December 2019

PR19 final determinations

PR19 final determinations: Affinity Water final determination

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About this document

This document supports the 'Notification of the final determination of price controls for Affinity Water' and sets out further details about the final determination price control, service and incentive package for Affinity 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 Affinity Water to deliver;
- the allowed revenue that Affinity 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 Affinity 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 Affinity 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.

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Amendment	**Date**
Table 3.1 page 30 – Amendment made to Water Resources Company August 2019 total (from £237.5 million to £273.5 million)	18 May 2020

1 Summary

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

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

Our PR19 methodology sets out a framework for companies to address the challenges facing the sector with a particular focus on improved service, affordability, increased resilience and greater innovation. We published our draft determination for Affinity 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 Affinity Water. We cover the customer bill profile, costs, outcomes for customers, allowed revenues and our decision for Affinity Water, as its September 2018 business plan was categorised as significant scrutiny, on the outcome delivery incentive cap[3] and lower cost sharing rate. More detail is provided in the following sections of this document.

[3] Caps are used to protect customers from large bill increases – the caps multiplied by the incentive rate is the maximum outperformance payment and performance better than this level does not increase outperformance payments.

Bill profile

Our final determination for Affinity Water will cut average bills by 5.5% in real terms in the 2020-25 period compared to the company's proposed 1.0% 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 Affinity 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)	£172	£172	£172	£171	£171	£170
Draft determination	£172	£150	£150	£151	£151	£151
Final determination	£172	£156	£158	£159	£161	£162

Costs

Our final determination allows wholesale totex of £1,441.4 million. This is:

- £46.7 million higher than in our draft determination; and
- £19.6 million lower than stated in the company's representation on our draft determination.

Our final determination allows Affinity Water £267 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £121 million to improve the environment by efficiently delivering its obligations as set out in the whole Water Industry National Environment Programme (WINEP);
- £62.7 million for supply-demand balance schemes, including for long-term drought resilience; and
- £57.3 million for new meter installations.

Our final determination makes an allowance of £4.5 million for Affinity Water to investigate and develop options to meet the supply requirements of abstraction licence changes in the company's Brett region, through the direct procurement for customers' process.

We make an additional allowance of £83.3 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 Affinity 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 Affinity Water

Area	Measure
Key common performance commitments	• 20% leakage reduction on a three year average basis. This is at least 15% reduction from PR14 performance commitment levels. • 12.5% reduction in per capita consumption by 2024-25 • 17% reduction in water supply interruptions by 2024-25
Bespoke performance commitments	• Improve IT resilience by a 29% reduction in the impact of the disruption to customers and employees because of unplanned interruptions to IT services by 2024-25 • Improve customer view about water quality by 7% reduction in the number of contacts about appearance, taste and odour by 2024-25 • Complete 8 environmental improvement pilot projects, working in partnership with local communities. • Maintain the British Standards Institution (BSI) standard for accessible service throughout 2020-25
Overall incentive package	Overall, the likely range of returns from outcome delivery incentive package in our final determination equates to a return on regulatory equity range of -2.93 (P10) to + 0.77 (P90).

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

Allowed revenues

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

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

	Water Resources	Network plus - water	Wholesale total	Residential retail	Total
Company view of allowed revenue (£m)	210.7	1,210.1	1,420.8	141.6	1,562.4
Final allowed revenues (£m)	208.3	1,121.8	1,330.2	129.2	1,459.3

Note retail revenue is the sum of the margin, retail costs, and adjustments. The residential retail control is an average revenue control. We have included forecast revenue (in real terms) for this 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 Affinity 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.

Affinity Water's Regulatory Capital Value (RCV) growth in 2020-25 is 24.8% and 67.0% of its RCV will be indexed to CPIH in 2025. We bring forward £15 million of revenue from future periods.

We consider that Affinity 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. Affinity Water commits to meeting the expectations set out in our 'Putting the sector in balance position statement'.

The company confirmed it would implement our default gearing outperformance mechanism within its business plan. Under its actual financial structure, Affinity Water expects gearing above the level that would trigger sharing payments under the gearing outperformance sharing mechanism in 2020-25. The company forecasts gearing to reduce to around 77% by the end of the period. The allowed return on capital is lower than the draft determination and this may mean that the company needs to bring forward plans to maintain its financial resilience.

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 during 2020-25.

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. Affinity Water has not proposed any voluntary sharing mechanism. However, the company will introduce a trust fund from 2020-21 with £0.1 million of company money made available per year to support customers who are in severe financial hardship.

We provide further detail on these issues in section 7.

Outcome delivery incentive cap and lower cost sharing assessment

We are not applying an outcome delivery incentive cap or lower cost sharing rate for Affinity Water. Since the initial assessment of business plans, it has engaged positively and its submissions are of sufficient quality (see 'Significant scrutiny application of lower cost sharing rates and outcome delivery incentive cap' technical appendix for details).

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 Affinity 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 Affinity Water representation	Summary of our response
Affinity Water challenges the mains repair, low pressure and supply interruptions over 12 hours performance commitments which it says pose unacceptable outcome delivery incentive risk levels.	We adjust the mains repair performance commitment as part of a sector change and reduce the incentive rate by 30%. We adjust incentive rates for supply interruptions over 12 hours and low pressure in response to representations, see section 2 for more detail.
The company retains its wholesale revenue forecasting incentive mechanism claim for a higher rate of connections above forecast in PR14 but it reduces the claim from £21.9 million to £16.6 million 'to move the discussion forward' as a compromise.	We allow £10.8 million of the claim, where changes are linked to the Mayor of London housing zones and the help to buy scheme. We reject the remaining element as the evidence the company provides is not sufficient and convincing, see section 4 for more detail.
Affinity Water challenges our approach to leakage expenditure. It includes a £12.9 million request for transitional expenditure to deliver the step change in leakage in 2020-25. This is a lower request than in its April plan.	We do not allow the leakage expenditure the company requests. We only allow leakage expenditure where a company goes beyond the forward-looking upper quartile. Affinity Water receives an adjustment of £9.3 million to reflect higher growth in the company's area, see section 2.
Affinity Water challenges our use of the WINEP uncertainty mechanism for the unconfirmed sustainability changes to abstraction licences in the Brett Region (in the company's East supply region estimated cost £110-115 million). It proposes alternative options including delivery via the direct procurement for customers process.	We recognise the issue as a late abstraction licence change and allow £4.5 million to develop and procure the Brett sustainability reduction scheme via the direct procurement for customers process, see section 3 for more detail.

Following an action in our draft determination, Affinity Water provides additional detail about its proposal to improve financial resilience to reduce gearing to 76.8% by 2024-25 from 78.3% with no dividend payments being made from 2018-2025. Affinity Water proposes a higher target threshold for its financial ratios on a notional basis and in doing so proposes to advance revenue by 3.4% on account of it being a small water only company.	The company has obtained independent assurance to support its conclusions on the long-term viability of its actual capital structure Our assumptions on dividends and equity injections are consistent with the company representation. We have not accepted all of the proposals in the company's representation and so the company may need to bring forward its plans to improve its financial resilience. We do not apply a higher target headroom in our assessment of financial ratios, as there is not sufficient and convincing evidence to support the company's rationale and Affinity Water with RCV greater than £1 billion is not a small company. We allow a PAYG uplift of 1.11% to bring forward £15 million of revenue in the 2020-25 period to improve notional financeability. We set out further detail in section 5.
Affinity Water is concerned at the allowed return on capital level and the further 37 basis points reduction signalled at draft determination. It states that this makes its notional company financeability challenging which leads to a higher PAYG rate being required. It states that a further allowed return on capital decrease will risk both the notional and actual company financeability.	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 financeability for the final determination is made in the context of changes made to the draft determination in our final determination. We consider the company's final determination is financeable on the basis of the notional structure based on the allowed revenues which include a reasonable allowed return on capital. The final determination is sufficient to ensure the company will be in a position to deliver its obligations and commitments to customers. It is the company's responsibility to maintain financial resilience under its actual financial structure and it must bear the risks associated with its choice of capital and financing structure.

We also received representations on Affinity 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
The Consumer Council for Water (CCWater) is broadly supportive of the draft determination, in particular, the revised performance commitments for water supply interruptions and IT supply interruptions. It is supportive of initiatives to improve the security of water resources, including water supply transfers, as long as they provide best value for customers and are delivered cost effectively.	We set out our approach to managing these issues in section 3, our 'Strategic regional water resource solutions appendix' and our 'Securing cost efficiency technical appendix'.
Group Against Reservoir Development welcomes our approach to strategic regional water resources but considers our draft determination allowances are too generous. It challenges Affinity Water's water resources management plan need for a new supply source by 2037 and thinks a 'decision on the next major source for the South East can and should be delayed 5 years to 2027' as the 2022 target it says will not provide enough time for detailed investigations to be completed.	The strategic regional water resource solutions will be developed with the regional need (scale and timing) in mind. This programme allows more options to be considered in parallel meaning more flexibility as uncertainties reduce. There is customer protection on this funding meaning that only efficient spend on this programme is kept by the company in the early stages, all inefficient spend and underspend is returned to customers, see the 'Strategic regional water resource solutions appendix' for more detail.

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)	1,350.8	1,459.3
Wholesale cost allowance[1] (£m, 2017-18 CPIH deflated)	1,394.7	1,441.4
Retail cost allowance (£m, nominal)	139.6	142.2
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 Affinity Water are:

- We make a £9.3 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 £4.5 million allowance for Affinity Water to investigate and develop options to meet the supply requirements of abstraction licence changes in the company's Brett region, through the direct procurement for customers' route.
- 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 also amend the underperformance payment rate on mains repairs for all companies to industry average, to provide a more balanced spread of risks and incentives.
- 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.
- 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 retain an uplift to PAYG rates to bring forward allowed revenue by £15 million to improve notional financeability. This compares to an increase in PAYG revenue of £18 million for the draft determination.
- We are increasing revenue through the wholesale revenue forecasting incentive mechanism by £16.2 million compared to the draft determination. This includes £10.8 million for a revenue claim in respect of higher revenue from new connections covered by the Mayor of London housing zones and the help to buy scheme.
- We revise Affinity 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 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'.

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 also amend the underperformance payment rate on mains repairs for all companies to industry average. This will provide a more balanced spread of incentives and risks across its performance commitments
- 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. Together these two changes provide a more balanced spread of incentives and risks on water supply interruptions
- 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.
- We amend the low pressure outcome delivery incentive rate from the mean of company proposals to the median value.
- We reduce the outcome delivery incentive rate for water supply interruptions longer than 12 hours to account for the overlap between this bespoke measure and the company's common performance commitment.

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.

Affinity Water's performance is currently around average in the sector. It has achieved 90% of its 2018-19 performance commitment levels. However it failed its leakage performance commitment levels in 2017-18 and 2018-19 and has incurred an under-performance payment. The company is currently a lower quartile performer on the industry standard water supply interruptions measure and appears to have been heavily impacted by freeze-thaw with worse performance than previous years.

Its September plan proposed stretching performance levels for the standard water supply interruptions, which would require significant improvement on past performance, and the largest percentage reduction in per capita consumption across the industry. The company noted that, on water supply interruptions longer than 12 hours, 'We have failed to deliver our policy commitments for the first three years of the AMP and the number of customers experiencing supply interruptions greater than 12 hours during 2017/18 was particularly high. We take these failures very seriously and have conducted in-depth analysis to understand the underlying cause

of failures and have put in place a robust recovery plan. We recognise that we still have significant way to go over the next two years' However, the company proposed few bespoke performance commitments and those proposed were lacking in ambition. Its leakage reduction level was not stretching, even in light of current performance. Its outcome delivery incentive rates were a concern, including showing insufficient evidence of customer engagement on the use of outperformance payments.

In its April Business plan, the company increased its proposed performance commitments from 19 to 28, 11 of these were related to resilience. The company proposed a 23% reduction in leakage and sought £48 million of additional funding to reduce the gap to industry upper quartile performance by 2024-25. Affinity Water also amended its outcome delivery incentive rates, basing these mainly on industry average. It placed most financial incentives on leakage and supply interruptions.

In its draft determination, we intervened in the company's performance commitment level for mains repairs and performance deadband for compliance risk index. Our most material interventions were to increase financial incentives for underperformance on supply interruptions and asset health. We also reduced its proposed leakage reduction to 20%, providing no additional funding, which we considered a stretching performance commitment for the company within base funding.

In its representations, the company challenges mains repairs, low pressure and supply interruptions over 12 hours performance commitments which it says pose unacceptable outcome delivery incentive risk levels.

The company is concerned that the mains repairs levels are unachievable and leave it with significant risk of underperformance payments. It states that factors outside of its control (e.g. extreme weather) impact its performance. We acknowledge that extreme weather can have an impact on mains repairs performance, but this impacts all companies and should even out over the 2020-25 period. The company proposes levels at a value worse than performance in five out of the last seven years, which we do not consider to be sufficiently stretching. We amend the base levels of mains repairs to an average of the best five years' performance, as we now consider the use of this information to set the forward-looking base level provides a more representative level and ensures companies maintain good performance to improve the overall health of their assets over the longer-term. We increase the levels for mains repairs by a reducing percentage, for all companies, in all years to allow companies the flexibility to use proactive mains repairs to reduce leakage.

The company also claims that the risk of underperformance payments on mains repairs is disproportionate. We also amend the underperformance payment rate on mains repairs for all companies to industry average, to provide a more balanced spread of incentives and risks across the company's performance commitments. We note that the company's performance in 2018-19 was better than expected.

On water supply interruptions above 12 hours, the company considers that it is disproportionate of us to expect the same level of financial incentives in the 2015-20 period to continue in the 2020-25 period, other incentives will overlap, in particular, interruptions of greater than 3 hours. It also considers it more difficult to manage the risk of long interruptions. While we consider the evidence that it is more difficult to manage long interruptions to be unconvincing and note the company's poor performance on this measure, we acknowledge that there is an overlap in incentives and adjust the incentive rates to account for this.

On low pressure, the company makes representations to reduce its underperformance rates, it does not support our use of industry mean outcome delivery incentive rates, preferring the median, and considers that its customers place a low value on low pressure. It also claims that our view of it as a poor performer is erroneous. We note that the company uses industry wide willingness to pay data to set its outcome delivery incentive rates rather than the views of its customers. We agree with the company that use of a median rather than mean is appropriate and so have adjusted the final determination for this, which reduces the underperformance rate by almost half, but we continue to consider that the company is a poor performer, so make no further adjustment to our final determination for this reason. Consistent with our review of the use of median and mean for calculating incentive rates, we amend sewer collapses and sewer blockages rates using the median value.

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

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

2.1 Customer engagement

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

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

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

In our initial assessment of plans we highlighted a number of concerns regarding Affinity Water's evidence of customer engagement submitted as part of its September 2018 business plan. These included lack of primary willingness to pay research; lack of evidence of insight gained from analysis of customer data; limited evidence of engagement with future customers or those that have experienced resilience issues and lack of evidence of the acceptability and affordability of the submitted version of the business plan.

In its April 2019 revised business plan, the company submitted additional evidence of customer support on: the affordability and acceptability of the final bill profile, willingness to pay quantitative valuations and the incentives and rewards for performance commitments. We found that the research submitted was extensive, with over 1,800 customers participating in online studies and focus groups. We assessed phase one and two of the company's willingness to pay research to be of satisfactory quality and its customer's valuations were incorporated in setting its outcome delivery incentives.

We consider that the phase three willingness to pay research submitted as late evidence to the company's April Business plan is of sufficient quality and in the final determination are allowing the company outperformance payments for the early delivery of river restoration schemes and setting outcome delivery incentive rates according to its customer valuation research.

In Affinity Water's August 2019 representations to our draft determination, the company submits two new pieces of customer engagement research on the

acceptability of bill profiles. The research pieces are robust in terms of sample size with 1,000 or above customers being tested in each survey, although we found that there was a lack of educational material provided to the customer. For example, among the most common reasons customers felt the bill profiles were not acceptable was that they felt they needed further education and proof in order to understand the benefit. However, the research is indicative of customers' views and consistent with the research findings of other companies. We are therefore using it in determining the company's bill profile. See section 6 for further details.

In its representations to our draft determination Affinity Water states that for low pressure we have not aligned its outcome delivery incentive rate with its customers' views, who place a low value on the performance commitment. We also note that the company uses industry wide willingness to pay data to set its outcome delivery incentive rates which is not the views of its customers. The outcome delivery incentive rate on low pressure is discussed further in section 2 above. Affinity Water's customer challenge group does not submit any representations to our draft determinations.

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

Affinity 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 'Affinity Water - Outcomes performance commitment appendix'.

The key changes we are making in the final determination are set out in table 2.1[4] below. 'Affinity 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.

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

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

Key changes
Increasing the water supply interruptions 2024-25 level (making it easier to achieve) to five minutes, with an amended glidepath in the first four years taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company. 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.
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 also amend the underperformance payment rate on mains repairs for all companies[4] to industry average which will provide a more balanced spread of risks and incentives for the company.
Adjusting the deadband on the Compliance Risk Index to a score of 2.00 throughout the period reducing the risk of underperformance payments in the last three years of the 2020-25. This allows more flexibility in performance to take into account the uncertainty created by the ban on the use of metaldehyde being overturned by the High Court and also aligns with the median level of current company performance.
Reducing the low pressure underperformance rate to median rather than mean. This is as part of a methodology change covered in the 'Delivering outcomes for customers policy appendix'.
Accepting the new performance commitment in relation to water quality contacts, but increasing the stretch of the performance commitment levels since the company does not propose improvement and does not provide convincing evidence to demonstrate the potential impact of the Grafham bulk supply or how it has determined the potential impact. Accepting the underperformance rate in relation to water quality contacts. The complete water quality contacts asset health measure on appearance, taste and odour Affinity Water proposed in response to our feedback at draft determination.
Reducing the underperformance payments and increasing outperformance payments in relation to unplanned supply interruptions greater than 12 hours. We consider that there is sufficient and convincing evidence that the rate should be reduced to address the overlaps with other PR19 outcome delivery incentives, but insufficient evidence to remove financial incentives as there is evidence that customers support a financial incentive and the overlaps are not absolute.
Accepting the company's proposal to include an underperformance rate in relation to its WINEP performance commitments. The company proposed the rates instead of changing the performance commitment definitions that include both amber and green schemes.

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) [PR19AFW_W-A1]	X		X	
Water supply interruptions [PR19AFW_W-D1]	X	X	X	
Leakage [PR19AFW_W-B1]	X	X	X	
Per capita consumption [PR19AFW_R-B1]	X	X	X	
Mains repairs [PR19AFW_W-D4]	X		X	
Unplanned outage [PR19AFW_W-D3]	X		X	
Risk of severe restrictions in a drought [PR19AFW_W-D2]				X
Priority services for customers in vulnerable circumstances [PR19AFW_R-N3]				X
C-MeX: Customer measure of experience [PR19AFW_R-C1]	X	X	X	
D-MeX: Developer services measure of experience [PR19AFW_W-C1]	X	X	X	

Table 2.3: Summary of performance commitments: bespoke performance commitments

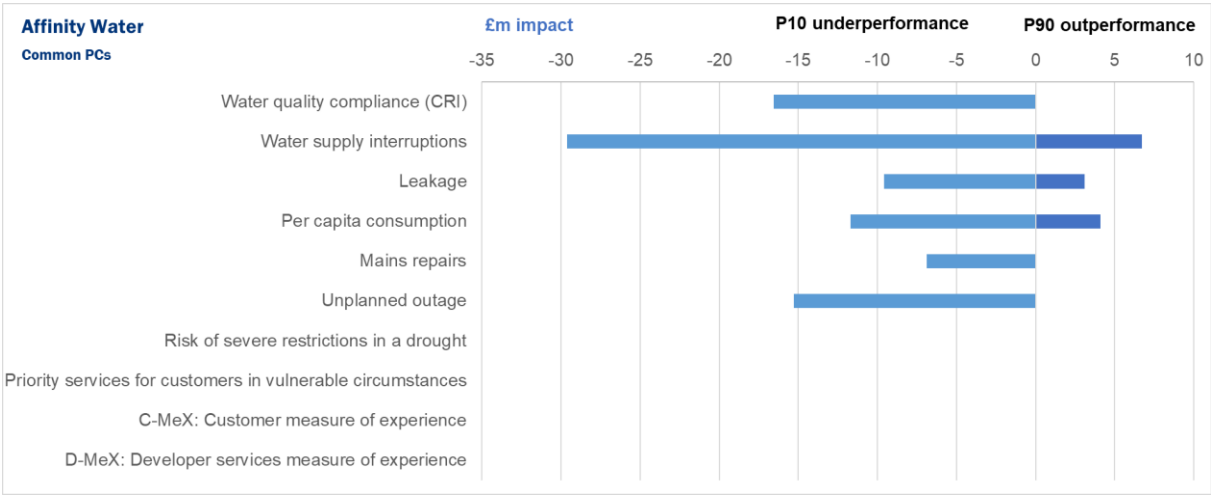
Name of bespoke performance commitment	Type of outcome delivery incentive				
	Financial				Reputational
	Under	Out	In-period	End of period	
Average time properties experience low pressure [PR19AFW_W-D5a]					X
Customers in vulnerable circumstances satisfied with our service (receiving financial help) [PR19AFW_R-C2]					X
Customers in vulnerable circumstances who found us easy to deal with (receiving financial help) [PR19AFW_R-C3]					X
Environmental innovation - delivery of community projects [PR19AFW_W-B2]		X	X		
Reducing the total number of void properties by identifying false voids [PR19AFW_R-C4]	X	X	X		
River restoration [PR19AFW_W-B3]	X	X	X		
Abstraction reduction [PR19AFW_W-B4]	X		X		
Number of sources operating under the Abstraction Incentive Mechanism [PR19AFW_W-B5]	X	X	X		
Properties at risk of receiving low pressure [PR19AFW_W-D5b]	X		X		
Number of occupied properties not billed (Gap sites) [PR19AFW_W-C2]	X		X		
Unplanned interruptions to supply over 12 hours [PR19AFW_W-N1]	X	X	X		
Customer contacts per 1000 population for Water Quality (taste, odour & appearance) [PR19AFW_W-N2]	X		X		
BSI accreditation [PR19AFW_R-N4]					X
IT resilience [PR19AFW_R-N6]					X
Customers in vulnerable circumstances satisfied with our service (not receiving financial help) [PR19AFW_R-N7]					X
Customers in vulnerable circumstances who found us easy to deal with (not receiving financial help) [PR19AFW_R-N8]					X
Value for Money Survey [PR19AFW_R-N9]					X
WINEP Delivery [PR19AFW_NEP01]					X

Figure 2.1 and figure 2.2 provide an indication of the financial value of each of Affinity 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 payments for bespoke performance commitments over 2020-25 (£ million)

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

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

	Draft determination		Final determination	
	% of 5 year regulatory equity		% of 5 year regulatory equity	
	P10	P90	P10	P90
Affinity Water	-3.15	+ 0.15	-2.93	+ 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. Affinity Water's September 2018 business plan falls significantly short of demonstrating that the company has an integrated resilience framework that will deliver resilience in the round. It does however provide evidence that the company has attempted to understand its baseline maturity and of the company's risk assessment before and after the implementation of proposed mitigations, including long-term risks to 2035.

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 Affinity Water an action (AFW.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.

Affinity Water's resilience action plan includes some good elements but falls short of our expectations in many areas. The company provides evidence that it has put in place some elements of an integrated resilience framework and that it is adopting best practice from within the sector. However, we have particular concerns that:

- the company does not develop its action plan based on a maturity assessment, therefore it is difficult to determine the extent to which the actions identified target the right areas for improvement. The company does not refer to the maturity assessment presented in its initial business plan and states that its initial baseline maturity assessment will take place in 2020. We expect the company to clearly demonstrate how its action plan is influenced by an understanding of its baseline maturity.
- the company fails to provide sufficient evidence that the concerns we raised in our initial assessment of business plans have been adequately addressed; specifically how the company has assigned risk scores and prioritised 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 demonstrate a clear line of sight between risks to resilience, planned mitigations and its package of outcomes. We expect the resilience action plan to demonstrate how systems will be developed to provide a clear link between risks to resilience, maturity improvements and mitigations and the ability to deliver its package of outcomes.

Overall, Affinity 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 Affinity Water is £1,441.4 million for the wholesale services. This compares with £1,394.7 million at draft determination. In retail, our final determination allowance is £142.2 million, compared with £139.6 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 4th placed company as an efficiency benchmark, rather than the 5th place (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.
- For final determinations we apply a frontier shift challenge of 1.1% per year to metering enhancement costs.

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

Affinity Water submitted a business plan with total costs above what it has incurred historically, although base expenditure was in line with historical levels. The costs were less efficient than our efficient baselines for 2020-25. To ensure customers pay only for efficient costs we challenge the company's proposed costs and investment programme where appropriate. At draft determinations, the company had a cost gap of around 3.5%. For our final determinations we have increased our allowances for

both base and enhancement expenditure such that the gap narrows to around 1.4% or £22.8 million.

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 'Affinity 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	44.3	54.6	61.2	75.9	43.0	279.0	273.5[5]
Water network plus	242.7	241.5	238.2	225.2	214.8	1,162.4	1,187.5
Total	**287.0**	**296.1**	**299.4**	**301.0**	**257.8**	**1,441.4**	**1,460.9**

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.

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,

[5] Amendment made to Water Resources Company August 2019 total (£237.5 million to £273.5 million)

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.

Our base costs for wholesale water include operating and maintenance costs, as well as costs associated with the connection of new developments (i.e. new developments and new connection costs) and costs for addressing low pressure.

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	Total
Base expenditure	88.1	1,003.0	1,091.0
Enhancement expenditure	128.7	137.9	266.6
Operating lease adjustment	-	-12.0	-12.0
Gross allowed totex for calculation of cost sharing rates	216.8	1,128.9	1,345.6
Strategic regional water resources solutions and other cash items	62.3	23.2	85.4
Third party costs	-	10.3	10.3
Non-section 185 diversions	-	-	-
Ex-ante cost sharing adjustment	-	-	-
Gross totex	279.0	1,162.4	1,441.4
Grants and contributions after adjustment for income offset[1]	-	80.9	80.9
Net allowed totex for calculating PAYG	279.0	1,081.5	1,360.5
Pensions deficit recovery costs[2]	-	-	-
Total	**279.0**	**1,081.5**	**1,360.5**

[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	1,363.2	1,367.0	1,310.5	1,357.6

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

	Draft determination allowance	Final determination allowance
Base expenditure	1,046.9	1,091.0
Enhancement	263.6	266.6
- Environmental obligations (WINEP)	117.1	121.0
- Supply-demand balance and metering enhancement	121.6	120.0
- Resilience enhancement	13.6	13.6
- Other enhancement (including raw water deterioration, and meeting lead standards)	11.4	11.9

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	81.9	88.1
Water Network plus	1,018.1	1,003.0
Total	**1,100.0**	**1,091.0**

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 also make 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 August 2019 representations made in response to our 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 Affinity Water's area for the period 2020-25 is higher than the historical average growth rate in the sector, we make a positive adjustment to the company's wholesale water base allowance of approximately £9.3 million. More details of our approach can be found in the 'Securing cost efficiency technical appendix'.

3.3 Enhancement expenditure

For wholesale enhancement expenditure we challenge the scope of work, the evidence provided to support solution options and the efficient delivery of programmes. We cost benchmark with the rest of the industry where we 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	129.6	128.7
Water Network plus	137.5	137.9
Total	**267.1**	**266.6**

Our final determination allows Affinity Water £267 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £121 million to improve the environment by efficiently delivering its obligations as set out in the WINEP;

- £62.7 million for supply-demand balance schemes delivering long-term drought resilience; and
- £57.3 million for new meter installations.

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

Leakage

We welcome Affinity Water's reduction in its requested enhancement costs for leakage in response to our draft determination, from £48.2 million to £12.9 million. However, 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 not achieved by Affinity Water, our allowance is unchanged from draft determination and we do not allow any of the requested £12.9 million under enhancement. In 'Securing cost efficiency technical appendix' we set out our policy on the funding of leakage reduction costs, including how we derive the upper quartile threshold for leakage enhancement costs.

Metering

Our allowance for final determination has reduced by £1.6 million to £57.3 million for new meter installations. This is as a result of applying frontier shift to the metering model. We explain our approach and how we apply the frontier shift assumption to metering costs in the 'Securing cost efficiency technical appendix'.

Water supply in the Brett region

Our final determination makes an allowance of £4.5 million for Affinity Water to investigate and develop options to meet the supply requirements of abstraction licence changes in the company's Brett region, through the direct procurement for customers' route.

At draft determination we included costs associated with this abstraction licence change as a potential uplift through the WINEP uncertainty mechanism. In its representation to the draft determination the company presents further detail of the

costs, and some basic consideration of a range of options (predominantly desalination) and alternative delivery mechanisms (including direct procurement for customers).

Our final determination decision is to allow direct procurement for customers' funding for the Brett area. This allows desalination options of different sizes to be investigated before 2021 when the environmental investigations will be complete and the scale of the abstraction licence change will be confirmed. Our cost allowance means alternative options to desalination can be explored, which the company presents as non-preferred. It is unclear why the neighbouring Essex and Suffolk Water system can only offer a maximum of 5 Ml/d at peak only, when Essex and Suffolk Water's water resources management plan presents a much larger dry year annual average surplus in 2025. Furthermore, given the large allowance we make in the final determination for Anglian Water to interconnect its water resource zones by 2025, we would also expect regional trading and source development options to be considered more fully. In 2021 the decision regarding the solution, its size and delivery through direct procurement for customers' route will be taken, following the standard process for direct procurement for customers' schemes.

Strategic regional water resource development

We make an additional allowance in our final determination for strategic water resource development to support the delivery of long-term drought resilience. We set out our policy on funding of these strategic solutions in the 'Strategic regional water resource solutions appendix'. We make no change to this allowance since draft determination, making up to £83.3 million available for this programme of work.

3.4 Cost sharing

In the water resources and water 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.

Affinity Water's September 2018 business plan was assessed as requiring significant scrutiny at the initial assessment of plans. In our PR19 methodology we set out that for companies whose plans are assessed to need significant scrutiny, we will set a reduced cost sharing rate of 75% for underperformance and 25% for outperformance. When we published our view of costs at the initial assessment of plans we said we would decide at the final determination whether to apply a reduced cost sharing rate, or calculate the rates based on our approach for slow track companies, to reflect whether the company had engaged positively to address our concerns with the plan over the remainder of the price review process. We are not applying a lower cost sharing rate for Affinity Water. Since the initial assessment of business plans, it has engaged positively and its submissions are of sufficient quality (see 'Significant scrutiny application of lower cost sharing rates and outcome delivery incentive cap' technical appendix for details).

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

	Water resources	Network plus - water
Totex for cost sharing rates – September 2018 business plan (£m)	243.3	1,174.7
Totex for cost sharing rates – August 2019 (£m)	211.5	1,155.6
Weighted company view of totex for cost sharing rates (£m)	227.4	1,165.2
Gross allowed totex for cost sharing rates (£m)	216.8	1,128.9
Cost sharing ratio	1.03	
Cost sharing rate – outperformance	47%	
Cost sharing rate – underperformance	53%	
Grants and contributions (£m)	-	100.8
Abstraction charges and business rates (£m)	30.2	61.0
Net allowed totex subject to cost sharing reconciliation (£m)	186.5	967.1

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.

Affinity Water submitted two cost adjustment claims in residential retail in relation to exceptional circumstances driving higher costs. One was for high population transience and the other for high regional wages. For population transience, we consider the changes we made at draft determinations related to transience – modifying the sign of the coefficient to positive and adding transience as a variable to one total retail cost model – were sufficient to fully account for transience costs and therefore make no further adjustment. For regional wages, Affinity Water does not resubmit the claim in its August 2019 representation to the draft determination.

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

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Residential retail	27.0	27.7	28.4	29.2	29.9	142.2
Company view	28.1	28.7	29.1	29.8	29.8	145.5

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.

Brett River Sustainability Reduction scheme

The Brett river sustainability reduction scheme is needed to address the Environment Agency concerns that this water body has been seriously damaged. A scheme is likely to be needed to address an abstraction reduction in the catchment areas to maintain the rivers flow. Affinity Water has agreed that the options to deliver this scheme may be suitable for a direct procurement for customers process which delivers a scheme by procuring a third-party (a competitively appointed provider) to design, build, finance, operate and maintain infrastructure. Affinity 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 land necessary for construction activities to commence;
- delivering some of the site enabling works; and
- works to prepare for any interface between the scheme and Affinity Water's network.

We allow costs 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 Affinity Water which will be determined by a competitive procurement process to be conducted by Affinity Water. We do not expect Affinity Water's customers to start paying for a competitively appointed provider's revenues until the next price control period.

Consideration of representations on our draft determination

Affinity Water in its representation requests that we consider the Brett river sustainability reduction scheme as either an outcome delivery incentive, a direct procurement for customers or a strategic regional water resource solution. 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 the licence modifications, necessary to enable the delivery of the scheme through direct procurement for customers, in 2020. Our expectation is that the 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 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 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 Brett river sustainability reduction scheme we specify 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 Brett river sustainability reduction scheme, no bespoke outcomes were proposed by Affinity Water. We have determined that bespoke outcomes specific to direct procurement for customers for the Brett river sustainability reduction scheme are not appropriate for this period 2020-25 due to the uncertainty at this stage about the scope of the scheme.

Affinity Water identifies a number of potential strategic regional water resource solutions that may be suitable for direct procurement for customers, for example the Thames Water-Affinity Water transfer and the Anglian Water-Affinity Water transfer solutions. We expect these and any other major schemes which may arise due to significant changes to the Affinity 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 Affinity 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 £1,459.3 million of revenue across all price controls for Affinity Water in the final determination, compared to £1,350.8 million in the draft determination and £1,562.4 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 retain an uplift to PAYG rates to bring forward allowed revenue by £15 million to improve notional financeability. This compares to an increase in PAYG revenue of £18 million for the draft determination.
- Allowed revenue includes Affinity Water's contribution to the innovation competition.
- We revise our approach to calculating grants and contributions.
- We reflect Affinity 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 are revising our view of Affinity Water's claim within the wholesale revenue forecasting incentive mechanism. We are including the amount of the revenue claim in respect of higher revenue from new connections covered by the Mayor of London housing zones and the help to buy scheme (£10.8 million). However, we are retaining our intervention to exclude the additional revenue claimed in relation to the remainder of the increase in new connections and infrastructure charges (£5.8 million). We explain our assessment in detail in 'Affinity Water - Accounting for past delivery additional information.' Taking account of the company's latest information, we are increasing revenue by £16.2 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.

Wholesale controls

For the wholesale controls (that is water resources and water network plus), 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 Affinity 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	Total – Final determination	Total - Draft determination
Pay as you go	101.5	665.3	766.8	694.6
RCV run-off	80.2	248.9	329.1	339.8
Allowed return on capital	23.7	145.5	169.1	184.5
Revenue adjustments for PR14 reconciliations	1.5	-14.2	-12.7	-29.1
Fast track reward	0.0	0.0	0.0	0.0
Tax	1.8	2.5	4.3	0.0
Grants and contributions after adjustment for income offset (price control)	0.0	80.9	80.9	47.4
Deduct non-price control income	0.0	-10.6	-10.6	-10.6
Innovation competition	0.0	4.8	4.8	0.0
Revenue re-profiling	-0.2	-1.3	-1.5	-1.3
Final allowed revenues	208.3	1,121.8	1,330.2	1,225.2

We set out the calculation of allowed revenue for each wholesale control on an annual basis in the 'Affinity Water – Allowed revenue appendix' in tables 1.1 and 1.2.

In our new strategy for regulating water 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 Affinity 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[6], 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.

4.1.1 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 adjustments to residential retail (see table 4.2 below) – the full calculation is set out in our financial models.

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

- Our methodology set out an early view of the retail margin that applies for the retail price controls. This was used by Affinity 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)	1,297.5	1,384.1
Proportion of wholesale revenue allocated to residential (%)	81.7%	81.7%
Residential retail costs (£m)	139.6	142.2
Total retail costs (£m)	**1,200.1**	**1,273.4**
Residential retail net margin (%)	1.0%	1.0%
Residential retail net margin (£m)	**12.0**	**12.7**
Residential retail adjustments (£m)[1]	-13.4	-12.0
Residential retail revenue (£m)[2]	**138.2**	**143.0**

[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 'Affinity Water - Allowed revenue appendix' in table 1.3.

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 'Affinity Water - Allowed revenue appendix', tables 2.1 and 2.2.

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	Total
Totex allowance (£m)	279.0	1,081.5	1,360.5
Final determination PAYG rate (%)	36.4%	61.5%	56.4%
Pay as you go totex (£m)	101.5	665.3	766.8
Pension deficit recovery cost (£m)	-	-	-
Total pay as you go (£m)	101.5	665.3	766.8

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

	Water resources	Water network plus
Original company plan (%)	40.1%	63.0%
Draft determination (%)	33.3%	56.9%
Final determination (%)	36.4%	61.5%

In the draft determination, we applied Affinity Water's approach to PAYG rates of recovering in each year an amount equivalent to operating costs plus infrastructure renewal costs. We applied a technical intervention to amend the PAYG rates proposed in the business plan to reflect our view of the mix of operating and capital expenditure compared with the business plan. In its revised business plan, Affinity Water proposed an average 7.6% increase to PAYG to improve notional financeability. We did not consider the scope of the increase appropriate and intervened to reduce the increase to an average of 1.3% across all years and all wholesale controls.

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

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

In its representations, Affinity Water states that for the final determination the company requires a minimum uplift of 3.4% from the draft determination level to improve notional financeability.

As for the draft determination, we are bringing forward revenue of £15 million to increase cash flows in the 2020-25 period to improve notional financeability through an uplift to PAYG rates. We assess an uplift to PAYG rates for all years for all wholesale controls of 1.11% to be sufficient. This compares to 1.30% for the draft determination and 4.70% requested by the company in its representations. 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 the business plan Affinity Water proposed allocations of the RCV for Water Resources price control based on Ofwat guidance. We are allocating the company's RCV between the existing wholesale control and water resources in accordance with the proportions proposed by Affinity 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
RCV – 31 March 2020	1,185.7	
% of RCV allocated by control	11.00%	89.00%
RCV – 31 March 2020	130.4	1,055.3
Midnight adjustments to RCV	-3.6	-29.5
Midnight adjustments relating to operating leases	-	12.5
Opening RCV – 1 April 2020	126.7	1,038.3

4.2.3 Allowed return on capital

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

Affinity Water's business plan incorporates the early view allowed return on capital for the wholesale price controls of 3.30% - CPIH deflated (2.30% - RPI deflated) that we state in the PR19 methodology. 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	Total
RPI inflated RCV	63.4	519.1	582.5
CPIH inflated RCV	63.4	519.1	582.5
Other adjustments	-	-	-
Total RCV	**126.7**	**1,038.3**	**1,165.0**

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

	Water resources	Water network plus	Total
RPI inflated RCV	41.5	437.6	479.1
CPIH inflated RCV	39.7	418.1	457.8
Post 2020 investment	145.3	371.8	517.2
Other adjustments	-	-	-
Total RCV	**226.6**	**1,227.5**	**1,454.1**

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

	Water resources	Water network plus	Total
RPI inflated RCV	5.1	46.1	51.1
CPIH inflated RCV	7.5	68.4	75.9
Post 2020 investment	11.1	31.0	42.1
Other adjustments	-	-	-
Allowed return on capital	23.7	145.5	169.1
Company April 2019 – return on capital	25.2	164.8	190.0

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 'Affinity Water - Allowed revenue appendix' in tables 4.1 and 4.2.

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 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	Total
CPIH inflated RCV	23.7	101.0	124.7
RPI inflated RCV	24.3	103.5	127.8
Post 2020 investment	32.2	44.4	76.6
Total RCV run-off	**80.2**	**248.9**	**329.1**

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).

In the draft determination we intervened to remove a number of adjustments to RCV run-off rates proposed by Affinity Water resulting in a reduction to the company's RCV run-off rates of 0.2% on average. We applied Affinity Water's underlying RCV run-off rates which are based on the depreciation rate for each wholesale control.

In its representations, Affinity Water confirms its approach to underlying RCV run-off rates. In the representation business plan tables, the company proposes changes to RCV run-off rates for the water resources and water network plus controls to profile bills which it sets out is NPV neutral. We set out our approach to bill profiles for Affinity Water in section 6.1 and the adjustments we make for revenue re-profiling in table 4.1. We therefore maintain the approach for draft determinations and apply the company's RCV run-off rates excluding adjustments 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
Company April 2019 (%)	7.66%	4.11%
Draft determination (%)	7.48%	3.89%
Final determination (%)	7.48%	3.89%

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 'Affinity Water - Allowed revenue appendix' in tables 5.1 and 5.2.

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. 'Affinity 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 'Affinity 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	No interventions required.
Residential retail revenue	We are intervening to reinstate the value in the 15 July 2019 submitted reconciliation model for reforecast unmetered water customers in 2016-17 of 667,225 to replace the figure contained in the submitted table R9 of 667,255. 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 3.85% for the 'Materiality threshold for financing adjustment - Discount Rate' in line with the 'PR14 reconciliation rulebook'. Overall, our minor interventions do not result in any changes to the total residential retail revenue payment at the end of the 2015-20 period which remains at £1.282 million.
Wholesale revenue forecasting incentive mechanism	We are including the amount of the revenue claim in respect of higher revenue from new connections covered by the Mayor of London housing zones and the help to buy scheme (£10.8 million). However, we are retaining our intervention to exclude the additional revenue claimed in relation to the remainder of the increase in new connections and infrastructure charges (£5.8 million). We explain our assessment in detail in 'Affinity Water - Accounting for past delivery additional information.' Our intervention reduces the total wholesale revenue forecasting incentive mechanism adjustment at the end of the 2015-20 period from £12.792 million in Affinity Water's 15 July 2019 submission to £0.537 million.
Totex	We are intervening to change the 'Water: Final menu choice' figure to full decimal accuracy as calculated in the 'PR14 populated final determination models'. Our minor intervention increases the water totex RCV adjustment at the end of the period from £3.992 million to £4.010 million and reduces the water totex revenue adjustment at the end of the period from - £0.083 million to - £0.064 million.
Land sales	No interventions required.
Residential retail service incentive mechanism	We are intervening to set Affinity Water's residential retail service incentive mechanism adjustment to -8.18% of residential retail revenue to reflect its performance from 2015-16 to 2018-19. This equates to -£11.459 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	-13.4	-13.4
Residential retail revenue	N/A	N/A	1.3	1.3
Wholesale revenue forecasting incentive mechanism	N/A	N/A	12.8	0.5
Totex	4.0	4.0	-0.1	-0.1
Land sales	-0.8	-0.8	N/A	N/A
Residential retail service incentive mechanism	N/A	N/A	-8.6	-11.5
PR09 blind year adjustments[2]	-36.4	-36.4	1.0	1.0
Water trading	N/A	N/A	0.0	0.0
Other adjustments	0.0	0.0	0.0	0.0
Total	**-33.2**	**-33.2**	**-7.0**	**-22.1**
Total post profiling[3]	N/A	N/A	-7.5	-23.4

[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 'Affinity 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	Total
Fast track reward	0.0	0.0	0.0
Tax	1.8	2.5	4.3
Grants and contributions (price control)	0.0	80.9	80.9
Deduct non-price control income	0.0	-10.6	-10.6

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'.

Affinity Water provided information in data tables relevant to the calculation of the expected tax charge. Affinity Water also provides revised tax information in its representation, to reflect changes to totex and the tax profile in the draft determination. We accept the information provided by the company and apply this to the final determination. Our financial model calculates a higher level of taxable profits than at draft determination, so the resulting tax allowance is higher. This difference is mostly driven by the higher final allowed revenues calculated by the financial model for the final determination, which are a result of our interventions.

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

	Water resources	Water network plus	Total
Tax	1.8	2.5	4.3

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)	0.00	100.8	0.0	0.0	100.8

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

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Grants & contributions (price control)	0.0	80.9	0.0	0.0	80.9

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	0.0	0.0	0.0	0.0

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	Total
Non-price control income	0.0	-10.6	-10.6

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.

Affinity Water asks us to reconsider its proposal for an uncertainty mechanism in respect of costs associated with sustainability reductions to water abstraction levels in its Brett catchment area. We consider that solutions could be delivered by 'direct procurement for customers' as set out in the 'Delivering customer value in large schemes technical appendix'. However we have specified a Notified Item, as we consider that an interim determination is the appropriate mechanism to provide Affinity Water with funding in certain specified circumstances where the direct procurement route no longer provides value for money for customers for the Brett River Sustainability Reduction scheme.

We include a Notified Item in respect of possible additional costs resulting from the absence of, or delays in introducing, a ban on the outdoor use of metaldehyde in our final determination for Affinity 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 for Affinity Water could be material and we consider a Notified Item to be the approach that best protects the interests of customers and provides these companies with protection to the extent that material costs arise.

We are including a PR24 reconciliation mechanism for business rates in our final determination for Affinity 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 Affinity Water along with all other companies serving England[7] 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.

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

- 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.

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 base 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 Affinity Water we restrict the base dividend yield to 0.82% 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 £15 million to ensure our determinations are financeable on the basis of the notional structure. This compares to advancing £18 million of PAYG revenue for the draft determination.

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

Affinity 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. Affinity Water may need to bring forward its plans 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 Affinity 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[8].

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

[8] 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.

[9] 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.

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

Affinity 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.

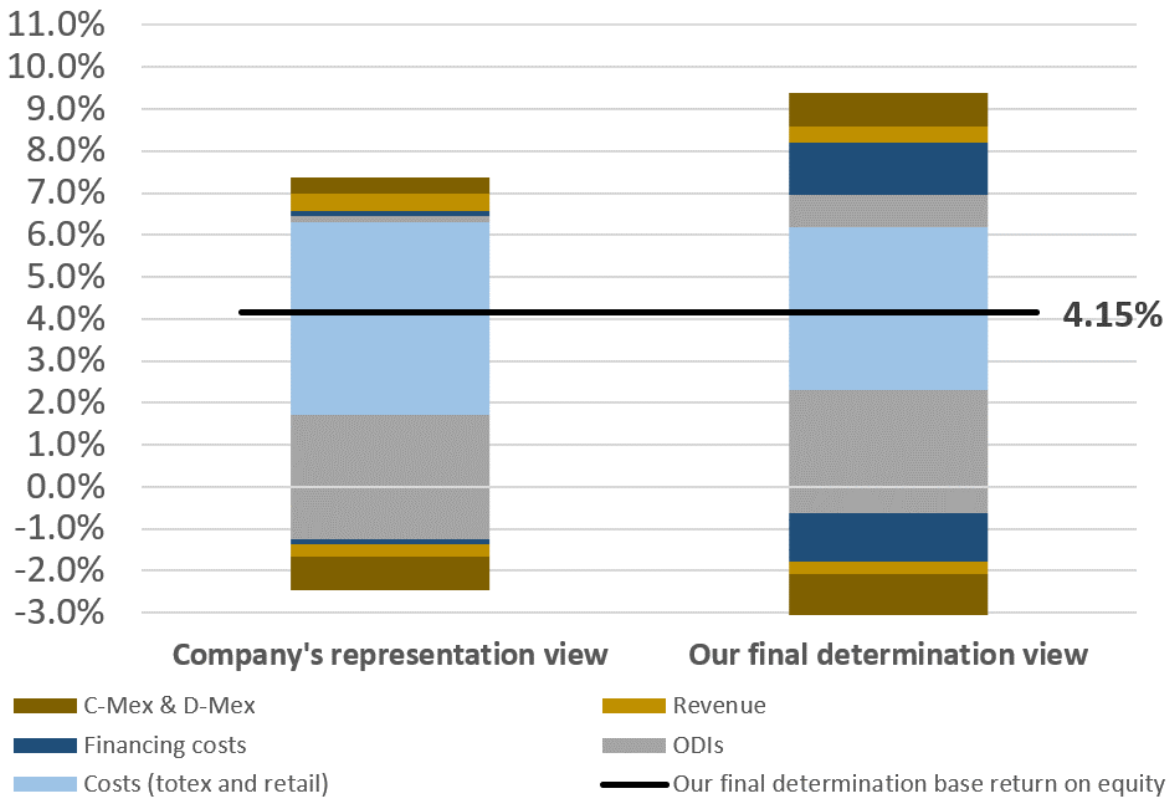
We asked companies to update their risk ranges in their representations. We state those risk ranges in table 5.1 against the cost allowances and base return on regulatory equity in our final determinations. These risk ranges are not fully comparable with our final determination ranges as they take account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

	Range implied in company representation		Final determination ranges	
Base RoRE	-		4.15%	
Risk ranges	**Lower bound**	**Upper bound**	**Lower bound**	**Upper bound**
Totex	-2.13%	1.85%	-1.53%	1.74%
Outcome delivery incentives	-2.95%	0.15%	-2.93%	0.77%
Financing costs	-0.12%	0.12%	-1.16%	1.23%
Retail costs	-0.31%	0.31%	-0.31%	0.31%
C-MeX and D-MeX	-0.81%	0.40%	-1.03%	0.80%
Revenues (includes Retail)	-0.30%	0.39%	-0.30%	0.39%
Total	**-6.61%**	**3.23%**	**-7.25%**	**5.25%**

Note 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 Affinity 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 Affinity 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, Affinity Water sets out the Board provides assurance that, based on the assumptions in its business plan, both notional and actual capital structures remain financeable throughout 2020 to 2025, and that key financial ratios are at a level that retains sufficient headroom to maintain an investment grade credit rating. The Board also confirms the company will meet and maintain headroom against the covenants in place, ensuring that resilience and customers' interests are maintained in the short and long term. The company states that its plan targets 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, Affinity 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 states that in its view, the annual cash flows allowed by the draft determination are not sufficient to conclude that the draft determination is financeable on the notional or actual capital structures. However, it provides qualified assurance that, under the package Affinity Water proposes in its representation, it is satisfied that the notional structure and the company's actual capital structure would remain financeable over 2020-25.

We have carefully considered the representations made by Affinity 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[10]. We set out the

[10] 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

revisions we are making to our performance commitments and cost allowances elsewhere in this document. We consider the revenues allowed in our final determination, which reflect our assessment of efficient allowed costs, are sufficient for Affinity 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 Affinity Water's final determination exceeds 10%. Therefore consistent with our policy approach 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 0.82% with dividend growth of 1.18%.

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.

The draft determination included an uplift to PAYG rates to improve notional financeability. In assessing financeability for the final determination, we remove any adjustments we made to PAYG and RCV run-off rates for financeability in the draft determination. Our subsequent financial modelling of the notional company suggests that Affinity Water continues to face a financeability constraint. Therefore, consistent with the draft determination and the approach in the PR19 methodology, our final determination increases PAYG rates to bring forward £15 million of revenue to improve cash flows and financial ratios in 2020-25. The financial ratios stated in table 5.2 include the effect of the increase to PAYG rates.

In its representations, Affinity Water states that higher headroom in financial ratios is required for smaller companies to maintain credit ratios due to a higher potential impact of cost shocks as a result a higher level of operational gearing. We do not consider Affinity Water to be a small company with allowed revenues for 2020-25 and opening RCV of greater than £1 billion. We apply the same criteria for assessing notional financeability including headroom as for other companies in the sector. We

discuss the impact of operational gearing in the 'Aligning risk and return technical appendix'.

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 the 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 Affinity 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	58.54%	60.78%	60.60%
Interest cover	4.81	3.86	4.42
Adjusted cash interest cover ratio (ACICR)	2.20	1.50	1.50
Funds from operations (FFO)/Net debt	13.19%	9.62%	10.82%
Dividend cover	0.00	52.44	3.70
Retained cash flow (RCF)/Net debt	13.19%	9.60%	10.34%
Return on capital employed (RoCE)	4.51%	2.88%	3.39%

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.

In presenting the ratios for our final determinations we exclude the effect of differing accounting treatment of infrastructure renewal expenditure from the numerator of the adjusted interest cover ratio to improve comparability of the financial ratios between companies. If calculated on a consistent basis with the final determination, Affinity Water's draft determination adjusted interest cover would be 1.37x.

Affinity 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 Affinity Water in table 5.3. RCV growth for the final determination is higher than in the company's April plan and lower than 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 compared with the draft determination. We reduced RCV run-off rates in the draft determination, we maintain the draft determination 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	59.0%	4.57%	21.23%
Draft determinations	51.6%	4.41%	29.04%
Final determinations	56.4%	4.37%	24.81%
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 'Affinity 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 £60 million above an adjusted cash interest cover of 1.0 times, providing headroom to our totex downside of £45 million and outcome delivery incentives downside of £27 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.

Affinity 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 Affinity Water's actual structure in figure 5.2.

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

Affinity Water is a highly geared company. It reported gearing of 79.7% at 31 March 2019. In its business plan it proposes gearing of 80.1% in 2021 and 76.8% in 2025.

At the time of our final determination it has corporate family credit rating of Baa2 (negative) with Moody's and A- (negative) with S&P.

Through the process of setting its determination, we have challenged Affinity Water to provide details about its plans to maintain the long-term financial resilience of the company. In its representations it has indicated that it will aim to reduce gearing to 75% or below during 2020-25 through an equity injection of £35 million, reinvestment of the profits from the non-appointed business and retention of dividends. The company sets out these plans are subject to the terms of the final determination.

The company provided Board assurance that the company is financially resilient under its business plan. Following the draft determination the Board updated its assessment of the financial resilience and concluded the plan is financeable and financially resilient in the context of the representation, but that further reductions in the cost of capital, compared to the draft determination will put the financeability of the company at risk. The company has obtained independent assurance to support its conclusions on the long-term viability of its actual capital structure.

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. Therefore we consider the company may need to bring forward its plans to improve its financial resilience.

The company's proposed base dividend for 2020-25 is set out in section 7. 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 the company's progress in reducing gearing along with its 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. Affinity Water has committed to assess its financial resilience beyond 2025 in its next long-term viability statement.

6 Affordability and bill profile

Key changes from the draft determination

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

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

6.1 Bill profile

Affinity Water proposes an average bill profile with a 1.0% reduction. Our bill profile contains a greater reduction of 5.5% over 2020-25.

Affinity Water submits additional evidence on bill profiles and acceptability in its August 2019 representations to our draft determination, and its new customer research that suggests its customers want bill movements to be smoothed over the 2020 – 30 period. The company states that under its draft determination it will see a 10.8% increase to the average bill profile in 2025-30 and that the majority (61%) of its customers would prefer bill increases to be phased gradually over the ten-year period. As the company's RCV is increasing by 25% over 2020-25, which is high for the sector, together with the potential impact of the company's direct procurement for customers scheme discussed in section 3.6, we accept the company's argument that bills are likely to increase beyond 2025 and that smoothing bills over a longer period is in customers' interests. As the company also has tight financeability ratios over the period, it has not been possible for us to change its bill profile to a gradual reduction over the period as we have done for most companies.

At draft determinations, we set Affinity Water a bill profile that contained an upfront cut followed by flat real terms prices. At final determinations, Affinity Water's average bill profile provides an initial drop followed by an increasing real bill (1% per year). We note that the bill overall still decreases in real terms over the period.

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

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Company April 2019	£172	£172	£172	£171	£171	£170
Draft determinations	£172	£150	£150	£151	£151	£151
Final determinations – before reprofiling	£172	£148	£153	£159	£170	£165
Final determinations	£172	£156	£158	£159	£161	£162

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 including Affinity Water undertook additional customer testing on their long-term bill profiles with several making adjustments as a result. We expect companies to continue to pay attention to this issue, taking customer views into account and planning in a way that ensures they control costs into the future.

6.2 Help for customers who are struggling to pay

Our final determinations for Affinity Water will deliver a real terms reduction to the average bill between 2020 and 2025.

In addition, Affinity Water commits to:

- increase the number of customers that receive support through social tariffs from 57,000 in 2019-20 to 83,000 in 2024-25;
- increase its social tariff cross subsidy to £4.50, as supported by customers;
- use its IT system Tallyman to better segment customers and tailor communications on debt, giving a better customer experience; and
- set up customer assistance and hardship funds to provide additional support to customers.

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

- maintain high satisfaction among customers on its financial and non-financial vulnerability assistance schemes;

- ensure a large majority of customers on its financial and non-financial vulnerability assistance schemes find the company easy to deal with;
- improve customer views of value for money; and
- maintain the British Standards Institution (BSI) standard for accessible services throughout 2020-25.

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	34.2	37.8	43.2	47.1	46.0	208.3
Water network plus	218.9	222.5	223.0	225.1	232.3	1,121.8
Residential retail	25.6	25.7	25.8	26.0	26.1	129.2
Total	**278.8**	**286.0**	**292.1**	**298.2**	**304.3**	**1,459.3**

The water resources and water 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 two 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	34.2	0.00%	10.58%	14.67%	9.29%	-2.46%
Water network plus	218.9	0.00%	1.68%	0.31%	0.96%	3.27%

7 Putting the sector in balance

Key points

- Affinity Water reported gearing of 79.7% as at 31 March 2019. It forecasts that its level of gearing (80.1% by 2021 and 76.8% 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 mechanism to introduce a glidepath to the gearing level that 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.
- On executive pay, Affinity Water falls short of the 60% alignment to delivery for customers we identify as current 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[11];
- 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.

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

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 benefit sharing mechanism to contain a glidepath. We explain this in the final determination 'Aligning risk and return: technical appendix'.

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

Table 7.1: Our assessment of Affinity 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 Affinity Water has not proposed any voluntary sharing mechanism. However, the company will introduce a trust fund from 2020-21 with £0.1 million made available per year from company money to support customers who are in severe financial hardship. The company will evaluate the success of the fund before determining the level of support for 2025-30.
Dividend policy for 2020-25 Affinity Water confirms that it is committed to the expectations on dividend policy as set out in our 'Putting the sector in balance' position statement. In doing so it has indicated its base dividend yield will be below 5% in 2020-25. It states it has shareholder agreement to pay no dividends from the appointed business over the period 2020-25, to enable all returns to be reinvested into the company to reduce gearing levels. However we expect the company to apply its policy in a transparent manner and consistent with our expectations in 2020-25. 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, it will consider its performance in the round (customer service, operational, community and employees) and has detailed the specific obligations and commitments to customers that will be considered. It also confirms that the level of

Our assessment of the company's proposals to balance the interests of customers
performance delivery considered will be determined with reference to the final determination. It confirms that dividends can be increased or lowered from the base depending on the actual performance of the company and explains how performance delivery will impact on dividends paid. The company commits to reporting on its dividends declared or paid in the year in its Annual Performance Report. This includes how they relate to the policy and any changes in the policy. The policy will be reviewed by the Board at least annually. Any changes in the policy will be clearly signalled in the company's Annual Performance Report. 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'. We expect Affinity Water to be transparent when explaining its dividend policy and reporting on dividends paid over 2020-25, to demonstrate how it has delivered on the commitments in relation to its dividend policy and to ensure it meets the expectations we set out in 'Putting the sector in balance' as updated in the final determination 'Aligning risk and return: technical appendix'.
Performance related executive pay policy for 2020-25 In our 'Aligning risk and return technical appendix' we identify that 60% alignment to delivery for customers is current good practice among the companies that we regulate. Based on our calculations, Affinity Water's measures that are directly aligned to customer delivery falls short of good practice, and therefore we consider that there is scope for it to improve this position. We expect Affinity Water's policy on performance related executive pay to demonstrate a substantial alignment to the delivery of service for customers throughout 2020-25. Affinity Water states that it is committed to meet the expectations set out in our 'Putting the sector in balance: position statement', and sets out that the policy contains: • Annual bonus based on 40% financial targets (including for example cash generated from operations), 40% service and stakeholder commitments (including for example, C-Mex, leakage, consumption, water quality) and 20% personal performance. • Long-term bonus based on 40% financial targets (including for example cash generated from operations and investment targets), 50% customer service and stakeholder commitments (including for example, C-Mex, D-Mex, leakage, mains bursts, environmental innovation) and 10% employee commitments. • The company sets out targets are aligned to the commitments made for 2020-25 and have been informed by customer engagement and challenged by their customer challenge group.

Our assessment of the company's proposals to balance the interests of customers
• The policy will be implemented, overseen and monitored by the remuneration committee, and payment of any bonus or long-term incentive plan is at its discretion, who also have limited powers to vary payments in the event of under-performance. • Bonuses include safeguards to ensure that financial and personal performance are not incentivised to the detriment of delivering of stretching customer and operational performance, which is achieved by the requirement of a minimum of 70% performance across financial performance, customer service and operational performance and personal performance. • The company commits to publish a separate annual report on remuneration which will include details of any changes in the policy and the underlying reasons for the change. • The remuneration committee will ensure that the performance related element of its policy demonstrates a substantial link to performance delivery for customers through 2020-25, underpinned by stretching targets set by reference to the final determination for AMP7. The company sets out the committee will also continually assess performance targets to ensure they continue to be stretching throughout AMP7. Affinity Water states that is has published the executive remuneration policy on its website and that it will ensure that the latest version of the policy is published on the website throughout AMP7. We expect the board'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 Affinity 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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