December 2019

PR19 final determinations

PR19 final determinations: Anglian Water final determination

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About this document

This document supports the 'Notification of the final determination of price controls for Anglian Water' and sets out further details about the final determination price control, service and incentive package for Anglian 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 Anglian Water to deliver;
- the allowed revenue that Anglian 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 six appendices to this document on cost efficiency, outcomes performance, past delivery, allowed revenue and, where relevant, additional information. For all documents related to the Anglian 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 Anglian Water accepts our final determination, it will be accepting that it has adequate funding to properly carry out the regulated business, including meeting 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.

Contents

Amendment	Date
Table 3.7 Page 47 - Amendment made to figures. • Grants and contributions before the deduction of income offset (£m) Network plus – Water replacing £190.8 million with £189.5 million. • Grants and contributions before the deduction of income offset (£m) Network plus – Wastewater replacing £191.9 million with £184.2 million. • Net allowed totex subject to cost sharing reconciliation Network plus – Water replacing £1,635.7 million with £1,636.7 million • Net allowed totex subject to cost sharing reconciliation Network plus – Wastewater replacing £2,219.5 million with £2,227.1 million	30 April 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. We published our draft determination for Anglian Water on 18 July 2019, based on our detailed review of the revised plans submitted to us on 1 April 2019. The company and a number of stakeholders provided representation responses on our draft determination on 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 Anglian 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 Anglian Water will cut average bills by 10.5% in real terms in the 2020-25 period compared to the company's proposed 1.4% reduction. Table 1.1 below sets out the difference in bill profile between the company's business plan submission in April 2019, our draft determination and the final determination. Average bills are lower than proposed by Anglian 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 plan (April resubmission)	£422	£421	£418	£418	£419	£416
Draft determination	£422	£370	£370	£370	£370	£370
Final determination	£422	£394	£390	£386	£382	£378

Costs

Our final determination allows wholesale totex of £5,309.7 million. This is:

- £232.0 million higher than in our draft determination and
- £744.4 million lower than stated in the company's representation on our draft determination.

Our final determination allows Anglian Water £1,425 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £744 million to improve the environment by efficiently delivering its obligations as set out in the Water Industry National Environment Programme (WINEP);
- £437 million improve supply-demand balance, which includes £305 million to invest in a large internal interconnection programme, £47 million to develop associated treatment facilities, and £71 million to reduce leakage;
- £126 million to increase customer metering and install more than one million smart meters to promote water efficiency; and
- £32 million to improve resilience.

Anglian Water proposes to deliver the Elsham treatment works and transfer scheme by a direct procurement for customers process. This means a third-party will be procured to design, build, finance, operate and maintain infrastructure. Anglian Water has an important role on the project during construction and into operations so we allow £9.4 million to carry out this work, during the period 2020-25.

We make an additional allowance of £24.8 million in our final determination for strategic water resource development to support the delivery of long-term drought resilience.

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 Anglian 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 Anglian Water

Area	Measure
Key common performance commitments	• 16.4% leakage reduction on a three year average basis. This is at least 15% reduction from PR14 performance commitment levels. • 5.6% reduction in per capita consumption by 2024-25 • 33% reduction in pollution incidents by 2024-25 to 19.5 pollution incidents per 10,000km of the wastewater sewer by 2024-25 • 21% reduction in internal sewer flooding incidents by 2024-25 to 1.34 incidents per 10,000 sewer connections • 55% reduction in water supply interruptions by 2024-25 to 5 minutes
Bespoke performance commitments	• 6% reduction in external sewer flooding incidents by 2024-25 • 10% reduction in operational carbon emissions 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 - 1.93% (P10) to + 0.77% (P90).

Note the calculations behind these numbers are outlined in the 'Anglian Water - Outcomes performance commitment append

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.

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)	295.5	2,383.5	3,115.7	546.7	6,341.3	446.9	6,788.2
Final allowed revenues (£m)	265.7	2,104.1	2,862.0	476.3	5,708.1	426.0	6,134.1

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.

As set out in the 'Allowed return on capital technical appendix', we are updating our assessment of the allowed return on capital for Anglian 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 0.16 percentage points from our 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.

Anglian Water's Regulatory Capital Value (RCV) growth in 2020-25 is 9.5% and 62.4% of its RCV will be indexed to CPIH in 2025. We bring forward £80 million of revenue from future periods.

We consider that Anglian Water's final determination is financeable on the basis of the notional structure, based on a reasonable allowed return on capital and revenue advanced through pay as you go (PAYG) adjustments. 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. Anglian Water commits to meeting the expectations set out in our 'Putting the sector in balance position statement'.

Anglian Water has high gearing[3] and under its actual financial structure, it expects gearing to be at a level that would trigger sharing payments with customers through the gearing outperformance sharing mechanism. The company confirmed it would implement our default gearing outperformance mechanism within its business plan. Under its actual financial structure, Anglian Water expects gearing above the level that would trigger sharing payments under the gearing outperformance sharing mechanism in 2020-25.

Anglian Water reported regulatory gearing[4] of 78.6 at 31 March 2019. It has committed to reducing its gearing to a 'mid 70 percent' level during 2020-25.

[3] Based on net debt to regulatory capital value.
[4] Based on net debt to regulatory capital value.

However, the allowed return on capital is lower than the draft determination and this may mean that the company needs to take steps to maintain financial resilience.

Anglian Water proposes performance related executive pay measures that are 100% aligned to customer delivery. 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. Anglian Water has not proposed a voluntary sharing mechanism, and does not propose a company contribution to payment matching or its social tariff over 2020-25. However, it has budgeted £1 million per year for its hardship 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 draft determinations by 30 August 2019. More detail about the issues raised in the representations by the company and our consideration of those 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 Anglian Water in its representation 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 Anglian Water's representation	Summary of our response
Anglian Water strongly challenges our econometric models for base costs and our approach to enhancement.	We have considered the company's representation response in relation to both our econometric models and approach to enhancement. We have adjusted some enhancement data and model approaches, and we include the 2018-19 data in our econometric models, both of which the company

Key point in Anglian Water's representation	Summary of our response
	recommended. The cost gap at final determination has narrowed from 20% to 12%. See section 3 and 'Securing cost efficiency technical appendix'.
Anglian Water strongly challenges our approach to: • modelling growth costs, arguing that they have higher onsite and offsite costs due to the remoteness and intensity of growth in the Anglian Water area; and • capital maintenance, asserting that we have not taken account of forward looking maintenance requirements in our base modelling	We make an additional allowance for companies with a high growth forecast. Anglian Water receives a further allowance of £40.6 million across water and wastewater. The evidence the company provided is not sufficiently convincing to justify higher onsite and offsite unit costs so we do not change our approach. See section 3 and 'Anglian Water - Cost efficiency additional information appendix'. We do not make an adjustment for the company's claim. The evidence it provides for additional maintenance costs is not sufficiently convincing. See section 3 and 'Anglian Water - Cost efficiency additional information appendix' for more detail.
Anglian Water argues we are challenging the primacy of the statutory water resources management plan process. It comments that the programme has been through the required process with Defra and the Environment Agency with no issues flagged.	We are not challenging the need of core elements of the water resources management plan but the resilience related solutions and uplifts where companies have discretion to choose their investments. We raised our concerns with the selection of the best value plan in our statutory consultation response to the draft water resources management plan in June 2018. Our challenge is consistent with the Strategic Policy Statement that expects us to continue to challenge companies to meet that need in a way that represents the best value for money for customers over the long term. Following additional evidence provided by Anglian Water, we significantly increase the allowance for the interconnector programme from £242 million to £305 million (the company requests £344 million). See section 3 and the 'Securing cost efficiency technical appendix'.
The company rejects our view that the draft determination base expenditure allowances fund future upper quartile performance across the board. It requests £137 million as a base cost adjustment to maintain upper quartile leakage performance (reduced from £148 million in its April 2019 revised business plan).	At final determination we reject this claim because we further update our approach to funding leakage reduction allowances (see section 3 for more detail). We consider that it is appropriate to evaluate the validity of a base adjustment relating to leakage, through assessment of alternative base model specifications. These tests result in us making a £50.2 million uplift to Anglian Water's base allowance, which is driven by the alternative

Key point in Anglian Water's representation	Summary of our response
	specifications including average pumping head, leakage, growth and lengths of mains renewed or relined. The leakage and average pumping head alternative scenarios are the significant drivers of the uplift for the company (see section 3 and the 'Anglian Water - Cost efficiency additional information appendix' for more detail).
The company raises a concern that there is a significant downside skew on outcome delivery incentives with an upper quartile requirement for all companies, particularly on water supply interruptions.	We have considered all representations and adjust a number of performance commitment levels and outcome delivery incentives which provide a more balanced spread of incentives and risks for the company. The resulting package is stretching but achievable for an efficient company. See section 2 for more detail.
Anglian Water asserts that there is a lack of recognition of the relationship between the quality of service provided and the costs required to achieve that service in its draft determination.	Our assessment of cost efficiency takes into account the overall level of stretch across both costs and outcomes. Where appropriate we make adjustments to our approach at draft determination, allowing increased totex, adjusted performance commitments and incentives. We consider that the resulting combination of our requirements on both costs and outcomes are stretching but achievable. Evidence suggests that companies can perform well on both costs and outcomes with some companies performing better than the sector-wide benchmarks we set in the 2015-20 price review period. See the 'Policy summary' and 'Securing cost efficiency technical appendix' for more detail.
Anglian Water raises a concern about our approach to outcomes which it states has been piecemeal and creates a disconnect from what its customers said they wanted.	We set out in our PR19 methodology that customer support is important as one of a number of considerations we are taking into account when making our decisions. We also consider for example historical and comparative performance. We have considered and taken account of the quality of customer evidence provided in setting our final determination and outcome delivery incentives. See section 2 for more detail.
The company is concerned that the allowed return on capital at draft determination is too low and that, in the context of the overall balance of risk and return, neither the notional nor the actual company is financeable.	We use an allowed return on capital based on updated market evidence, as set out in our 'Allowed return on capital technical appendix'. 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

Key point in Anglian Water's representation	Summary of our response
	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
The company raises a concern at the removal of the cashflow funding mechanism at draft determination.	We have considered the representations we received in relation to upfront payments. We continue to consider that the upfront payment should be removed from companies above our efficient cost baseline. We consider this payment is not appropriate as companies tend to outperform their business plan submissions, and it could lead to even greater negative adjustments to its revenue at PR24. The upfront payment also means that customers are likely to pay more for the 2020-25 period and above the level of efficient costs. We set out our response in more detail in our 'Securing cost efficiency technical appendix'.
Anglian Water raises concerns with the PR19 process which it states has resulted in late changes in approach and has left a number of unresolved issues ahead of final determination.	We have changed elements of our approach in response to concerns raised by companies, including Anglian Water, since our initial assessment of plans. Where companies submitted information too late to be considered at draft determination, we made it clear that this would be taken into account at final determination. For Anglian Water, it submitted additional information too late for consideration at draft determination in relation to capital maintenance, growth, enhancement modelling and its water resources management plan. This information has been taken into account in our final determination.

We also received representations on Anglian Water's draft determination from other stakeholders as shown in table 1.5, which shows a summary of our response to representations that are relevant to the company. 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
Consumer Council for Water (CCWater) is broadly supportive of the draft determination, in particular our request for an action plan describing a systems-based approach to resilience, the package of performance commitments and the affordability and vulnerability offering. It is concerned that customer supported performance commitments, service improvements or investment may be removed or reduced because of our cost efficiency challenge. CCWater suggests that a Competition and Markets Authority appeal could be pursued if Anglian Water doubts it can deliver the final determination plan.	We have considered and taken account of the customer evidence provided in setting our final determination cost allowances, performance commitment levels and outcome delivery incentives. Our 'Policy summary', 'Delivering outcomes for customers policy appendix' and 'Securing cost efficiency technical appendix' explain the rationale for our decisions, including the evidence used. We consider that the performance commitments and cost allowances for investment in our final determination are stretching but achievable and in the interests of customers.
The Environment Agency says it welcomes the flood risk partnership approach between Northumbrian Water and Anglian Water. The Environment Agency comments on outstanding issues regarding need and alignment with the water resources management plan.	We are adding a further performance commitment: Partnership working on pluvial and fluvial flood risk. We have allowed a further cost allowance that includes the company working with other organisations to reduce pluvial and fluvial flood risk at its assets so that it can maintain service to customers. This performance commitment will provide transparency on the company's progress and return expenditure to customers if the company delivers less than promised. We have worked closely with the Environment Agency to address potential concerns. We confirm we are not challenging the need for core water resource management plan elements but the resilience related solutions and uplifts where companies have more discretion to choose their investments. Our challenge is consistent with the Strategic Policy Statement that expects us to continue to challenge companies to meet that need in a way that represents the best value for money for customers over the long term.
Anglian Water's Customer Challenge Group flags concern that the cost efficiency challenge may lead to schemes not being delivered and lower levels of service than set out in the original business plan.	We consider that our final determination is an in-the round package that is stretching but achievable which will improve outcomes for customers and the environment that is funded for efficient delivery. We have adjusted our view of costs taking account of the evidence in the company's representation and set a level of stretch on outcomes performance commitments to set expectations of improved service.

1.3 Key changes from the draft determination

Our final determination carefully considers the representations we received from companies and stakeholders on our 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)	5,853.5	6,134.1
Wholesale cost allowance[1] (£m, 2017-18 CPIH deflated)	5,077.7	5,309.7
Retail cost allowance (£m, nominal)	400.4	403.0
Wholesale allowed return[2] (% - CPIH basis)	3.08%	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 Anglian Water are:

- We make a £40.6 million upward adjustment to our base allowance due to a relatively high forecast of population growth in 2020-25 in the company's supply area.
- We make a £50.2 million upward adjustment to our base allowance based on alternative model specifications.
- 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 increase 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 stretch of performance commitment for an efficient company. We reduce the outcome delivery incentive underperformance rate to be symmetrical with its outperformance rate.

- We reflect Anglian Water's latest information on its actual performance in 2018-19 and expected performance in 2019-20 from its 15 July submission and 30 August representation.
- We revise Anglian 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.
- 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'.
- 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.

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 increase 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. We reduce the outcome delivery incentive underperformance rate to be symmetrical with its outperformance rate.
- 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.

On leakage, we are aligning the company's performance commitment levels with the approach to enhancement funding. Enhancement funding will take the company to its Water Resource Management Plan levels and therefore we set the company's performance commitment levels to achieve the same volumetric reduction as the funding.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.

Anglian Water's current performance is above average in the sector. It is the best performing company on service incentive mechanism and has achieved continuous improvement annually. It maintains its performance levels while also achieving upper quartile performance on the highest percentage of commitments in 2018-19.

In its September business plan, Anglian Water proposed a balanced package that covered a wide range of outcomes its customers value. The company largely set stretching levels including for leakage and internal sewer flooding. In addition, it provided generally sufficient and convincing evidence for its outcome delivery incentives and follows the PR19 methodology principles. The company did, however, propose a large number of deadbands, potentially reducing the stretch and incentives of its performance commitment package. In response to our challenges at the initial assessment of plans, the company chose to provide additional justification rather than materially change its position.

At draft determination, we set additional stretch to three of the company's common performance commitments to reach upper quartile: per capita consumption, pollution incidents and supply interruptions. We also added performance commitments with outcome delivery incentives to recover costs if Anglian Water does not fully deliver its smart metering and internal interconnection programmes. On outcome delivery incentive rates, we increased rates on per capita consumption (low compared to

other companies' rates and its PR14 incentive), reduced rates on supply interruptions (high compared to other companies' rates and currently earning outperformance payments at PR14). We removed the company's deadbands.

The company makes representations on our outcome delivery incentive rate methodology. For our full consideration of these arguments please see 'Delivering outcomes for customers policy appendix' and 'Anglian Water - Delivering outcomes for customers final decisions'.

The company considers our draft determination significantly deviates from the results of its customer research. It argues it is inconsistent for us to agree its approach to incentive rates is correct but then change them using a different view of reasonable ranges based on sector data. It argues our approach to reasonable ranges does not reflect the different elements that can vary across companies, for example the quality of customer research, the approach to calculating marginal costs, the existing relative performance of each company that customers value incremental improvements upon, the mixture of household and non-household valuations, and the varying rate calculations themselves.

The company did provide some good customer research that was used well to develop its business plan proposals, (section 2.1 below considers further the use of customer research in our determination). However, customer research is only one input into our approach to assessing outcome delivery incentive rates.

Our methodology for assessing outcome delivery incentive rates uses reasonable ranges for the sector, based on company business plan submissions, to identify outliers and as an input into setting rates. We use reasonable ranges, as companies' proposed outcome delivery incentive rates vary considerably, in ways we are unable to correlate to plausible drivers of underlying customer preferences. This is because using a reasonable range based on data from across the sector mitigates the risk of methodological differences leading to outcome delivery incentive rates which depart from underlying customer preferences. Our approach uses the reasonable range proportionately and as one element of our analysis. We conscientiously consider companies' research as well as several other factors such as large variance from PR14 rates, comparative performance, and past performance issues. If the research is considered good quality, it is included in the data we use to set outcome delivery incentive rates for customer facing performance commitments. Consequently, we consider our use of reasonable ranges to be proportionate and consistent, and that, in setting rates, we balance our use of reasonable ranges with additional information including companies' customer research. So while we consider Anglian Water's overall approach to be supported by strong evidence, as noted above, where we

intervened at draft determination, this was on the basis of the additional information we consider when setting rates such as comparison with equivalent PR14 rates.

Anglian Water also argues that, since customer valuations generally decrease as service quality and cost increases, the increased stretch in our draft determinations should be coupled with lower financial incentive rates. The company has not provided any evidence, however, that its costs would be materially different to reach the new performance commitment levels set at draft determination compared to the performance commitment levels it proposed in its April business plan.

The company makes representations on mains repairs. It continues to propose its mains repairs performance commitment as non-financial and includes a bespoke financial commitment on reactive mains repairs. The company is concerned that the levels required on mains repairs and the interaction with leakage reduction leave it with significant risk of underperformance payments. 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 flexibility to deliver a step change in leakage reduction, allowing more flexibility in the earlier years to use proactive mains repairs to reduce leakage. We intervened in mains repairs levels for this company at draft determinations since it was lagging the sector, 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. For Anglian Water, this significantly reduces the gap between its proposals and our final determination decision. We are not changing the underperformance rate since it is already at industry average, but remove the financial element from the reactive mains repairs measure to make it non-financial to avoid double counting with the common performance commitment. We are requiring reporting on reactive and proactive mains repairs for 2020-25, which will increase transparency.

On leakage, at draft determination, we acknowledged the company's arguments that it was not aligning its levels with Water Resources Management Plan levels of leakage. The company would earn outperformance payments from its performance commitment level to lower leakage levels, for example to Water Resources Management Plan levels. We also allowed the company enhancement funding. The company makes representations on its leakage levels and outcome delivery incentive rates, proposing to increase its leakage reduction to around 12% and to increase its standard outperformance incentive rates. We have assessed the

representations and consider that we should align the company's performance commitment levels with the approach to enhancement funding. Enhancement funding will take the company to its Water Resource Management Plan levels and therefore we set the company's performance commitment levels to achieve the same volumetric reduction as the funding. Beyond this level, the company can earn outcome delivery incentive outperformance payments and then enhanced outperformance payments since it has an enhanced outcome delivery incentive for leakage. If the company does not achieve its levels, the underperformance rate progressively recovers the enhancement funding.

On water supply interruptions, the company makes representations that the 2024-25 level is unachievable and questions the methodology used to arrive at it, which it considers goes against its customer preferences. The company notes that most of the industry would be paying underperformance payments if the levels are retained. The company's 2018-19 actual performance is better than its 2019-20 forecast. We increase 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. The company argues it should have lower underperformance rates. We are proposing to reduce the underperformance rate as part of a sector-wide change, so that it is symmetrical with its outperformance rate, reducing underperformance payments by around 40%. This will provide a more balanced spread of risks and incentives.

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.

Anglian Water's plan demonstrates an overall high quality, ambitious and innovative

approach to customer engagement and participation and shows how customer views help shape the plan and ongoing business operations.

In response to our initial assessment of its plan, in its April 2019 revised business plan Anglian Water presented new evidence of customer support 'regarding the relatively minor changes to our plan now being proposed'. Specifically, the new research covered: the affordability and acceptability of the revised plan; the bathing waters performance commitment; deadbands on some performance commitments (leakage, sewer collapses, external sewer flooding and bathing water quality); the WINEP incentive mechanism; the revised bill profile; and executive pay. We found this new evidence to be of a satisfactory quality. However, the research was sometimes limited in its use. For example, the company only provides evidence of customer support for deadbands in principle, not evidence of customer support for deadbands on a specific performance commitment and at a specific level. We noted that Anglian Water did not present new evidence of customer support in relation to some of the proposed actions set out in our initial assessment of its plan (for example, caps and collars6 on some performance commitments) but did provide further explanation of evidence included within the September 2018 plan. We also noted that, when referring to recently submitted evidence of the customers' views on the overall affordability and acceptability of the revised plan, the company includes 'don't know' and 'don't mind' as affirmative responses, which we do not regard to be good practice as it overstates the acceptability of the plan.

Anglian Water submits new customer engagement research in its August 2019 representations to our draft determination on executive pay and acceptability of customers' bills. We find that the research on executive pay is of satisfactory quality and have incorporated the company's proposal into its business plan (see section 7 for further details). Anglian Water's research on bill acceptability considers that the company's plan (of higher bills and costs) shows a higher level of acceptability than the plan we propose. The company's customer engagement forum submit representations to our draft determination and support the company's findings, stating that they would be 'concerned if the lower bill profile put forward in the draft determination were to lead to a reduction in the company's ability to deliver the service improvements identified through extensive and sector-leading customer engagement.' However, the company has mischaracterised the findings from the research as it does not provide a sufficient explanation of the additional costs that it considers are needed to deliver its business. In our initial assessment of plans and our draft determination we identified that the additional costs proposed by the company result in significant inefficiency in its business plan. The company has also not provided the customers with any comparative information of the bills and outcomes which other companies are proposing (see section 6 for further details).

In its representations to our draft determination, Anglian Water states that the interventions we made to its outcome delivery incentive package do not reflect its customers' views. This is addressed in section 2 above.

The company disagrees with the removal of caps and collars in relation to water supply interruptions, leakage (enhanced threshold), internal sewer flooding, external sewer flooding, abstraction incentive icallism and void properties.

Anglian Water has submitted representations on three of its asset health outcome delivery incentive rates (treatment works, sewer collapses and unplanned outages) based on customer support for maximum underperformance payments. The company proposes new rates based on a revised view of the 'performance interval' over which the maximum underperformance payment applies. Where we have removed deadbands, it now proposes to adjust its outcome delivery incentive underperformance rate downwards so that the maximum underperformance payment tested with its customers would now be incurred between its performance commitment level and its P105 (note the company does not restate its P10s in its resubmission) rather than between the smaller performance interval of the deadband level and the P10. We consider that the research is both high quality and shows

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

customers support the maximum underperformance payments proposed by the company. However, we do note that, although the maximum payment was derived from customers' views, the performance interval over which it applies was not specifically tested with customers. Therefore, the evidence that customers would want the underperformance rate to be amended because the performance interval changed when deadbands were removed is not sufficient. Although we retain the underperformance rates in our draft determination, we set a collar6 at a level such that the maximum underperformance payment the company could incur is equal to that set out in the company's customer research. A collar reduces the performance interval to which the underperformance payments would apply. We also note that the company is a comparatively good performer on all three performance commitments.

However, we do not consider that customers' views on maximum underperformance payments should alone determine where collars should be set. It is also necessary to consider whether the levels provide appropriate incentives to manage risk. Where the collars proposed by the company suggest a tight range of underperformance payments, we consider that this would not give sufficient incentive for the company to adequately prepare for high impact low probability events.

The company argues that deadbands on its performance commitment level should be included for the WINEP as customers support the level proposed and it considers a deadband will ensure its delivery. A deadband provides an absence of financial incentive and, apart from very specific circumstances, we consider they should only be applied if there is strong evidence as to why it is appropriate and in the interests of the company's customers. The company does not set out, and we have not identified any reason, why the deadband would be in the interests of customers. We also note that the company does not provide evidence of customer support for this proposed deadband.

They further argue that the percentage of population supplied by a single source should have outperformance payments attached to it due to customer support. We have assessed the company's customer engagement research and find that overall the research is of good quality and allow the company outperformance only outcome delivery incentives. We further allow the company end-of-period financial incentives as opposed to in-period incentives in relation to bathing waters attaining excellent

6 The caps (collars) multiplied by the incentive rate is the maximum outperformance (underperformance) payment and performance better (worse) than this level does not increase outperformance (underperformance) payments.

status as we consider that the company has provided sufficient customer engagement research to evidence customer support.

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

Anglian 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 'Anglian Water - Outcomes performance commitment appendix'.

The key changes we are making in the final determination are set out in table 2.1[7] below. 'Anglian 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.

[7] 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.

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

Key changes
Increasing, in alignment with the approach to enhancement funding, the company's performance commitment levels in relation to leakage to align with Water Resources Management Plan which would give a 16.4% leakage reduction on a three year average basis. Enhancement funding will take the company to its Water Resources Management Plans levels which is its performance commitment level. Beyond that level, the company can earn outcomes delivery incentive outperformance payments and then enhanced outperformance payments since it has an enhanced outcomes delivery incentive for leakage. If the company does not achieve its levels, the underperformance rate progressively recovers the enhancement funding.
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. We reduce the underperformance rate to be symmetrical with its outperformance rate. Together these two changes provide a more balanced spread of incentives and risks on water supply interruptions.
Retaining the performance commitment levels for internal sewer flooding. Amending the outcome delivery incentive rates in relation to internal sewer flooding to be symmetrical with the outperformance rates to provide a balanced spread of incentives and risks.
Increasing 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. We intervened in mains repairs levels for this company at draft determinations since it was lagging the sector, 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.
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 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.
Accepting the company's reduction in target in relation to unplanned outage. The reduction is based on the implementation of new reporting procedures as it suggests that the level of outage it experiences is higher than previously reported against the shadow measure.
Relaxing the company's target in relation to helping those who struggle to pay as the company provided further information that was not available to us when setting the draft determination.
Accepting the company's revised performance commitment level profile to reflect the inclusion of unmetered properties in managing void properties.
Relaxing the company's underperformance rate in relation to smart metering delivery after receiving further information from the company on the costs.
We are adding a further performance commitment: Partnership working on pluvial and fluvial flood risk. We have allowed a further cost allowance that includes the company working with other organisations to reduce pluvial and fluvial flood risk at its assets so that it can maintain service to customers. This performance commitment will provide transparency on the company's progress and return expenditure to customers if the company delivers less than promised.

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) [PR19ANH_3]	X		X	
Water supply interruptions [PR19ANH_4]	X	X	X	
Leakage [PR19ANH_5]	X	X	X	
Per capita consumption [PR19ANH_6]	X	X	X	
Mains repairs [PR19ANH_11]	X		X	
Unplanned outage [PR19ANH_12]	X		X	
Risk of severe restrictions in a drought [PR19ANH_9]				X
Priority services for customers in vulnerable circumstances [PR19ANH_22]				X
Internal sewer flooding [PR19ANH_7]	X	X	X	
Pollution incidents [PR19ANH_8]	X	X	X	
Risk of sewer flooding in a storm [PR19ANH_10]				X
Sewer collapses [PR19ANH_13]	X		X	
Treatment works compliance [PR19ANH_14]	X		X	
C-MeX: Customer measure of experience [PR19ANH_1]	X	X	X	
D-MeX: Developer services measure of experience [PR19ANH_2]	X	X	X	

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.

Table 2.3: Summary of performance commitments: bespoke performance commitments

Name of bespoke performance commitment	Type of outcome delivery incentive				
	Financial				Reputational
	Under	Out	In-period	End of period	
Percentage of population supplied by a single supply system [PR19ANH_15]		X	X		
Properties at risk of persistent low pressure [PR19ANH_16]	X	X	X		
External Sewer Flooding [PR19ANH_17]	X	X	X		
Reactive Mains Bursts [PR19ANH_18]					X
Bathing Waters Attaining Excellent Status [PR19ANH_19]	X	X		X	
Abstraction Incentive Mechanism [PR19ANH_20]	X	X	X		
Customer awareness of the company's Priority Services Register [PR19ANH_21]					X
Managing void properties [PR19ANH_23]	X	X	X		
Operational carbon [PR19ANH_24]					X
Capital carbon [PR19ANH_25]					X
Non-household Retailer Satisfaction [PR19ANH_30]					X
WINEP [PR19ANH_32]	X	X	X		
Water quality contacts [PR19ANH_34]	X	X	X		
Event Risk Index (ERI) [PR19ANH_35]					X
British Standards Institution - Standard for Inclusive Service [PR19ANH_36]					X
Helping those struggling to pay [PR19ANH_37]					X
Smart metering delivery [PR19ANH_38]	X			X	

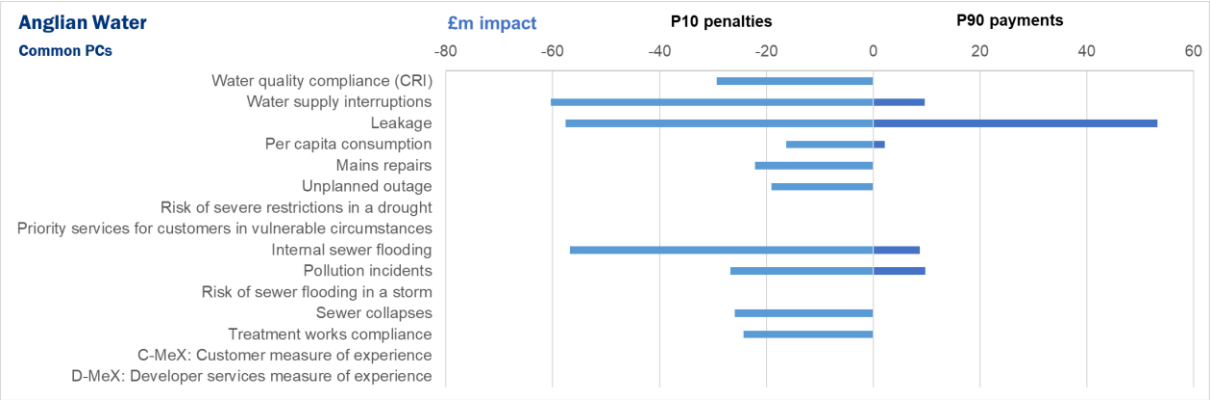
Name of bespoke performance commitment	Type of outcome delivery incentive				
	Financial				Reputational
	Under	Out	In-period	End of period	
Internal interconnection delivery [PR19ANH_39]	X			X	
Value for Money [PR19ANH_40]					X
Cyber Security [PR19ANH_41]	X			X	
WINEP Delivery [PR19ANH_NEP01]					X
Partnership working on pluvial and fluvial flood risk [PR19ANH_42]	X			X	
Community investment [PR19ANH_43]					X
Customer trust [PR19ANH_44]					X
Natural capital impact [PR19ANH_45]					X
Regional collaboration [PR19ANH_46]					X
Underperformance incentive for Elsham treatment works and transfer scheme [PR19ANH_47]	X			X	
Outperformance payment for Elsham treatment works and transfer scheme [PR19ANH_48]		X		X	

Figure 2.1 and figure 2.2 provide an indication of the financial value of each of Anglian 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 April 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)



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)

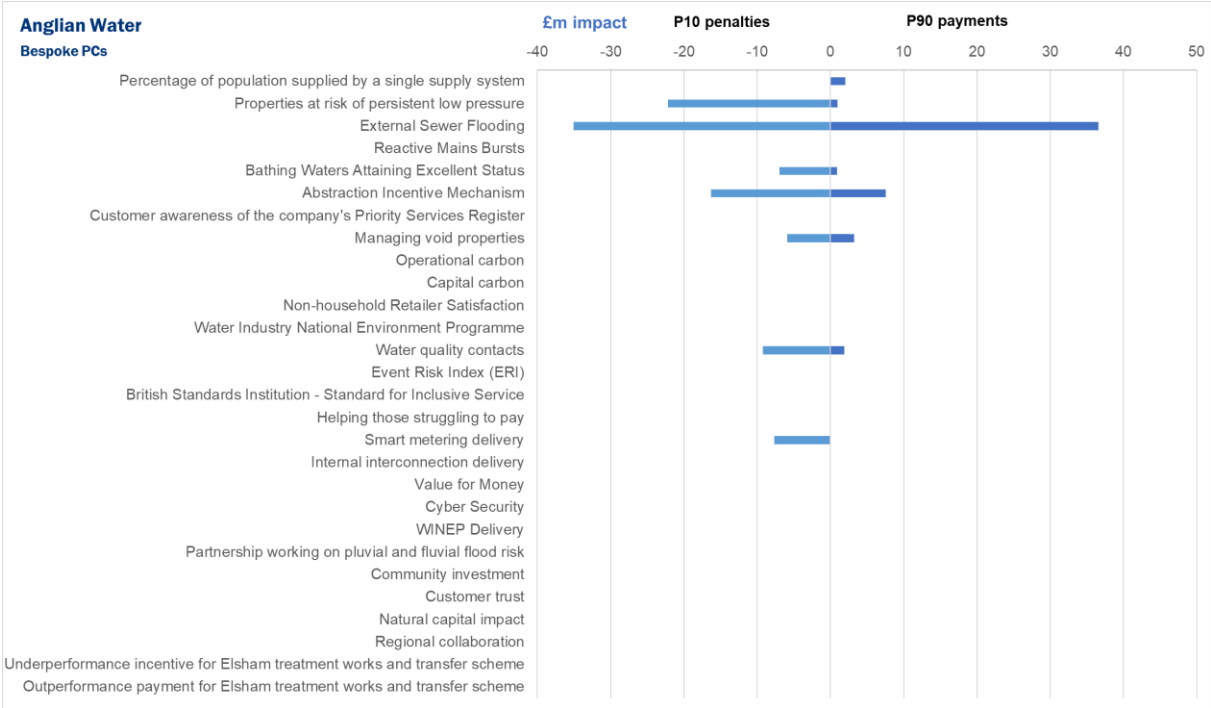


Table 2.4 provides an indication of the financial value of the overall package at the upper and lower extreme levels of performance (expressed as a percentage point impacts on RoRE (return on regulatory equity)) and the overall impact of our final determination decsions Further information on how we 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 decsions on RoRE range

	Draft determination		Final determination	
	% of 5 year regulatory equity		% of 5 year regulatory equity	
	P10	P90	P10	P90
Anglian Water	-3.14	+0.47	-1.93	+0.77

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. Anglian 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. Anglian Water's business plan does provide high quality evidence in some areas. For example, it provides a comprehensive baseline maturity assessment for corporate and operational resilience and evidence of an effective approach to asset health and incident management, with some links to resilience.

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 Anglian Water an action (ANH.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.

Anglian Water's resilience action plan includes some good elements but falls short in many areas. The company provides evidence that it is taking on-board some elements of best practice and applying systems thinking in practice, for example to investment planning decisions. However, we have particular concerns that:

it is unclear how / if the company's maturity assessment informed the development of its action plan, as there is no mention of the maturity assessment in the action plan. We expect the company to clearly demonstrate how its action plan is influenced by an understanding of its baseline maturity.

The company does not respond to our feedback from the initial assessment of business plans on areas such as the prioritisation of risks. We expect the company to clearly respond to our feedback and demonstrate how this informed the development of its action plan.

the company does not provide sufficient detail, on resource requirements, specific timescales and accountability for delivery, to provide confidence that the action plan will be delivered. We expect the resilience action plan to provide sufficient detail to demonstrate a robust path to its implementation, including clear governance and accountable owners for actions.

Overall, Anglian 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 Anglian Water is £5,309.7 million for the wholesale services. This compares with £5,077.7 million at draft determination. In retail, our final determination allowance is £403.0 million, compared with £400.4 million at draft determination.
- Our base allowance is affected by a number of changes we have made since draft determinations:
  - 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 fourth placed company in wholesale water and the third 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 £11.5 million upward adjustment to our base allowance for water network plus, and a £29.1 million upward adjustment for wastewater network plus. The adjustments are due to a relatively high forecast of population growth in 2020-25 in the company's supply area.
- We make a £5.1 million upward adjustment to our base allowance for water resources, and a £45.1 million upward adjustment for water network plus. The adjustments follow an assessment of our base cost allowance based on alternative model specifications.

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 a more meaningful, trusted relationship with customers.

Anglian Water submitted a business plan for 2020-25 with a proposed increase in expenditure from historical spend that is the highest in the industry. We challenged the efficiency of its proposed costs and investment programme to ensure customers pay only for efficient costs. In its response to our draft determination in August 2019, Anglian Water reduces its requested costs significantly. As a consequence of this, and additional cost allowances that we make, the gap at final determination narrows from 20% to 12%. However, even its representation to the draft determination request is 33% above its 2014-2019 costs.

Despite the reduction in requested costs, Anglian Water's proposed wholesale costs are still greater than our view of efficient costs. We challenge the company's expenditure proposals both in enhancement and wholesale base costs.

In the residential retail price control Anglian Water's proposals are broadly efficient. Our allowance is 1% lower than the company's proposed costs.

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 'Anglian 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: Totex[1] 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	48.2	51.2	57.2	52.5	47.3	256.4	311.2
Water network plus	379.7	452.4	471.7	434.0	362.8	2,100.6	2,397.2
Wastewater network plus	405.8	558.4	540.4	561.1	483.8	2,549.5	2,867.2
Bioresources[2]	83.6	86.7	82.5	74.7	75.6	403.2	478.4
Total	917.3	1,148.7	1,151.8	1,122.3	969.6	5,309.7	6,054.0

[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.

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

Our base costs for wholesale water include operating costs (excluding enhancement opex) and maintenance costs. In wholesale water, base costs also include costs associated with the connection of new developments (i.e., new developments and new connection costs) and costs for addressing low pressure. In wastewater, base costs 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 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	194.7	1,361.7	1,785.8	383.4	3,725.6
Enhancement expenditure	39.6	644.7	732.3	8.0	1,424.6
Operating lease adjustment	-0.4	-4.3	-6.4	-2.6	-13.8
Gross allowed totex for calculation of cost sharing rates	233.9	2,002.2	2,511.7	388.7	5,136.4
Strategic regional water resources solutions and other cash items	11.4	13.4	-	-	24.8
Third party costs	8.2	59.2	7.3	2.4	77.1
Non-section 185 diversions	-	1.3	-	-	1.3
Ex-ante cost sharing adjustment	-	-	-	-	-
Gross totex	253.5	2,076.1	2,518.9	391.1	5,239.6
Grants and contributions after adjustment for income offset[1]	-	105.5	139.4	-	245.0
Net totex (for PAYG)	253.5	1,970.6	2,379.5	391.1	4,994.6
Pensions deficit recovery costs[2]	3.0	24.5	30.5	12.1	70.0
Total	256.4	1,995.0	2,410.0	403.2	5,064.7

[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 April 2019 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 April 2019	Company August 2019	Draft determination allowance	Final determination allowance
Wholesale water	2,705.3	2,585.9	2,074.7	2,240.7
Wholesale wastewater	3,439.3	3,293.1	2,842.4	2,909.4
Total	6,144.6	5,879.0	4,917.1	5,150.2

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

	Draft determination allowance	Final determination allowance
Base expenditure	3,629.7	3,725.6
Enhancement	1,287.5	1,424.6
- Environmental obligations (WINEP)	729.2	744.0
- Supply-demand balance enhancement and metering	462.6	563.1
- Resilience enhancement	18.1	32.2
- Other enhancement (e.g. investment to address raw water deterioration, sludge quality and growth, meet lead standards and improve taste/odor/colour)	77.5	85.2

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	220.0	194.7
Water Network plus	1,532.9	1,361.7
Wastewater Network plus	2,033.9	1,785.8
Bioresources	447.7	383.4
Total	**4,234.5**	**3,725.6**

Notes 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 Anglian Water for the period 2020-25 is higher than the historical average growth rate in the sector, we make a positive adjustment of approximately £11.5 million to the company's wholesale water base allowance, and a positive adjustment of approximately £29.1 million to its wholesale wastewater base allowance. More details of our approach can be found in the 'Securing cost efficiency technical appendix'.

We also assess Anglian Water's arguments related to high onsite and offsite costs in its area. We consider that the company fails to provide convincing evidence and arguments that it has exceptional circumstances and or that our base cost models do

not capture some of its circumstances. We also consider that the adjustment above address some of its arguments in relation to offsite costs. We therefore do not make an additional adjustment to our base allowance above the base adjustment for high growth rates and the adjustment of £50.2 million to wholesale water in light of evidence from additional model specifications.

We reject the company's three uncertainty mechanisms for growth-related costs. We consider that companies are sufficiently protected against high growth at PR19 through the cost sharing mechanism; the resetting of price control determinations every five years, which provides an opportunity to adjust for high growth rates, and through the development services reconciliation adjustment (DSRA). We provide further details in 'Anglian Water – Cost efficiency additional information appendix'.

Business rates

Anglian 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 4.4.4 for more details. Our approach to setting allowances for business rates is set out in 'Securing cost efficiency technical appendix'.

Cost adjustment claim – leakage

Anglian Water submits a cost adjustment claim of £136.9 million for additional base expenditure to maintain (rather than improve) its leakage performance. The company considers that the base econometric models would not provide a sufficient allowance to maintain its frontier leakage performance, as the models would only fund costs for maintaining average industry leakage performance.

For final determination we make an adjustment of £50.2 million to our base allowance, based on evidence from alternative model specifications, including models with leakage as an explanatory variable. We do not make an additional adjustment to our base allowance.

Anglian Water was funded to achieve its low leakage levels of 2019-20 through totex allowances and the outcomes delivery incentives framework in previous price reviews. We expect Anglian Water to maintain its low leakage levels through our base costs allowance, which includes the £50.2 million uplift, without additional

funds, in particular given the rest of the industry is required to reduce leakage without additional allowance. See 'Anglian Water – Cost efficiency additional information' for further detail of our assessment.

Base cost adjustment claim – smart metering

For the early replacement of existing meters the company includes in its August 2019 representation a base cost adjustment claim (rather than the enhancement request which it made in April 2019) of £42.4 million. It removes the early replacement element from its enhancement request which now focuses on installing smart meters and associated infrastructure for which we make an allowance (see section 3.3). Our decision is unchanged and we make no allowance. As at draft determination we consider that the selection of a strategy involving early replacement of meters is within management control and we expect large companies to be able to manage long-term investment plans within their base allowance, which allows for an element of lumpy maintenance. We also consider that the installation of smart meters will provide benefits in areas such as per capita consumption (PCC), leakage reduction and customer engagement which will bring value to the company that a basic meter would not. We therefore consider this approach to be no different to any company selecting to bring forward asset replacement in order to deliver its chosen strategy. This is not an activity we consider appropriate to provide additional funding for beyond our base model allowance. This is consistent with the approach we take for other companies and we consider maintenance activities that are necessary to support the water resources management plan should be delivered through the base model allowance. We note that another company undertaking significant replacement of basic meters with smart meters does not request any base allowance uplift. We consider that we recognise the potential for delivery challenges in the smart meter programme through the enhancement allowance that we make for companies undertaking these activities.

Cost adjustment claim – capital maintenance

Anglian Water includes a cost adjustment claim for £197 million as late evidence in June 2019 in response to our initial assessment of plans, arguing for an adjustment to our modelled base allowance for future capital maintenance requirements. The company submits a revised claim for £238 million in its representation in August 2019. We assess the cost claim for final determination and reject it as we do not find sufficient and convincing evidence on the need for an adjustment. We provide further details of our assessment in 'Anglian Water – Cost efficiency additional evidence'.

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 can.

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	68.5	39.6
Water Network plus	764.5	644.7
Wastewater Network plus	795.3	732.3
Bioresources	16.2	8.0
Total	**1,644.5**	**1,424.6**

Our final determination allows Anglian Water £1,425 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £744 million to improve the environment by efficiently delivering its obligations as set out in the Water Industry National Environment Programme (WINEP);
- £437 million improve supply-demand balance, which includes £305 million to invest in a large internal interconnection programme, £47 million to develop associated treatment facilities, and £71 million to reduce leakage;
- £126 million to increase customer metering and install more than one million smart meters to promote water efficiency; and
- £32 million to improve resilience.

Below we discuss key areas of our determination on enhancement cost proposals. Our document 'Anglian 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).

Environmental obligations (WINEP)

For final determination we allow £744 million for environmental obligations as set out in the WINEP, which is an increase of around £15 million from the draft determination allowance. Our wastewater WINEP allowance is £688 million. Our comparative assessment of wastewater WINEP costs shows Anglian Water to be inefficient in areas such as phosphorus removal and efficient in others such as schemes increasing flow to full treatment.

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, do we make an enhancement allowance for leakage reduction. As this is achieved by Anglian Water, we allow funding under enhancement, for the leakage reduction it will deliver beyond the forecast upper quartile threshold. We use the leakage reduction unit cost the company identifies and apply the company-specific efficiency factor to it to make our allowance. We make a slight upward adjustment to the allowance to align with the demand-side leakage benefits the company identifies in its water resources management plan. This is in response to the company's representation regarding a 'gap' in leakage funding, using figures we calculate based on our revised assessment approach. The final determination allowance for this component increases from £69.2 million at draft determination to £71.4 million at final determination following our revised assessment approach. In the 'Securing cost efficiency technical appendix' we set out further our policy on the funding of leakage reduction costs, including how we derive the upper quartile threshold for leakage enhancement costs.

Internal interconnectors

We maintain a consistent approach to that taken at draft determination and allow the majority of the £392 million the company requests for all the schemes as part of the company's identified interconnector and treatment programme. We recognise the company's need to address the supply-demand deficits it calculates within its water resource zones through the latest water resources management plan. As such we consider the final determination allowance of £352 million is sufficient for the company to maintain its supply-demand balance.

We have reviewed the several iterations of additional information submitted by the company to support this programme and adjust our decisions where evidence is

provided to justify an adjustment. However, we continue to challenge where we find insufficient evidence to justify proposed scheme capacities and the company does not demonstrate sufficient evidence of considering a full range of options or that its costs are efficient. The approach the company takes to justify this programme appears to have been based on initial policy decisions followed up by supporting analysis. We expect to see transparency and consistency between submissions provided to different regulators to justify such large investment proposals.

In its representation the company increases the cost of the interconnection programme to reflect the addition of the £7.4 million East Ruston solution. We allow cost for the certain components of this need but include the uncertain drivers in the WINEP uncertainty mechanism. The total costs include the increased direct procurement for customers development costs for Elsham treatment and transfer of £9.4 million, up from £8.3 million in draft determination.

The revisions we make to leakage, short and long-term supply-demand components and internal interconnectors increases the overall supply-demand balance enhancement allowance we make from £354 million at draft determination to our final determination allowance of £437 million.

Metering

For the enhancement element of the expenditure we review the additional evidence the company submits in its representation regarding the technology it is installing and the cost breakdown. We therefore make an allowance of £126.3 million for this component compared to the company's request for £136.8 million. This is an increase of £18.2 million from the draft determination as a result of the company providing additional evidence justifying its programme efficiency in comparison to other company costs. We discuss the base adjustment request relating to the early replacement of existing meters with smart meters in section 3.2.

Resilience

For water resilience enhancement, at draft determination we allowed £17.1 million to address risks associated with single source of supply, power resilience and flooding. Following additional evidence the company provides in its representation to the draft determination, we consider that Anglian Water provides sufficient evidence to support the need for the 'Critical infrastructure crossing' investment and make a further allowance of £2.0 million. We apply further cost challenges on the basis of insufficient evidence that a range of options have been considered and that the proposed costs are robust and efficient. We maintain our decision not to allow

additional costs for the 'Water treatment works resilience' investment as we consider the case describes base activities and elements risks management control. Our final determination allowance for water resilience enhancements is £19.0 million.

For wastewater resilience enhancement, our allowance at the draft determination was £1.0 million. For final determinations Anglian Water provides additional evidence to demonstrate the need to invest in flood protection schemes that are to be delivered through partnership working. The investments will protect the company's assets from pluvial, fluvial and coastal flooding and the need for investment is accepted within the resilience enhancement line. However there is insufficient evidence to demonstrate that the proposed costs are efficient and challenge the costs. We make an additional allowance of £12.1 million.

Our total allowance for resilience improvements to £32.2 million.

Lead standards

Anglian Water requests £24.3 million to meet its obligation to maintain customers' exposure to levels of lead below the statutory limit, proposing to replace 5,250 communication pipes and 2,250 supply pipes. We assess these costs using a benchmark model. Anglian Water is less efficient than our benchmark and has the highest unit cost in the industry, and we therefore challenge the efficiency of its proposed expenditure. We assess separately the costs for its proposed treatment solution, which Anglian Water provides additional evidence for, but do not find convincing evidence of the robustness of the cost and continue to apply the 10% company efficiency factor. For final determination, we make a separate partial allowance for replacement of the 2,250 supply pipes, recognising the company's aspiration to minimise lead at customer tap. Our final determination total allowance is £12.5 million, up from £11 million allowed at draft determination.

Sludge quality and growth

Anglian Water requests £12.5 million to accommodate the sludge production growth as result of population growth and the WINEP programme for phosphorus removal for the period 2020-25. At draft determination we allowed £0.5 million. In its representations, Anglian Water provides convincing evidence that there is a need for enhancement funding for the additional treatment capacity but fails to prove that its proposed solution of installing additional capacity is the best option for customers. Using the information the company supplies, we conclude that a contract with a third party is the best option for customers and one that stimulates the bioresources market. For final determination, we therefore allow £5.7 million that is equivalent to

three years of opex and a 2.5-year contract in the bioresources market for the period 2022-25 at the estimated efficient fully loaded gate fee for the quantity of sludge the company planned to build capacity to treat.

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 our 'Strategic regional water resource solutions appendix'. In its representation, Anglian Water requests £24.8 million, a slight reduction in allowance from draft determination. We allow the full amount the company requests at final determination to enable it to develop strategic regional solutions in association with other companies.

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.

For the draft determinations we calculated each company's cost sharing rates based on the ratio of the company's view of costs in its September 2018 business plan relative to our view of efficient costs. For the final determinations, we calculate the company's view of costs based on a 50% weight on the company's final cost proposals in its August 2019 representation to the draft determination and 50% weight on the September 2018 business plan. We explain our approach to calculating cost sharing rates in the 'Securing cost efficiency technical appendix'.

Table 3.7 sets out the cost sharing rates for PR19 and net totex that is subject to cost sharing at the end of the 2020-25 period. We calculate cost sharing rates based on totex gross of grants and contributions (but after making adjustments for operating leases and excluding costs of strategic regional water resources development costs, third party costs and pension deficit recovery costs). At the end of the 2020-25 period, we will apply cost sharing to totex net of grants and contributions.

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
Totex for cost sharing rates – September 2018 business plan (£m)	290.6	2,405.3	2,949.5
Totex for cost sharing rates – August 2019 (£m)	288.5	2,297.4	2,829.2
Weighted company view of totex for cost sharing rates (£m)	289.5	2,351.4	2,889.3
Gross allowed totex for cost sharing rates (£m)	233.9	2,002.2	2,511.7
Cost sharing ratio	1.18		1.15
Cost sharing rate – outperformance	32%		35%
Cost sharing rate – underperformance	68%		65%
Grants and contributions before the deduction of income offset (£m)	-	189.5[8]	184.2[9]
Abstraction charges and business rates (£m)	61.1	176.0	100.3
Net allowed totex subject to cost sharing reconciliation (£m)	172.7	1,636.7[10]	2,227.1[11]

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

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.

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

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Residential retail	78.2	79.2	80.6	82.0	83.1	403.0
Company view	77.1	79.5	81.4	83.3	85.2	406.5

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.

Elsham transfer scheme

The Elsham treatment works and transfer scheme is needed to allow surplus water from East Lincolnshire and Elsham to be transferred south. This will improve drought resilience associated with decreasing abstraction levels, and increased growth and climate change impacts. Anglian Water has agreed that this scheme should be carried out using a direct procurement for customers process which delivers the project by a third-party (a competitively appointed provider) to design, build, finance, operate and maintain infrastructure. Anglian Water has an important role on the project during construction and into operations including:

- carrying out the procurement of a competitively appointed provider;
- obtaining the necessary planning consents to deliver the project;
- approving the design for the project;
- acquiring the land necessary for construction activities to commence;

- delivering some of the site enabling works; and
- works to prepare for the interface between the scheme and Anglian Water's network.

We allow £9.4 million to carry out this work (excluding land acquisition), during the period 2020-25. We have not allowed for a competitively appointed provider's revenues, these will be calculated by reference to the terms of the contract it enters into with Anglian Water which will be determined by a competitive procurement process to be conducted by Anglian Water. We do not expect Anglian Water's customers to start paying for the competitively appointed provider's revenues until the next price control period.

Consideration of representations on our draft determination

Table 3.9 lists the representations we have received that are specific to direct procurement for customers and the Elsham treatment works and transfer scheme and shows where to find more information on our responses in this document.

Table 3.9: Representations specific to the Elsham treatment works and transfer scheme

Area	Company-specific representations	Detailed commentary in this appendix
Development allowances	Request for £1.7 million correction in-line with PR19 methodology	'Anglian Water - Cost efficiency final determination appendix' - Total direct procurement for customers development costs for Elsham treatment and transfer of £9.4 million, up from £8.3 million in draft determination.

Overall, we consider that the procurement of this scheme through a direct procurement for customers process will identify the best value for customers and protects customers' interests due to improved transparency.

Developments to facilitate direct procurement for customers

We will consult on licence modifications, necessary to enable the delivery of the scheme, in 2020. Our expectation is that a competitively appointed provider would be procured in the 2020-25 price control period and the contract would cover the construction of the scheme and its operation for a period of no less than 20 years.

Under the direct procurement for customers process the need to include regulatory mechanisms to manage uncertainty as a result of change is recognised. If material changes in external factors dictate that a scheme may no longer demonstrate value for money through a direct procurement for customers process, a scheme could instead, with our agreement, be delivered through a traditional in-house procurement process. We discuss the uncertainty mechanism further in 'Delivering value for customers in large projects'.

For the Elsham treatment works and transfer scheme we have specified a Notified Item as we consider that an interim determination is the appropriate mechanism in the event that the scheme should need to be delivered in-house.

For the Elsham treatment works and transfer scheme, no bespoke outcomes are proposed by Anglian Water. We determine that bespoke outcomes specific to direct procurement for customers are appropriate for this period 2020-25. We intervene in Anglian Water's business plan and include both under and out performance incentives which we detail in the 'Anglian Water - Outcomes performance commitment appendix'.

Anglian Water also identified a number of potential strategic regional water resource solutions that may be suitable for direct procurement for customers, for example the South Lincolnshire reservoir and the Anglian Water-Affinity Water transfer. We expect these schemes and any other major schemes which may arise due to significant changes to Anglian 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 Anglian 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 £6,134.1 million of revenue across all price controls for Anglian Water in the final determination, compared to £5,853.5 million in the draft determination and £6,788.2 million in the company's April 2019 revised 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 0.16 percentage points from our 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.
- Taking account of company representations, we revise our approach to determine the mix of operating and capital expenditure to take better account of the nature of our decisions on cost allowances. We apply the updated approach in our technical intervention to PAYG rates. We increase PAYG rates to bring forward allowed revenue by £80 million to address a notional financeability constraint.
- Allowed revenue includes Anglian Water's contribution to the innovation competition.
- We revise our approach to calculating grants and contributions.
- We reflect Anglian Water's latest information on its actual performance in 2018-19 and expected performance in 2019-20 from its 15 July submission and 30 August representation.
- Our final determination includes finalised scores for 2018-19 in the residential retail service incentive mechanism. This increases revenue by £2.2 million compared to the draft determination.

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.
- 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 (and 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-section 185 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 Anglian 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	209.0	1,060.5	994.6	346.2	2,610.3	2,305.5
RCV run-off	49.5	584.9	1,166.7	94.6	1,895.6	1,913.5
Allowed return on capital	24.1	365.2	558.7	37.6	985.6	1,058.4
Revenue adjustments for PR14 reconciliations	0.0	19.8	4.0	0.0	23.8	26.5
Fast track reward	0.0	0.0	0.0	0.0	0.0	0.0
Tax	0.0	0.0	0.0	0.0	0.0	0.0
Grants and contributions after adjustment for income offset (price control)	0.0	104.2	131.8	0.0	236.0	186.9
Deduct non-price control income	-16.9	-38.9	-6.1	-2.1	-64.1	-64.1
Innovation competition	0.0	8.4	12.5	0.0	21.0	0.0
Revenue re-profiling	0.0	-0.1	-0.1	0.0	-0.2	5.5
Final allowed revenues	**265.7**	**2,104.1**	**2,862.0**	**476.3**	**5,708.1**	**5,432.3**

We set out the calculation of allowed revenue for each wholesale control on an annual basis in the 'Anglian 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 Anglian Water stretching outcome performance commitments. 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[12], 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:

- 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

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

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 Anglian 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)	5,707.9	5,987.1
Proportion of wholesale revenue allocated to residential (%)	80.3%	80.2%
Residential retail costs (£m)	400.4	403.0
Total retail costs (£m)	**4,986.3**	**5,206.0**
Residential retail net margin (%)	1.0%	1.0%
Residential retail net margin (£m)	**50.5**	52.7
Residential retail adjustments (£m)[1]	12.0	15.1
Residential retail revenue (£m)[2]	**462.9**	**470.8**

[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 'Anglian 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 'Anglian 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)	253.5	1,970.6	2,379.5	391.1	4,994.6
Final determination PAYG rate (%)	81.3%	52.6%	40.5%	85.4%	50.9%
Pay as you go totex (£m)	206.0	1,036.0	964.0	334.1	2,540.3
Pension deficit recovery cost (£m)	3.0	24.5	30.5	12.1	70.0
Total pay as you go (£m)	**209.0**	**1,060.5**	**994.6**	**346.2**	**2,610.3**

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%	46.9%	38.5%	79.7%
Draft determination (%)	69.3%	47.4%	38.4%	79.7%
Final determination (%)	81.3%	52.6%	40.5%	85.4%

In the draft determination, we applied Anglian Water's approach to PAYG rates of recovering in each year an amount equivalent to operating costs. In its representations Anglian Water states that PAYG must be aligned to the plan where there are changes and sets out that its underlying PAYG rate has increased as a result changes to totex.

Taking account of company representations, we revise our approach to determine the mix of operating and capital expenditure to take better account of the nature of our decisions on cost allowances. We apply the updated approach in our technical intervention to PAYG rates.

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.

Following our assessment of notional financeability, we are increasing PAYG rates for all years for all wholesale controls by 1.92% to increase cash flows in the 2020-25 period and to align to credit ratios targeted by the company on a notional basis, bringing forward £80 million of allowed revenue from future periods. We set out our financeability assessment in section 5.2.

The movements in PAYG rates between the company plan, the draft determination and final determination reflect the differences in the mix of operating and capital expenditure in our totex allowance along with the increase to PAYG rates for notional financeability in the final determination.

4.2.2 Opening RCV adjustments

As part of its business plan, Anglian 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 Anglian 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	2,998.8		4,899.8	
% of RCV allocated by control	6.61%	93.39%	93.57%	6.43%
RCV – 31 March 2020	198.3	2,800.5	4,584.8	315.0
Midnight adjustments to RCV	-6.7	-94.8	-255.6	N/A
Midnight adjustments relating to operating leases	0.7	7.3	10.9	4.4
Opening RCV – 1 April 2020	192.3	2,713.0	4,340.1	319.4

4.2.3 Allowed return on capital

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

In its representation, Anglian Water proposes an allowed return on capital for the wholesale price controls of 3.4% to 3.7% CPIH deflated (2.4% to 2.7% - RPI deflated). This range is higher than our draft determination figure of 3.08% - CPIH deflated (2.08% - RPI deflated). The company argues that its higher allowed return is needed to support the expected Baa1/BBB+ credit rating for the notional company and ensure financial resilience over the long term. 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 4.6 and 4.7;

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	96.1	1,356.5	2,170.1	159.7	3,782.4
CPIH inflated RCV	96.1	1,356.5	2,170.1	159.7	3,782.4
Other adjustments	-	-	-	-	-
Total RCV	192.3	2,713.0	4,340.1	319.4	7,564.8

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	78.0	1,163.0	1,752.1	122.7	3,115.8
CPIH inflated RCV	74.6	1,111.2	1,674.1	117.2	2,977.1
Post 2020 investment	41.6	846.1	1,252.6	48.4	2,188.6
Other adjustments	-	-	-	-	-
Total RCV	194.2	3,120.3	4,678.7	288.3	8,281.5

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	8.3	120.9	187.9	13.5	330.7
CPIH inflated RCV	12.4	179.5	279.1	20.1	491.1
Post 2020 investment	3.3	64.8	91.6	4.1	163.8
Other adjustments	-	-	-	-	-
Allowed return on capital	24.1	365.2	558.7	37.6	985.6
Company April 2019 – return on capital	32.0	448.5	664.7	46.7	1,191.9

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 'Anglian 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	21.6	245.2	496.0	42.5	805.3
RPI inflated RCV	22.1	251.2	507.8	43.5	824.6
Post 2020 investment	5.8	88.5	162.9	8.6	265.7
Total RCV run-off	49.5	584.9	1,166.7	94.6	1,895.6

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).

For the draft determination, we applied Anglian Water's RCV run-off rates which are based on its assessment of a fair and reasonable allocation of cost recovery across years for costs that have been added to RCV and which it draws from a range of evidence. Anglian Water then reduces RCV run-off rates for water resource, water network plus and wastewater network plus controls to assist with affordability and provide a gradual transition to removing the adjustment completely at PR24.

Anglian Water does not make any representations in relation to RCV run-off rates and we continue to apply the company's RCV run-off rates for the final 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 April 2019 (%)	4.96%	3.91%	5.06%	6.00%
Draft determination (%)	4.96%	3.91%	5.06%	6.00%
Final determination (%)	4.96%	3.91%	5.06%	6.00%

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 'Anglian Water - Allowed revenue appendix' in table 5.1 to table 5.4.

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. 'Anglian 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 'Anglian 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	For consistency with other companies that have in-period outcome delivery incentives, we have adjusted the 'Total to be applied at PR19' so that it includes 2018-19 (£3.090 million) and 2019-20 (£3.605 million) outcome delivery incentive values in 2012-13 prices for Anglian Water's W-D4 Leakage three year average performance commitment. We are making this intervention relative to the company's 15 July 2019 submission. The intervention is consistent with the company's view in its representation. Our intervention increases the total net performance revenue payment at the end of the 2015-20 period for wholesale water from £24.945 million to £29.077 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 also including a figure of 3.74% for the 'Materiality threshold for financing adjustment - Discount Rate' in line with the 'PR14 reconciliation rulebook'. Overall, our minor interventions do not change the total residential retail revenue payment at the end of the 2015-20 period which remains at - £5.599 million.
Wholesale revenue forecasting incentive mechanism	No interventions required.
Totex	No interventions required.
Land sales	No interventions required.
Residential retail service incentive mechanism	We are intervening to set Anglian Water's residential retail service incentive mechanism adjustment to +4.04% of residential retail revenue to reflect its performance from 2015-16 to 2018-19. This equates to +£18.602 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	0.0	0.0	52.9	57.0
Residential retail revenue	N/A	N/A	-5.6	-5.6
Wholesale revenue forecasting incentive mechanism	N/A	N/A	-14.9	-14.9
Totex	-162.6	-188.4	-29.8	-31.1
Land sales	-5.6	-5.6	N/A	N/A
Residential retail service incentive mechanism	N/A	N/A	26.1	18.6
PR09 blind year adjustments[2]	-163.1	-163.1	13.3	13.3
Water trading	N/A	N/A	0.0	0.0
Other adjustments	0.0	0.0	0.0	0.0
Total	-331.3	-357.1	42.0	37.3
Total post profiling[3]	N/A	N/A	42.6	38.0

[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 'Anglian 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, where applicable;
- 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	-	-	-	-	-
Tax	0.0	0.0	0.0	0.0	0.0
Grants and contributions (price control)	0.0	104.2	131.8	0.0	236.0
Deduct non-price control income	-16.9	-38.9	-6.1	-2.1	-64.1

4.4.1 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'.

Anglian Water provided information in data tables relevant to the calculation of the expected tax charge in its business plan. Anglian Water also provides revised tax information in its representation, to reflect changes to totex in the draft determination. We accept the information provided by the company and apply this to the final determination. Our final determination continues to forecast no tax payable over 2020-25 due to the level of tax deductions available, which is consistent with the company's business plan forecasts.

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Tax	0.0	0.0	0.0	0.0	0.0

4.4.2 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 '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 (before deduction of income offset allowances)	0.0	189.5	184.2	0.0	373.6

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	104.2	131.8	0	236.0

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	1.3	7.7	0	9.0

4.4.3 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	-16.9	-38.9	-6.1	-2.1	-64.1

Note negative numbers represent a deduction from the allowed revenue.

4.4.4 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. Anglian Water proposes several uncertainty mechanisms outlined below.

- Anglian Water proposes an uncertainty mechanism related to increased costs arising from the Department for Transport's (DFT's) Specification for the Reinstatement of Openings in Highways. It requests a Notified Item if we consider the costs are not covered as a relevant change of circumstance in its licence. We do not accept Anglian Water's proposal because we consider the company is adequately protected by the existing cost sharing arrangements. Furthermore, we note the DFT considers there could be net savings for businesses under the proposed changes, noting that many innovations in reinstatement techniques and materials have been introduced that are not covered by the existing code.
- Anglian Water proposes three uncertainty mechanisms for costs associated with customer growth levels that it considers are not covered by PR19 provisions such as the Developer Services Revenue Adjustment (DSRA). It proposes there should be unit cost adjusting outcome delivery incentive mechanisms. We did not accept a similar proposal by Anglian Water in our draft determination and, having reviewed the information available, we do not accept this proposal in our final determination because we consider that the cost risks concerned are adequately addressed by the DSRA, the provisions for cost recoveries from developers and the totex cost sharing arrangements. Further information is provided in the Anglian Water 'Cost efficiency additional information appendix'.
- Anglian Water proposes an uncertainty mechanism associated with possible additional costs resulting from the absence of, or delays in introducing, a ban on the outdoor use of metaldehyde. We are including a Notified Item in respect of this issue in our final determination for Anglian Water. For most companies the costs we have identified for this issue are not material, and companies are protected by the usual cost sharing rates and, in some cases, under other cost adjustment mechanisms. However, we accept that potential costs forecast by Anglian Water could be material and we consider a Notified Item to be the approach that best protects the interests of customers and provides the company with protection to the extent that material costs arise.

We are including a PR24 reconciliation mechanism for business rates in our final determination for Anglian 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 Anglian Water along with all other companies serving England[13] 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.

We have specified a Notified Item as we consider that an interim determination is the appropriate mechanism should the Elsham treatment and transfer scheme need to be delivered in-house.

[13] 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% (from 3.15% in the draft determination) and apply a dividend growth of 1.18%. This takes account of the allowed cost of equity in the final determination. For Anglian Water we restrict the base dividend yield to 1.84% in our notional financeability assessment due to the high level of RCV growth 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.
- For the final determination we advance allowed revenue by £80 million to ensure our determinations are financeable on the basis of the notional structure.

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

Anglian Water is responsible for ensuring it delivers its obligations and commitments in the context of its choice of capital and financing structure. The company proposes to remain highly geared in 2020-25. Anglian Water may need to take further steps to improve its financial resilience. We will closely monitor changes in levels of the company's gearing, credit ratings, and other key financial metrics during 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 Anglian 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 the 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[14].

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[15]. 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 Anglian Water in our final determination. The risk ranges show the plausible range of company returns based on Anglian 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

[14] 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.

[15] 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.

commitments set in our determinations, our incentive mechanisms also aim to protect customer interests where companies underperform.

Anglian 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.

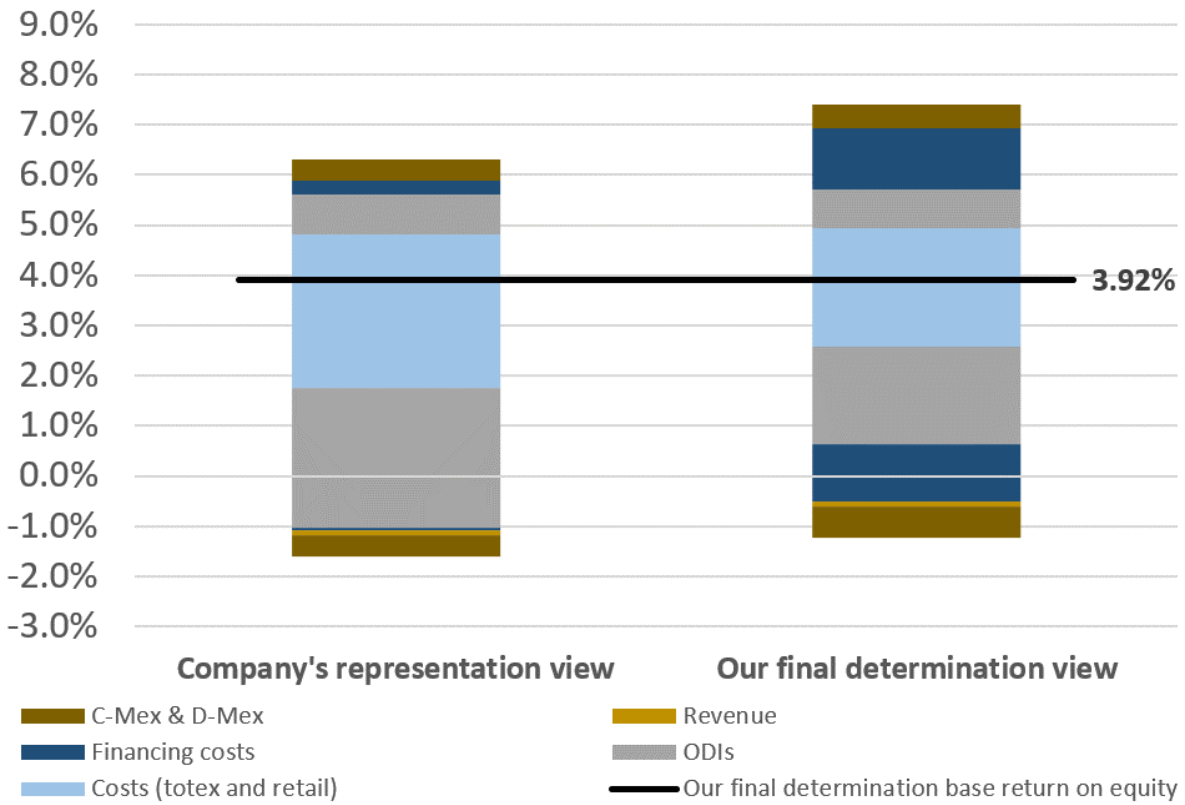
We asked companies to update their risk ranges in their representations. We state those risk ranges in table 5.1 against the cost allowances and base return on regulatory equity in our final determinations. These risk ranges are not fully comparable with our final determination ranges as they take account 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: Anglian Water final determination risk ranges

	Range implied in company representation		Final determination ranges	
Base RoRE	-		3.92%	
Risk ranges	**Lower bound**	**Upper bound**	**Lower bound**	**Upper bound**
Totex	-2.09%	0.82%	-1.27%	0.93%
Outcome delivery incentives	-2.79%	0.78%	-1.93%	0.77%
Financing costs	-0.05%	0.28%	-1.16%	1.23%
Retail costs	-0.07%	0.09%	-0.07%	0.09%
C-MeX and D-MeX	-0.40%	0.42%	-0.60%	0.46%
Revenues (includes Retail)	-0.10%	0.00%	-0.10%	0.00%
Total	**-5.51%**	**2.39%**	**-5.14%**	**3.48%**

[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 Anglian 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 Anglian 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 April business plan, Anglian Water sets out that its 'Board provides assurance that, based on the assumptions in its business plan, 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 states that its plan targeted a credit rating of Baa1 on a notional basis.

Subsequently, we asked companies to provide additional Board assurance, in their representation to our draft determination, that they will remain financeable, taking account of the reasonably foreseeable range of plausible outcomes of their final determination 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.

In its representation to our draft determination, Anglian Water sets out that the Board concludes it is not possible to provide assurance that the company is financeable based on the draft determination package on either a notional or actual basis. It bases this conclusion on the allowed return on capital and after taking account of the increased risks represented in the draft determination. The company provides qualified assurance that under the package Anglian Water proposes in its representations including a higher return on capital, it considers a target credit rating of Baa1 appropriate if the balance of risk and return is restored within the final determinations.

We have carefully considered the representations made by Anglian Water including the qualifications on 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[16]. 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

[16] 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

for Anglian 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.

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 Anglian Water's final determination prior to adjustments for financeability exceeds 10%. Therefore consistent with our policy set out in the 'Aligning risk and return technical appendix' we consider it is appropriate for equity to contribute to the funding of this growth. In our financeability assessment we restrict the base dividend yield to maintain gearing around the notional level of 60% in 2025, consistent with the gearing level that underpins the calculation of our allowed return. The resulting dividend yield we assume is 1.84% with dividend growth of 1.18%.

In its representation, Anglian Water sets out that it does not consider it appropriate to withhold all dividends for the notional company, however its representation lowered its assumed dividend yield for the notional company to 60% of the cost of equity from 70% in its September 2018 business plan. This equates to a dividend yield of 2.21% based on a blended cost of equity for the final determination of 3.69%. The dividend yield used in our final determination is lower than the yield stated by the company in its representation, but it is consistent with the application of our policy that equity should have a role in funding significant real RCV growth.

In its April revised business plan, Anglian Water uses additional revenue from past performance reconciliation adjustments to improve the financeability for the notional structure. In our draft determination we accepted this as a departure from the PR19 methodology on the basis it was an approach proposed by the company that we consider protects the interests of customers.

However, for final determinations, taking account of the lower allowed return, we apply a consistent approach across companies. Our approach is consistent with the PR19 methodology, which is to assess financeability before taking account of any reconciliation adjustments. We discuss this further in the 'Aligning risk and return technical appendix'.

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 financial modelling of

the notional company suggests that Anglian Water faces a financeability constraint. Therefore, consistent with the approach in the PR19 methodology, our final determination increases PAYG rates to bring forward £80 million of revenue to improve cash flows and financial ratios. The financial ratios stated in table 5.2 include the effect of the increase to PAYG rates.

Anglian Water sets out in its representations that certain rating agencies reverse adjustments to accelerate revenues when calculating adjusted interest cover and therefore advancing revenue above the natural level does not enhance financeability. As set out in the PR19 methodology, revenue advancement is preferable to cost of equity adjustments as it is net present value neutral for customers over time and has the effect of crystallising some of the inflationary return related to the partial transition from RPI to CPIH as the measure of inflation. We discuss these issues further in the 'Aligning risk and return technical appendix'. We note also that Anglian Water reduces RCV run-off rates below the underlying rate to assist affordability for customers. Our PAYG adjustment reverses this deferral of revenue to some extent whilst bills remain below the level presented to customers in Anglian Water's customer research for acceptability of the business plan.

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 Anglian 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	61.34%	60.80%	59.97%
Interest cover	3.77	3.79	4.02
Adjusted cash interest cover ratio (ACICR)	1.46	1.44	1.50
Funds from operations (FFO)/Net debt	9.19%	9.28%	9.49%
Dividend cover	1.08	0.68	1.44
Retained cash flow (RCF)/Net debt	7.56%	7.24%	8.29%
Return on capital employed (RoCE)	3.74%	3.48%	3.54%

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.

Anglian Water sets out in its representations that the Ofwat financial model overstates the adjusted interest cover financial ratio due to the treatment of pension deficit recovery payments. We correct the treatment of pension deficit in the financial ratios for the final determination which lowers the financial ratios compared with out draft determination. We discuss this issue further in the 'Aligning risk and return: technical appendix'.

Anglian Water's financial ratios in its April business plan tables for the notional company take account of reconciliation adjustments. We set out in the table the ratios excluding these adjustments consistent with our assessment of notional financeability. We verified the recalculation of the ratios with the company.

We set out the average PAYG and RCV run-off rates along with the RCV growth over 2020 to 2025 for Anglian Water in table 5.3. RCV growth for the final determination is lower than in the company's April plan and in the draft determination. Overall, changes to allowed expenditure, the revised approach to determining the mix of operating and capital expenditure and the uplift to the PAYG rates means less expenditure is added to RCV. We are not amending Anglian Water's RCV run-off rates in our final determination.

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

	PAYG	RCV run-off	RCV growth
Company April 2019	46.9%	4.66%	18.46%
Draft determinations	46.4%	4.67%	10.88%
Final determinations	50.9%	4.67%	9.47%
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 'Anglian 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 in the final determination to allow the company to continue to meet its annual interest costs. We estimate 5 year headroom of £342 million above an adjusted cash interest cover of 1.0 times, providing headroom to our totex downside of £149 million and outcome delivery incentives downside of £160 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.

Anglian 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 Anglian Water's actual structure in figure 5.2.

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

Anglian Water is a highly geared company. It reported gearing of 78.6% at 31 March 2019. In its forecast plan it showed gearing of 79.7% at 31 March 2021 and 77.1% at 31 March 2025.

The company has committed to reduce gearing to the mid-70s during 2020-25 and it may need to take further action to achieve its target gearing level.

At the time of our final determination Anglian Water has a corporate family credit rating of Baa1 (negative) with Moody's and credit ratings of A- (negative) with S&P and A (stable) with Fitch.

The Board provided assurance that the company is financially resilient under its plan. Qualified assurance was provided following the draft determination in the context of its representations and company remains concerned about the financial resilience in light of the proposed reduction in the allowed return.

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. The company may need to take further steps to improve its financial resilience.

As set out in section 7, the company has proposed a base dividend for 2020-25 that is consistent with its intention to reduce gearing. When considering the payment of any dividend we expect the Board to take account of the financial resilience of the company.

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 adequate steps are being taken by management and 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. Anglian Water has committed to assess it 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 Anglian 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

Anglian Water proposes an average bill profile with a 1.4% reduction. Our bill profile contains a significantly greater reduction of 10.5% over 2020-25.

Anglian Water maintains in its August 2019 representation that its bill and costs, which are significantly higher than its draft determination, are acceptable to customers and submits new research which shows it is supported by two-thirds of customers. The company states that this shows customers are in favour of additional investments rather than cuts to bills. Anglian Water's customer challenge group also comments on this matter in its representation, stating that it is concerned our draft determination might endanger delivery of service improvements supported by Anglian Water's customers. We do not accept these representations for the following reasons:

- The company's acceptability research mischaracterises the situation in Anglian Water's business plan as its planned costs have increased significantly from its historical levels without full justification.
- Our models and assessments allow for efficient expenditure where there is sufficient evidence of need. In Anglian Water's research customers are not told that the independent regulator found the company was inefficient, and its levels of service fell below those of other companies in a number of areas.
- Equally, Anglian Water's customers were not asked whether they preferred the expenditure, bills and outcomes in its plan versus the expenditure, bills and outcomes that will be delivered by other companies. This would be a more valid way for them to gain an understanding of the true support for their plans.
- Our approach ensures customers only pay for efficient costs. Anglian Water has not demonstrated that its customers are willing to pay for inefficient costs. Shareholders are able to fund the additional expenditure required to bring the company to required service levels if they wish or the company may be able to

increase efficiency to obtain reasonable levels. If Anglian Water had provided sufficient evidence to justify higher efficient investment then we would have included this in its final determination.

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. Anglian 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 the Consumer Council for Water;
- Company revenues fall less sharply in 2020 with a gradual bill reduction, reducing impact of any step change in allowances.

Due to deteriorating financial ratios at the end of the period, unlike for some other companies we have not been able to model a completely flat nominal bill for Anglian Water. The company still has a gradual real terms bill reduction over the period but Anglian Water's average bills will go up by a modest amount year-on-year when inflation is added (we assume inflation will add about 2%, or £8, per year). We note that this increase will be below that which would have occurred under the company's draft determination bill profile.

Table 6.1: Average bills (2017-18 CPIH deflated)

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Company April 2019	£422	£421	£418	£418	£419	£416
Draft determinations	£422	£370	£370	£370	£370	£370
Final determinations – before reprofiling	£422	£392	£391	£390	£381	£377
Final determinations	£422	£394	£390	£386	£382	£378

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 (Anglian 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 determination for Anglian Water will deliver a real terms reduction to the average bill between 2020 and 2025.

In addition, Anglian Water commits to:

- increase the capacity of its affordability support so that it can assist 475,000 customers per year;
- increase its social tariff cross subsidy to £7, as supported by customers;
- actively promote all affordability assistance and group the assistance under one brand; and
- undertake 300,000 ExtraCare affordability assessments every year, using these assessments to choose the right affordability support for each customer.

Anglian Water has four bespoke performance commitments on affordability and vulnerability, which will require it to:

- Provide support for 388,100 customers every year through affordability schemes;
- Improve customer views of value for money;
- Maintain the British Standards Institution (BSI) standard for accessible services throughout 2020-25; and
- Increase awareness of its services for vulnerable customers among its customer base.

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	52.3	51.5	53.4	54.5	54.0	265.7
Water network plus	408.2	425.0	424.5	424.6	421.9	2,104.1
Wastewater network plus	557.9	562.6	562.2	578.8	600.4	2,862.0
Bioresources	99.5	97.4	95.8	92.2	91.3	476.3
Residential retail	97.2	82.5	82.4	82.2	81.7	426.0
Total	1,215.1	1,219.0	1,218.3	1,232.3	1,249.3	6,134.1

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	52.3	0.00%	-1.56%	3.96%	2.10%	-0.96%
Water network plus	408.2	0.00%	4.22%	-0.03%	0.03%	-0.64%
Wastewater network plus	557.9	0.00%	0.88%	0.00%	3.03%	3.81%

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 Anglian Water is set out in the 'Bioresources revenue to remunerate fixed costs – Anglian 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	Draft determination	Final determination
Part 1: Revenue to remunerate fixed costs £m 2017-18 FYA CPIH deflated prices (2020-25)			
Total return on capital	N/A	40.7	37.6
Total run-off	N/A	96.0	94.6
Revenue to service RCV	N/A	136.7	132.2
Local authority and Cumulo rates for both treatment and disposal	N/A	15.5	15.5
Fixed share of other direct costs of treatment and disposal	N/A	24.5	31.4
Fixed share of other indirect cost of treatment and disposal	N/A	26.8	34.3
Fixed PAYG revenue	N/A	66.9	81.2
Fixed share of revenue to cover tax	N/A	0.0	0.0
Pension deficit repair contributions	N/A	12.0	12.1
Other fixed costs	N/A	12.0	12.1
Revenue to remunerate fixed costs	451.5	215.6	225.4
Part 2: Variable revenue (£/TDS) 2017-18 FYA CPIH deflated prices (2020-25)			
Unadjusted revenue (£m)	546.7	408.5	476.3
Revenue to remunerate fixed costs	451.5	215.6	225.4
Revenue to remunerate variable costs (£m)	95.2	192.9	250.9
Forecast volume of sludge (TDS)	800,536	800,536	800,536
Variable revenue (£/TDS)	118.9	240.9	313.4

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 Anglian 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)	93.1	94.0	94.8	95.6	98.8	476.3
Forecast volume of sludge (TDS)	156,441	157,911	159,329	160,716	166,139	800,536
Variable revenue (£/TDS)	N/A	N/A	N/A	N/A	N/A	313.4

7 Putting the sector in balance

Key points

- Anglian Water reported gearing of 78.6% as at 31 March 2019. Anglian Water forecasts that its level of gearing (79.7% by 2021 and 77.1% by 2025) will trigger 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'.
- Our current assessment of the company's proposed dividend policy indicates that the company is falling short in a number of areas and we expect greater transparency from the company when reporting on dividends paid over 2020-25 in the annual performance report.
- On executive pay, Anglian Water's measures are 100% aligned to customer delivery, which we acknowledge as being sector leading and best 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[17];
- companies with high levels of gearing share financing gains from high gearing with customers; and
- 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 Anglian Water's proposals is in table 7.1. We comment on the financial resilience of Anglian Water in section 5.2.

Table 7.1: Our assessment of Anglian 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 has confirmed it would implement our default gearing outperformance mechanism within its business plan. The company forecasts that its gearing level will trigger sharing of financing gains with customers during 2020-25.
Voluntary sharing mechanisms Anglian Water has not proposed a voluntary sharing mechanism, and does not propose a company contribution to payment matching or its social tariff over 2020-25. However, it has budgeted £1 million per year for its hardship fund.
Dividend policy for 2020-25 Anglian Water confirms that it is committed to the expectations on dividend policy as set out in our 'Putting the sector in balance' position statement but under our current assessment it falls short in a number of areas set out below. Its revised business plan indicated a base dividend yield of below 4.5% for 2020-25 based on its actual structure, noting its commitment to reduce gearing. The company states that the majority of dividends that flow out of the Company will be injected back as equity. 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'.

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

Our assessment of the company's proposals to balance the interests of customers

The company's dividend policy refers to all of 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 setting dividend payments, the board will have due regard to regulatory targets in meeting obligations to its customers and has detailed the specific obligations and commitments to customers that will be considered. Further correspondence with the company confirms that the level of performance delivery considered will be as set out in the final determination.

The revised base dividend yield is in our view reasonable for a company performing in line with its price determination but the company hasn't indicated that dividends may be either increased or lowered from the base level depending on the actual performance of the company and provides insufficient detail on 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 is 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'.

The company commits to publishing its dividend policy in the Annual Performance Report, and to explaining clearly how dividends declared or paid comply with its dividend policy and how commitments to customers have been considered. It has also committed to signal changes to stakeholders.

We expect Anglian 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'. Specifically further transparency needs to be provided on:

- how performance delivery has impacted on the dividends paid.

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, Anglian Water's measures are 100% directly aligned to customer delivery, which we acknowledge as being sector leading and best practice.

Anglian Water states it is committed to meet the expectations set out in our 'Putting the sector in balance: position statement'. The company has reviewed its policy for 2020-25 the details of which are:

- The previous annual bonus scheme and long-term incentive plan (LTIP) will be replaced by a single scheme, the Deferred Bonus Scheme
- The new scheme will have three sets of measures (i) customer satisfaction measures, including C-Mex, (ii) customer delivery measures, which will include a small number of outcome delivery incentives which customers have identified as being their priority and (iii) a customer centric measure of efficiency.
- Engagement with its online community shows:
  - the 3 measures being evenly weighted
  - the identification of top 5 key metrics, being leakage, pollution incidents, water supply, external sewer flooding and mains bursts
- The results of the online survey will now be validated as they are surprised external sewer flooding came higher than internal sewer flooding. It will also be consulting other stakeholders as vulnerability measures rated low amongst the group surveyed

Our assessment of the company's proposals to balance the interests of customers
• The deferred element of the bonus will be subject to additional performance conditions which require stable serviceability to be maintained over the whole of the deferral period • Stretching targets will, as a minimum, be based on those included in the final determination. • The remuneration committee of Anglian Water will oversee and implement the policy. They will also have discretionary powers to vary or withhold payments for any deterioration in performance and also to look at performance in the round, to ensure focus is maintained on customers' needs. • Further discussion will take place in September with options being presented to the November remuneration committee, which will include for example a discussion / debate on the ranking of C-Mex / D-Mex. • Once the design of the performance conditions for the 2020 scheme has been agreed in November and it has received its final determination, the quantitative targets will be presented at the February remuneration committee meeting. • The policy will receive formal sign off at the March remuneration committee meeting, and will be published in the AIR in June 2020. • Anglian Water will continue to publish details of its policy in the company's Annual Integrated Report. 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 the committee to be equipped with the appropriate tools to carry out its role, including for example, the use of withholding periods, clawback arrangements and underpin / gateway arrangements. We expect Anglian 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 final determination '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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