial risk to the delivery of their business plans and to explain and demonstrate how they manage and mitigate that risk. It required companies to use return on regulatory equity (RoRE) analysis to assess the impact of upside and downside risk on the basis of their notional capital structures based on a prescribed suite of scenarios using the company's assessment of P10/P90 confidence limit values[10].

RoRE is calculated as the return on equity for the equity portion of the RCV based on our notional gearing assumption. A company's base RoRE is aligned with our allowed real post-tax cost of equity, but it can differ between companies because the blended real cost of equity will vary according to the proportion of the RCV (and notional regulatory equity) that is indexed to RPI or CPIH[11]. The proportion of RCV (and notional regulatory equity) that is linked to RPI or CPIH varies between companies according to factors that include the size of the investment programme, the proportion of totex that is capitalised and RCV run-off rates.

In addition, base RoRE includes the margin for the retail price control. While the retail margin is 1% on retail and wholesale costs for all companies, it varies between companies when measured against regulatory equity.

Table 5.1 and figure 5.1 sets out the annual average risk ranges for Severn Trent Water in our final determination. The risk ranges show the plausible range of company returns based on Severn Trent Water's RCV and cost data for 2020-25, the allowed equity return and a notional gearing level of 60%. The final determination ranges reflect our approaches to the assessment of risk ranges for outcome delivery incentives and our approach to apply a common approach to the assessment of risk ranges for totex and financing costs for the sector.

Our PR19 methodology aims to increase the strength of financial incentives to better align the incentives placed on companies with the interests of customers. Our determinations aim to be stretching to encourage companies to deliver further efficiencies and better levels of service to customers. The incentives we put in place incentivise companies to outperform the cost allowances and performance commitments set in our determinations, our incentive mechanisms also aim to protect customer interests where companies underperform.

[10] P90 is the performance threshold at which there is only a 10% chance of outturn performance being better. P10 is the performance threshold at which there is only a 10% chance of outturn performance being worse.

[11] RPI is the retail price index; CPIH is the consumer price index including owner-occupiers' housing costs; both are published by the Office for National Statistics.

Severn Trent Water has a significant scope to earn upside from outperformance as well as the risk of lower returns from underperformance with modest negative skew overall to its overall risk range, driven primarily by outcome delivery incentives. Our view is that an efficient company should be able to achieve the base return on the notional structure. The onus is on companies to manage the risk and effect of any downside scenarios while maintaining financial resilience.

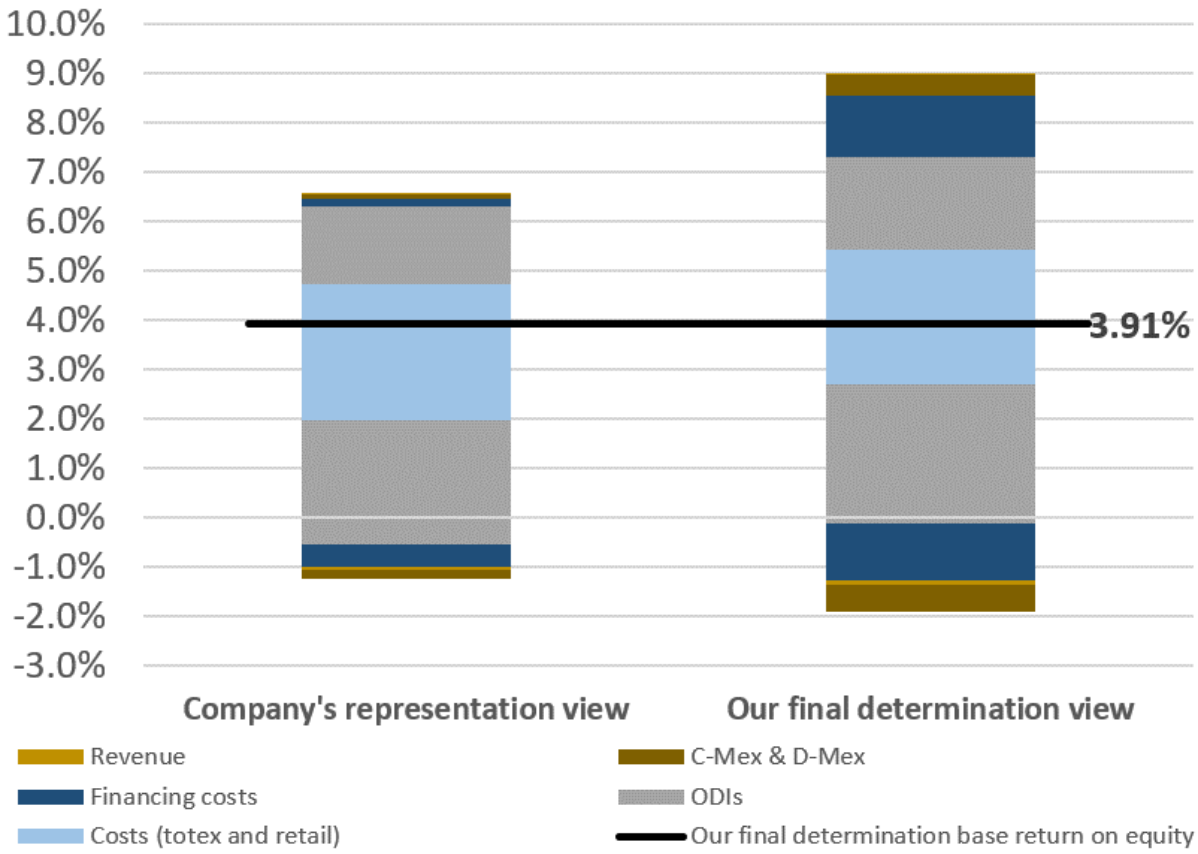
We asked companies to update their risk ranges in their representations. We state those risk ranges in table 5.1 against the cost allowances and base return on regulatory equity in our final determinations. These risk ranges are not fully comparable with our final determination ranges as they take account of company views of the cost efficiency and outcome delivery incentive stretch in our draft determinations which we revise for the final determinations.

Table 5.1: Severn Trent Water final determination risk ranges

	Range implied in company representation		Final determination ranges	
Base RoRE	-		3.91%	
Risk ranges	**Lower bound**	**Upper bound**	**Lower bound**	**Upper bound**
Totex	-1.69%	0.60%	-0.98%	1.28%
Outcome delivery incentives	-2.55%	1.57%	-2.83%	1.90%
Financing costs	-0.43%	0.14%	-1.16%	1.23%
Retail costs	-0.23%	0.23%	-0.23%	0.23%
C-MeX and D-MeX	-0.16%	0.09%	-0.53%	0.42%
Revenues (includes Retail)	-0.09%	0.03%	-0.09%	0.03%
Total	**-5.15%**	**2.68%**	**-5.82%**	**5.10%**

[1] We calculate the company's range based on the resubmitted ranges the company states in its representation that are in monetary terms. As we have calculated the ranges in the financial model used for the final determination we have not stated the company's view of the base equity return.

Figure 5.1: Company representation and final determination RoRE ranges for Severn Trent Water



Note representation view is based on Ofwat's calculation of the RoRE ranges for the company using the final determination financial model and is based on the company submission that accompanied its representation. To facilitate comparison with our final determination, we present the risk range around the base allowed return on equity for Severn Trent Water's final determination.

The final determination risk range reflects the following interventions that we make for all companies:

- The totex range is our assessment of the plausible range based on evidence of the historic sector performance and taking account of the company's cost sharing rates that apply in its final determination.
- The financing cost risk range is based on our assessment of the range for a notional water company including both embedded and new debt.
- The outcome delivery incentive risk range has been determined under our Outcomes Framework as set out in table 2.4.
- The C-MeX risk range is calculated as 12% upside and 12% downside of Residential Retail Revenue, reflecting the cap and collar limits for this incentive.
- The D-Mex risk range is calculated as 6% upside and 12% downside of developer services revenue, reflecting the cap and collar limits for this incentive.

We set out further details on the issues above in the ‘Aligning risk and return technical appendix’.

5.2 Financeability

Companies in the water sector must make significant investment both to maintain and deliver required enhancements to the asset base. Therefore it is important that companies are able to access finance on reasonable terms if they are to meet their obligations and commitments to customers. In recent price review periods, almost all of the new investment in this sector has been funded by debt and retained earnings, however, there may be a requirement for direct equity investment where there is a very significant investment requirement, to ensure companies maintain good credit quality.

We must set our determinations in the manner which we consider best calculated to satisfy our duties. Our financeability assessment considers whether the allowed revenues, relative to efficient costs, are sufficient for an efficient company to finance its investment on reasonable terms and to deliver its activities in the long term, while protecting the interests of existing and future customers. In carrying out our financeability assessment, we assume that an efficient company is able to deliver a level of performance that is consistent with our efficient cost allowances.

Our financeability assessment assumes there is no out/underperformance with respect to the levels of service provided to customers. Our approach protects the interests of customers as it ensures companies and their investors bear the consequences of inefficiency and underperformance in delivery of their obligations and commitments to customers.

We carry out our financeability assessment on the basis of the notional capital structure that underpins our allowed return on capital as companies are entitled to determine the financial structure appropriate for their circumstances, provided they bear the associated risks. For example, if a company’s choice of financing structure results in it incurring higher debt costs than reflected in our view of efficient allowed returns, the company will bear this cost. The approach is consistent with meeting all of our regulatory duties and with the approach we and other regulators have taken in previous reviews.

Our PR19 methodology requires companies to provide Board assurance that the business plan is financeable on both the notional and their actual capital structures and requires companies to provide evidence to support these statements, including evidence supporting the target credit rating and that this is supported by the financial ratios that underpin the plan.

In its business plan, Severn Trent Water sets out that the plan is financeable on both the notional and actual capital structure and that the plan protects customer interests in both the short and the long term. The company targets a credit rating of BBB+/Baa1 for the notional company, setting out this is consistent with our approach to the notional company and allows Severn Trent Water to maintain a stable, low cost, resilient funding platform for investment into the future.

Subsequently, we asked companies to provide additional Board assurance, in their representations in response to our slow track and significant scrutiny draft determinations, that they would remain financeable, taking account of the allowed return on capital in the slow track and significant scrutiny draft determinations and the reasonably foreseeable range of plausible outcomes of their final determinations including evidence of further downward pressure on the allowed return. Companies also took account of these issues in the risk analysis presented in section 5.1.

Severn Trent Water provides further Board assurance that the final determination would be financeable at the stated target credit rating on the notional and its actual capital structure if the final determination reflects the fast track draft determination updated for the slow track allowed return on capital and additional totex allowance and the further uplift in water network plus RCV run-off rates of 0.8%. Severn Trent Water targets a BBB+ credit rating for the notional and actual capital structures. The company also states that any further reduction in the allowed return on capital to that allowed in the slow track and significant scrutiny draft determinations would require an offsetting increase in RCV run-off.

We have carefully considered the representations made by Severn Trent Water including the qualifications attached to the assurances provided. We have considered this in the context that the allowed return which is based on market data is lower than our draft determination and the basis on which the company provided assurance about the financeability of its plan. However we are satisfied that the market data supports our view that allowed returns are sufficient to reward investors for the risks they face in a sector that already benefits from significant risk protections[12]. We set out the revisions we are making to our performance commitments and cost allowances elsewhere in this document. We consider the revenues allowed in our final determination, which reflect our assessment of efficient allowed costs, are sufficient for Severn Trent Water to meet its obligations and commitments to customers on the basis of the notional structure. We comment on the financial resilience of the actual structure in section 5.3.

[12] These protections include appointments that confer effective monopolies for specified geographic regions; our commitment to remunerate efficient investment in the RCV as at 31 March 2020; price limit reopeners; inflation indexation; totex cost sharing; allowances for special cost factor claims; outcome delivery incentives; and reconciliation mechanisms for wholesale revenue, the cost of new debt and tax.

Our financeability assessment uses a suite of financial metrics based on those used in the financial markets and by the credit rating agencies. The key financial ratios are primarily cash flow measures of a company's earnings, leverage and ability to service its debt interest and principal repayments. We provide further detail of the key ratios in the 'Aligning risk and return technical appendix'.

RCV growth in Severn Trent Water's final determination is less than 10%. Therefore consistent with our policy approach set out in the 'Aligning risk and return technical appendix' we apply the base dividend yield assumption of 3.00% with dividend growth of 1.18% for Severn Trent Water.

In table 5.2 we set out some of the financial ratios provided by the company in its business plan, and in our draft and final determinations.

Our in the round assessment of notional financeability is made on the basis of the financial ratios from our financial model. It takes account of the evidence that the company provides regarding the levels and thresholds of the financial ratios that underpinned its assurance statement on notional financeability in its business plan (also stated in table 5.2). We note that the Board assurance statement that accompanied the company's representations was made in the context of the draft determination. Our assessment of notional financeability for the final determination is made in the context of changes made in our final determination. We consider that Severn Trent Water's final determination is financeable based on the allowed revenues which include a reasonable allowed return on capital. The final determination is sufficient to ensure it will be in a position to deliver its obligations and commitments to customers.

Table 5.2: Ofwat calculation of key financial ratios – notional structure before reconciliation adjustments (5 year average)

	Business plan	Draft determinations	Final determinations
Gearing	61.28%	60.04%	59.83%
Interest cover	3.89	4.08	4.39
Adjusted cash interest cover ratio (ACICR)	1.56	1.48	1.69
Funds from operations (FFO)/Net debt	10.48%	10.02%	10.44%
Dividend cover	1.40	1.42	1.58
Retained cash flow (RCF)/Net debt	7.84%	7.62%	8.41%
Return on capital employed (RoCE)	4.65%	4.65%	4.43%

The basis of the calculation of the ratios is set out in the PR19 methodology.
Net debt represents borrowings less cash and excludes any pension deficit liabilities.
FFO is cash flow from operational activities and excludes movements in working capital.
Cash interest excludes the indexation of index-linked debt.

We set out the average PAYG and RCV run-off rates along with the RCV growth over 2020 to 2025 for Severn Trent Water in table 5.3. RCV growth for the final determination is higher than in the company's business plan and in the draft determination. Changes to allowed totex will change the level of post-2020 additions to RCV. This, along with the reduction to RCV run-off rates set out in section 4.2, results in the movements between the business plan and the draft and final determinations shown in table 5.3.

Table 5.3: PAYG rates, RCV run-off and growth

	PAYG	RCV run-off	RCV growth
Company September 2018	58.7%	5.03%	0.55%
Draft determinations	58.2%	4.96%	3.40%
Final determinations	58.7%	4.86%	3.82%

The PAYG and RCV run-off rates are averages across five years and across all wholesale controls. We set out the changes we make to PAYG and RCV run-off rates along with the

five year average for each control in section 4.2 and annual PAYG and RCV run-off rates in the 'Severn Trent Water - Allowed revenue appendix'. Changes to totex allowances and PAYG rates for individual controls can result in small changes to the average RCV run-off rates presented in the table above.

In assessing the financeability of the notional company, we consider the headroom available within the final determination to allow the company to continue to meet its annual interest costs. We estimate 5 year headroom of £538 million above an adjusted cash interest cover of 1.0 times, providing headroom to our totex downside of £200 million and outcome delivery incentives downside of £182 million calculated as 1% return on regulatory equity. We set out further detail in relation to our approach to assessing headroom within final determinations in the 'Aligning risk and return technical appendix'.

5.3 Financial resilience

It is the responsibility of each company to choose and manage its financial structure to maintain financial resilience in the long term. A company's financial resilience can be impacted by its financing choices, for example, where a company chooses a structure with a high level of gearing, this can reduce available headroom to withstand cost shocks. Interest costs, levels of dividends paid and company performance in delivering obligations and commitments to customers can also impact on financial resilience.

Severn Trent Water is responsible for the financeability of the company and the maintenance of long-term financial resilience under its actual structure. We comment further on the financial resilience of the company's actual structure in figure 5.2.

Figure 5.2: Financial resilience of Severn Trent Water's actual financial structure

In its business plan Severn Trent Water sets out that it expects its gearing to remain close to our notional level of 60% during 2020-25. Its reported gearing at 31 March 2019 is 63.7% and in its business plan it proposes gearing of 62.9% in 2021 rising to 65.1% by 2025.

At the time of our final determination it has credit rating of A3 (negative) with Moody's and Baa1 (negative) with S&P.

The company provided assurance that its plan was financially resilient, however in its representations on the draft determination it indicates that taking account of the lower cost of capital used in the draft determinations for slow track companies it would be financeable under its actual capital structure if we agree to changes to its PAYG and RCV run-off rates. We have made changes to its RCV run-off rates as noted above (section 4.2.4), but we have not adjusted RCV run-off to the full extent that Severn Trent water had requested.

As stated in section 5.2 we consider the company to be financeable on the notional basis and there is a need for companies to ensure that that they are also financially resilient under their actual structures.

However, we have not accepted all of the company's representations and the allowed return is lower in the final determination reflecting market expectations on the cost of finance.

It is the company's responsibility to maintain its financial resilience under its actual financial structure and as set out in section 7, the company will need to reduce its base dividend yield for 2020-25 in the context of the allowed return and our final determination.

We will closely monitor changes in levels of the company's gearing, credit ratings and other key financial metrics during 2020-25 to test that financial resilience is being maintained.

In its future reporting, we expect the company to explain clearly in its long-term viability statement how the Board has identified and assessed the potential risks to its financial resilience and the mitigating actions it is taking to address those risks. Severn Trent Water has committed to assess its financial resilience beyond 2025 in its next long-term viability statement.

6 Affordability and bill profile

Key changes from the draft determination

The key changes made to the affordability elements of the draft determination are:

- We revise Severn Trent Water's average bill profile from a large reduction upfront followed by flat real terms prices, to have a smaller reduction upfront, followed by a gradually falling real price over 2020-25.

6.1 Bill profile

Severn Trent Water's April business plan contains an average bill profile with a 5.2% reduction. Our bill profile contains a significantly greater reduction of 8.9% over 2020-25. Severn Trent Water asks in its representation for its bill profile to be changed from its draft determination, which has a cut upfront followed by flat nominal terms, to a more progressive bill reduction. The company highlights that this minimises bill volatility for customers and is in line with Defra's Strategic Policy Statement. We accept that smoother bills are in customers' interests and have re-worked Severn Trent Water's average bill profile so that it gradually reduces in real terms over the period. This is in line with our default approach to setting bill profiles.

We are changing our approach to setting average bill profiles from draft determinations, where the majority of companies were set profiles that included upfront bill cuts followed by flat real terms profiles, which would increase in nominal terms once inflation is taken into account. As set out above, Severn Trent Water's bill profile changes to a gradual reduction to provide customers with as much stability as possible in what they actually pay, post inflation (i.e. nominal bills). We set bills in this way for the following reasons;

- Research shows customers prefer consistent, predictable bills;
- Flat nominal bills will help households, particularly those who are financially vulnerable, to plan their finances;
- Profiling in this way is easy to understand and communicate to customers;
- Profiling bills in this way has extensive support from stakeholders including water companies, customer challenge groups and CCWater;
- Company revenues fall less sharply in 2020 with a gradual bill reduction, reducing impact of any step change in allowances.

Table 6.1: Bills in real terms

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Company September 2018	£343	£326	£331	£333	£331	£325
Draft determinations	£343	£327	£327	£327	£327	£327
Final determinations – before reprofiling	£343	£330	£328	£323	£322	£318
Final determinations	£343	£336	£330	£324	£318	£313

Throughout the price control we have put a strong emphasis on companies planning for the long term, both in terms of their goals and their bills. Following actions we set out at initial assessment of business plans, nine companies (Severn Trent Water was not one of these companies) undertook additional customer testing on their long-term bill profiles with several making adjustments as a result. We expect companies to continue to pay attention to this issue, taking customer views into account and planning in a way that ensures they control costs into the future.

6.2 Help for customers who are struggling to pay

Our final determinations for Severn Trent Water will cut average bills by 8.9% in real terms between 2020 and 2025.

In addition Severn Trent Water commits to:

- Nearly double the number of customers on its social tariff from 50,900 in 2019-20 to 97,750 by 2024-25. To help it meet this goal Severn Trent Water will increase its social tariff cross-subsidy from £3 to £8 per customer.
- Simplify the application process for its social tariff scheme and offer different levels of discount to customers in different circumstances to ensure that customers are receiving the right amount of support.
- Introduce two new initiatives: a debt write-off scheme for customers with large arrears and a payment breaks scheme.
- Through social tariffs, payment holidays and breaks and other schemes, the company aims to support 199,000 customers who struggle to pay in 2024-25, a 64,000 increase on the number it will support in 2019-20.

Severn Trent Water has two performance commitments on affordability which will require it to:

- improve customer views on value for money; and
- increase the proportion of customers who receive affordability support.

Companies will be reporting their performance against the Priority Services Register (PSR) common performance commitment and their bespoke affordability and vulnerability performance commitments to us and their customers on an annual basis during the price control period. In addition, companies put forward in their business plans further measures for addressing affordability and vulnerability issues. We expect companies to report periodically to their customers on their progress in addressing affordability and vulnerability concerns. We will also be considering how we will scrutinise and report on companies' progress in this important area, including working with other stakeholders in the water sector and beyond.

6.3 Total revenue allowances and k factors

Table 6.2 summarises the allowed revenue for each control. This is expressed in a 2017-18 CPIH price base so that this can be compared with the rest of this document.

Table 6.2: Allowed revenue by year (£ million, 2017-18 prices)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Water resources	78.5	81.1	85.8	90.8	83.9	420.1
Water network plus	630.3	627.1	616.7	606.3	607.9	3,088.4
Wastewater network plus	697.8	685.0	675.8	669.3	675.9	3,403.8
Bioresources	80.8	78.8	76.3	75.1	74.8	385.8
Residential retail	97.9	97.0	95.9	94.8	93.6	479.2
Total	**1,585.3**	**1,569.0**	**1,550.5**	**1,536.2**	**1,536.2**	**7,777.3**

The water resources, water network plus and wastewater network plus controls are in the form of a percentage limit (inflation plus or minus a number that we determine for each year of the control (the 'K' factor)) on the change in allowed revenue (R) from the previous charging year (t-1). This is based broadly on the formula:

$$R_t = R_{t-1} \times \left[1 + \frac{CPIH_t + K_t}{100}\right]$$

Table 6.3 sets out the K factors in each year for each of these three controls. For the first year, we have set a 'base' revenue which will be used as the starting revenue for calculating 2020-21 allowed revenues.

Table 6.3: Base Revenue and K factors by charging year (2017-18 prices)

	Base (£m)	2020-21	2021-22	2022-23	2023-24	2024-25
Water resources	78.5	0.00%	3.45%	6.02%	5.95%	-7.80%
Water network plus	630.3	0.00%	-0.50%	-1.63%	-1.70%	0.28%
Wastewater network plus	697.8	0.00%	-1.85%	-1.29%	-0.98%	1.02%

In addition to these controls, we have set a modified average revenue control for bioresources. We recognise that a proportion of bioresources costs are fixed, so we allow for this in setting the average revenue control. The revenue control ensures that where sludge production varies the incremental change in revenues that arises is aligned to incremental costs. The 'modified average revenue' control includes a revenue adjustment factor, which applies if there are differences between the forecast and measured quantities of sludge.

To ensure companies' allowed revenues reflect their costs, we are intervening to implement a standard approach across companies to this classification. We have set out our methodology and our reasons for intervening in the appendix 'Our methodology for the classification of bioresources costs and revenues'. Further details of how we have applied the methodology to Severn Trent Water is set out in the 'Bioresources revenue to remunerate fixed costs – Severn Trent Water' model.

Table 6.4 sets out our view of the share of revenue to remunerate fixed costs.

Table 6.4: Classification of proportion of revenue to remunerate fixed costs and variable costs for bioresources

	Company view	Ofwat view based on draft determination	Ofwat view based on final determination
Part 1: Revenue to remunerate fixed costs £m 2017-18 FYA CPIH deflated prices (2020-25)			
Total return on capital	N/A	81.9	65.5
Total run-off	N/A	189.2	177.6
Revenue to service RCV	**N/A**	**271.2**	**243.2**
Local authority and Cumulo rates for both treatment and disposal	N/A	28.4	28.4
Fixed share of other direct costs of treatment and disposal	N/A	43.2	31.4
Fixed share of other indirect cost of treatment and disposal	N/A	19.2	14.0
Fixed PAYG revenue	**N/A**	**90.8**	**73.8**
Fixed share of revenue to cover tax	N/A	0.0	0.0
Pension deficit repair contributions	N/A	4.1	5.2
Other fixed costs	**N/A**	**4.1**	**5.2**
Revenue to remunerate fixed costs	**345.5**	**366.0**	**322.2**
Part 2: Variable revenue (£/TDS) 2017-18 FYA CPIH deflated prices (2020-25)			
Unadjusted revenue (£m)	406.0	457.9	385.8
Revenue to remunerate fixed costs	345.5	366.0	322.2
Revenue to remunerate variable costs (£m)	**60.5**	**91.9**	**63.6**
Forecast volume of sludge (TDS)	1,218,300	1,195,893	1,218,300
Variable revenue (£/TDS)	**49.7**	**76.8**	**52.2**

The modified average revenue in each year is calculated by a formula that we set out in the 'Notification of the PR19 draft determination of Price Controls for Severn Trent Water', which includes some components set now in this determination and some components which relate to out-turn performance (such as the actual volume of sludge in future years).

Table 6.5: Bioresources control

	2020-21	2021-22	2022-23	2023-24	2024-25	2020-25
Unadjusted revenue (£m)	76.6	76.9	77.2	77.4	77.7	385.8
Forecast volume of sludge (TDS)	241,900	242,700	243,800	244,400	245,500	1,218,300
Variable revenue (£/TDS)	N/A	N/A	N/A	N/A	N/A	52.2

7 Putting the sector in balance

Key points

- Severn Trent Water reported gearing of 63.7% as at 31 March 2019. Severn Trent Water forecasts that its level of gearing (62.9% by 2021 and 65.1% by 2025) will remain below the level that triggers sharing of financing gains with customers on account of high gearing as set out in the 'Aligning risk and return technical appendix'. We are updating the gearing outperformance sharing mechanism to introduce a glidepath to the gearing level that the triggers sharing payments as set out in the 'Aligning risk and return technical appendix'.
- Consistent with the lower allowed return on equity in our final determination, we are revising our calculation of the dividend yield as a guide to the reasonable base dividend yield in the absence of out/underperformance in 2020-25. We set out that the acceptable level of base dividend yield can be expected to vary depending on the scale of a company's RCV growth in 2020-25 and future investment needs.
- We expect the company will need to reduce its proposed base dividend yield for 2020-25 to take account of the lower allowed return in our final determination and our revised expectations for a reasonable base dividend yield that we set out in the 'Aligning risk and return technical appendix'
- On executive pay, Severn Trent Water is in line with the 60% alignment to delivery for customers we identify as current good practice. We retain our expectation of the company that it will ensure its dividend and performance related pay policies demonstrate substantial alignment with the customer interest, underpinned by stretching performance targets throughout 2020-25.

In July 2018 we published our 'Putting the sector in balance: position statement'. The position statement sets out the steps we expect companies to take to demonstrate they strike the right balance between the interests of customers and their investors. In summary, we expect that:

- company dividend policies for actual financial structures and performance related executive pay policies show appropriate alignment between returns to owners and executives and what is delivered for customers[13];
- companies with high levels of gearing share financing gains from high gearing with customers; and

[13] We explain more fully our expectations in the 'Aligning risk and return technical appendix' that accompanies this draft determination.

- companies provide assurance and supporting evidence to demonstrate their long-term financial resilience and management of financial risks for the actual financial structure, taking account of their future investment needs.

We also encourage companies to adopt voluntary sharing mechanisms, particularly where, for example, companies outperform our cost of debt assumptions.

In our final determinations, we have amended our gearing outperformance sharing mechanism to contain a glidepath. We explain this in the final determination 'Aligning risk and return technical appendix'.

Our assessment of Severn Trent Water's proposals is in table 7.1. We comment on the financial resilience of Severn Trent Water in section 5.2.

Table 7.1: Our assessment of Severn Trent Water's proposals to balance the interests of customers

Our assessment of the company's proposals to balance the interests of customers
Gearing outperformance benefit sharing mechanism The company confirmed it would implement our default gearing outperformance mechanism, though the company forecasts that its gearing level through 2020-25 will remain well below the threshold that triggers the mechanism.
Voluntary sharing mechanisms Severn Trent Water proposes to start a technical academy. Funded with its own money, £2 million will be invested each year of the control period to the academy. The academy is to build the engineering skills for the company and the Midlands region. The company is also creating a new community dividend, comprising of employee volunteering time, payments to support vulnerable customers (currently funded through a £3.5 million donation to the Trust Fund) and 1% of company profits which could amount to £2.5 million each year.
Dividend policy for 2020-25 Severn Trent Water confirms that it is committed to meet the expectations on dividend policy as set out in our 'Putting the sector in balance' position statement. In doing so its September business plan indicates base dividend payments in line with a circa 5% RoRE over 2020-25. We expect the company will need to reduce its proposed base dividend yield for 2020-25 to take account of the lower allowed return in our final determination and our revised expectations for a reasonable base dividend yield that we set out in the 'Aligning risk and return technical appendix'. The company's dividend policy refers to all the areas included in the 'Putting the sector in balance' position statement (out/underperformance & benefit sharing, employee interest & pension obligations, actual capital structure, need for future investment and financial resilience). The company confirms that when determining the appropriate level of dividend, the Board will consider performance against commitments in the round. Targets are set based on forecast upper quartile performance, linked to the standards of

Our assessment of the company's proposals to balance the interests of customers
performance set in the final determination. It has detailed the specific obligations and commitments to customers that will be considered. It confirms that dividends can be increased or lowered from the base depending on the actual performance of the company and explains how performance delivery will impact on dividends paid. The company commits that its annual performance report will explain how the dividends it proposes are consistent with its dividend policy. The company will also explain any change to its policy and the judgements the Board has made in making that change. The company confirms that when setting dividend payments, it will adjust the base dividend to reflect and recognise delivery to customers, in particular performance above or below that set in its final determination. It has detailed the specific obligations and commitments to customers that will be considered. It confirms that dividends can be increased or lowered from the base depending on the actual performance of the company and explains how performance delivery will impact on dividends paid. Consistent with the lower allowed cost of equity in our final determination, we have revised our calculation of the dividend yield that we consider to be reasonable for assessing the base dividend for water companies in 2020-25. We consider the acceptable level of base dividend yield of up to 4% but this can be expected to vary depending on the scale of a company's RCV growth and future investment needs. We set out further details in 'Aligning risk and return: technical appendix'. We expect Severn Trent Water to be transparent when explaining its dividend policy and reporting on dividends paid over 2020-25, to demonstrate how it has delivered on the commitments in relation to its dividend policy and to ensure it meets the expectations we set out in 'Putting the sector in balance' as updated in the final determination 'Aligning risk and return: technical appendix'.
Performance related executive pay policy for 2020-25 In our 'Aligning risk and return technical appendix' we identify that 60% alignment to delivery for customers is current good practice among the companies that we regulate. Based on our calculations Severn Trent Water's measures that are directly aligned to customer delivery are in line with good practice, however we consider that there is scope for it to improve this position. We expect Severn Trent Water's policy on performance related executive pay to demonstrate a substantial alignment to the delivery of service for customers throughout 2020-25. Severn Trent Water states it is committed to meet the expectations set out in our 'putting the sector in balance' position statement. It has proposed that for 2020-25: • The annual bonus will be based on (i) 51% weighting linked to customer and environmental based objectives and (ii) 49% profit before interest and tax. • The long-term incentive plan is based on achieving upper quartile performance of a single performance measure (RoRE). Having this single measure requires management to focus on performance across a range of areas such as Totex, customer outcome delivery incentives and financing. • The Severn Trent Water Remuneration Committee determines the policy on the remuneration of all executive directors and the committee's terms of reference are reviewed annual and published on the company's website. • Full details of the targets, achievement against them and performance narrative, for both the LTIP and annual bonus scheme will continue to be published in the

Our assessment of the company's proposals to balance the interests of customers
relevant Director's Remuneration report. In addition with a commitment to engaging with shareholders regarding any proposed changes to design or performance metrics. We expect the company's remuneration committee to ensure there is on-going rigorous challenge as to how the policies are applied and to ensure that only truly stretching performance is rewarded. In so doing, we expect it to be equipped with the appropriate powers to carry this out, including for example, the use of withholding periods, clawback arrangements and underpin / gateway arrangements. We expect Severn Trent Water to be transparent when explaining and reporting against its performance related executive pay policy in 2020-25, to ensure it meets the expectations we set out in 'Putting the sector in balance' as updated in the 'Aligning risk and return technical appendix'.

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We regulate the water sector in England and Wales.

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