December 2019

PR19 final determinations

PR19 final determinations: United Utilities final determination

Ofwat

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About this document

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

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

Contents

Amendment	Date
Table 3.7 Page 43 – Amendments made to figures. • Grants and contributions before the deduction of income offset (£m) Network plus – Water amended from £204.7 million to £147.3 million • Grants and contributions before the deduction of income offset (£m) Network plus – Wastewater amended from £87 million to £48.8 million • Net allowed totex subject to cost sharing reconciliation Network plus – Water amended from £1,676.6 million to £1,734.0 million • Net allowed totex subject to cost sharing reconciliation Network plus – Wastewater amended from £2,302.8 million to £2,341.0 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. United Utilities' September 2018 business plan was awarded fast track status at the initial assessment of plans on 31 January 2019. We expect fast track companies to demonstrate leadership on delivering positive outcomes for customers and the environment. United Utilities has benefited from its plan receiving fast track status and it has been able to start implementing its plan ahead of 2020-25. The company receives a financial reward of £24 million, in recognition that the company produced a high quality plan which included a number of ambitious, innovative and sector-leading proposals to make customer's bills affordable and provide support for vulnerable customers.

As United Utilities is a fast track company we published our draft determination early on 11 April 2019. Our draft determination for United Utilities was based on our detailed review of the business plan submitted to us on 3 September 2018 and the company agreeing to our initial assessment of plans interventions on 11 February 2019. United Utilities confirmed that it opted out of the early certainty principle entirely. This meant that it opted out of fixing elements of its outcomes package and cost allowance at draft determination and so these are subject to change in our final determination.

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

1.1 What our final determination includes

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

Bill profile

Our final determination for United Utilities will cut average bills by 13.8% in real terms in the 2020-25 period compared to the company's proposed 11.0% reduction. Table 1.1 below sets out the difference in bill profile between the company's business plan submission in September 2018, our draft determination and the final determination. Average bills are lower than proposed by United Utilities, 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 (September 2018 business plan)	£429	£394	£392	£386	£383	£382
Draft determination	£429	£378	£378	£378	£378	£378
Final determination	£429	£401	£393	£385	£377	£370

Costs

Our final determination allows wholesale totex of £5,488.8 million. This is:

- £160.8 million higher than in our fast track draft determination; and
- £146.7 million lower than stated in the company's representation on our draft determination.

Our final determination allows United Utilities £837 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £663 million to improve the environment by efficiently delivering its obligations as set out in the whole Water Industry National Environmental Programme (WINEP);
- £78 million to improve resilience;
- £41 million for its metering programme;
- £14 million to meet lead standards; and

- £12 million to improve the quality of drinking water including its taste, odour and colour.

United Utilities proposes that the Manchester and Pennines Resilience scheme is delivered by a direct procurement for customers process. This means a third party will be procured to design, build, finance, operate and maintain infrastructure. The company has an important role on the project during construction and into operations so we allow £57 million for the company to carry out this work during 2020-25.

We make an additional allowance of £44.1 million in our final determination for strategic water resource development to support the delivery of long-term drought resilience.

We allow the company to recover atypical diversions costs, such as those associated with High Speed 2, outside of the price control, which the company estimates as £100 million during 2020-25.

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

Outcomes for customers

Our final determination package includes a full set of performance commitments, specifying the minimum level of service that United Utilities 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 United Utilities

Area	Measure
Key common performance commitments	• At least 15% leakage reduction from PR14 performance commitment levels.[3] • 6.3% reduction in per capita consumption by 2024-25 • 20% reduction in pollution incidents by 2024-25 to 19.5 pollution incidents per 10,000 connections. • 73% reduction in internal sewer flooding incidents by 2024-25 to 1.34 incidents per 10,000km of sewers • 58% reduction in water supply interruptions by 2024-25 to 5 minutes
Bespoke performance commitments	• 34% reduction in customer contacts about drinking water quality by 2024-25 • 28% reduction in customers receiving low pressure by 2024-25 • 11% reduction in sewer blockages by 2024-25 • 22% reduction in external sewer flooding incidents by 2024-25 • 20% increase in the number of customers lifted out water poverty through the company's financial assistance programmes by 2024-25 • 75% customer satisfaction for value for money by 2024-25
Overall incentive package	Overall, the likely range of returns from outcome delivery incentive package in our final determination equates to a return on regulatory equity range of – 1.38% (P10) to + 1.21% (P90).

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

Allowed revenues

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

[3] Please note that the figures in the tables of the 'United Utilities - Outcomes performance commitment appendix' which relate to this performance commitment reflect that it is measured on a three-year average and show a 10.8% reduction from 2019-20 baseline levels on a three-year average basis.

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

	Water Resources	Network plus - water	Network plus - wastewater	Bioresources	Wholesale total	Residential retail	Total
Company view of allowed revenue (£m)	501.0	2,896.6	3,890.5	494.6	7,782.8	513.9	8,296.7
Final allowed revenues (£m)	521.8	2,975.6	3,784.1	472.4	7,753.9	493.9	8,247.8

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

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

United Utilities Regulatory Capital Value (RCV) growth in 2020-25 is -4.5% and 59% of its RCV will be indexed to CPIH in 2025. We accept United Utilities Water's approach to bring forward the effect of a full transition to CPIH through an adjustment to RCV run-off rates is supported by customer preferences.

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

Putting the sector in balance

We have encouraged companies to take greater account of customers' interests – and to transparently demonstrate that they are doing so in the way they finance themselves, pay dividends to their shareholders, and determine performance related executive pay. United Utilities 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, United Utilities expects to maintain gearing below the level that would trigger sharing payments under the gearing outperformance sharing mechanism in 2020-25.

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

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. United Utilities proposes to provide £71 million of voluntary funding to its CommUnity Share scheme which will provide financial assistance scheme for customers in need of financial support. Where dividend distributions to shareholders exceed a pre-defined level, United Utilities will match these with additional contributions to the CommUnity Share scheme. We provide further detail on these issues in section 7.

1.2 Representations on the draft determination

All companies and stakeholders were invited to make representations on our fast track draft determinations by 24 May 2019 and on our slow track and significant scrutiny draft determinations by 30 August 2019. More detail about the issues raised in the representations by the company and our consideration of 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 United Utilities in both its May and August representations and a summary of our response to each of those points:

Table 1.4: Company representation

Key point in United Utilities representation	Summary of our response
United Utilities provides more evidence in support of its four cost adjustment claims: • resilient reservoirs; • drainage; • diversions; and	We recognise that reservoir maintenance is important and we support the company's proposals to meet safety standards. In our final determination we maintain our decision not to make an additional allowance for United Utilities in relation to this claim. We consider that United Utilities is adequately

• Manchester and Pennine Resilience scheme.	funded to maintain the safety of its reservoirs. We accept the company's modified performance commitment to maintain the safety of its reservoirs, see section 3 for more detail. We do not allow the cost adjustment claim for drainage as the evidence provided is not sufficiently convincing that the company is required to operate larger sewers than other companies. See 'United Utilities Cost efficiency additional information' for more detail. We continue to allow the cost adjustment claim to progress the development of the Manchester and Pennines Resilience scheme, see section 3. For diversions, see row below.
It challenges our approach to grants and contributions, particularly diversions and income offset.	Following our clarification to the company, it withdraws its cost adjustment claim for diversions. We allow the company to recover atypical diversions costs outside of the price control, which the company estimates as £100 million in 2020-25, see section 3 for more detail. We clarified that we expect companies will recover less than the 'gross' grant and contributions figure used in the final determinations, and recognised that income offset is funded by customers, not companies. The revenue forecasting incentive will take into account the treatment of the income offset.
The company states that changes to performance commitment levels for asset health measures are not deliverable without substantial increases to investment programmes. It indicates particular concerns with the mains repairs, sewer collapses, water supply interruptions and internal sewer flooding performance commitments.	We adjust the performance commitment levels for mains repairs, sewer collapses and water supply interruptions, taking account of wider evidence, to calibrate stretch of performance commitments for an efficient company. We adjust the underperformance collar on internal sewer flooding to provide a more balanced spread of risks and incentives, see section 2 for more detail.
United Utilities raises concerns over the robustness of the Customer measure of experience (C-MeX) and the confidence in the results.	For C-MeX we make some changes to improve accuracy and confidence in scores, see 'Customer measure of experience (C-Mex) and developer services measure of experience (D-Mex) policy appendix' for more detail.

It provides further evidence in support of its performance commitments for: • systems thinking; and • natural capita.	We have made no change to the systems thinking performance commitment in the draft determination. The company provides insufficient evidence of any benefits from outperformance that do not already have financial incentives, or that customers support paying outperformance payments. We adjust the outperformance cap for natural capital so that the company is able to earn the full expected range of outperformance if it delivers greater benefits to the environment.
United Utilities states that the 41% cost challenge in its strategic water resource solutions draft determination is unreasonable. It comments that our cost sharing approach is overly punitive.	We increase our allowance to £44.1 million based on the additional evidence in the company's representation response. We do not see the need for cost sharing to be the same as the rest of totex as these are specific projects with controlled, gated decision making surrounding them, see 'Strategic regional water resource solutions appendix'.
United Utilities states it is looking for confirmation of timetables, approval gateways, licence amendments and formalisation of draft guidance for direct procurement for customers (DPC).	We will consult on the licence modifications necessary to enable the delivery of the Manchester and Pennines Resilience scheme in 2020. We have continued to engage with the company since it made its representation and it has revised its view to accept a notified item following its representation meeting in October 2019, see section 3.
United Utilities raises concerns about ongoing uncertainty with allowed revenues for fast track companies. It maintains its request for a pay as you go (PAYG) pull and for Ofwat to accept its proposals to accelerate CPIH transition by advancing regulatory capital value (RCV) runoff.	We apply the full 1% RCV run-off rate to create the effect of full CPIH transition in the final determination. See section 4 for more detail.
United Utilities disagrees with our approach to use latest market data to inform a lower allowed return on capital at final determination. The company says that its September 2018 business plan was both financeable and financially resilient, on both a notional and actual company basis. It says that it cannot, at this stage, arrive at	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

any definitive conclusion regarding the financeability of the proposed change to the allowed return on capital as it affects the actual company.	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.
United Utilities considers that we should change our methodology for calculating residential retail service incentive mechanism payments back to the PR14 methodology. It considers we should remove outliers (notably Portsmouth Water) that have an undue impact on the industry service incentive mechanism payment calculations and adjust final determination calculations accordingly.	We consider that our approach for draft determinations remains appropriate for the final determination. It is consistent with our PR19 methodology and reflects the outcomes of our consultation on calculating the service incentive mechanism and the quality of customer service provided by companies. The removal of high performing outliers would not be appropriate. Our approach allocates payments in a way which clearly distinguishes between performance differences (payments are proportionate). See 'Accounting for past delivery technical appendix'.

We also received representations on United Utilities draft determination from other stakeholders on 24 May 2019 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) states that United Utilities customers should not be expected to bear any costs associated with planning or implementing arrangements to enable the future potential transfer of water from the region to others.	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. Customers will also benefit from future water exports, see the 'Strategic regional water resource solutions appendix' for more detail.
Invesco, an investor in United Utilities, has following concerns: • the proposed cost of equity is low and any further reductions would be hard to justify. • our use of the Capital Asset Pricing Model (CAPM); suggests investor risk in the water sector is increasing given public scrutiny, nationalisation risks and the downward trajectory for allowed returns.	Our allowed return on capital is estimated using the well-established approach of using the CAPM, and is aligned with City analyst expectations. Our nominal allowed return on equity (6.27%) is only slightly below the median return for FTSE 100 companies over the past three years (7.6%). This lower return is unsurprising for a sector characterised by low demand risk, inflation protection and predictable and stable revenues.

The Environment Agency also made representations that it is broadly supportive of the draft determination for United Utilities with no specific concerns raised.

1.3 Key changes from the draft determination

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

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

	Draft determination	Final determination
Allowed revenues (£m, 2017-18 CPIH deflated)	8,191.7	8,247.8
Wholesale cost allowance (£m, 2017-18 CPIH deflated) [1]	5,328.0	5,488.8
Retail cost allowance (£m, nominal)	513.4	474.8
Wholesale allowed return[1] (% - CPIH basis)	3.30%	2.92%

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

Significant changes from the draft determination for United Utilities are:

- Overall, we allow a higher cost allowance than at our draft determination and total revenue allowances increase due mainly to an increase in allowed returns.
- We increase our capital expenditure enhancement allowance, excluding growth, by £40 million.
- We make a £54.5 million downward adjustment to our base allowance due to a relatively low forecast population growth in 2020-25 in the company's supply area.
- 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 rate to industry average to provide a more balanced spread of incentives and risks.
- We adjust the water supply interruptions 2024-25 performance level to five minutes, with an amended glidepath in the first four years, taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company. We reduce the outcome delivery incentive underperformance rate to be symmetrical with its outperformance rate to provide a more balanced spread of incentives and risks.
- We reduce the underperformance rate for the internal sewer flooding performance commitment so that is it symmetric to the outperformance rate. We also amend the underperformance collar for internal sewer flooding to reduce the downside risk for the company in the first two years of the 2020-25 period, and increase it in the last two years. These two changes provide a more balanced spread of incentives and risks for the company.

- We accept United Utilities' representation that its proposal for a full transition to CPIH is supported by customer preferences. We increase RCV run-off rates by 1% to give the effect of a full transition to CPIH. Following this we consider our determination to be financeable on a notional basis and remove the increase to PAYG rates applied in the draft determination for notional financeability.
- We revise our approach to estimating revenue from developer grants and contributions. For United Utilities this means that our calculation of grants and contributions falls to £70.6 million after taking into account the income offset which is significantly lower than at draft determination (£170 million). This is now closer to the company's own business plan forecast and follows the approach suggested in the company's draft determination representation.
- We reflect United Utilities' latest information on its actual performance in 2018-19 and expected performance in 2019-20 from its 15 July submission.

2 Outcomes

Key changes from the draft determination

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

- 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 rate to industry average to provide a more balanced spread of incentives and risks.
- We reduce the underperformance rate for internal sewer flooding so that is it symmetric to the outperformance rate and amend the underperformance collar for internal sewer flooding to reduce the downside risk for the company in the first two years of the 2020-25 period and increase it in the last two years. This will provide a similar level of exposure over the five years as other companies, but reduces the downside risk for the first two years as the company progresses from PR14 levels to forward-looking upper quartile 2024-25 levels, while maintaining a strong incentive over the period. These two changes provide a more balanced spread of incentives and risks across its performance commitments.
- 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 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.

Throughout PR19, we have been asking companies to:

- make more 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.

The company's current performance is average. It is one of the most improved companies on the service incentive mechanism and has achieved continuous improvement annually. In 2018-19 it improves its performance levels on several measures such as supply interruptions and internal sewer flooding and maintains stable levels on leakage and water quality contacts, although it is a lower quartile performer on these measures. It remains in the middle of the pack on the percentage of commitments met in 2018-19.

In its September 2018 business plan, United Utilities acknowledged issues with its overall performance during 2015-20 and is focused on improvement. The company states that: 'We have experienced, and learnt from, the impact of large disruptive events such as the Lancashire water quality incident during AMP6'.

In its September 2018 business plan, the company proposed insufficiently stretching performance levels for its leakage, per capita consumption and internal/external sewer flooding performance commitments. The company did not show a good line of sight between its outcome delivery incentive rates and its customer evidence (triangulation4). This includes not providing suitable evidence of customer valuations to support its Systems Thinking performance commitments. To achieve fast track status United Utilities agreed to a series of actions on its performance commitments and outcome delivery incentive package. These resulted in increases in the stretch on some key performance commitment levels (water supply interruptions, internal sewer flooding and pollution incidents to achieve the forecast upper quartile as well

[4] Triangulation is the method used in averaging across multiple sources of research data.

as leakage, per capita consumption, mains repairs and external flooding incidents), as well as a reduction of the potential outperformance payments or an increase of the potential underperformance payments on a number of material outcome delivery incentives to better align with the its customers' valuations or, when appropriate, industry rates. On bespoke performance commitments, this included the removal of financial incentives that were not sufficiently well-justified.

The company did not take early certainty on outcomes so changes made at draft determination for companies who were slow track or significant scrutiny implied changes to United Utilities' fast track determination.

In its representations, the company argues for changes to many of our implied draft determination performance commitment levels since it considers them to be unachievable this includes mains repairs, water supply interruptions, internal sewer flooding and leakage as well as systems thinking and natural capital.

On water supply interruptions, the company challenges the scale of the performance improvement. We adjust the water supply interruptions 2024-25 level to five minutes, with an amended glidepath in the first four years, taking account of wider evidence to calibrate stretch of performance commitment for an efficient company. The company also does not consider our implied change to its rate from draft determinations is justified by its customer valuations and claims it is inappropriate for a fast track company. We consider that its own rates are understated; it has inappropriately used the results of the company's valuation research, rates are below industry average and below the equivalent rates from PR14. We use all of the company's customer research and industry average to set an amended outcome delivery rate but as part of a sector wide change we reduce the outcome delivery incentive underperformance rate to be symmetrical with its outperformance rate to provide a more balanced spread of incentives and risks on water supply interruptions. This is an increase overall in the rates from fast track draft determination.

On internal sewer flooding, the company challenges the early year levels for internal sewer flooding performance commitments as being unachievable and proposes a glidepath. We do not consider its customers should suffer from its historical poor performance. Therefore, we retain the performance commitment levels but reduce its underperformance rate to be symmetrical with the outperformance rate. We amend its collar to protect the company and to reduce its exposure to outcome delivery incentive underperformance payments while it improves to industry upper quartile levels.

On mains repairs, we increase the performance commitment levels for mains repairs by a reducing percentage, for all companies, in all years, reducing the stretch. The aim is to allow all companies the flexibility to deliver the step change in leakage reduction, allowing more flexibility in the earlier years to use proactive mains repairs to reduce leakage. We intervened in mains repairs levels for this company at draft

determinations since it was lagging behind 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, as we now consider the use of this information to set the forward-looking base level provides a more representative performance commitment level and ensures companies maintain good performance to improve the overall health of their assets over the longer-term. We also amend the underperformance rate to industry average to provide a more balanced spread of incentives and risks.

In its fast track draft determination the company leakage percentage reduction was increased from 15% to 20% on an annual average basis which was from 8.7% to 14% on a three year average basis. We revert to the company's September Business Plan proposal of 15% reduction on an annual average leakage since we consider this stretching and consistent with the wider sector challenge to reduce leakage with base cost allowances. However, we change the profile to ensure continuous improvement. The final leakage performance commitment levels are equivalent to 10.8% on a three year average basis by 2024-25 which will achieve at least a 15% improvement on PR14 levels and will enable it to earn outcome delivery incentives, if it improves performance beyond stretching levels to fund further service improvement. We note the company is meeting its leakage levels in PR14.

On its systems thinking performance commitment, there are a number of significant limitations to how it interprets the results of its customer engagement. See section 2.1 for further detail on our assessment.

On its natural capital performance commitment, we adjust the outperformance cap for natural capital so that the company is able to earn the full expected range of outperformance if it delivers greater benefits to the environment.

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.

2.2 Customer engagement

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

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

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

In its September 2018 business plan, United Utilities demonstrated elements of high-quality customer engagement evidence, although we highlighted some areas of concern in our initial assessment of the company's plan such as insufficient evidence of how customer views have informed outcome delivery incentives. We additionally found that the company did not provide sufficient evidence to demonstrate a well-reasoned approach to triangulating its customer valuations, and an inconsistent approach to its triangulation criteria.

United Utilities was awarded fast track status, although it opted out of early certainty for all performance commitments. We intervened in our fast track draft determination in April 2019 on outcome delivery incentives that the company had proposed in its September 2018 business plan where the values were industry outliers. In most cases, we intervened to re-triangulate to better align with the company's own willingness to pay research. However, in some instances we set outcome delivery incentives within our reasonable range to protect customers from financial incentives that are in excess of the value they attach to the performance commitment. In addition, the company proposed symmetrical outperformance and underperformance outcome delivery incentives that were not supported by customer engagement research.

United Utilities presents new customer engagement research on its systems thinking performance commitment and bill profiles in its representations to our fast track draft determinations. In relation to systems thinking, the company states in its representations that customers support outperformance payments, but we do not consider that customers were provided appropriate information or asked appropriate questions to establish this. While we support what systems thinking aims to deliver, we consider it is better to incentivise tangible outcomes, rather than a capability that may help deliver those outcomes. We therefore retain this commitment as reputational rather than financial.

We have concerns about how the performance commitment is presented to its customers and how the research results are portrayed in its representations. However, in relation to bill profiles we find that elements of its research are of high quality and have incorporated its customer preferences in setting flatter bills. The company's customer challenge group did not submit any quality assurance for this research or any representations in response to our fast track draft determination.

In its representation to our fast track draft determination and slow track draft determinations of other companies, United Utilities states that it developed its September 2018 business plan return on regulatory equity range in close consultation with its customers. The company states that it considers that 'changes are needed to bring the range closer to that supported by customers'. The company further represents on how we set its outcome delivery incentives rates for leakage, mains repairs, water supply interruptions, per capita consumption, pollution incidents, internal sewer flooding and external sewer flooding performance commitments. Since the company did not take early certainty on outcome delivery incentive rates, our draft determination for slow track companies implies interventions in a few cases where outcome delivery incentive rates are inappropriate, particularly with reference to triangulation. We apply the same approach as at slow track draft determinations in our final determinations, for example for water supply interruptions as described above.

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.

2.3 Performance commitments and outcome delivery incentives

United Utilities' 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 'United Utilities - Outcomes performance commitment appendix'.

The key changes we are making in the final determination are set out in table 2.1[5] below. 'United Utilities – Delivering outcomes for customers final decisions' sets out our final decisions in terms of changes to our draft determination for the company's performance commitments and outcome delivery incentives, having considered stakeholder and company representations to our draft determination.

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

Key changes
We are amending the company's proposal on the leakage performance commitment level, moving the three year average level for 2024-25 from 14% to 10.8% (equivalent in the case of United Utilities to moving the expected annual average leakage reduction from 19% to 15%) since we consider this is stretching and consistent with the wider sector challenge to reduce leakage with base cost allowances and the company levels will likely deliver a 15% improvement on PR14 levels. We note the company is meeting its leakage levels in PR14.
Amending the percentage reduction from 5.2% to 6.3% in relation to per capita consumption by 2024-25. This aligns more closely with the company's Water Resource Management Plan level and takes into account potential supply demand balance issues relating to the fact that the company announced and nearly introduced a Temporary Use Ban (A Hosepipe ban) for its domestic customers during the summer in 2018.
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 amend the outperformance rate to better reflect customer research and 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.
Retaining the company performance commitment levels for internal sewer flooding. Amending the outcome delivery incentive rates in relation to internal sewer flooding to be symmetrical with the outperformance rates. The company is a poor performer on internal sewer flooding relative to other companies and although we are retaining the same industry wide glidepath and 2024-2025 levels, we are amending the underperformance collar to reduce the downside risk. This will provide a similar level of exposure over the five years as other companies, but increases the downside risk as United Utilities progresses towards the 2024-25 level, maintaining a strong incentive over the period.
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 behind 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 rate to industry average to provide a more

[5] 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.

balanced spread of incentives and risks. We additionally accept the company's removal of the deadband.
Adjusting the sewer collapses level, to achieve upper quartile reduction of 19% by 2024-25, instead of our draft determination maximum percentage reduction of 28%. The company is a poor performer on sewer collapses and this level recognises the need for company improvement in this area and we consider this is stretching but achievable. Reducing the outcome delivery incentive rate in line with our change in methodology to base the industry average on the median rather than the mean for sewer collapses see Delivering outcomes for customers policy appendix.
We are amending 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. 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.
Accepting the company's performance commitment level following a change in the definition of void properties that makes the performance measure more comparable with other companies. We are also accepting the company's proposal to have the underperformance rate set to match the outperformance rate. This is because we are updating our draft determination methodology to remove the cost sharing ratio.
Accepting the company's proposal to reinstate outperformance payments in relation to recycling biosolids, as this was unintentionally left out of the draft determination.
Increasing outperformance payment caps in relation to enhancing natural capital for customers. This is following the company's submission of a corrected table that set the outperformance cap at the P90 performance level. 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
Improving the performance commitment level profile in relation to customer contacts (appearance, taste and odour) from 2020-25 based on the upper quartile percentage improvement from 2019/20 to 2024/25 proposed by all companies, which is 34%. Amending the outperformance and underperformance payments to address concerns with the company' triangulation which appears to attach undue weight to the highest willingness to pay values.
Amending both the definition and adding underperformance and outperformance payments in relation to keeping reservoirs resilient, to strengthen incentives for the company to outperform.
Amending the performance commitment definitions in relation to non-household void properties to ensure that in-period determinations take into account the financial consequences of any retail market mechanism which may be developed, for example, under the Market Performance Framework in the 2020-25 period.

Table 2.2: Summary of performance commitments: common performance commitments

Name of common performance commitment	Type of outcome delivery incentive			
	Financial			Reputational
	Under	Out	In-period	
Water quality compliance (CRI) [PR19UUW_A01-CF]	X		X	
Water supply interruptions [PR19UUW_B03-WN]	X	X	X	
Leakage [PR19UUW_B01-WN]	X	X	X	
Per capita consumption [PR19UUW_B05-WN]	X	X	X	
Mains repairs [PR19UUW_B02-WN]	X	X	X	
Unplanned outage [PR19UUW_B04-CF]	X		X	
Risk of severe restrictions in a drought [PR19UUW_B06-CF]				X
Priority services for customers in vulnerable circumstances [PR19UUW_D03-HH]				X
Internal sewer flooding [PR19UUW_G02-WWN]	X	X	X	
Pollution incidents [PR19UUW_C01-WWN]	X	X	X	
Risk of sewer flooding in a storm [PR19UUW_G01-WWN]				X
Sewer collapses [PR19UUW_F01-WWN]	X		X	
Treatment works compliance [PR19UUW_C02-CF]	X		X	
C-MeX: Customer measure of experience [PR19UUW_D01-HH]	X	X	X	
D-MeX: Developer services measure of experience [PR19UUW_D02-CF]	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	
Reducing water quality contacts due to taste, smell and appearance [PR19UUW_A02-WN]	X	X	X		
Number of properties with lead risk reduced [PR19UUW_A03-WN]	X	X	X		
Helping customers look after water in their home [PR19UUW_A04-WN]	X	X	X		
Reducing discolouration from the Vyrnwy treated water aqueduct [PR19UUW_A05-WN]		X	X		
Reducing areas of low water pressure [PR19UUW_B07-WN]	X	X	X		
Water service resilience [PR19UUW_B08-WN]	X	X	X		
Manchester and Pennine resilience [PR19UUW_B09-DP]	X			X	
Keeping reservoirs resilient [PR19UUW_B10-WR]	X	X		X	
Thirlmere transfer into West Cumbria (AMP7) [PR19UUW_B11-WN]	X	X	X		
Abstraction incentive mechanism [PR19UUW_C03-WR]	X	X	X		
Improving the water environment [PR19UUW_C04-WR]	X		X		
Improving river water quality [PR19UUW_C05-WWN]	X		X		
Protecting the environment from the impact of growth and new development [PR19UUW_C06-WWN]	X	X		X	
Enhancing natural capital value for customers [PR19UUW_C08-CF]	X	X	X		
Recycling biosolids [PR19UUW_C09-BR]	X	X	X		
Better air quality [PR19UUW_C10-BR]	X	X	X		
Street works performance [PR19UUW_D04-CF]					X
Priority Services- BSI accreditation [PR19UUW_D05-HH]					X

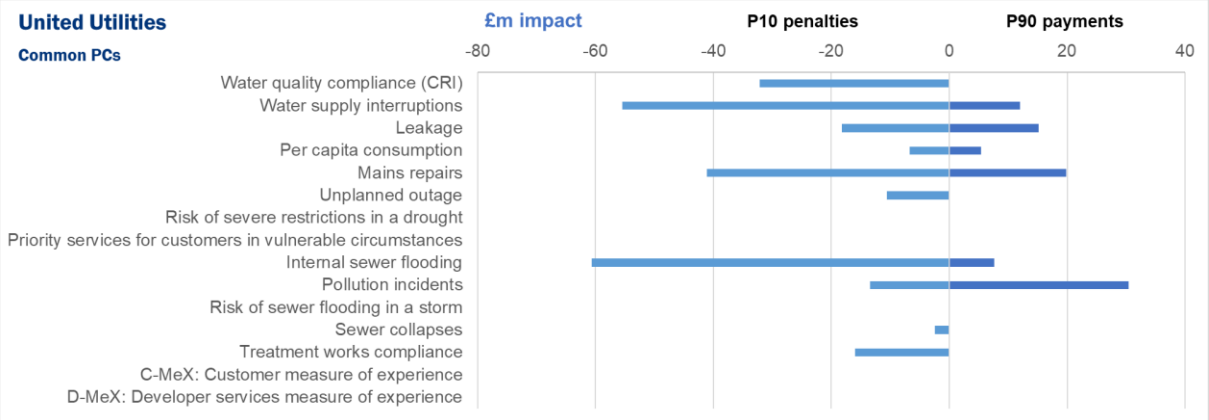
Name of bespoke performance commitment	Type of outcome delivery incentive				
	Financial				Reputational
	Under	Out	In-period	End of period	
Number of customers lifted out of water poverty [PR19UUW_E01-HH]	X	X	X		
Voids [PR19UUW_E10-HH]	X	X	X		
Non-household vacancy incentive scheme [PR19UUW_E03-CF]		X	X		
Gap sites (Wholesale) [PR19UUW_E04-CF]		X	X		
Gap sites (Retail) [PR19UUW_E05-HH]		X	X		
Systems thinking capability [PR19UUW_E06-CF]					X
Successful delivery of direct procurement of Manchester and Pennine resilience [PR19UUW_E07-DP]		X		X	
Customers say that we offer value for money [PR19UUW_E09-HH]					X
Sewer blockages [PR19UUW_F02-WWN]	X	X	X		
External flooding Incidents [PR19UUW_G03-WWN]	X	X	X		
Raising customer awareness to reduce the risk of flooding [PR19UUW_G04-WWN]	X	X	X		
Hydraulic internal flood risk resilience [PR19UUW_G05-WWN]	X	X	X		
Hydraulic external flood risk resilience [PR19UUW_G06-WWN]	X	X	X		

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

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

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

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



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

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

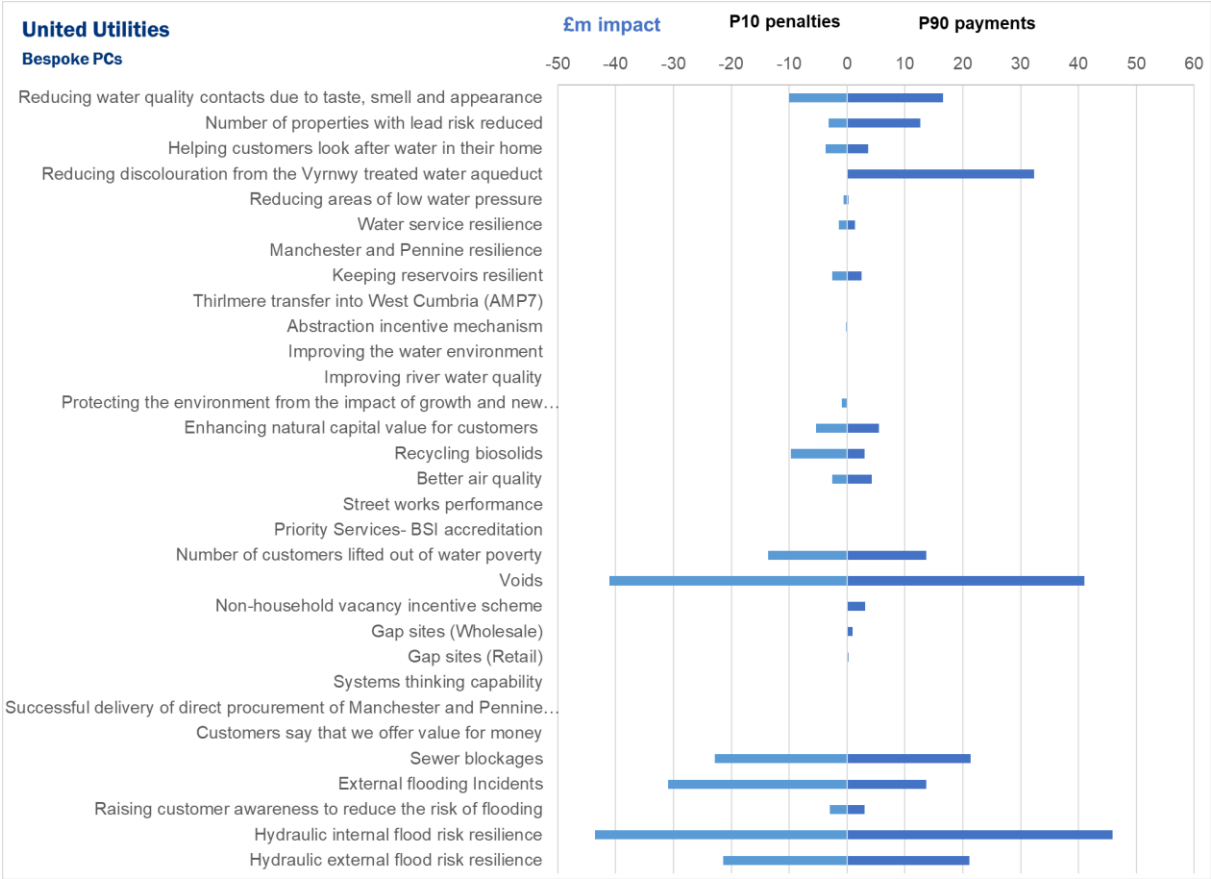


Table 2.4 provides an indication of the financial value of the overall package at the upper and lower extreme levels of performance (expressed as a percentage point impacts on RoRE (return on regulatory equity)) and the overall impact of our final determination decisions. Further information on how we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

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

	Draft determination		Final determination	
	% of 5 year regulatory equity		% of 5 year regulatory equity	
	P10	P90	P10	P90
United Utilities	-2.3	1.0	-1.38	1.21

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'.

2.4 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 final methodology.[6] United Utilities' September 2018 business plan provides high quality evidence in most aspects of securing long-term resilience, although it falls short of being ambitious and innovative. It demonstrates clear links between priority risks and options identified to

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

mitigate these, and that a wide range of mitigation options has been considered covering the 4Rs approach (resistance, reliability, redundancy, and response and recovery). The company's business plan also includes good engagement with third parties for ecosystems services approaches, and demonstrates that the company has learnt from past failures and used this learning to inform its approach to resilience.

We recognise that it may take some time for companies to fully understand best practice approaches to resilience in the round and implementing a systems-based approach to resilience. In our initial assessment of business plans, we set United Utilities an action (UUW.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.

United Utilities' resilience action plan includes some good elements but falls short of our expectations in many areas. The company's actions focus on embedding a systems-based approach into various practical elements of the business, for example planning processes such as water resource management plans, people and leadership/management skills, decision-support tools. This demonstrates that the company has developed its thinking around the practical implications of systems-thinking. However, we have particular concerns that:

- the link between the capability model and the key elements of the company's action plan (people, process, tools and data) is unclear. We expected the company to articulate how the actions proposed link to improvements in its capability model;
- there is no indication of the current level of maturity for the company in relation to the 'ideal' elements presented, and there is no evidence of the maturity levels expected after implementation of the action plan. We expected the company to articulate what maturity and service outcome improvements would be achieved by its action plan; and
- the company's action plan only covers short term actions for 2020-25, with no consideration for long-term activities to implement and consolidate the resilience approach. We expected the company to cover long-term resilience actions, across planning periods, to embed and continually improve its approach to resilience.

Overall, United Utilities, 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 United Utilities is £5,488.8 million for the wholesale services. This compares with £5,328 million at draft determination. In retail, our final determination allowance is £474.8 million, compared with £513.4 million at draft determination.
- Our base allowance is affected by a number of changes we have made since United Utilities' fast track draft determination:
  - we expand our definition of base costs to include costs that are driven primarily by population growth;
  - we move from a capex to a totex assessment of enhancement activities;
  - we change our approach to forecasting several of the explanatory factors in our econometric models;
  - we include company outturn data from 2018-19 in our econometric models;
  - we exclude non-section 185 diversions costs (i.e., diversions other than those required by section 185 of the Water Industry Act 1991) from our econometric models and allow companies to recover related income outside the price control, from the relevant transport authority;
  - we strengthen the catch-up challenge applied to wholesale modelled base costs. We use the 4th placed company in wholesale water and the 3rd placed company in wholesale wastewater as an efficiency benchmark, rather than the upper quartile company at draft determinations;
  - we reduce the frontier shift challenge from 1.5% per year to 1.1% per year, but we extend to all wholesale base costs.
- We make a £16.8 million downward adjustment to our base allowance for water network plus, and a £37.7 million downward adjustment for wastewater network plus. The adjustments are due to a relatively low forecast of population growth in 2020-25 in the company's supply area.

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

United Utilities submitted a business plan for 2020-25 with a proposed expenditure that is significantly lower that what it has spent in recent years, across both wholesale and retail. We recognise that the company has made a significant step up in its efficiency. Comparing United Utilities' proposed expenditure to our efficiency benchmarks, we determine that it is broadly efficient in water services, but slightly inefficient in wastewater services and residential retail. We challenge United Utilities' proposed costs to ensure customers pay only for efficient costs. Our allowance for the company is higher than at draft determination.

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

In the 'United Utilities – 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, including the Bolton improvement scheme which is a new potential requirement.

3.1 Allowed expenditure for wholesale services

Table 3.1 shows 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's 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	73.7	76.1	86.4	99.7	94.3	430.1	419.7
Water network plus	449.4	436.5	438.4	435.3	412.0	2,171.7	2,151.4
Wastewater network plus	446.8	467.7	433.1	625.2	557.1	2,529.9	2,691.9
Bioresources[2]	73.8	76.2	71.6	66.8	68.9	357.2	372.5
Total	**1,043.8**	**1,056.5**	**1,029.4**	**1,226.9**	**1,132.2**	**5,488.8**	**5,635.5**

[1] Totex includes all costs. This includes pension deficit recovery costs, third party costs, operating lease adjustments, allowances related to the development of strategic regional water resource solutions and costs that are assumed to be recovered through grants and contributions.
[2] The bioresources control is an average revenue control. The totex allowance in our draft determination is based on a forecast level of tonnes of dry solids.

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

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

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

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

than those required by section 185 of the Water Industry Act 1991 (‘non-section 185 diversions’).

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

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Base expenditure	360.7	1,946.2	1,839.2	356.5	4,502.5
Enhancement expenditure	25.3	160.1	650.7	0.6	836.7
Operating lease adjustment	-	-0.1	-1.1	-0.0	-1.2
Gross allowed totex for cost sharing rates	385.9	2,106.1	2,488.8	357.2	5,338.0
Strategic regional water resources solutions and other cash items	44.1	-	-	-	44.1
Third party costs	0.0	6.3	0.6	-	6.9
Non-section 185 diversions	-	59.3	40.5	-	99.7
Ex-ante cost sharing adjustment	-	-	-	-	-
Gross totex	430.1	2,171.7	2,529.9	357.2	5,488.8
Grants and contributions after adjustment for income offset[1]	-	79.1	87.0		166.1
Net allowed totex for PAYG calculation	430.1	2,092.5	2,442.9	357.2	5,322.7
Pensions deficit recovery costs[2]	-	-	-	-	-
Total	**430.1**	**2,092.5**	**2,442.9**	**357.2**	**5,322.7**

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

Movement in allowed wholesale expenditure between draft and final determinations

Table 3.3 compares our totex allowance at final determination to our allowance at draft determination. The table only includes base and enhancement expenditure. That is, it excludes pension deficit recovery costs, third party costs, and costs for strategic regional water resources development where relevant.

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

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

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

Price Control	Company September 2018	Company August 2019	Draft determination allowance	Final determination allowance
Wholesale water	2,456.2	2,458.5	2,450.7	2,492.2
Wholesale wastewater	3,034.4	3,022.2	2,834.9	2,847.1
Total	**5,490.6**	**5,480.6**	**5,285.6**	**5,339.3**

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

	Draft determination allowance	Final determination allowance
Base expenditure	4,145.1	4,502.5
Growth	344.0	
Enhancement	796.5	836.7
- Environmental obligations (WINEP)	637.9	663.2
- Supply-demand balance and metering enhancement	53.5	50.1
- Resilience enhancement	22.3	78.6
- Other enhancement	82.9	44.9

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

3.2 Wholesale base expenditure

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

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

Price Control	Company August 2019	Final determination allowance
Water Resources	348.8	360.7
Water Network plus	1,849.7	1,946.2
Wastewater Network plus	1,969.5	1,839.2
Bioresources	362.0	356.5
Total	**4,530.0**	**4,502.5**

Note Company business plan base costs exclude enhancement opex.

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

As the population growth forecast in United Utilities for the period 2020-25 is lower than the historical average growth rate in the sector, we make a downward adjustment of approximately £16.8 million to United Utilities' wholesale water base allowance, and a downward adjustment of approximately £37.7 million to its wholesale wastewater base allowance. More details of our approach can be found in the 'Securing cost efficiency technical appendix'.

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

Drainage cost adjustment claim (Combination of exogenous factors impacting surface water runoff)

United Utilities submitted a cost adjustment claim for an additional £88 million to maintain and operate its sewers. It argues that it is required to operate larger sewers than other companies due to higher rainfall and lower permeability soils in its area. United Utilities considers that these factors are not captured in our base allowance

from the econometric models. For final determination we maintain our decision not to make an additional allowance for United Utilities for this claim:

- We are not persuaded that high surface water runoff necessarily means that larger assets are needed to manage the resulting flows, given the relief provided by combined sewer overflows;
- We are not convinced that United Utilities has larger sewers than the norm. Our analysis indicates that, even allowing for errors in the latest asset inventory data reported, United Utilities does not have sewerage infrastructure assets that are larger than the norm in terms of the average sewer diameter or average installed capacity of in-line network sewage pumping stations.
- It is unclear that on a per kilometre basis United Utilities spends unusually high amounts on operating or maintaining its underground assets. Data from the September 2018 business plans and the 2019 Annual Performance Reports show that in 2017-18 and 2018-19 United Utilities' unit costs have been at or just below the industry average.

We set out more information about our assessment and decision about this claim in 'United Utilities Cost efficiency additional information'.

Reservoir safety cost adjustment claim

United Utilities submitted a cost adjustment claim for an additional £51 million to maintain the safety of its reservoirs at acceptable levels as defined by the Health and Safety Executive. The company argues that our modelled allowance does not sufficiently capture its maintenance costs to comply with reservoir safety legislation for a number of reasons such as the age, disproportionately high number and risk profile of the reservoirs.

We recognise that reservoir maintenance is important and we support the company's proposals to meet safety standards. However, for final determination we maintain our decision not to make an additional allowance for United Utilities in relation to this claim. Historical expenditure to maintain reservoirs is included in the data we use to derive our base models and therefore in our base allowance. The company provides no evidence that our resulting modelled base allowance is insufficient, nor makes any attempt to calculate an implicit allowance for what it considers is already covered by our modelled allowance. We consider that United Utilities is adequately funded to maintain safety of reservoirs. We accept United Utilities' modified performance commitment to maintain the safety of its reservoirs.

We allow a cost adjustment for Dŵr Cymru and Hafren Dyfrdwy for their claims to improve the safety standard of existing reservoirs. The main driver for these claims is that Natural Resources Wales has enforced the reduction in the threshold of statutory reservoirs from 25 to 10 megalitres, which increases the number of

reservoirs requiring higher standards of maintenance in Wales. This lower threshold is currently not enforced in England and United Utilities is not including reservoirs below the 25 megalitres threshold in its claim. United Utilities' claim relates to maintenance of the same stock of reservoirs as it had in previous periods, which we consider is a base activity included in our base allowance.

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[1]	Final determination allowance
Water Resources	25.6	25.3
Water Network plus	234.4	160.1
Wastewater Network plus	680.2	650.7
Bioresources	10.4	0.6
Total	**950.6**	**836.7**

Note these figures are slightly overstated because the company submits requested enhancement expenditure including opex associated with enhancements in 2015-20.

Our final determination allows United Utilities £837 million to invest in improvements to service, resilience and the environment. This is an increase from the equivalent allowance for enhancement capex, excluding growth, at the draft determination which was £797 million.

Key parts of the final determination allowance are:

- £663 million to improve the environment by efficiently delivering its obligations as set out in the whole WINEP programme;
- £78 million to improve resilience;
- £41 million for its metering programme;
- £14 million to meet lead standards; and
- £12 million to improve the quality of drinking water including its taste, odour and colour.

Below we discuss key areas of our determination on enhancement cost proposals. Our document 'United Utilities - 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 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. In its fast track draft determination representation the company identifies additional funding that it requests to meet the stretching 20% leakage reduction we set in its draft determination. For the final determinations we no longer allow leakage enhancement funding for reductions greater than 15%. We also revise the performance commitment to require the company to reduce leakage by 15%. Any improvement the company delivers beyond its performance commitment will enable it to receive outperformance payments through its outcome delivery incentive. As forecast upper quartile performance is not achieved by United Utilities, our allowance is unchanged from draft determination and we do not allow any of the £40 million requested under enhancement. In 'Securing cost efficiency technical appendix' we set out our policy on the funding of leakage reduction costs, including how we derive the upper quartile threshold for leakage enhancement costs.

Lead reduction

In the fast track draft determination we assessed capex for lead reduction programmes using an econometric model. We made our draft determination allowance as the lesser of the requested capex or the model output. In its business plan, United Utilities does not request any enhancement capex for lead reduction, so our allowance at draft determination was £0, even though it requested £14 million in opex. For final determination we use a revised benchmark model that considers enhancement totex, rather than capex. United Utilities is more efficient than our benchmarks, and therefore we allow the company the amount it requested at draft determination.

Manchester and Pennines resilience scheme

The company proposes a direct procurement for customers scheme to replace sections of the Haweswater aqueduct that are currently in a poor condition. At draft determination we accepted the need for the programme and challenged the costs for the further work on scheme feasibility, initial investigations and DPC management costs. We challenged these on a basis of a top-down cost benchmark supported by a review of bottom-up costs. In its representations on the draft determination the company accepted that it could accommodate some of the efficiency challenge but

that the stringency of our allowance would result in a restricted survey programme and an inefficient treatment of risk. For final determination we do not change our allowance of £57 million as United Utilities does not provide sufficient evidence that our top-down allowance was inadequate. It provides no further refinements of its previous business plan submission to show the impacts of, for example, more detailed survey planning and the results of the market testing of costs to provide these services.

Wastewater environmental programme

At draft determination our capex allowance for United Utilities' wastewater WINEP was £599 million. For final determinations our approach to setting allowances has changed. We describe the detail of our approach to assessing WINEP costs in 'Securing cost efficiency technical appendix. Our comparative assessment of WINEP costs shows United Utilities to be inefficient in its flow monitoring programme and efficient in phosphorus removal. Our final determination totex allowance for wastewater WINEP is £635 million.

Metering

At draft determination our allowance was £43.5 million based on the metering model outputs. For the slow track draft determination we updated the metering model to use forecast totex rather than historic capex resulting in minor changes to company allowances. For final determination we use the same model but apply the frontier shift to its outputs. As a result of these changes the company allowance is £40.6 million of the £48.4 million requested for new meter installations.

Strategic water resource development

We make an additional allowance in our final determination for strategic water resource development to support the delivery of long-term drought resilience. We set out our policy on funding of these strategic solutions in the 'Strategic regional water resource solutions appendix'. As at draft determination we made an allowance for United Utilities to develop strategic regional solutions in association with other companies. The company provides further evidence to support an increase in its allowance for this programme to £44.1 million in its final determination. Based on the slow track draft determination representations, we accept that Severn Trent Water and United Utilities should be funded to develop some of these solutions individually as they impact significantly on their in-house asset base. Although the funding is now allowed to each company individually, we expect these solutions to be progressed consistently and transparently through the gated development process.

3.4 Cost sharing

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

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

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

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

	Water resources	Network plus - water	Network plus - wastewater
Cost sharing rate – underperformance and outperformance	50%		50%
Grants and contributions before income offset (£m)	0.0	147.3[7]	48.8[8]
Abstraction charges and business rates (£m)	165.8	224.8	99.1
Net allowed totex subject to cost sharing (£m)	220.1	1,734.0[9]	2,341.0[10]

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

3.5 Allowed expenditure in residential retail

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

The company's allowed costs in residential retail are lower than at draft determinations. At the initial assessment of business plans, we used council tax collection rate as an explanatory variable in our econometric models. We have since removed this variable from our models due to their coefficients being statistically insignificant, unstable and because their inclusion deteriorate the statistical performance of other variables in the models. When we used this variable at the initial assessment of plans we used different versions of the data to estimate model coefficients and allowances: we used the old release of the council tax data to estimate the model's coefficients, but a new release of the data to set cost allowances for 2020-25. The use of different versions benefited United Utilities at the initial assessment of business plans. Addressing the inconsistency of data by using the new release of the data to estimate the coefficients and set allowances (or by removing the variable altogether, as we do for final determinations) reduces the company's allowance by around £39 million.

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

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Residential retail	93.5	94.4	94.8	95.5	96.6	474.8
Company view	102.1	101.6	101.2	101.3	101.6	507.8

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. We asked companies to consider direct procurement for customers for discrete, large-scale enhancement projects expected to cost over £100 million, based on whole-life totex.

Manchester and Pennines Resilience scheme

The Haweswater aqueduct is the main water supply to the Manchester region. The tunnel sections of this aqueduct require major repair or replacement and the Manchester and Pennines Resilience scheme aims to carry out these works. United Utilities proposes that a sector leading scheme be carried out using a direct procurement for customers process which delivers the project by procuring a third-party (a competitively appointed provider) to design, build, finance, operate and maintain infrastructure. United Utilities has an important role on the project during construction and into operations including:

- carrying out the procurement of a competitively appointed provider;
- obtaining the necessary planning consents to deliver the project;
- approving the design for the project;
- acquiring the land necessary for construction activities to start;
- delivering some of the site enabling works; and
- works to prepare for the interface between the Manchester and Pennines scheme and United Utilities' water network.

We allow £57.4 million to carry out this work 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 United Utilities which will be determined through a competitive procurement process to be conducted by United Utilities. We do not expect United Utilities' customers to start paying for the competitively appointed provider's revenues until 2024-25 at the earliest.

Consideration of representations on our draft determination

Table 3.9 lists the representations we received that are specific to direct procurement for customers and the Manchester and Pennines Resilience scheme and shows where to find more information on our responses in this document.

Table 3.9 Representations specific to the Manchester and Pennines Resilience scheme

Area	Company-specific representations	Detailed commentary in this company appendix
Performance Commitments	Request that Ofwat provides United Utilities with a form of draft decision on its performance commitments for the delivery of the Manchester and Pennines Resilience scheme.	Delivering value for customers in large projects

Licence Modifications	Request for assurance that the licence will allow United Utilities to recover its liabilities to the competitively appointed provider	Delivering value for customers in large projects

United Utilities continues to propose the Manchester and Pennines Resilience scheme as suitable and offering better value for customers if delivered through a direct procurement for customers process.

Overall, we consider that the procurement of this scheme through a direct procurement for customers process will identify the best value for customers and help protect 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 in 2020. Our expectation is that the competitively appointed provider would be procured during the 2020-25 price control period and the contract would cover the construction of the scheme and its operation for a period of no less than 20-years.

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

While United Utilities did not originally support our proposal for an uncertainty mechanism in the form of a notified item covering its Manchester and Pennines Resilience scheme in the event the scheme ends up being delivered in house, we continued to engage with the company since it made its draft determination representation and it has revised its view to accept that a notified item for the Manchester and Pennines Resilience scheme a notified item is an appropriate uncertainty mechanism. We note, whereas they accept our approach United Utilities still have a preference for their alternative, based on the Water Industry National Environment Programme. We discuss this further in our technical appendix, 'Delivering customer value in large schemes'.

For the Manchester and Pennines Resilience scheme we consider United Utilities' representations and we determine that bespoke outcomes are appropriate and we detail these in 'United Utilities – Outcomes performance commitment appendix'.

United Utilities' business plan does not identify any other schemes that are suitable for direct procurement for customers. However, we expect any major schemes which may arise due to significant changes to United Utilities' business plan to be reviewed against the direct procurement for customers criteria, as we detailed in the PR19 methodology. If the criteria are met, we expect United Utilities 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 continue to 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 £8,247.8 million of revenue across all price controls for United Utilities in the final determination, compared to £8,191.7 million in the draft determination and £8,296.7 million in the company's September 2018 business plan.
- The allowed return on capital for the wholesale price controls is 2.92% (on a CPIH basis, 1.92% on a RPI basis), a reduction of 0.38 percentage points from our fast track draft determination, based on our assessment of market evidence. The allowed retail margin for the household retail control remains at 1.0%, consistent with the draft determination.
- As a fast track company, our determination includes a reward equivalent to a return of 10 basis points on regulatory equity.
- In line with the draft determinations for slow track and significant scrutiny companies, we make a technical intervention to PAYG rates to maintain United Utilities' approach and take account of our view of the mix of operating and capital expenditure. We revise our approach for final determinations to take better account of the nature of our interventions to cost allowances.
- We accept United Utilities' representation that its proposal for a full transition to CPIH is supported by customer preferences. We increase RCV run-off rates by 1% to give the effect of a full transition to CPIH. Following this we consider our determination to be financeable on a notional basis and remove the increase to PAYG rates applied in the draft determination for notional financeability.
- Allowed revenue includes United Utilities contribution to the innovation competition.
- We revise our approach to calculating grants and contributions.
- We reflect United Utilities' latest information on its actual performance in 2018-19 and expected performance in 2019-20 from its 15 July submission.
- Our final determination includes finalised scores for 2018-19 in the residential retail service incentive mechanism. This increases revenue by £6.2 million compared to the zero values we included in the draft determination for the fast track companies.

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

4.1 Allowed revenue

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

4.1.1 Wholesale controls

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

- Pay as you go (PAYG) – this reflects the allocation of our efficient totex baseline to costs that are recovered from revenue in 2020-25. The proportion of totex not recovered from PAYG is added to the regulatory capital value (RCV) which is recovered over a longer period of time.
- Allowed return on capital – this is calculated based on our assessment of the allowed return on capital multiplied by the average RCV for each year.
- RCV run-off – this reflects the amount of RCV that is amortised from the RCV in the period of the price control.
- PR14 reconciliations – this reflects the application of out/underperformance payments from PR14 through revenue adjustments in 2020-25.
- Fast track reward - fast-track companies are awarded a financial reward for achieving fast-track status. We retain the approach adopted at the draft determination to provide an award equivalent to 0.1% of return on regulatory equity.
- Corporation tax allowance – this is estimated from projected corporation tax rates, profit forecasts and assumed levels of tax relief contained in our financial model for the draft determination.
- Grants and contributions – this represents revenue that we expect to be received from developers in respect of work undertaken by companies to service new developments. It includes income from connection charges, infrastructure charges and section 185 diversion recharges. The total grants and contributions amount deducted from totex may not agree to this amount, as we only include

grants and contributions income relating to the price control here (some income is outside the price control).

- Non-price control income – income from charges excluded from the price controls. For example, this includes bulk supplies, standpipes, unmeasured cattle troughs, and other services. In a change from our draft determination, we also now include diversions recharges which are in respect of the New Roads and Street Works act 1991 activities and other non-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 United Utilities' wholesale controls in table 4.1. We summarise the total of the build up of allowed revenue as five year totals, however our financial model calculates the allowed revenue on an annual basis for the purposes of our draft determination. We state the allowed revenue for each price control on an annual basis in section 6.

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

Table 4.1: Calculation of allowed revenue (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total – Final determination	Total - Draft determination
Pay as you go	327.9	1,497.5	1,155.3	193.5	3,174.3	3,129.0
RCV run-off	111.9	926.7	1,634.4	208.0	2,881.0	2,609.9
Allowed return on capital	72.9	405.5	823.0	53.4	1,354.8	1,564.0
Revenue adjustments for PR14 reconciliations	0.7	21.8	4.1	0.0	26.7	-8.8
Fast track reward	0.0	23.9	0.0	0.0	23.9	14.3
Tax	9.6	77.3	107.5	18.0	212.4	191.4
Grants and contributions after adjustment for income offset (price control)	0.0	21.8	48.8	0.0	70.6	170.0
Deduct non-price control income	-0.8	-9.5	-1.5	0.0	-11.8	-11.8
Innovation competition	0.0	13.2	16.1	0.0	29.4	0.0
Revenue re-profiling	-0.5	-2.8	-3.6	-0.4	-7.4	13.0
Final allowed revenues	**521.8**	**2,975.6**	**3,784.1**	**472.4**	**7,753.9**	**7,671.1**

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

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

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

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

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

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

In our new strategy consultation[11], we explored options for customer-funded interventions designed to drive innovation to benefit customers in the longer-term. Having reviewed the responses to the consultation, we are publishing our decision in 'Driving Transformational Innovation in the Water Sector' alongside the PR19 final determinations, confirming that we are making up to £200m available for innovation activities for the period 2020-25 through the introduction of an innovation competition. We will work together with companies and other stakeholders in the sector to set up a competition which will effectively drive innovation in the sector to the benefit of customers across England and Wales.

4.1.2 Residential retail control

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

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

- Retail cost to serve – this reflects our efficient view of costs per customer for the retail business.
- Net margin on wholesale and retail activities – this is calculated based on the wholesale revenue applicable to residential retail customers, plus the retail cost to serve, with a net margin applied. Net margins are calculated excluding any adjustments to residential retail (see table 4.2 below) – the full calculation is set out in our financial models.
- Our methodology set out an early view of the retail margin that applies for the retail price controls. This was used by United Utilities 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)	8,322.7	8,499.0
Proportion of wholesale revenue allocated to residential (%)	69.1%	69.1%
Residential retail costs (£m)	513.4	474.8
Direct procurement for customers pass-through costs (£m)	0.0	2.4
Total retail costs (£m)	**6,263.3**	**6,352.4**
Residential retail net margin (%)	1.0%	1.0%
Residential retail net margin (£m)	**63.3**	**64.2**
Residential retail adjustments (£m)[1]	0.7	7.3
Residential retail revenue (£m)[2]	**577.4**	**546.4**

[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 'United Utilities - Allowed revenue appendix' in table 1.5.

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

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

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

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

4.2.1 PAYG in allowed revenue

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

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

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

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Totex allowance (£m)	430.1	2,092.5	2,442.9	357.2	5,322.7
Final determination PAYG rate (%)	76.2%	71.6%	47.3%	54.2%	59.6%
Pay as you go totex (£m)	327.9	1,497.5	1,155.3	193.5	3,174.3
Pension deficit recovery cost (£m)	-	-	-	-	-
Total pay as you go (£m)	**327.9**	**1,497.5**	**1,155.3**	**193.5**	**3,174.3**

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

	Water resources	Water network plus	Wastewater network plus	Bioresources
Original company plan (%)	86.6%	71.0%	49.3%	57.3%
Draft determination (%)	86.2%	76.1%	47.2%	56.8%
Final determination (%)	76.2%	71.6%	47.3%	54.2%

In the draft determination, we applied United Utilities' approach to PAYG rates of recovering in each year an amount equivalent to operating 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. We applied an uplift of 1.38% to PAYG rates for all controls to improve notional financeability.

In its representations, United Utilities states that our approach to the technical intervention is an approximation and requests that we reassess the PAYG rates. The company also states that if amendments made to costs result in overall revenues and customer bills to be above the level of its original business plan, then it would be in customers' interests to the limit the PAYG revenues.

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.

Following our assessment of notional financeability of the final determination, we do not consider an uplift to PAYG rates is required for notional financeability. Therefore we have removed the uplift applied in the draft determination. We set out our financeability assessment in section 5.2.

The movement in PAYG rates between the original company plan, the draft determination and final determination reflect the differences in the mix of operating and capital expenditure in totex allowance and the PAYG adjustment for notional financeability in the draft determination.

4.2.2 Opening RCV adjustments

As part of the business plan United Utilities Water proposed allocations of the RCV for both water resources and bioresources price controls based on Ofwat guidance. At draft determination, we expressed concerns about the RCV allocations for water resources. We subsequently intervened and proposed an alternative allocation of 20%. In light of this feedback, United Utilities Water have changed their methodology to base it on future expenditure. This increases the allocation to Water Resources to 15%. We welcome this revision and accept their proposals. We identified no issues with bioresources.

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

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

	Water resources	Water network plus	Wastewater network plus	Bioresources
RCV – 31 March 2020	3,927.7		7,218.6	
% of RCV allocated by control	15.00%	85.00%	93.94%	6.06%
RCV – 31 March 2020	589.2	3,338.5	6,781.2	437.360
Midnight adjustments to RCV	8.7	49.5	19.5	N/A
Midnight adjustments relating to operating leases	0.0	0.6	53.9	0.0
Opening RCV – 1 April 2020 (before fast-track reward)	597.9	3,388.6	6,854.6	437.4

4.2.3 Allowed return on capital

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

United Utilities 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. We maintained the early view allowed return on capital for draft determinations for fast track companies. We set out in 'PR19 draft determinations: Overview of fast-track companies' draft determinations' that we would update the allowed return on capital for slow track draft determinations and final determinations. The allowed return on capital for the wholesale price controls in our final determinations is 2.92% – CPIH deflated (1.92% – RPI deflated). We set out the basis for the allowed return on capital in our 'Allowed return on capital technical appendix'.

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

The PR19 methodology confirms our protection of the value of the RCV as at 31 March 2020 across each of the wholesale price controls. This applies to the RCV

that is defined as 'RPI inflated RCV' and 'CPIH inflated RCV' in tables 4.6 and 4.7; this RCV is run-off (or amortised) over time. Totex that is added to the RCV from 1 April 2020 is stated as 'post 2020 investment'.

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

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	298.9	1,694.3	3,427.3	218.7	5,639.2
CPIH inflated RCV	298.9	1,694.3	3,427.3	218.7	5,639.2
Other adjustments	-	-	-	-	-
Total RCV	**597.9**	**3,388.6**	**6,854.6**	**437.4**	**11,278.4**

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	252.0	1,299.5	2,730.5	135.8	4,417.8
CPIH inflated RCV	253.6	1,309.1	2,749.6	137.1	4,449.5
Post 2020 investment	95.1	517.0	1,168.5	128.3	1,909.0
Other adjustments	-	-	-	-	-
Total RCV	**600.8**	**3,125.6**	**6,648.7**	**401.2**	**10,776.3**

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	26.5	143.5	294.7	16.9	481.5
CPIH inflated RCV	40.3	218.5	448.7	25.8	733.3
Post 2020 investment	6.2	43.5	79.6	10.7	139.9
Other adjustments	-	-	-	-	-
Allowed return on capital	72.9	405.5	823.0	53.4	1,354.8
Company (September 2018) –return on capital	75.7	479.5	963.9	62.1	1,581.1

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 'United Utilities - Allowed revenue appendix' in tables 4.1 to 4.4.

4.2.4 RCV run-off

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

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
CPIH inflated RCV	45.3	385.2	677.7	81.6	1,189.7
RPI inflated RCV	59.5	463.5	837.7	91.0	1,451.8
Post 2020 investment	7.0	78.0	119.1	35.4	239.5
Total RCV run-off	**111.9**	**926.7**	**1,634.4**	**208.0**	**2,881.0**

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

For the draft determination, we applied United Utilities RCV run-off rates which are consistent with the economic utilisation of assets for each wholesale control based on the company's forecast of current cost depreciation.

In its representation, United Utilities sets out that an adjustment is required in the draft determination to RCV run-off rates for the water resources and water network control as a result of the intervention to the allocation of opening RCV between the two controls in the draft determination. The company requests that we amend RCV run-off rates for the two controls if we do not accept the representation it makes in relation to the allocation of opening RCV. We set out in section 4.2.2 that we accept the revised approach which allocates 15% of RCV to Water Resources versus 14% in its original business plan. As such we consider a technical adjustment is not required.

United Utilities makes a further representation for an adjustment to RCV run-off rates for RCV inflated by RPI to deliver the effect of a full transition to CPIH. The company proposes to transition up to a level capped by the bills set out in its original business plan. United Utilities provides evidence that the bill profile resulting from full transition is supported by customer preferences. We accept the company approach and apply a 1% increase to RCV run-off rates for RCV inflated by RPI to give an equivalent effect to a full transition to CPIH.

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

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

	Water resources	Water network plus	Wastewater network plus	Bioresources
Company (September 2018) (%)	3.23%	5.02%	4.31%	8.89%
Draft determination (%)	3.23%	5.02%	4.31%	8.90%
Final determination (%)	3.70%	5.48%	4.77%	9.31%

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 'United Utilities - Allowed revenue appendix' in table 5.1 to table 5.4. The increase in RCV run-off rates between the final determination and the company plan and draft determination reflect the increase applied to RCV run-off rates for RCV inflated by RPI.

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. 'United Utilities - 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 'United Utilities - Accounting for past delivery appendix' sets out how these adjustments are allocated across controls and how the RCV adjustment feeds into the midnight adjustments to RCV set out in table 4.5.

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

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

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

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

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

Incentive	Intervention(s)
Outcome delivery incentives	We are intervening on the 2019-20 forecast performance for performance commitment S-D2 (maintaining wastewater treatment works) as it is overly pessimistic. This removes the company's underperformance payment of - £4.387 million in 2019-20 (2012-13 prices). We are also intervening to reduce the outperformance payment for the performance commitment on 'contribution to rivers improved – wastewater' by £0.4 million to ensure that the definition is followed correctly. Overall, our interventions increase the wastewater RCV adjustment at the end of the 2015-20 period from £55.872 million to £60.460 million.
Residential retail revenue	We are intervening to round the company's modification factor figures to 2 decimal places to ensure consistency with the 'PR14 reconciliation rulebook'.

Incentive	Intervention(s)
	Overall, our minor interventions do not change the total residential retail revenue payment at the end of the 2015-20 period which remains at £5.209 million.
Wholesale revenue forecasting incentive mechanism	No interventions required.
Totex	We are intervening to change the 'Water: Final menu choice' and 'Sewerage: Final menu choice' figures to full decimal accuracy as calculated in the PR14 populated final determination models. Our minor interventions increase the water totex revenue adjustment at the end of the period from £49.614 million to £49.618 million and reduce the wastewater RCV adjustment from £42.022 million to £42.021 million.
Land sales	No interventions required.
Residential retail service incentive mechanism	We are intervening to set United Utilities' residential retail service incentive mechanism adjustment to 1.10% of residential retail revenue to reflect its performance from 2015-16 to 2018-19. This equates to £6.238 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	55.9	60.5	-8.4	-8.4
Residential retail revenue	N/A	N/A	5.2	5.2
Wholesale revenue forecasting incentive mechanism	N/A	N/A	1.8	1.8
Totex	149.8	149.8	60.8	60.8
Land sales	-6.7	-6.7	N/A	N/A
Residential retail service incentive mechanism	N/A	N/A	15.0	6.2
PR09 blind year adjustments[2]	-125.9	-125.9	-23.5	-23.5
Water trading	N/A	N/A	0.0	0.0
Other adjustments	0.0	0.0	0.0	0.0
Total	73.0	77.6	50.9	42.2
Total post profiling[3]	N/A	N/A	54.3	44.6

[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 'United Utilities - Accounting for past delivery appendix'.
[3] Total post profiling is the total revenue over the period, taking account of the time value of money and the company's choices of how it wishes to apply revenue adjustments either in the first year or spread over a number of years.

4.4 Other allowed revenue

Other components of allowed revenue are:

- The fast track reward;
- Corporation tax allowance – this is estimated from projected corporation tax rates, profit forecasts and assumed levels of tax relief contained in our financial model for the final determination.

- Grants and contributions – this represents revenue that we expect to be received from developers in respect of work undertaken by companies to service new developments.
- Non-price control income – this forecast income is deducted from the total allowed revenues, as this revenue is not recovered from the charges covered by the price control – but is expected to cover some of the costs included in the calculation of the price control.

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Fast track reward	0.0	23.9	0.0	0.0	23.9
Tax	9.6	77.3	107.5	18.0	212.4
Grants and contributions (price control)	0.0	21.8	48.8	0.0	70.6
Deduct non-price control income	-0.8	-9.5	-1.5	0.0	-11.8

4.4.1 Fast track reward

In our draft determination we allowed United Utilities a financial reward equivalent to 10 basis points on the return on regulatory equity to recognise the quality of its business plan, as part of its fast-track status. United Utilities requested that this reward is attributed as an additional revenue adjustment to the water network plus control. We retain this approach for the final determination.

4.4.2 Taxation

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

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

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Tax	9.6	77.3	107.5	18.0	212.4

4.4.3 Grants and contributions

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

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

Grants and contributions (price control)

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

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

Our approach to calculating 'gross' and 'net' grants and contributions is outlined in '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.

For United Utilities this means that our calculation of 'net' grants and contributions falls to £70.6m, which is significantly lower than at draft determination (£170m). This is now closer to the company's own business plan forecast and follows the approach suggested in the company's draft determination representation.

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

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Grants & contributions (price control; before deduction of income offset allowances)	0.0	147.3	48.8	0.0	196.1

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	21.8	48.8	0.0	70.6

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	57.4	38.2	0.0	95.6

4.4.4 Non-price control income

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

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

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Non-price control income	-0.8	-9.5	-1.5	0.0	-11.8

Note negative numbers represent a deduction from the allowed revenue.

4.4.5 Uncertainty mechanisms

Given the range of risk mitigation measures included in price controls, the PR19 methodology said that final determinations would only include bespoke uncertainty mechanisms where robust and compelling evidence was presented for that item. United Utilities does not propose any uncertainty mechanisms.

We are including a PR24 reconciliation mechanism for business rates in our final determination for United Utilities 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 United Utilities along with all other companies serving England[12] because:

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

In each case, the cost variance to the company's PR19 cost allowance will be subject to a 75 (customer share):25 (company share) symmetrical sharing rate in the totex reconciliation at PR24. This means that the company will still be incentivised to

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

manage costs efficiently, whilst receiving appropriate protection against material cost increases. Conversely, customers will receive a benefit if outturn costs are lower than the allowance levels we have set.

We have specified a Notified Item as we consider that an interim determination is the appropriate mechanism in the event the Manchester and Pennines Resilience scheme is not delivered by direct procurement for customers.

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 apply our notional dividend yield assumption of 3.00% and with a dividend growth of 1.18% in our notional financeability assessment for United Utilities. This takes account of the allowed cost of equity in the final determination.
- We revise our approach to pension deficit recovery costs in our financial modelling of the notional company to match cash out flow for pensions deficit recovery costs to the allowed funding.

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

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

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

5.1 Risk analysis

The PR19 methodology set out that we expect companies to demonstrate a clear understanding of financial risk to the delivery of their business plans and to explain and demonstrate how they manage and mitigate that risk. It required companies to use return on regulatory equity (RoRE) analysis to assess the impact of upside and downside risk on the basis of their notional capital structures based on a prescribed

suite of scenarios using the company's assessment of P10/P90 confidence limit values[13].

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[14]. 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 United Utilities in our final determination. The risk ranges show the plausible range of company returns based on United Utilities' RCV and cost data for 2020-25, the allowed equity return and a notional gearing level of 60%. The final determination ranges reflect our approaches to the assessment of risk ranges for outcome delivery incentives and our approach to apply a common approach to the assessment of risk ranges for totex and financing costs for the sector.

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

United Utilities has a significant scope to earn upside from outperformance as well as the risk of lower returns from underperformance. 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

[13] 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.

[14] 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.

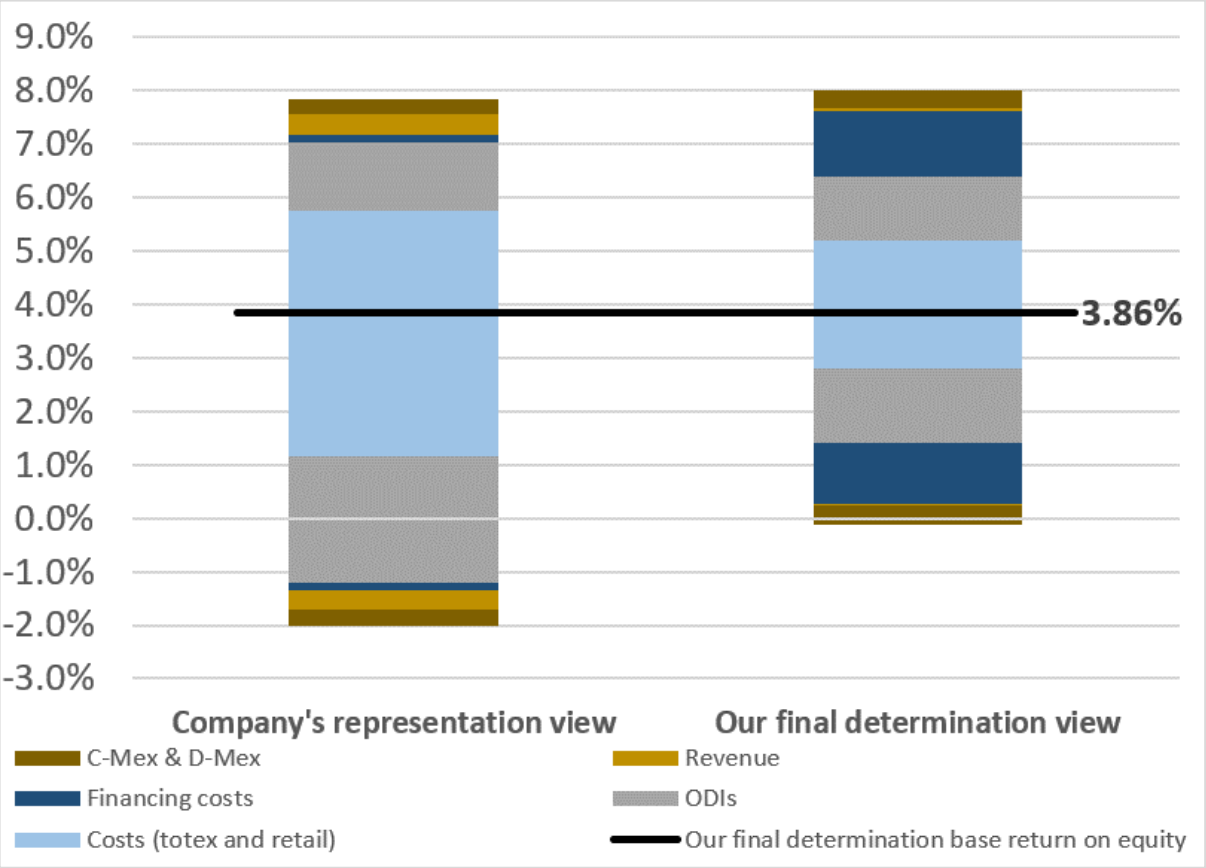
regulatory equity in our final determinations. These risk ranges are not fully comparable with our final determination ranges as they take account of company views of the cost efficiency and outcome delivery incentive stretch in our draft determinations which we revise for the final determinations.

Table 5.1: United Utilities final determination risk ranges

	Range implied in company representation		Final determination ranges	
Base RoRE	-		3.86%	
Risk ranges	**Lower bound**	**Upper bound**	**Lower bound**	**Upper bound**
Totex	-2.37%	1.51%	-0.73%	0.96%
Outcome delivery incentives	-2.38%	1.29%	-1.38%	1.21%
Financing costs	-0.14%	0.14%	-1.16%	1.23%
Retail costs	-0.32%	0.37%	-0.32%	0.37%
C-MeX and D-MeX	-0.31%	0.29%	-0.38%	0.32%
Revenues (includes Retail)	-0.35%	0.38%	-0.02%	0.05%
Total	**-5.86%**	**3.99%**	**-3.99%**	**4.14%**

[1] We calculate the company's range based on the resubmitted ranges the company states in its representation that are in monetary terms. As we have calculate 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 United Utilities



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 United Utilities Water's final determination.

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

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

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

5.2 Financeability

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

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

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

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

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

In its business plan, United Utilities sets out that its 'Board assures that both the notional and actual capital structures remain financeable in the long term, and that key financial ratios are at a level that retain sufficient headroom to maintain investment grade 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 (Moody's) and BBB+ (S&P) on a notional basis.

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

United Utilities says that its Board is likely to judge that the final determination will enable the company to be financeable on the basis of the slow track draft determinations allowed return on capital. However, it makes clear the Board assurance is on the basis of acceptance of its representations on cost assessment, revenue advancement and amelioration of more significant ex post revenue risks with higher resultant revenue allowances such that customer bill levels are consistent with its September 2018 business plan.

United Utilities provides a review of the implied impact of the reduction in the cost of capital and the resulting reductions in credit ratings for the notional company.

We have carefully considered the representations made by United Utilities including the qualifications attached to the assurances provided. We have considered this in the context that the allowed return which is based on market data is lower than our draft determination and the basis on which the company provided assurance about the financeability of its plan. However we are satisfied that the market data supports our view that allowed returns are sufficient to reward investors for the risks they face in a sector that already benefits from significant risk protections[15]. We set out the revisions we are making to our performance commitments and cost allowances elsewhere in this document. We consider the revenues allowed in our final determination, which reflect our assessment of efficient allowed costs, are sufficient for United Utilities 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.

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

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

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

The company makes a representation in relation to notional dividends yields, setting out that the policy should recognise that assumed rates of dividend growth persist across price control periods. United Utilities states that the dividend yield assumption should include an amount relating to growth over the period of time in which we have been applying a 'base yield plus real growth' approach to notional dividends. We discuss how we determine an appropriate base dividend yield in the 'Aligning risk and return technical appendix' and the circumstances in which we may vary from the base dividend yield assumption.

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.

United Utilities sets out in its representations that certain rating agencies reverse adjustments to accelerate revenues when calculating adjusted interest cover. However, in its business plan, United Utilities proposed to increase PAYG rates to address a notional financeability constraint. We set out in the PR19 methodology that revenue advancement is preferable to cost of equity adjustments as it is net present value neutral for customers over time and has the effect of crystallising some of the inflationary return related to the partial transition from RPI to CPIH as the measure of inflation. While we increase PAYG rates in the draft determination to address a notional financeability constraint (following United Utilities' approach in its business plan) we have not found the need to increase PAYG rates in the final determination taking account of changes to RCV run-off rates explained below.

Our in the round assessment of notional financeability is made on the basis of the financial ratios from our financial model. It takes account of the evidence that the company provides regarding the levels and thresholds of the financial ratios that underpinned its assurance statement on notional financeability in its business plan (also stated in table 5.2). We note that the Board assurance statement that accompanied the company's representations was made in the context of the draft determination. Our assessment of notional financeability for the final determination is made in the context of changes made in our final determination. We consider that United Utilities' 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	59.85%	58.89%	56.98%
Interest cover	4.01	4.05	4.58
Adjusted cash interest cover ratio (ACICR)	1.55	1.54	1.52
Funds from operations (FFO)/Net debt	9.73%	9.81%	10.83%
Dividend cover	0.96	1.00	1.56
Retained cash flow (RCF)/Net debt	6.30%	6.66%	8.58%
Return on capital employed (RoCE)	4.62%	4.34%	4.32%
The basis of the calculation of the ratios is set out in the PR19 methodology. **Net debt** represents borrowings less cash and excludes any pension deficit liabilities. **FFO** is cash flow from operational activities and excludes movements in working capital. **Cash interest** excludes the indexation of index-linked debt.			

We set out the average PAYG and RCV run-off rates along with the RCV growth over 2020 to 2025 for United Utilities in table 5.3. RCV growth for the final determination is lower than in the company's April plan and in the draft determination. Overall, changes to allowed expenditure and the revised approach to determining the mix of operating and capital expenditure means less expenditure is added to RCV. The final determination removes the uplift to PAYG rates applied in the draft determination. And in the final determination we accept the company's proposal to increase RCV run-off rates for the RPI inflated part of the RCV is supported by customer preferences which gives the effect of a full transition to CPIH.

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

	PAYG	RCV run-off	RCV growth
Company (September 2018)	60.7%	4.65%	-3.97%

Draft determinations	61.9%	4.62%	-4.01%
Final determinations	59.6%	5.10%	-4.45%
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 'United Utilities - 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 £433 million above an adjusted cash interest cover of 1.0 times, providing headroom to our totex downside of £182 million and outcome delivery incentives downside of £218 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.

United Utilities 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 United Utilities' actual structure in figure 5.2.

Figure 5.2: Financial resilience of United Utilities actual financial structure

United Utilities reported gearing of 64.8% at 31 March 2019 and in its business plan it forecasts gearing of 62.1% at 31 March 2021 and 60.0% at 31 March 2025.

At the time of our final determination it has credit ratings of A3 (stable) with Moody's, A- (negative) with S&P and BBB+ (stable) with Fitch.

The company provided Board Assurance that it was financially resilient in its business plan and it provided assurance that, under the package United Utilities proposes in its representation, it is satisfied that the company's actual capital structure would remain financeable over 2020-25 and that the company would be financially resilient in the long term on the basis of its actual structure. However United Utilities set out that it did not have adequate information to enable it to come

to any view about the adequacy or otherwise of the final revenue allowance and it is the overall revenue outcome that determines financeability and financial resilience.

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

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

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

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

In its future reporting, we expect the company to explain clearly in its long-term viability statement how the Board has identified and assessed the potential risks to its financial resilience and the mitigating actions it is taking to address those risks. United Utilities 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 United Utilities' average bill profile from a large reduction upfront followed by flat real terms prices, to have a smaller reduction upfront, followed by a gradually falling real price over 2020-25.

6.1 Bill profile

United Utilities' draft determination contained an average bill profile with an 11.0% reduction. Its final determination bill profile contains a reduction of 13.8% over 2020–25.

United Utilities submits additional evidence in its representation on bill profiles and acceptability in its representation. The company sets out its case for an accelerated transition to CPIH, highlighting out upward pressure on bills in future periods from the Manchester and Pennines resilience scheme and further transition to CPIH (and possible increases to the Weighted Average Cost of Capital). It proposes transitioning as far as possible to a level capped by the bills set out in its original business plan. We require companies to have customer support for the use of financial levers on the basis of the resultant bills.

United Utilities conducted additional customer research in relation to CPIH transition in May 2019. The survey presented three bill options from the draft determination bill profile (option 1) to full CPIH transition (option 3) with a partial enhanced transition to cap bills in line with the original business plan (option 2). The results show 63% of customers prefer the bill profile including a full transition to CPIH with 81% finding the bill profile acceptable 'driven by customers wanting to avoid bill increases, and have lower bills in the longer term'.

While we find elements of the customer engagement research United Utilities submits to be of mixed quality, it makes a convincing case that its customers want bills that are stable and predictable. This is in keeping with what we've found in the majority of customer research, and is supported by several submissions from other stakeholders such as customer challenge groups and the CCWater. On the basis of the customer support it secures, we accept the company's representation on CPIH.

As a result of its transition to CPIH, United Utilities' average bill profile changes from a large reduction upfront followed by flat real terms prices, to have a smaller reduction upfront, followed by a gradually falling real price over 2020–25. This profile is in line with our standard approach and provides customers with as much stability as possible in what they actually pay, post inflation (i.e. nominal bills). We set bills in this way for the following reasons;

- Research (including United Utilities' exercise in May 2019) shows customers want consistent, predictable bills;
- Flat nominal bills will help households, particularly those who are financially vulnerable, to plan their finances;
- Profiling in this way is easy to understand and communicate to customers;
- Profiling bills in this way has extensive support from stakeholders including water companies, customer challenge groups and the Consumer Council for Water;
- Company revenues fall less sharply in 2020 with a gradual bill reduction, reducing impact of any step change in allowances.

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

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Company (September 2018)	£429	£394	£392	£386	£383	£382
Draft determinations	£429	£378	£378	£378	£378	£378
Final determinations – before reprofiling	£429	£389	£385	£383	£386	£385
Final determinations	£429	£401	£393	£385	£377	£370

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 (United Utilities was not one of these companies) undertook additional customer testing on their long-term bill profiles with several making adjustments as a result. We expect companies to continue to pay attention to this issue, taking customer views into account and planning in a way that ensures they control costs into the future.

6.2 Help for customers who are struggling to pay

Our final determinations for United Utilities will cut average bills by 13.8% in real terms between 2020 and 2025.

In addition, United Utilities commits to:

- provide financial assistance to 152,000 customers by 2024-25 to alleviate affordability issues. To help it meet this goal United Utilities will increase its social tariff cross-subsidy to £1.60 per customer and it will also spend £71m of company funding on schemes to help customers who need financial support.
- increase the flexibility and accessibility of its payment break offer;
- continue its innovative Town Action Planning approach which engages hard-to-reach customers on its affordability schemes; and
- expand its 'Lowest Bill Guarantee' scheme, whereby customers who may experience affordability difficulties when switching to a water meter are guaranteed to be billed the lowest of their old unmetered charge or their new metered charge for two years after switching.

United Utilities has two performance commitments on affordability which will require it to:

- improve customer views on value for money; and
- increase the number of customers lifted out of water poverty every year.

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	102.7	102.6	102.6	104.5	109.4	521.8
Water network plus	607.9	606.5	597.3	590.9	573.1	2,975.6
Wastewater network plus	790.3	767.9	755.5	739.7	730.7	3,784.1
Bioresources	94.9	95.0	95.4	93.8	93.3	472.4
Residential retail	101.2	100.2	98.6	97.4	96.5	493.9
Total	**1,697.0**	**1,672.2**	**1,649.4**	**1,626.3**	**1,603.0**	**8,247.8**

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

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

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

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

	Base (£m)	2020-21	2021-22	2022-23	2023-24	2024-25
Water resources	102.7	0.00%	-0.06%	0.13%	1.90%	4.73%
Water network plus	607.9	0.00%	-0.22%	-1.47%	-1.09%	-3.06%
Wastewater network plus	790.3	0.00%	-2.87%	-1.58%	-2.12%	-1.23%

In addition to these controls, we have set a modified average revenue control for bioresources. We recognise that a proportion of bioresources costs are fixed, so we

allow for this in setting the average revenue control. The revenue control ensures that where sludge production varies the incremental change in revenues that arises is aligned to incremental costs. The ‘modified average revenue’ control includes a revenue adjustment factor, which applies if there are differences between the forecast and measured quantities of sludge.

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

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

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

	Company view	Ofwat view based on draft determination	Ofwat view based on final determination
Part 1: Revenue to remunerate fixed costs £m 2017-18 FYA CPIH deflated prices (2020-25)			
Total return on capital	N/A	62.4	53.4
Total run-off	N/A	201.7	208.0
Revenue to service RCV	**N/A**	**264.0**	**261.3**
Local authority and Cumulo rates for both treatment and disposal	N/A	35.4	35.4
Fixed share of other direct costs of treatment and disposal	N/A	33.2	30.0
Fixed share of other indirect cost of treatment and disposal	N/A	19.7	17.8
Fixed PAYG revenue	**N/A**	**88.2**	**83.1**
Fixed share of revenue to cover tax	N/A	0.0	0.0
Pension deficit repair contributions	N/A	0.0	0.0
Other fixed costs	**N/A**	**0.0**	**0.0**
Revenue to remunerate fixed costs	**239.9**	**352.3**	**344.4**
Part 2: Variable revenue (£/TDS) 2017-18 FYA CPIH deflated prices (2020-25)			
Unadjusted revenue (£m)	494.6	496.6	472.4
Revenue to remunerate fixed costs	239.9	352.3	344.4
Revenue to remunerate variable costs (£m)	**254.7**	**144.3**	**128.0**
Forecast volume of sludge (TDS)	999,396	999,396	999,396
Variable revenue (£/TDS)	**254.9**	**144.4**	**128.1**

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

Table 6.5: Bioresources control

	2020-21	2021-22	2022-23	2023-24	2024-25	2020-25
Unadjusted revenue (£m)	92.6	93.3	94.2	95.4	96.9	472.4
Forecast volume of sludge (TDS)	195,962	197,394	199,216	201,746	205,079	999,396
Variable revenue (£/TDS)	N/A	N/A	N/A	N/A	N/A	128.1

7 Putting the sector in balance

Key points

- United Utilities Water is reporting gearing of 64.8% as at 31 March 2019[16]. United Utilities forecasts that its level of gearing (62.1% by 2021 and 60% by 2025) will remain below the level that triggers sharing of financing gains with customers on account of high gearing as set out in the 'Aligning risk and return technical appendix'. We are updating the gearing outperformance sharing mechanism to introduce a glidepath to the gearing level that the triggers sharing payments as set out in the 'Aligning risk and return technical appendix'
- Consistent with the lower allowed return on equity in our final determination, we are revising our calculation of the dividend yield as a guide to the reasonable base dividend yield in the absence of out/underperformance in 2020-25. We set out that the acceptable level of base dividend yield can be expected to vary depending on the scale of a company's RCV growth in 2020-25 and future investment needs.
- We expect the company will need to revise its proposed base dividend yield for 2020-25 to take account of the lower allowed return in our final determination and our revised expectations for a reasonable base dividend yield that we set out in the 'Aligning risk and return technical appendix'.
- On executive pay, United Utilities falls short of the 60% alignment to delivery for customers we identify as current good practice. We retain our expectation of the company that it will ensure its dividend and performance related pay policies demonstrate substantial alignment with the customer interest, underpinned by stretching performance targets throughout 2020-25.

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

- company dividend policies for actual financial structures and performance related executive pay policies show appropriate alignment between returns to owners and executives and what is delivered for customers[17];
- companies with high levels of gearing share financing gains from high gearing with customers; and

[16] Based on net debt to regulatory capital value.
[17] We explain more fully our expectations in the 'Aligning risk and return technical appendix' that accompanies this draft determination.

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

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

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

Our assessment of United Utilities' proposals is in table 7.1. We comment on the financial resilience of United Utilities in section 5.2.

Table 7.1: Our assessment of United Utilities' proposals to balance the interests of customers

Our assessment of the company's proposals to balance the interests of customers
Gearing outperformance benefit sharing mechanism The company confirmed it would implement our default gearing outperformance mechanism within its business plan, the company forecasts that its gearing level through 2020-25 expected to remain below the threshold that triggers the mechanism.
Voluntary sharing mechanisms United Utilities proposes £71 million of its own money over the control period for its CommUnity Share. This is a guaranteed shared amount before considering any dividend payments which will provide financial assistance schemes for customers in need of financial support. These schemes are a support tariff for low income households (£46 million), a social tariff which provides caps for pensioners in receipt of pension credit (£7 million) and the UU Trust Fund, which provides grants to customers who are struggling to pay their water bill (£18 million). Where dividend distributions to shareholders exceed a pre-defined level, United Utilities will match these with contributions to its CommUnity Share scheme. This scheme will benefit customers and communities in the North West, with allocations made in consultation with customers and shareholders and overseen by its Customer Challenge Group.
Dividend policy for 2020-25 United Utilities confirms that it is committed to meet the expectations on dividend policy as set out in our 'Putting the sector in balance' position statement. In doing so its September business plan indicated a nominal base dividend of 5% of the equity portion of the RCV for each year. We expect the company will need to revise its proposed base dividend yield for 2020-25 to take account of the lower allowed return in our final determination and our revised expectations for a reasonable base dividend yield that we set out in the 'Aligning risk and return technical appendix'. The company's dividend policy refers to all the areas included in the 'Putting the Sector in balance' position statement (out/underperformance & benefit sharing, employee interest & pension obligations, actual capital structure, need for future investment and financial resilience). The company confirms that its dividend payments will take account of the company's overall delivery for customers, which will be based on performance targets embedded in the final determination, including all outcome delivery incentives, cost and financial targets reflected therein. It has detailed the specific obligations and commitments to customers that will be considered. It confirms that dividends may 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.

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

The company commits that it will explain its dividend policy every year and provide stakeholders with a clear explanation of its approach and decision as part of the Annual Performance Report. In exceptional and unforeseen circumstances, it may have to make changes to its policy, However, if it were to do so, it would explain its reasoning to customers and other stakeholders.

Consistent with the lower allowed cost of equity in our final determination, we have revised our calculation of the dividend yield that we consider to be reasonable for assessing the base dividend for water companies in 2020-25. We consider the acceptable level of base dividend yield of up to 4% but this can be expected to vary depending on the scale of a company's RCV growth and future investment needs. We set out further details in 'Aligning risk and return: technical appendix'.

We expect United Utilities 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, United Utilities 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 United Utilities Water's policy on performance related executive pay to demonstrate a substantial alignment to the delivery of service for customers throughout 2020-25.

United Utilities states it is committed to meet the expectations set out in our 'putting the sector in balance' position statement:

- The company has confirmed it has carried out a review of the annual bonus arrangements, and that this has resulted in the outcome that there will continue to be at least a 60% weighting linked to delivery for customers.
- At its AGM in July 2019, shareholders approved a proposal to increase the weighting of customer focused performance in its long-term incentive plan. This places a 50% weighting on customer related measures including customer regulated measures (CMeX/DMeX), resilience measures and performance against specific outcome delivery incentives, (prioritised using feedback directly from customers) and a 50% weighting on RoRE (which focuses performance across a range of areas such as totex, customer outcome delivery incentives and financing)..
- The United Utilities Remuneration Committee will oversee the policy and is constituted entirely of independent non-executive directors. In addition, the committee is required under its terms of reference to ensure that performance elements of executive pay are 'transparent, stretching and rigorously applied'.
- Executive pay policies and practices will be disclosed in the annual report and financial statement and annual performance report.

We expect the company's remuneration committee to ensure there is on-going rigorous challenge as to how the policies are applied and to ensure that only truly stretching performance is rewarded. In so doing, we expect it to be equipped with the appropriate powers to carry this out, including for example, the use of withholding periods, clawback arrangements and underpin / gateway arrangements.

We expect United Utilities 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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