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PR19 final determinations

PR19 final determinations: Dŵr Cymru final determination

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About this document

This document supports the 'Notification of the final determination of price controls for Dŵr Cymru' and sets out further details about the final determination price control, service and incentive package for Dŵr Cymru 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 Dŵr Cymru to deliver;
- the allowed revenue that Dŵr Cymru 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 Welsh Government's statement of strategic priorities and objectives for Ofwat[2]. We have also had regard to the principles of best regulatory practice, including the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted.

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

There are six appendices to this document on cost efficiency, outcomes performance, past delivery, allowed revenue and, where relevant, additional information. For all documents related to the Dŵr Cymru 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 Dŵr Cymru 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 'Welsh Government priorities and our 2019 price review final determinations' for more information.

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Amendment	Date
Table 3.7 Page 46 – Amendment made to figures. • Grants and contributions before the deduction of income offset (£m) Network plus – Water amended from £106.0 million to £99.8 million, for Network plus – Wastewater amended from £51.4 million to £43.5 million. • Net allowed totex subject to cost sharing reconciliation Network plus – Water amended from £996.1 million to £1002.4 million, for Network plus – Wastewater amended from £1,199.7 million to £1,207.7 million. Page 66 – Amendment to refer to Customer Challenge Group instead of customer support group.	18 May 2020

1 Summary

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

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

Our PR19 methodology sets out a framework for companies to address the challenges facing the sector with a particular focus on improved service, affordability, increased resilience and greater innovation. We published our draft determination for Dŵr Cymru on 18 July 2019, based on our detailed review of the revised plans submitted to us on 1 April 2019. The company and a number of stakeholders provided representation responses on our draft determination on 30 August 2019.

Our final determination carefully considers all of the representations we received from companies and stakeholders on our draft determination and takes account of the most up-to-date information available where appropriate. We consider the changes we have made in our final determination are in line with our statutory duties.

1.1 What our final determination includes

This section sets out the overall shape of our final determination for Dŵr Cymru, 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 Dŵr Cymru will cut average bills by 9.4% in real terms in the 2020-25 period compared to the company's proposed 5.5% reduction. Table 1.1 below sets out the difference in bill profile between the company's business plan submission in April 2019, our draft determination and the final determination. Average bills are lower than proposed by Dŵr Cymru, reflecting our view of efficient costs and a reduction in the allowed return. Further details on bills are set out in section 6.

Table 1.1: Bill profile for 2020-25 before inflation

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Company plan (April resubmission)	£441	£417	£417	£417	£417	£417
Draft determination	£441	£378	£378	£378	£378	£378
Final determination	£441	£434	£425	£416	£408	£399

Costs

Our final determination allows wholesale totex of £2,942.8 million. This is:

- £150.1 million higher than in our draft determination and
- £163.4 million lower than stated in the company's representation on our draft determination.

Our final determination allows Dŵr Cymru £584 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £212 million to improve the environment by efficiently delivering its obligations as set out in the National Environment Programme (NEP);
- £66 million to deliver enhancements to the supply-demand balance and promote water efficiency;
- £76 million for improving the safety of reservoirs;
- £97 million to improve the quality of drinking water including its taste, odour and colour.
- £33 million to reduce wastewater discharges to the Loughor Estuary

The most material areas of enhancement cost challenge for Dŵr Cymru include: leakage; supply and demand balance enhancements; the water and wastewater resilience programmes; security; and Loughor Estuary.

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 Dŵr Cymru 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 Dŵr Cymru

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 • 33% reduction in pollution incidents by 2024-25 to 19.5 incidents per 10,000km of the wastewater sewer • 33% reduction in internal sewer flooding incidents by 2024-25 to 1.34 incidents per 10,000 connections • 58% reduction in water supply interruptions by 2024-25 to 5 minutes
Bespoke performance commitments	• 25% reduction in external sewer flooding incidents per 10,000 connections by 2024-25 • An increase in the number of lead pipes replaced from 1400 in 2020-21 to 7000 by 2024-25 • An increase in the number of children or adults who have participated in the company's educational activities (70,000 in 2020-21 to 75,000 in 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 -1.03% (P10) to + 0.61% (P90).

Note the calculations behind these numbers are outlined in the 'Dŵr Cymru - 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 'Dŵr Cymru - Outcomes performance commitment appendix' which relate to this performance commitment reflect that it is measured on a three-year average to smooth annual variations due to weather and show a 13.3% reduction from 2019-20 baseline levels on a three-year average basis.

Table 1.3: Allowed revenue, 2020-25 (£ million)[1]

	Water Resources	Network plus - water	Network plus - wastewater	Bioresources	Wholesale total	Residential retail	Total[2]
Company view of allowed revenue (£m)	166.9	1,292.1	1,816.3	173.6	3,448.8	272.5	3,721.3
Final allowed revenues (£m)	186.6	1,308.4	1,846.0	174.6	3,515.6	213.9	3,729.6

[1] 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.
[2] Business retail allowed revenue not included in 'Total'

As set out in the 'Allowed return on capital technical appendix', we are updating our assessment of the allowed return on capital for Dŵr Cymru's final determination. The allowed return is 2.96% (on a CPIH basis, 1.96% on a RPI basis) at the appointee level. After adjustment for the retail margin, the allowed return on capital for the wholesale price controls is 2.92% (on a CPIH basis, 1.92% on a RPI basis), a reduction of 0.16 percentage points from our draft determination, reflecting our assessment of market evidence. The allowed retail margin for the household retail control remains at 1.0%, consistent with the draft determination.

Dŵr Cymru's Regulatory Capital Value (RCV) growth in 2020-25 is 2.7% and 58.7% of its RCV will be indexed to CPIH in 2025. We bring forward £83.5 million of revenue from future periods.

We consider that Dŵr Cymru's final determination is financeable on the basis of the notional structure, based on a reasonable allowed return on capital and revenue advanced through pay as you go (PAYG) and RCV run-off adjustments. The determination is sufficient to deliver its obligations and commitments to customers. Further detail on our assessment of financeability is set out in section 5.

Putting the sector in balance

We have encouraged companies to take greater account of customers' interests – and to transparently demonstrate that they are doing so in the way they finance themselves, pay dividends to their shareholders, and determine performance related executive pay. Dŵr Cymru 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, Dŵr Cymru 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.

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. Dŵr Cymru has proposed a voluntary sharing scheme – WaterShare – which will share any net outperformance from outcome delivery incentives. 50% of the total will be shared via bill reductions, with the remaining 50% set aside in a WaterShare fund which will be reinvested to improve performance, the environment, or resilience, or to benefit communities.

Over 2020-25, Dŵr Cymru also commits to making a company contribution to its social tariff, and a hardship fund (its Customer Assistance Fund) which helps reduce the arrears of customers in financial difficulty.

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 Dŵr Cymru in its representation together with any further submissions after that date and a summary of our response to each of those points.

Table 1.4: Company representation

Key points in Dŵr Cymru representation	Summary of our response
Dŵr Cymru's representation shows a £249m cost reduction versus its September 2018 business plan and a £258m reduction compared to its April 2019 plan. The costs are removed from enhancement costs, with base costs unchanged. Dŵr Cymru proposes reinstatement of funding proposals for resilience schemes (£34 million); Botex cost modelling (£29 million + frontier shift); for public value initiatives (£26 million); and for statutory obligations (£100 million). The company argues that the Loughor Rainscape expenditure should be allowed in full in the PR14 reconciliation model.	We allow more totex than our draft determination. Key additional areas of funding are for water quality where we acknowledge Welsh specific circumstances (a £38 million increase to £97 million) and water resilience enhancement (£18.7 million compared to £3.6 million at draft determination) where we allow funding of the South Wales water grid. We make a partial allowance for the company's claim on a new visitor centre and upgrades to other public access sites across Wales. However, we do not allow the £4.7 million that falls outside the scope of the Water Industry Act 1991 and should be funded as part of the non-appointed business. See section 3 and 'Dŵr Cymru – Securing cost efficiency additional information appendix'. We do not allow the company's alternative approach to fully fund Loughor Estuary costs as the company accepted the risk in its PR14 final determination and the cost sharing mechanism and transition mechanisms allow it to manage this risk. We are allowing an additional £12 million for transitional expenditure for Loughor Estuary and an additional £5.7 million of revenue and £4.4 million of RCV through the totex menu reconciliation, to reflect outturn expenditure including for the Loughor Estuary. We explain our assessment in detail in 'Dŵr Cymru - Accounting for past delivery additional information'.
Dŵr Cymru's board considers some performance commitments to be undeliverable without funding for additional investment. It challenges on outcome delivery incentive rates not reflecting its customers' views and our rejection of bespoke performance commitments which it claims customers supported. It says that its customers prefer increased investment rather than maximum average bill reductions. Despite proposing increased investment, it proposes lower stretch on supply interruptions, pollution incidents and internal sewer flooding performance commitment levels.	Our final determinations are intended to be stretching but achievable for companies to deliver improved levels of service in 2020-25. We have taken account of evidence provided by the company, including its evidence of customers' views. See section 2 and 'Delivering outcomes for customers policy appendix'. On water supply interruptions we change the 2024-25 levels from 3 minutes to 5 minutes with an amended glidepath. We reduce the company's outcome delivery incentive underperformance rate. On pollution incidents we maintain that the company should achieve the industry wide forward-looking upper quartile levels.

Key points in Dŵr Cymru representation	Summary of our response
	On internal sewer flooding we retain the draft determination levels and reduce the outcome delivery incentive underperformance rate.
The company states that it has a significantly weaker set of key financial ratios (for the notional company) in the draft determination than any other company. Its representation includes a revised plan which it says addresses the funding issues including seeking increased RCV run-off rates but it states that its Board is unable to assure that the final determination will be financeable with a further reduction in the allowed return on capital.	We have carefully considered all of our duties, in particular our financing functions and consumer protection duties, and are satisfied that our final determination fulfils our duties in the round. Our assessment of notional financeability for the final determination is made in the context of changes made to the draft determination in our final determination. We consider the company's final determination is financeable on the basis of the notional structure based on the allowed revenues which include a reasonable allowed return on capital. The final determination is sufficient to ensure the company will be in a position to deliver its obligations and commitments to customers. It is the company's responsibility to maintain financial resilience under its actual financial structure and it must bear the risks associated with its choice of capital and financing structure. For our final determinations, we use an allowed return on capital based on updated market evidence, as set out in our 'Allowed return on capital technical appendix'. See section 4.

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

Table 1.5: Stakeholder representations

Stakeholder representations	Summary of our response
The Consumer Council for Water (CCWater) notes that customers supported company proposals (for bills, service levels and resilience) but were not consulted on whether this could be done at a more efficient cost.	In our final determinations, we set a cost-outcomes package that provides a strong incentive for companies to be efficient 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. In some cases, we find the company's representations convincing. For example, we amend the per capita consumption outcome delivery incentive rate to align with the company's proposal since it is more in line with customer preferences. We also revise its rates in relation to internal sewer flooding to better reflect customer preferences. See section 2.1.
Natural Resources Wales (NRW) states that the right outcomes are built into the draft determination and the company's ambition is being stretched in some areas.	Our final determinations are intended to be stretching but achievable for companies to deliver improved levels of service in 2020-25. We have taken account of evidence provided by the company as well as wider evidence to calibrate the stretch of the package of performance commitments for an efficient company. See section 2.
Dŵr Cymru's customer challenge group says that customers do not accept service deterioration or reduction in critical future investment in favour of bill reductions. The customer challenge group suggests we may not be taking account of Welsh requirements e.g. the Merthyr Tydfil direct procurement for customers scheme.	Our final determinations include an incentive package which encourages companies to deliver better service, particularly with respect to services that customers care about, whilst being efficient. We make allowances that enable companies to recover efficient costs for well justified expenditure and would not expect our challenge to drive any reduction in Dŵr Cymru's necessary and efficient investments for obligations it must meet. We set performance commitments to require improvement rather than deterioration in service. Our PR19 methodology takes account of the Welsh context. In our final determination we make allowances for Welsh specific circumstances: • for the removal of lead pipes from the water supply network. This allowance is in line with the Welsh Government's priority to reduce the risk of lead; • to enact enhanced safety standards arising from the Reservoirs Act 1975 (as amended by the Flood and Water Management Act 2010) at the pace expected by Natural Resources Wales; and • to mitigate the risk of water supply asset failures in South Wales. This is supportive of the Welsh Government's priority to improve resilience. We consider the Merthyr Tydfil direct procurement for customers scheme furthers the Welsh government's priorities of innovation and affordability, while not contradicting its competition policy. In addition, we take into account the evidence of support from CCWater, Dŵr Cymru's customer challenge group and Welsh Government regarding Dŵr Cymru's social tariffs proposal. We accept the approach proposed by the company and apply an increase of 0.21% to RCV run-off rates. See section 4.

1.3 Key changes from the draft determination

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

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

	Draft determination	Final determination
Allowed revenues (£m, 2017-18 CPIH deflated, excluding business retail)	3,409.5	3,729.6
Wholesale cost allowance[1] (£m, 2017-18 CPIH deflated)	2,792.6	2,942.8
Retail cost allowance (£m, nominal)	207.0	204.6
Wholesale allowed return[2] (% - CPIH basis)	3.08%	2.92%

[1] 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 Dŵr Cymru are:

- We increase our cost allowance for: Dŵr Cymru's resilience enhancement schemes by £15 million; its supply-demand balance and metering enhancement proposals by £14 million; and for the quality of drinking water including taste, odour and colour by £38 million.
- We adjust the outcome delivery incentive rates for internal and external sewer flooding to be more in line with customer preferences and to provide a more balanced spread of incentives and risks on these two performance commitments.
- We increase the water supply interruptions 2024-25 level (making it easier to achieve) to five minutes, with an amended glidepath in the first four years taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company. We reduce the outcome delivery incentive underperformance rate to be symmetrical with its outperformance

rate. Together these changes provide a more balanced spread of incentives and risks on water supply interruptions.

- We revise our view of the intervention relating to the expenditure incurred in delivering Dŵr Cymru's Loughor Estuary project within the totex reconciliation mechanism. We are allowing an additional £12 million for transitional expenditure for Loughor Estuary, an additional £5.7 million of revenue and £4.4 million of RCV through the totex menu reconciliation
- We increase PAYG and RCV run-off rates to bring forward allowed revenue by £83.5 million to address a notional financeability constraint.
- We increase RCV run-off rates to advance £55 million additional revenue to maintain the level of its social tariff. Dŵr Cymru commits to not collect this additional revenue, which we will ensure will be treated as revenue 'foregone' through our reconciliations at PR24.
- We revise Dŵr Cymru's average bill profile from a large reduction upfront followed by flat real terms prices, to have a smaller reduction upfront, followed by a gradually falling real price over 2020 – 25.

2 Outcomes

Key changes from the draft determination

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

- We adjust the outcome delivery incentive rates for internal and external sewer flooding to be more in line with customer preferences and to provide a more balanced spread of incentives and risks on these two performance commitments.
- We increase the water supply interruptions 2024-25 level (making it easier to achieve) to five minutes, with an amended glidepath in the first four years taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company. We reduce the outcome delivery incentive underperformance rate to be symmetrical with its outperformance rate. Together these changes provide a more balanced spread of incentives and risks on water supply interruptions.
- On mains repairs, we make changes that apply industry wide to ensure levels take account of historical levels of performance and the implications of leakage reduction levels for mains repairs. We also amend the underperformance payment rate on mains repairs for all companies to industry average. This will provide a more balanced spread of incentives and risks across its performance commitments.
- We amend the deadband on the compliance risk index (which measures compliance with the Drinking Water Inspectorate's (DWI's) water quality standards) to a score of 2.00 throughout the period reducing the risk of underperformance payments in the last three years of the 2020-25 period. This allows more flexibility in performance to take into account the uncertainty created by the ban on the use of metaldehyde, which has been overturned by the High Court and also aligns with the median level of company performance.

Throughout PR19, we have been asking companies to:

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

The outcomes framework is a key component in driving companies to focus on delivering the objectives that matter to today's customers, future customers and the

environment in the 2020-25 period and beyond. Outcomes define the service package that companies should deliver for their customers and their incentives to do this.

There are two key elements of the outcomes framework: performance commitments and outcome delivery incentives. Performance commitments specify the services that customers should receive and set out in detail the levels of performance that the companies commit to achieve within the five year period from April 2020 to March 2025. Outcome delivery incentives are the reputational and financial incentives that companies have, to deliver on their performance commitments to customers. They specify the financial or reputational consequences for companies of outperformance or underperformance against each of these commitments (they are referred to as 'out' where there is a payment to the company for better than committed performance, 'under' where there is a payment to customers where there is worse than committed performance, or 'out-and-under' incentives, depending on their design).

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

The company's current performance is around sector average. The 2018-19 service incentive mechanism performance is 6th highest out of 17 companies, and it has achieved amongst the highest leakage reduction since 2012. It has not met its supply interruptions service levels for two consecutive years and is relatively poor comparatively. It met its levels on pollution incidents and internal sewer flooding in 2018-19.

In its September Business Plan the company did not set sufficiently stretching performance levels for some performance commitments including internal sewer flooding and per capita consumption and the company's approach to setting outcome delivery incentives did not reflect customer preferences. For example, management judgement was used to calculate some rates and the company proposed outperformance payments across a number of performance commitments that its customers wanted to be reputational only. The company also requested enhancement funding for acceptability of drinking water (related to water quality contacts) and leakage, to improve its performance to that achieved in the rest of the sector. It made changes to some parts of its April business plan including proposing more stretching performance commitments. We intervened widely at draft

determination to set stretching performance commitment levels and to protect customers from excessive or misaligned financial incentives where we considered they were inappropriate or provided limited customer benefits.

In its representations to the draft determination, the company continues to raise concerns with our approach to setting performance commitment levels and outcome delivery incentives.

On outcome delivery incentive rates, it challenges our approach to:

- assessing rates using industry comparisons (reasonable ranges) since it claims this overwrites the views of its customers;
- setting rates using triangulation[4], including the use of PR14 rates. The company proposes expert judgement should be used to weight the different inputs to the triangulation and considers that deriving rates using willingness to pay and cost information has weaknesses. It claims that a top-down sense check is necessary to ensure that undue weight is not given to a few performance commitments.

On outcome delivery rates, we conscientiously consider companies' customer research as well as several other factors such as large variance from PR14 rates, comparative performance and past performance. If the research is considered good quality, it is included in the triangulation on customer facing performance commitments. We consider our use of reasonable ranges to be proportionate and consistent, and that, in setting rates, we balance our use of reasonable ranges with additional information including companies' customer evidence. We note the company's challenge to us on overwriting the views of its customers, but in contrast the company itself considers that outcome delivery incentives should be partly based on its views, or a 'top down sense check', which would override customer preferences. As described below and in section 2.1, we consider that the quality of Dŵr Cymru's customer engagement, and its application by the company to its outcomes, is mixed, and this is reflected on a case-by-case basis in our decisions.

On external sewer flooding, internal sewer flooding, water supply interruptions, and per capita consumption performance commitment levels the company largely challenges based on company-specific factors and deliverability of some performance commitments without funding for additional investment to catch up to

[4]Triangulation is the method used in averaging across multiple sources of research and data to set outcome delivery incentive rates.

sector performance. The company also challenges the outcome delivery incentive rates associated with these performance commitments.

On internal and external sewer flooding, the company makes representations that the weather in the region makes it more difficult to achieve the performance commitment levels. The company identifies a cohort of companies including Dŵr Cymru that have wetter weather, but we note that dry weather also impacts company performance on these measures. We do not consider the company is an outlier on these measures and note that the company also has very poor performance on sewer blockages which impacts on sewer flooding. Therefore we retain the draft determination levels for these performance commitments. The company also challenges the outcome delivery incentive rates for these performance commitments. For internal and external sewer flooding, we are reducing the underperformance and outperformance rates to better reflect customer preferences. For external sewer flooding we are also triangulating with the lower bound of the industry range. For internal sewer flooding, we are also reducing the underperformance rate to be symmetrical with the outperformance rate which will reduce potential underperformance payments for poor performance. These changes provide a more balanced spread of incentives and risks across Dŵr Cymru's performance commitments.

On water supply interruptions, the company does not consider a common service level to be appropriate and that company-specific circumstances such as topography should be taken into account. It considers that the levels are unachievable and questions the methodology used to derive the levels. The company recognises it is not unique in any of the company-specific factors it has raised but that, with all factors together, it is at the more challenging end of the range. Whilst we acknowledge that there are factors that make this commitment more or less challenging for some companies, we note that the company is not an outlier in performance. Overall, evidence provided is not sufficiently convincing to suggest a lower level of service is appropriate. However, we are amending the 2024-25 level from 3 minutes to 5 minutes for all companies 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 do not agree with the outcome delivery incentive rate the company proposes in its representation since we have concerns that the company's revised approach to using its customer research to set outcome delivery rates (triangulation) places too little weight on its customer willingness to pay results, too much weight on less robust research, inappropriately adjusts the PR14 rate and uses the lower bound of the reasonable range instead of the industry average. However, we are reducing the outcome delivery incentive underperformance rate for all companies so that it is symmetrical with its

outperformance rate, this provides a more balanced spread of incentives and risks across its performance commitments.

On per capita consumption reduction, at draft determination we intervened to increase the reduction from 5% to 6.3% which was the upper quartile reduction and aligns with Dŵr Cymru's Water Resource Management Plans when differences between plans and performance commitments are taken into account. The company makes representations on the level for per capita consumption re-proposing a reduction of 5% claiming that this was better aligned with its Water Resource Management Plans. We disagree with this since this does not take into account that per capita consumption levels are used in the Water Resource Management plan process for planning purposes, which is based on a 'dry year' scenario. In contrast, the per capita consumption performance commitment levels we set are for reporting actual per capita consumption performance on an annual basis and is based on a methodology that ever year will not be a 'dry year' as assumed by the water resources planning methodology for planning purposes. We expect a company's per capita consumption in 'normal years' to be at or more likely lower than per capita consumption in the 'dry year' scenario[5]. We take this into account when considering the reasons for differences in the per capita consumption levels put forward in companies' business plans for their performance commitment levels and values specified in their respective Water Resource Management Plans. We have additionally amended its outcome delivery incentive rates in line with customer preferences. For per capita consumption outcome delivery incentive rates, we intervened at draft determination to set the underperformance rate at the industry average as the company proposed a non-financial incentive. We find the company's revised proposal to use the lower bound of the reasonable range convincing since the company has provided some evidence of low customer preference for this performance commitment. Therefore, we are amending the rate to align with the company's proposal.

In relation to C-MeX, Dŵr Cymru disagrees with the use of All Sector Upper Quartile score from UK Customer Satisfaction Index for higher performance payments for C-MeX. We retain the use of UK Customer Satisfaction Index as our analysis shows that it is stretching but achievable, and we consider that Dŵr Cymru over-estimates the level of stretch required in its representation. This (and other concerns the company has with D-MeX) are discussed in 'Customer measure of experience (C-Mex) and developer services measure of experience (D-Mex) policy appendix'.

[5] The difference between dry year and normal year scenarios is often expressed in the Water Resource Management plan in the form of an uplift factor which each company derives using its own long-term historical data and which is based on an abnormally dry year. This uplift factor increases a 'normal year' demand into a 'dry year' demand, which is at its highest before water use restrictions are imposed, and is applied to each year of the Water Resource Management Plan planning horizon.

On bespoke performance commitments, the company makes representations on customer support. We have made some changes due to the evidence provided. See section 2.1 below.

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

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

2.1 Customer engagement

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

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

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

Our initial assessment of the Dŵr Cymru plan found high quality customer engagement in many areas although we highlighted concerns about customer valuations from quantitative research not being reflected in outcome delivery incentive rates.

In response to our initial assessment of its business plan, in its April 2019 revised business plan, Dŵr Cymru undertook additional customer engagement aiming to provide evidence of customers' views of the acceptability and affordability of the

overall plan and package of outcome delivery incentives, elements of some of the incentives and long-term bill profiles. We found this research to be of a satisfactory quality. However, the company provided insufficient evidence to support its response to some actions that we set out following our initial assessment of its plan. For example, the company acknowledged that the research did not provide customers' views on an outperformance payment for the pollution incidents performance commitment or for a non-financial incentive for the unplanned outages performance commitment. In addition, the level of customer support for some of the company's proposals was low: for example, only 44% of customers agreed with the non-financial incentive for the per capita consumption performance commitment, versus 35% who thought 'there should be financial rewards and penalties' and 20% 'don't know'.

In its August 2019 representations to our draft determination, the company expresses dissatisfaction that many of our interventions were not based on the customer research that it carried out and instead used company comparisons. It argues that targets should not be uniform, one of the reasons being that customer preferences differ across regions. Additionally, it asks for further recognition of its customer engagement given that we stated that 'our draft determinations take into account customers' views on performance levels where these have been based on high-quality customer engagement, as well as historical and forecast performance levels across the sector.' The company therefore has asked us to set out where we believe its customer engagement on performance commitments was lacking in quality, contrary to the views of the customer challenge group. Dŵr Cymru submits in its August 2019 representations that its customers place a low valuation on water supply interruptions and external sewer flooding and its targets should reflect this.

The company's customer challenge group submits representations to our draft determination where it expresses concern that we have not represented customers' views and preferences in our interventions. It notes that the company's plan receives high acceptability from customers and it assessed the research as high quality in accordance with CCWater's guidance. It further disagrees with our approach to outcome delivery incentive rates and performance commitment levels with respect to alignment with customer research.

We outlined in our PR19 methodology that for some performance commitments supported by good quality data and where we see little reason why companies should not be achieving the same stretching level of performance, we expect companies to set their commitment levels to at least the forecast upper quartile level in each year of the price control. This applied to water supply interruptions, internal sewer flooding and pollution incidents. We do not accept that Dŵr Cymru customers should receive lower service than customers of other companies in Wales and

England. For most other performance commitments we have not set uniform levels. We further note that our PR19 methodology asked companies to engage with customers but also to challenge stretch against six other areas which includes comparative and historical information, as the company quoted, we take these other considerations into account when setting performance commitment levels including on external sewer flooding where comparative assessment shows the company is a relatively poor performer. We note than in many cases, the company imposed a top-down sense check on its rates that took rates away from its customers' preferences.

In relation to bespoke performance commitments, there is a mixed picture on customer engagement. On visitors to recreational facilities, asset resilience, km of river improved and community education, the company disagrees with our decision that its customer engagement research is insufficient in supporting financial incentives and the company's customer challenge group support this argument. Dŵr Cymru provides a convincing argument that there is customer benefit in including financial incentives for visitors to recreational facilities and community education performance commitments and while we identify some concerns with the customer engagement research that the company cites in support of outcome delivery rates, we acknowledge there is sufficient customer support. We further assess that the company's customer engagement evidence is supportive of outperformance payments and amend the outcome delivery incentives to reflect this. However, we find that the company does not provide any additional evidence of customer support for financial payments on asset resilience. The company merely states that it considers that the customer research results are sufficient grounds for retaining financial outcome delivery incentives for these measures. This research provides insufficient evidence of customer's support or willingness to pay.

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

2.2 Performance commitments and outcome delivery incentives

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

The key changes we are making in the final determination are set out in table 2.1[6] below. 'Dŵr Cymru – 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.

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

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

Key changes
Increasing the water supply interruptions 2024-25 level (making it easier to achieve) to five minutes, with an amended glidepath in the first four years taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company. We reduce the underperformance rate to be symmetrical with its outperformance rate Together these two changes provide a more balanced spread of incentives and risks on water supply interruptions.
Retaining the company's performance commitment levels in relation to internal sewer flooding. Amending the outcome delivery incentive rates in relation to internal sewer flooding to be symmetrical with the outperformance rates to provide a balanced spread of incentives and risks, and to better reflect its customer engagement research.
Increasing the performance commitment levels for mains repairs by a reducing percentage, for all companies, in all years, reducing the stretch. The aim is to allow all companies the flexibility to deliver the step change in leakage reduction, allowing more flexibility in the earlier years to use proactive mains repairs to reduce leakage. We intervened in mains repairs levels for this company at draft determinations since it was lagging the sector, setting the level at the average of the best three years performance. At final determination, we amend the base levels of mains repairs to an average of the best five years' performance, which provides a more representative level and ensures companies maintain good performance to improve the overall health of their assets over the longer-term.
Amending the deadband on the compliance risk index to a score of 2.00 throughout the period reducing the risk of underperformance payments in the last three years of the 2020-25 period. This allows more flexibility in performance to take into account the uncertainty created by the ban on the use of metaldehyde, which has been overturned by the High Court and also aligns with the median level of company performance.
Reducing the underperformance rate in relation to external sewer flooding. Dŵr Cymru is an industry outlier, with relatively large downside risk. We are therefore triangulating its customer engagement research with the industry average. We are also reducing the outperformance rate in order to balance incentives.
Reducing the underperformance rate in relation to per capita consumption to better reflect the low priority Dŵr Cymru's customers place on this performance commitment.
Increasing the performance commitment level in relation to asset resilience as the company has identified an error in its calculation and is proposing a new level for each year to correct for this error.
We are increasing the performance commitment level in relation to worst served customers for water services to better reflect the change in the definition which now captures customers affected by supply interruptions but do not contact the company.
Increasing the performance commitment level in relation to water catchments improved performance commitment level. The company's timetable for complying with the regulatory requirements for delivering actions and obtaining formal sign-off indicates that removal of safeguard zone status is a multi-year process. Based on this, we agree that performance commitment levels for equal improvement each year are not appropriate
We are amending visitors to recreational facilities and community education performance commitments to include financial incentives as we consider the performance commitment levels are sufficiently stretching, there is customer benefit and customer support. We include both outperformance and underperformance payments.
We are relaxing the performance commitment level in relation to vulnerable customers on social tariffs performance commitment level. We consider that the company has provided sufficient and convincing evidence to add extra detail to the performance commitment definition, which includes the date at which the performance commitment level is taken each year. This removes duplication from the performance commitment level. It also states the schemes excluded from the calculation which ensure only the correct schemes are included in the performance commitment level.

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) [PR19WSH_Wt1]	X		X	
Water supply interruptions [PR19WSH_Wt2]	X	X	X	
Leakage [PR19WSH_En4]	X	X	X	
Per capita consumption [PR19WSH_En5]	X		X	
Mains repairs [PR19WSH_Wt4]	X		X	
Unplanned outage [PR19WSH_Wt5]	X		X	
Risk of severe restrictions in a drought [PR19WSH_Ft1]				X
Priority services for customers in vulnerable circumstances [PR19WSH_Sv5]				X
Internal sewer flooding [PR19WSH_Rt1]	X	X	X	
Pollution incidents [PR19WSH_En3]	X	X	X	
Risk of sewer flooding in a storm [PR19WSH_Ft2]				X
Sewer collapses [PR19WSH_Rt3]	X		X	
Treatment works compliance [PR19WSH_En1]	X		X	
C-MeX: Customer measure of experience [PR19WSH_Sv1]	X	X	X	
D-MeX: Developer services measure of experience [PR19WSH_Sv2]	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	
Acceptability of drinking water [PR19WSH_Wt3]	X	X	X		
Tap water quality event risk index [PR19WSH_Wt6]					X
Water catchments improved [PR19WSH_Wt7]					X
Lead pipes replaced [PR19WSH_Wt8]	X	X	X		
Wastewater treatment works 'look-up table' compliance [PR19WSH_En2]					X
km of river improved [PR19WSH_En6]	X	X		X	
Bioresources product quality [PR19WSH_En7]	X	X	X		
Bioresources disposal compliance [PR19WSH_En8]	X		X		
Customer trust [PR19WSH_Sv3]					X
Business customer satisfaction [PR19WSH_Sv4]	X	X	X		
Customers on Welsh language register [PR19WSH_Sv6]					X
Sewer flooding on customer property (external) [PR19WSH_Rt2]	X	X	X		
Total complaints [PR19WSH_Rt4]	X	X	X		
Worst served customer for water service [PR19WSH_Rt5]					X
Worst served customer for wastewater service [PR19WSH_Rt6]					X
Change in average household bill [PR19WSH_Bl1]					X
Vulnerable customers on social tariffs [PR19WSH_Bl2]					X
Company level of bad debt [PR19WSH_Bl3]					X
Unbilled properties [PR19WSH_Bl4]	X	X	X		
Financial resilience [PR19WSH_Bl5]					X
Energy self-sufficiency [PR19WSH_Ft3]					X
Surface water removed from sewers [PR19WSH_Ft4]	X	X	X		
Asset Resilience (reservoirs) [PR19WSH_Ft5]					X
Asset Resilience (water network+ above ground) [PR19WSH_Ft6]					X

Name of bespoke performance commitment	Type of outcome delivery incentive				
	Financial				Reputational
	Under	Out	In-period	End of period	
Asset Resilience (water network+ below ground) [PR19WSH_Ft7]					X
Asset Resilience (waste network+ above ground) [PR19WSH_Ft8]					X
Asset Resilience (waste network+ below ground) [PR19WSH_Ft9]					X
Community education [PR19WSH_Ft10]	X	X	X		
Visitors to recreational facilities [PR19WSH_Ft11]	X	X	X		
Reportable injuries [PR19WSH_Co1]					X
Employee training and expertise [PR19WSH_Co2]					X
Employee Engagement [PR19WSH_Co3]					X
Delivery of our reservoirs enhancement programme [PR19WSH_Bl6]	X		X		
Delivery of our water network improvement programme [PR19WSH_Bl8]	X			X	
Combined sewer overflow storage systems [PR19WSH_En9]	X			X	
WINEP Delivery [PR19WSH_NEP01]					X
Delivery of our South Wales Grid water supply resilience scheme [PR19WSH_Bl10]	X			X	
Delivery of DWMPs [PR19WSH_DWMP]					X
Delivery of our new visitor centre [PR19WSH_VIS01]	X			X	
Cwm Taf Water Supply Strategy Scheme (Underperformance) [PR19WSH_DPC01]	X			X	
Cwm Taf Water Supply Strategy Scheme (Outperformance) [PR19WSH_DPC02]		X		X	

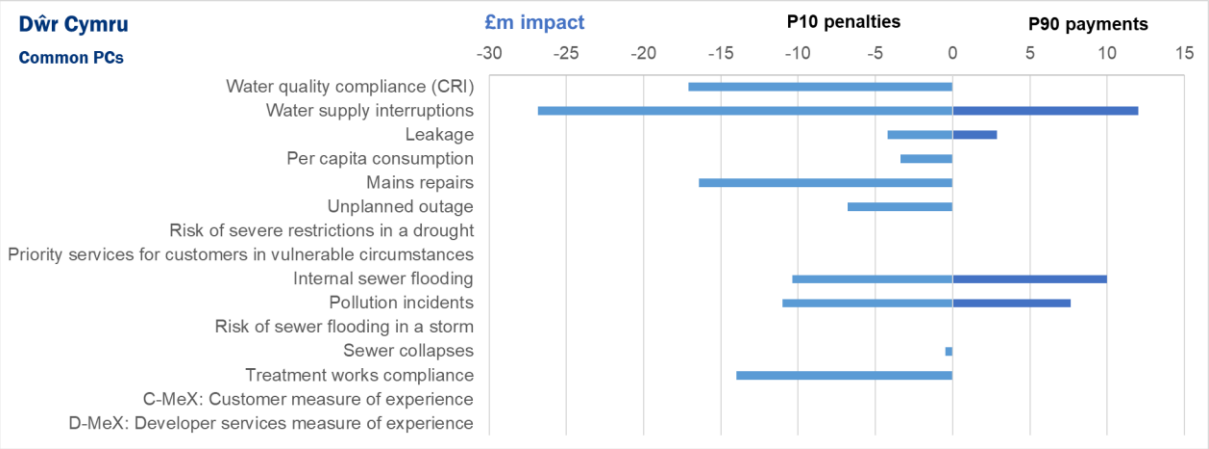
In the table above the performance commitment 'WINEP delivery' refers to delivery of the environment programme. This is performance commitment PR19WSH_NEP01 and full details can be found in the document 'Dŵr Cymru – Outcomes performance commitment appendix'.

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

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

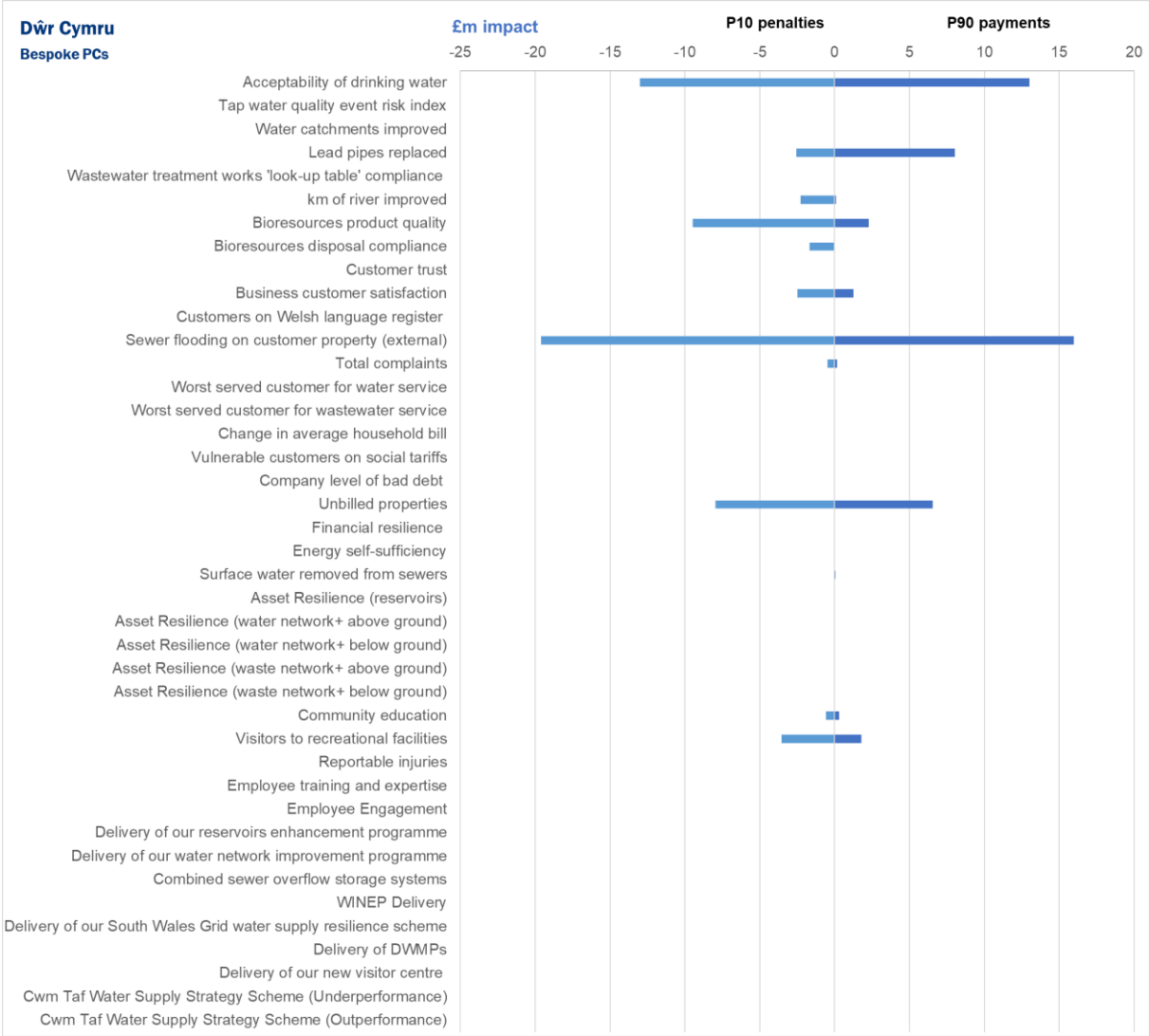
Our analysis has built on the estimates companies have provided, but there is a range of plausible estimates of what may happen in plausible worst case (P10) and plausible best case (P90). There is inherent uncertainty in forecasting these parameters and the figures presented should be seen as indicative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

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



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

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



In the chart above the performance commitment 'WINEP delivery' refers to delivery of the environment programme. This is performance commitment PR19WSH_NEP01 and full details can be found in the document 'Dŵr Cymru – Outcomes performance commitment appendix'.

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
Dŵr Cymru	-1.50	+0.42	-1.03	+0.61

The figures in the above tables are estimates. In the PR19 methodology we said that we expect companies to propose approaches to protect customers in case their outcome delivery incentive payments turn out to be much higher than expected. We asked companies, in our initial assessment of business plans 'PR19 initial assessment of plans: Delivering outcomes for customers policy appendix', to put in place additional protections for customers where we considered protections were not adequate.

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

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

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

We set out further details on how C-MeX and D-MeX will operate in the 2020-25 period, including any changes from draft determinations, in the 'Customer measure

of experience (C-MeX) and developer services measure of experience (D-MeX) policy appendix'.

2.3 Delivering a framework for resilience in the round

Resilience is one of our four themes for PR19. We set out our expectations for water companies' business plans in our PR19 methodology. Overall, Dŵr Cymru's September 2018 business plan falls short of demonstrating that the company has applied an integrated resilience framework that will deliver resilience in the round. It does however demonstrate that the company has developed an understanding of baseline maturity, that it has assessed and prioritised the risk of long-term trends to resilience through consultation with customers, and considered a broad range of mitigation options.

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 Dŵr Cymru an action (WSH.LR.A2) to develop a resilience action plan which demonstrates that it has a framework in place to deliver resilience in the round, and to submit this to us by 22 August 2019. We expected the resilience action plan to build upon the feedback that we provided following our initial assessment of the business plan.

Overall, Dŵr Cymru's resilience action plan meets our expectations in some areas but falls short of our expectations in others.

The company's action plan meets our expectations in the following areas:

- the company has commissioned external consultants to undertake a review of best practice in resilient systems approaches and to provide recommendations to the company on the most suitable options for it. The company has used this review to inform its action plan; and
- the priorities in the company's action plan are informed by a baseline maturity assessment

Dŵr Cymru's action plan does not meet our expectations in the following areas:

- the company does not address our feedback from the initial assessment of business plans in areas such as the mapping of systems interdependencies and prioritisation and quantification of risks. We expect the company to clearly

respond to our feedback and demonstrate how this informed the development of its action plan;

- the company does not provide sufficient evidence on how the resilience framework will be embedded within the organisation; the focus remains on the role of Board. We expect the company to demonstrate how the integrated resilience framework will be embedded through its organisation; and
- the company's action plan lacks the detail on resource requirements and accountability for delivery of specific elements of the plan to give us confidence that a robust plan is in place for the company to deliver an integrated resilience framework. We expect the resilience action plan to provide sufficient detail to demonstrate a robust path to implementing the company's action plan, including clear governance and accountable owners for actions.

Overall, Dŵr Cymru, 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 Dŵr Cymru is £2,942.8 million for the wholesale services. This compares with £2,792.6 million at draft determination. In retail, our final determination allowance is £204.6 million, compared with £207.0 million at draft determination.
- Our base allowance is affected by a number of changes we have made since draft determinations:
  - we include company outturn data from 2018-19 in our econometric models;
  - we exclude non-section 185 diversions costs (i.e., diversions other than those required by section 185 of the Water Industry Act 1991) from our econometric models and allow companies to recover related income outside the price control, from the relevant transport authority;
  - we strengthen the catch-up challenge applied to wholesale modelled base costs. We use the 4th placed company 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 £5 million downward adjustment to our base allowance for water network plus, and a £11 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.
- We remove a £17 million downward adjustment in recognition of water treatment works maintenance costs prior to the delivery of the Cwm Taf water supply strategy investment.
- We make a £7.1 million allowance for costs related to developing Drainage and Wastewater Management Plans (DWMPs).
- We make an additional £15 million allowance for resilience enhancement, and an additional £38 million for improving network water quality.

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

incentivise companies to innovate, which will pave the way for a more efficient, higher performing sector, with a more meaningful, trusted relationship with customers.

In September 2018 Dŵr Cymru submitted a business plan for 2020-25 with expenditure proposals that were 8% more than what it has incurred historically. To ensure customers pay only for efficient costs, we have challenged the company's proposed costs and investment programme at draft and final determinations where appropriate. At draft determinations the company had a £437 million (16 %) cost gap. We considered the company's proposed costs were inefficient in the wastewater network plus and residential retail price controls. In its representation to draft determinations the company reduces its costs by £139 million and proposes costs that are broadly in-line with its historical costs. We consider that its proposed costs in the wastewater network plus price control are broadly efficient. As a result of the company's revised costs and additional cost that we allow for following further evidence submitted by the company, the gap at final determination has narrowed to £188.5 million (6%).

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 'Dŵr Cymru – 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 NEP.

3.1 Allowed expenditure for wholesale services

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

Table 3.1: Totex[1] by year for wholesale controls, 2020-25 (£ million, 2017-18 CPIH deflated prices)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total	Company August 2019 - total
Water Resources	64.5	71.4	68.4	64.4	52.9	321.7	334.1
Water network plus	252.6	247.7	236.1	227.9	226.9	1,191.2	1,261.8
Wastewater network plus	276.4	256.1	264.4	255.4	253.1	1,305.4	1,384.6
Bioresources[2]	25.5	25.1	25.3	24.6	23.9	124.4	125.5
Total	**619.0**	**600.4**	**594.3**	**572.3**	**556.7**	**2,942.8**	**3,106.1**

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

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

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

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

Our base costs for wholesale water include operating costs (excluding enhancement opex) and maintenance costs. In wholesale water, base costs also include costs associated with the connection of new developments (i.e., new developments and new connection costs) and costs for addressing low pressure. In wastewater, base costs include new connections and growth, growth at sewage treatment works and costs to reduce flooding to properties that were previously assessed as enhancement expenditure.

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

Our raft 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, 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	159.5	963.5	1,047.9	117.5	2,288.3
Enhancement expenditure	117.8	212.3	247.1	6.9	584.1
Operating lease adjustment	-	-	-	-	-
Gross allowed totex for calculation of cost sharing rates	277.3	1,175.8	1,295.0	124.4	2,872.5
Strategic regional water resources solutions and other cash items	-	-	N/A	N/A	-
Third party costs	44.5	9.3	1.0	-	54.7
Non-section 185 diversions	-	6.1	9.4	-	15.6
Ex-ante cost sharing adjustment	-	-	-	N/A	-
Gross totex	321.7	1,191.2	1,305.4	124.4	2,942.8
Grants and contributions after adjustment for income offset[1]	0.9	74.5	44.6		120.0
Net totex for PAYG calculation	320.8	1,116.8	1,260.8	124.4	2,822.8
Pensions deficit recovery costs[2]	-	-	-	-	-
Total	**320.8**	**1,116.8**	**1,260.8**	**124.4**	**2,822.8**

[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 in the amount stated in table 3.2. Our draft determinations allowance does not exclude these costs.

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

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

Price Control	Company April 2019	Company August 2019	Draft determination allowance	Final determination allowance
Wholesale water	1,597.0	1,534.5	1,340.0	1,453.1
Wholesale wastewater	1,575.8	1,499.4	1,396.2	1,419.4
Total	**3,172.8**	**3,033.9**	**2,736.2**	**2,872.5**

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

	Draft determination allowance	Final determination allowance
Base expenditure	2,245.7	2,288.3
Enhancement	490.6	584.1
- Environmental obligations (NEP)	213.8	211.6
- Supply-demand balance and metering enhancement	51.8	66.3
- Resilience enhancement	7.6	22.7
- Other enhancement (including raw water deterioration, sludge quality and growth, meeting lead standards and improving taste/odour/colour)	217.4	283.5

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	154.7	159.5
Water Network plus	933.5	963.5
Wastewater Network plus	1,072.1	1,047.9
Bioresources	118.3	117.5
Total	**2,278.6**	**2,288.3**

Note company business plan base costs exclude enhancement opex.

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

As the population growth forecast in Dŵr Cymru's area for the period 2020-25 is lower than the historical average growth rate in the sector, we make a downward adjustment of approximately £5.1 million to Dŵr Cymru's wholesale water base allowance, and a downward adjustment of approximately £11.2 million to its wholesale wastewater base allowance. More details of our approach can be found in the 'Securing cost efficiency technical appendix'.

Dŵr Cymru 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'.

We continue to make a direct procurement for customers development allowance for the Cwm Taf water supply strategy. At draft determination we made a £17 million negative base adjustment to account for maintenance savings in the period leading up to the decommissioning of the existing three water treatment works as a result of the new works being commissioned. We now remove this base adjustment as we no longer consider it appropriate. We acknowledge that any base savings due to

maintenance strategy changes for these works may be small in the first five years (2020-25) leading up to decommissioning given the need to meet service levels. However, for 2025-30 we expect the company to take into consideration the implications of the works decommissioning when it submits future forecast base costs and business plan submissions.

Dŵr Cymru requests £13.6m to develop its Drainage and Wastewater Management Plans (DWMPs) in line with the DWMP framework published by Water UK. At draft determination, we did not make any allowance as we considered DWMPs were funded from the base allowance. After reviewing the outcome of Defra's recent consultations on DWMPs, and the additional information in Dŵr Cymru's representation, we agree that some additional investment is required to develop DWMPs to ensure a more consistent basis for long-term planning of drainage and wastewater services as recognised by the 21st Century Drainage Programme. We make partial allowance of £7.1m. We describe our approach to our assessment of DWMP costs in the 'Securing cost efficiency technical appendix'.

3.3 Enhancement expenditure

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

Table 3.6 summarises our allowances for enhancement expenditure.

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

Price Control	Company August 2019	Final determination allowance
Water Resources	133.7	117.8
Water Network plus	312.5	212.3
Wastewater Network plus	301.8	247.1
Bioresources	7.3	6.9
Total	**755.3**	**584.1**

Our final determination allows Dŵr Cymru £584 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £212 million to improve the environment by efficiently delivering its obligations as set out in the National Environment Programme (NEP);
- £66 million to deliver enhancements to the supply-demand balance and promote water efficiency;
- £76 million for improving the safety of reservoirs;
- £97 million to improve the quality of drinking water including its taste, odour and colour.
- £33 million to reduce wastewater discharges to the Loughor Estuary

Below we discuss key areas of our determination on enhancement cost proposals. Our document 'Dŵr Cymru - 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. As this is not achieved by Dŵr Cymru, our allowance is unchanged from draft determination and we do not allow any of the requested £40.6 million under enhancement. The company provides additional evidence in its representation to support classifying Project Cartref (water efficiency programme) expenditure and benefits as short term supply-demand balance enhancement rather than leakage reduction activity. As a result we make a change from draft determination and assess the majority of the expenditure the company requests as short term enhancement of the supply-demand balance rather than the leakage. However, we consider that the elements of Project Cartref expenditure directly attributed to repairing leaks is leakage expenditure and we assess this accordingly. 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.

Supply-demand balance enhancement and metering

The revisions we make to how we assess Project Cartref proposals and other supply-demand components, increases the supply-demand balance allowance we make from £32.8 million at draft determination to our final determination allowance of £47.3 million.

We accept the need for the Tywyn Aberdyfi scheme we rejected at draft determination, based on evidence the company provides in its August 2019 representation. The company reduces its costs by using our short term supply-demand industry unit cost to calculate what it needs. We consider that this represents an appropriate challenge and we allow the costs the company requests (£7.6 million) in full.

We allow in full the £17.3 million the company requests for installing new meters.

Network water quality

In our draft determination we allowed £59.2m for our assessment of this enhancement proposal. We considered the water acceptability cost adjustment claim which we allocated to the taste, odour and colour enhancement line together with the network water quality freeform line and made a combined allowance.

For final determination we continue with this approach of assessing both aspects together. Dŵr Cymru requests a combined cost of £117.9m. We continue to intervene for customers to set a more stretching customer acceptability performance commitment target to make improvements towards those experienced by customers across the industry.

We note the support from the Drinking Water Inspectorate for the company's plans. Dŵr Cymru provides additional evidence in its representation. We assess each element and apply bespoke challenges at the scheme level where we find insufficient evidence to support which investment option the company selects. Where we consider activities to be base operation we make no allowance.

We now allow £96.9m enhancement costs compared to £59.2m we allowed at draft determination. We set out more information about our assessments in 'Dŵr Cymru – securing cost efficiency additional information'.

Visitor amenities

For final determinations, Dŵr Cymru asks for £12.3m to provide a new visitor centre and upgrades to other public access sites across Wales.

Part of the requested expenditure (£2.2m) is to upgrade recreational sites across Wales for which Dŵr Cymru provides little supporting evidence to demonstrate the upgrades required. We therefore do not make an enhancement allowance for this element of the claim. For the remaining £10.1m for new visitor centre and accompanying facilities, we acknowledge the supplementary information the

company provides. However, we do not allow as enhancement the £4.7m that we consider goes beyond the recreational duties set by section 3 (5) of the Water Industry Act 1991 and instead corresponds to commercial activities (for example in relation to café, function room hire etc.) We consider such commercial activities to be non-appointed business. This is consistent with the distinction we make in the Regulatory Accounting Guidelines and also aligns with how the company has treated other visitor centres. We provide further detail of our assessment in our published feeder models.

Following our assessment of the evidence the company provides, and additional information it provides in response to a query, we make a partial allowance of £5.1 million for this claim.

Security

Dŵr Cymru requests £20 million for its proposed water security enhancement costs. This includes costs relating to complying with the Security & Emergency Measures Direction (SEMD) and non-SEMD costs relating to cyber resilience and compliance with the network and information systems (NIS) Directive.

For SEMD the company proposes installing various physical security enhancements at its key sites. For non-SEMD, the company proposes improvements to its IT, operational technology and network & communications systems.

For our final determination, we reduce the company's SEMD allowance because it has spent above the benchmark for SEMD costs. For non-SEMD we make a 10% challenge to its forecast costs. Although the company provides further details of its non-SEMD projects in response to our draft determination, it does not provide sufficient and convincing evidence to demonstrate its costs are efficient. Overall, we allow £12.2m for security costs compared to £10.0m allowed at our draft determination.

Wastewater resilience enhancement

Our draft determination for wastewater resilience enhancements allowed Dŵr Cymru to invest £3.9m to protect wastewater treatment works and pumping stations from power outages. The company does not raise substantive issues on its draft determination allowance for protecting its wastewater treatment assets from power outages and we maintain our draft determination allowance for this investment.

The company provides additional evidence on its proposed investment in sewer flooding, advising that the investment is to prevent new properties flooding as a result of urban creep and climate change driven intensification of storms.

We do not make an allowance for this investment in resilience enhancement because it does not address low probability and high consequence risks. The sector has been mitigating the effects of climate change and urban creep in previous periods. Our base econometric models use historical expenditure data on sewer flooding risk reduction (together with other base costs). The allowances we make from our base econometric models would therefore include an allowance to reduce sewer flooding risk for properties, in line with historical rates of change in flood risk due to climate change and urban creep.

Comparing an estimate of our implicit allowance for sewer flooding risk reduction in our base allowance to the investments that companies request in their business plans, we find that the implicit allowance is generally higher. We consider therefore that our base allowance is sufficient to cover costs in this area under current circumstance. We do not find sufficient and convincing evidence that the company will face exceptional pressures relative to the wider industry or historical rates of change to warrant an allowance additional to that provided for through our models.

We maintain our draft determination allowance of £3.9m for wastewater resilience enhancements.

Water resilience enhancement

In our draft determination we allowed £3.6 million for water 'Network resilience schemes'. Dŵr Cymru provides additional evidence in its representations for two proposals, which we discuss below.

At draft determination we did not make an allowance for the 'Extending our South Wales grid' investment (£19.9 million). Our final determination makes an allowance of £15.1 million for this scheme. After considering the evidence Dŵr Cymru provides in its representation, we consider that the company provides sufficient evidence to support the need for the scheme on the basis of a single point of failure in the trunk main from Tongwynlais, for example crossing strategic infrastructure assets that may require extended repair times. However, we do not accept the risk of bacteriological failure at Tongwynlais service reservoir because it is closely related to maintenance activities aimed at identifying and preventing structural defects that could cause ingress. Such activities should be funded through our base allowance. In addition, we apply cost challenges on the basis of insufficient evidence that a range of

resilience mitigation options have been considered and that the proposed costs are robust and efficient.

We maintain our decision to not allow enhancement costs for the 'Hereford supply resilience' investment (£13.6 million), because the risks the company describes which potentially cause extended works outages are either related to other cost areas for which we already make an allowance (e.g. SEMD enhancements or base costs); or not sufficiently evidenced with a thorough risk appraisal. We are concerned that the company provides insufficient evidence of considering a full range of options, including pollution monitoring options, to mitigate the identified risks. For us to have made an allowance the company should have undertaken a thorough strategic resilience assessment for Hereford water supply to consider how to improve its resilience.

As a result of the above, our final determination makes an allowance of £18.7 million for water resilience enhancements.

Loughor Estuary

Dŵr Cymru requests expenditure to retrospectively fund the reduction of discharges to the Loughor Estuary that the European Court of Justice found in breach of the law. The investment aims to reduce storm discharge frequencies at a number of the company assets that discharge into the Burry Inlet shellfish waters of the Loughor Estuary by 31 December 2020 by increasing the capacity of the company wastewater infrastructure and improving the management of surface water in the area. The company does not agree with the draft determination allowance of £21 million that qualified for transition expenditure and was derived on the basis of the expenditure profile supplied by the company. Following the review of the representations, our considered view is to accept the updated 2019-20 expenditure, which qualifies for inclusion as PR19 programme expenditure, and we allow £33 million.

3.4 Cost sharing

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

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

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

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

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

	Water resources	Network plus - water	Network plus - wastewater
Totex for cost sharing rates – September 2018 business plan (£m)	276.4	1,308.7	1,436.0
Totex for cost sharing rates – August 2019 (£m)	288.5	1,246.0	1,373.9
Weighted company view of totex for cost sharing rates (£m)	282.4	1,277.3	1,405.0
Gross allowed totex for cost sharing rates (£m)	277.3	1,175.8	1,295.0
Cost sharing ratio	1.07		1.08
Cost sharing rate – outperformance	43%		42%
Cost sharing rate – underperformance	57%		58%
Grants and contributions before deduction of income offsets (£m)[7]	0.9	99.8	43.5
Abstraction charges and business rates (£m)	42.1	73.7	43.8
Net allowed totex subject to cost sharing reconciliation (£m)[8]	234.3	1002.4	1207.7

3.5 Allowed expenditure in residential retail

Dŵr Cymru reduced its requested costs by £38m in its response to the draft determination, but this is still above our efficient allowances. Based on our benchmarking analysis, Dŵr Cymru is among the least efficient companies in residential retail both on a historical and a forward-looking basis. Our allowance for the company is 11% lower than what it requests. We note that the company is among those most significantly underperforming on its residential retail allowances for 2015-20 despite us allowing a glide path as part of the PR14 final determinations. We maintain our view that our residential retail allowances provide an appropriate basis for setting cost allowances for Dŵr Cymru.

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

As part of residential retail econometric models, we use the income score (a measure of deprivation produced by the Office for National Statistics) as a cost driver to act as a proxy for the probability of customers defaulting on paying their water and wastewater bills in a given operating region. The probability to default on bills drives bad debt related costs and is therefore included in our bad debt related and total cost models. In its draft determination representation, Dŵr Cymru claims that the wider availability of income score data for Wales relative to England disadvantages the company. Income scores for Wales are published annually, but are only published every five years for England. This means that the downwards trend in deprivation levels in the income score variable will only be captured for the Welsh companies but not the English companies. The company claims this results in a lower allowance compared to the English companies, which is not driven by differing levels of efficiency. We consider the company's argument convincing and we therefore undertake additional testing.

The company recommends fixing the Welsh income score to mirror the approach for English regions, but we consider the available additional years of data for Welsh income scores benefits our models' validity and enables us to use the most recent historical information available. We therefore decide not to change our core modelling approach. Nevertheless, to ensure Dŵr Cymru is not disadvantaged, we apply an off-model adjustment for Dŵr Cymru of £1.882m. We calculate this by applying the downwards trends in Equifax data on the propensity to default over the modelling period to each English company's income score forecasts when setting modelled costs. This allows us to capture the decreasing levels of deprivation in English companies' operating regions that is not accounted for in the income score variable. We then compare the efficient allowances to the unchanged allowances and award the difference to Dŵr Cymru's allowances only. The impact on Hafren Dyfrdwy is immaterial, and our allowed costs are consistent with what the company requested, so we make no adjustment to the company's allowance.

Dŵr Cymru submits a cost adjustment claim in relation to costs associated with the Welsh Language Scheme. We reject the claim as it does not meet our materiality threshold.

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

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

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Residential retail	40.0	40.5	40.9	41.4	41.8	204.6

Company view	47.4	47.0	46.7	44.5	44.2	229.8

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 Business retail

We allow Dŵr Cymru its proposed costs per customer for the business retail control, which we assessed as efficient at the draft determination. The allowed costs and retail margins are set out in section 4.

3.7 Direct procurement for customers

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

Cwm Taf Water Supply Strategy

The Cwm Taf Water Supply Strategy intends to replace using a direct procurement for customers process three existing water treatment works in the Cwm Taf area due to deteriorating water quality and old treatment technology. This investment will improve water quality to customers and improve reliability of supply with a new water treatment works and additional clean water storage. Dŵr Cymru will take account of the Welsh Government's relevant strategies and policies when developing and procuring this scheme using a direct procurement for customers process. The company also has an important role during construction and into operations including:

- carrying out the procurement of a competitively appointed provider;
- obtaining the necessary planning consents to deliver the project;
- approving the design for the project;
- acquiring the land necessary for construction activities to commence;
- delivering some of the site enabling works; and
- works to prepare for the interface between the scheme and Dŵr Cymru's network

We allow £13.6 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 Dŵr Cymru which will be determined by a competitive procurement process to be conducted by Dŵr Cymru. We do not expect Dŵr Cymru's customers to start paying for the competitively appointed provider's revenues until the next price control period.

Consideration of representations on our draft determination

Table 3.8 lists the representations we have received that are specific to direct procurement for customers and the Cwm Taf Water Supply Strategy scheme and shows where to find more information on our responses in this document.

Table 3.8: Representations specific to the Cwm Taf Water Supply Strategy scheme

Area	Company-specific representations	Detailed commentary in this appendix
Uncertainty mechanism	Scheme will not meet materiality level for a Notified item.	Delivering value for customers in large projects

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

Developments to facilitate direct procurement for customers

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

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

For the Cwm Taf Water Supply Strategy scheme we have specified a Notified Item as we consider that an interim determination is the appropriate mechanism in the event that the scheme should need to be delivered in-house.

For the Cwm Taf Water Supply Strategy scheme, no bespoke outcomes were proposed by Dŵr Cymru. We determine that bespoke outcomes specific to direct procurement for customers are appropriate for this period 2020-25. We intervene in Dŵr Cymru's business plan and include both under and out performance incentives which are detailed in 'Dŵr Cymru - Outcomes performance commitment appendix'.

Dŵr Cymru's business plan does not identify any other schemes that are suitable for direct procurement for customers. We expect any other major schemes which may arise due to significant changes to Dŵr Cymru's business plan to be reviewed against the direct procurement for customers criteria, as detailed in the PR19 methodology. If the criteria are met, we expect Dŵr Cymru to undertake further work to review detailed costs and commitments to ensure delivery is via the most efficient route, and to assess delivery via direct procurement for customers, to ensure that customers receive the best value.

4 Calculation of allowed revenue

Key changes from the draft determination

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

- We allow £3,729.6 million of revenue across all price controls (except business retail) for Dŵr Cymru in the final determination, compared to £3,409.5 million in the draft determination and £3,721.3 million in the company's April 2019 revised business plan.
- Consistent with its representation request, allowed revenue includes advanced revenue of £55 million to maintain the company's voluntary contribution to its social tariff in 2020-25. Dŵr Cymru commits to not collect this additional revenue in 2020-25 and we will ensure Dŵr Cymru's commitment is met through the reconciliation mechanisms at PR24.
- The allowed return on capital for the wholesale price controls is 2.92% (on a CPIH basis, 1.92% on a RPI basis), a reduction of 0.16 percentage points from our draft determination, based on our assessment of market evidence. The allowed retail margin for the household retail control remains at 1.0%, consistent with the draft determination.
- Taking account of company representations, we revise our approach to determine the mix of operating and capital expenditure to take better account of the nature of our decisions on cost allowances. We apply the updated approach in our technical intervention to PAYG rates. Dŵr Cyrmu has RCV run-off rates that are materially lower than the average of other companies in the sector. We accept its representation to increase RCV run-off rates by an average of 0.23% advancing £62 million of revenue.
- We increase PAYG and RCV run-off rates to bring forward further allowed revenue by £83.5 million to address a notional financeability constraint. Following our interventions, Dŵr Cymru's RCV run-off rates remain low in comparison with the sector.
- Allowed revenue includes Dŵr Cymru's contribution to the innovation competition.
- We revise our approach to calculating grants and contributions.
- We reflect Dŵr Cymru's latest information on its actual performance in 2018-19 and expected performance in 2019-20 from its 15 July submission and 30 August representation.
- We are allowing an additional £5.7 million of revenue and £4.4 million of RCV through the totex menu reconciliation relative to the draft determination. This

reflects Dŵr Cymru's updated outturn expenditure, including for the Loughor Estuary. We explain our assessment in of the reconciliation for expenditure for the Loughor Estuary project in detail in 'Dŵr Cymru - Accounting for past delivery additional information'.
- We are increasing revenue by £0.7 million from the reconciliation of the business retail service incentive mechanism.
- Our final determination includes finalised scores for 2018-19 in the residential retail service incentive mechanism. This increases revenue by £1.1 million compared to the draft determination.

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

4.1 Allowed revenue

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

4.1.1 Wholesale controls

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

- Pay as you go (PAYG) – this reflects the allocation of our efficient totex baseline to costs that are recovered from revenue in 2020-25. The proportion of totex not recovered from PAYG is added to the regulatory capital value (RCV) which is recovered over a longer period of time.
- Allowed return on capital – this is calculated based on our assessment of the allowed return on capital multiplied by the average RCV for each year.
- RCV run-off – this reflects the amount of RCV that is amortised from the RCV in the period of the price control.
- PR14 reconciliations – this reflects the application of out/underperformance payments from PR14 through revenue adjustments in 2020-25.

- Corporation tax allowance – this is estimated from projected corporation tax rates, profit forecasts and assumed levels of tax relief contained in our financial model for the draft determination.
- Grants and contributions – this represents revenue that we expect to be received from developers in respect of work undertaken by companies to service new developments. It includes income from connection charges, infrastructure charges and s185 diversion recharges. The total grants and contributions amount deducted from totex may not agree to this amount, as we only include grants and contributions income relating to the price control (and some income is outside the price control).
- Non-price control income – income from charges excluded from the price controls. For example, this includes bulk supplies, standpipes, unmeasured cattle troughs, and other services. In a change from our draft determination, we also now include diversions recharges which are in respect of the New Roads and Street Works act 1991 activities and other non-section 185 diversions. We deduct the forecast income from these charges from the allowed revenue, because costs relating to these charges are included in the calculation of allowed revenue.
- Innovation competition – this represents the additional revenue that the company will collect from its customers for the purpose of a collectively funded innovation competition for the period 2020-25. The amount each company's customers will contribute will be proportionate to individual company revenue at draft determinations. We expect the revenue collected from customers to be ring-fenced and administered so that it will not be used for purposes other than the innovation competition.
- Revenue re-profiling – this reflects the change in revenue in 2017-18 prices as a result of adjustments made to annual revenues to smooth the final bill profile consistent with customer preferences. The financial model calculates revenue adjustments on a net present value (NPV) neutral basis.

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

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

Table 4.1: Calculation of allowed revenue (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total – Final determination	Total - Draft determination
Pay as you go	184.3	615.2	697.9	78.2	1,575.6	1,315.5
RCV run-off	51.4	418.4	674.0	71.5	1,215.3	1,057.5
Allowed return on capital	31.6	214.2	441.2	25.9	712.9	776.3
Revenue adjustments for PR14 reconciliations	0.0	-6.7	-6.4	0.0	-13.0	6.9
Fast track reward	0.0	0.0	0.0	0.0	0.0	0.0
Tax	0.0	0.0	0.0	0.0	0.0	0.0
Grants and contributions after adjustment for income offset (price control)	0.9	68.2	36.6	0.0	105.7	127.2
Deduct non-price control income	-81.6	-4.8	-3.2	-0.8	-90.4	-90.4
Innovation competition	0.0	5.0	7.4	0.0	12.4	0.0
Revenue re-profiling	-0.1	-1.0	-1.5	-0.1	-2.7	0.6
Final allowed revenues	186.6	1,308.4	1,846.0	174.6	3,515.6	**3,193.6**

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

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

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

Our outcomes and total expenditure approach facilitate this innovation, by giving companies the flexibility and freedom to adopt innovative means of delivering services. We are promoting innovation by setting Dŵr Cymru stretching outcome performance commitments. Our outcome delivery incentives approach means that companies have to return money to customers where they fall short, but it also gives companies the opportunity to earn additional financial payments if they successfully improve performance and deliver for customers above and beyond the level expected of most companies. This encourages companies to look for innovative ways of delivering better services to customers and improving the environment.

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

In our new strategy consultation[9], 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 £200 million available for innovation activities for the period 2020-25 through the introduction of an innovation competition. We will work together with companies and other stakeholders in the sector to set up a competition which will effectively drive innovation in the sector to the benefit of customers across England and Wales.

4.1.2 Residential retail control

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

- Retail cost to serve – this reflects our efficient view of costs per customer for the retail business.
- Net margin on wholesale and retail activities – this is calculated based on the wholesale revenue applicable to residential retail customers, plus the retail cost to serve, with a net margin applied. Net margins are calculated excluding any

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

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

- Our methodology set out an early view of the retail margin that applies for the retail price controls. This was used by Dŵr Cymru 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)	3,341.5	3,736.6
Proportion of wholesale revenue allocated to residential (%)	76.6%	76.4%
Residential retail costs (£m)	207.0	204.6
Total retail costs (£m)	**2,766.7**	**3,060.9**
Residential retail net margin (%)	1.0%	1.0%
Residential retail net margin (£m)	**28.0**	**30.9**
Residential retail adjustments (£m)[1]	2.6	1.1
Residential retail revenue (£m)[2]	**237.5**	**236.7**

[1] Residential retail adjustments for the PR14 residential retail service incentive mechanism and residential retail revenue reconciliations are set out in table 4.13. The figures in table 4.2 are in nominal prices, and the figures in 4.13 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 'Dŵr Cymru - Allowed revenue appendix' in table 1.5.

4.1.3 Business retail control

The business retail control allows an average revenue for each customer type. For companies operating wholly or mainly in Wales, we use a 'net margin' approach for customers using less than 50Ml of water per year and all wastewater customers

(customer group 1) and a gross margin approach for customers using at least 50Ml of water per year (customer group 2).

For each customer type in customer group 1, the allowed revenue is based on:

- the allowed retail cost to serve – this is the allowed retail costs for the customer type divided by the number of customers; and
- a net margin, calculated as a percentage on the allowed retail cost to serve and the wholesale charge for that customer group.

The allowed average retail cost per customer and the net margin for each customer type is set out in table 4.3. The allowed average retail costs per customer include an adjustment for the reconciliation of the business retail service incentive mechanism for 2015-20, which is discussed further in table 4.13. The business retail service incentive mechanism only applies to customer group 1.

Table 4.3: Business customer group 1, allowed average retail cost components and allowed net margins (£, nominal prices)

Customer type	Units	2020-21	2021-22	2022-23	2023-24	2024-25
Water supplies < 50 ML	Average retail costs (£)	31.37	31.06	31.06	30.97	31.04
	Net margin (%)	1.00%	1.00%	1.00%	1.00%	1.00%
Wastewater services	Average retail costs (£)	40.97	40.81	41.01	41.12	41.44
	Net margin (%)	1.00%	1.00%	1.00%	1.00%	1.00%

Note allowed average retail costs include an allowance for costs, and an adjustment for the business retail service incentive mechanism reconciliation.

For each customer type in customer group 2, the allowed revenue is based on an allowed gross margin. Rather than setting a retail cost per customer and a net margin, this approach simply sets a gross margin as a percentage of the wholesale charge for the customer group (with this gross margin expected to cover retail costs to serve too). We first took this approach at PR16 as a simplification for the largest customers, allowing companies to set several different tariffs for customers that fall into these consumption bands while meeting the overall gross margin cap. The gross margin is set out in table 4.4.

In our PR19 methodology we said we would retain the supplementary cap for customer group 2 that we introduced at PR16. The purpose of this cap was to avoid undue price disturbance at the opening of the business retail market and it prevented the average retail revenue in each tariff band increasing by more than 1% of customers' overall bill each year. We decide not to retain the supplementary cap, as:

- for high usage customers we have seen signs of effective competition developing in the market and these customers have high awareness of market opening and relatively high levels of engagement in the market; and
- any potential benefit of the supplementary cap in terms of price stability is much reduced.

This is consistent with our review of the Retail Exit Code where we decided to remove regulatory protections for higher usage customers and also remove the supplementary cap.

Table 4.4: Business customer group 2 and allowed gross margins (%)

Customer type	2020-21	2021-22	2022-23	2023-24	2024-25
Water, >50ml/a	3.30%	3.30%	3.30%	3.30%	3.30%

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 4.5 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 'Dŵr Cymru's - 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 4.5: PAYG allowances for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Totex allowance (£m)	320.8	1,116.8	1,260.8	124.4	2,822.8
Final determination PAYG rate (%)	57.4%	55.1%	55.4%	62.9%	55.8%
Pay as you go totex (£m)	184.3	615.2	697.9	78.2	1,575.6
Pension deficit recovery cost (£m)	-	-	-	-	-
Total pay as you go (£m)	184.3	615.2	697.9	78.2	1,575.6

Table 4.6: PAYG rates for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources
Original company plan (%)	51.9%	43.2%	46.6%	60.2%
Draft determination (%)	51.7%	45.9%	50.3%	60.3%
Final determination (%)	57.4%	55.1%	55.4%	62.9%

In its April business plan, Dŵr Cymru retains the approach to PAYG rates from the original September 2018 business plan which is to recover in each year an amount equivalent to operating costs. The company does not propose to bring forward revenue from future periods. However, the company does not amend its PAYG rates to reflect the changes in costs that it makes between the original September business plan and the April business plan which results in £52 million of PAYG totex revenue being brought forward from future periods.

In the draft determination, we applied Dŵr Cymru's approach to PAYG rates of recovering in each year an amount equivalent to operating costs. We aligned PAYG rates to the stated approach by the application of the technical intervention which also reflected the changes in our view of the mix of operating and capital expenditure following our totex interventions. Our assessment of notional financeability in the draft determination concluded that an uplift to PAYG rates of 0.34% was required to advance revenue to improve financeability of the notional structure.

In its representations, Dŵr Cymru proposes an increase to RCV run-off rates and on the basis of this sets out a smaller uplift to PAYG rates is sufficient to improve notional financeability by achieving an adjusted interest cover ratio of 1.5 times.

We accept the proposal to increase RCV run-off rates as set out in section 4.2.4. Dŵr Cymru also makes a representation that we should consider base and enhancement costs separately when adjusting PAYG rates and sets out its view of PAYG rates for the draft determination.

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.

Our final determination includes a lower allowed return on capital than in the draft determination, reflecting market expectations. Following our assessment of notional financeability for the final determination, we accept the requirement for further revenue advancement than set out in the draft determination.

We are increasing the amount of revenue brought forward to £83.5 million to increase cash flows in the 2020-25 period to improve notional financeability. In order to align more closely with the notional financial ratios targeted by the company in its business plan, we advance revenue through the use of both PAYG rates and RCV run-off rates. Compared with the draft determination, we reduce the uplift to PAYG rates for all years for all wholesale controls from 3.40% to 1.81% which brings forward £43 million of allowed revenue from future periods. We set out our adjustments to RCV run-off rates in section 4.2.4 and our financeability assessment in section 5.2.

The movements in PAYG rates between the company plan, the draft determination and final determination reflect the differences in the mix of operating and capital expenditure in our totex allowance along with the increase to PAYG rates for notional financeability in the final determination. We set out our financeability assessment in section 5.2.

4.2.2 Opening RCV adjustments

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

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. The company proposed no adjustment in its business plan.

Table 4.7: Opening RCV, 1 April 2020 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources
RCV – 31 March 2020	1,792.5		3,855.6	
% of RCV allocated by control	10.57%	89.43%	94.29%	5.71%
RCV – 31 March 2020	189.4	1,603.1	3,635.6	220.0
Midnight adjustments to RCV	5.8	48.9	-35.9	N/A
Midnight adjustments relating to operating leases	0.0	0.0	0.0	0.0
Opening RCV – 1 April 2020	195.2	1,652.0	3,599.7	220.0

4.2.3 Allowed return on capital

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

Dŵr Cymru's business plan incorporates the early view allowed return on capital for the wholesale price controls of 3.30% - CPIH deflated (2.30% - RPI deflated) that we state in the PR19 methodology. The allowed return on capital for the wholesale price controls in our final determinations is 2.92% – CPIH deflated (1.92% – RPI deflated). We set out the basis for the allowed return on capital in our 'Allowed return on capital technical appendix'.

The PR19 methodology confirmed we are transitioning to CPIH as our primary inflation index from 2020. At 1 April 2020, we will index 50% of RCV to RPI; the rest, including totex that is added to the RCV, will be indexed to CPIH. Table 4.8 and table 4.9 set out the opening and closing balance for each component of RCV as of 1 April 2020 and 1 April 2025 respectively.

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

In determining the 'Allowed return on capital' revenue building block, we apply the relevant deflated allowed return on capital to the average RCV for the year for each

component (RPI inflated, CPIH inflated and post 2020 investment). This results in an allowed return on capital for each wholesale control over the period 2020-25 as set out in table 4.10.

Table 4.8: 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	97.6	826.0	1,799.9	110.0	2,833.4
CPIH inflated RCV	97.6	826.0	1,799.9	110.0	2,833.4
Other adjustments	0.0	0.0	0.0	0.0	0.0
Total RCV	**195.2**	**1,652.0**	**3,599.7**	**220.0**	**5,666.9**

Table 4.9: 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	83.0	678.2	1,561.9	81.9	2,405.0
CPIH inflated RCV	79.3	648.0	1,492.3	78.2	2,297.9
Post 2020 investment	122.1	443.4	511.4	39.0	1,116.0
Other adjustments	-	-	-	-	-
Total RCV	**284.5**	**1,769.6**	**3,565.6**	**199.1**	**5,818.8**

Table 4.10: Allowed return on capital by wholesale control for each component of RCV, 2020-25 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	8.7	72.1	161.4	9.2	251.4
CPIH inflated RCV	12.9	107.1	239.6	13.6	373.2
Post 2020 investment	10.1	35.0	40.1	3.1	88.3
Other adjustments	-	-	-	-	-
Allowed return on capital	**31.6**	**214.2**	**441.2**	**25.9**	**712.9**
Company April 2019 – return on capital	37.3	268.9	531.5	30.4	868.1

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 'Dŵr Cymru - 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 4.11 sets out the resultant RCV run-off revenue for each component of RCV for each wholesale control.

Table 4.11: RCV run-off on the RCV (5 year) (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
CPIH inflated RCV	18.3	178.0	307.5	31.8	535.6
RPI inflated RCV	18.7	182.2	314.9	32.5	548.4
Post 2020 investment	14.4	58.2	51.5	7.2	131.3
Total RCV run-off	**51.4**	**418.4**	**674.0**	**71.5**	**1,215.3**

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 Dŵr Cymru's RCV run-off rates which are based on a range of estimates of average asset lives for assets within each wholesale control. The company provides a range of evidence in its plan which supports a range of possible RCV run-off rates. Dŵr Cymru's business plan incorporates the low end of the range of estimates and the run-off rates on which its plan is based is materially lower than the sector average. The April business plan signals that in response to a lower allowed return on capital the company would consider a change to RCV run-off rates.

In it representations, the company proposes two adjustments to RCV run-off rates:

- Dŵr Cymru sets out that two financial ratios (funds from operations to net debt and retained cash flow to net debt) are materially lower than other companies in the sector and link this to the low RCV run-off rates. The company proposes an average 0.23% uplift to the run-off rates for water resources, water network plus and wastewater network plus controls. The company sets out that without the uplift, the represented plan would not be financeable based on the reduction to the allowed return on capital in the draft determination. We accept this approach in the final determination to address a financeability constraint which brings forward £62 million of revenue. The RCV run-off rates are within the range set out by Dŵr Cymru in its business plan and remain significantly lower than the average for the sector.
- In its April plan, Dŵr Cymru proposes £76 million voluntary funding in support of its social tariff. This is over and above the cross subsidy provided by customers as customer research does not support an increase to the level of cross subsidy. In its representations, the company sets out that its voluntary

contribution to social tariffs is achieved through revenue foregone, effectively reducing earnings. The company sets out that this, combined with the lower allowed return on capital represents a financial constraint for the notional company. The company proposes an increase to RCV run-off rates to bring forward £55 million to improve financial ratios and a commitment not to recover this amount of additional revenue. The company's social tariff is the highest per capita across all of the water companies and is supported by the Welsh Government, the Consumer Council for Water and its customer challenge group[10]. We accept the approach proposed by the company and apply an increase of 0.21% to RCV run-off rates. The company commits this revenue will not be collected and will be treated as revenue 'foregone'. We do not include the revenue foregone in our assessment of financial ratios for the financeability assessment and accept this adjustment as being in the interests of all of the company's customers over the long term. The increase in RCV run-off introduces a short term increase in the cross subsidy from customers but revenue foregone is effectively written off the RCV and therefore provides for lower bills for all customers in the longer term. We will ensure Dŵr Cymru fulfils its commitment to forego this revenue in 2020-25 through a bespoke adjustment to the retail revenue reconciliation at PR24. We will set out our approach to the reconciliation in the PR19 reconciliation rule book.

Following our assessment of financeability, we apply a further increase to RCV run-off rates of 0.16% to bring forward £40.5 million of revenue. We apply part of the financeability adjustment to RCV run-off advancement to align more closely with the notional financial ratios targeted by the company in its business plan. We also consider the increase to RCV run-off rates aligns to the company's representations given the movement in the allowed return on capital between the draft and final determinations. We set out our financeability assessment in section 5.2.

Table 4.12 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.

[10] Amendment to text to refer to Customer Challenge Group.

Table 4.12: RCV run-off rates for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources
Company April 2019 (%)	3.45%	4.08%	3.09%	6.22%
Draft determination (%)	3.45%	4.08%	3.09%	6.22%
Final determination (%)	4.07%	4.74%	3.68%	6.59%

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 'Dŵr Cymru - Allowed revenue appendix' in table 5.1 to table 5.4.

4.3 PR14 reconciliations

In PR14, we set mechanisms to incentivise companies to do the right thing for their customers. These financial incentives cover cost efficiency, outcomes performance, revenue forecasting (wholesale and retail), customer service (the service incentive mechanisms), 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. 'Dŵr Cymru - Accounting for past delivery final decisions' provides a detailed explanation of all policy interventions we are making in the models. Table 4.13 summarises our interventions. Table 4.14 sets out the resulting adjustments to revenue and the RCV. The 'Dŵr Cymru - 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 4.7.

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

Incentive	Intervention(s)
Outcome delivery incentives	No interventions required.
Residential retail revenue	We are intervening to round the company's modification factor figures to 2 decimal places to ensure consistency with the 'PR14 reconciliation rulebook'. We are also including a figure of 3.74% for the 'Materiality threshold for financing adjustment - Discount Rate' in line with the 'PR14 reconciliation rulebook'. Overall, our minor interventions increase the total residential retail revenue payment at the end of the 2015-20 period from £1.975 million to £1.980 million.

Incentive	Intervention(s)
Wholesale revenue forecasting incentive mechanism	No interventions required.
Totex	We accept the latest outturn expenditure figures for Loughor Estuary but are intervening to include outturn expenditure for 2015-18 in PR14 wastewater totex as set out in the company's data table commentary so that the cost sharing mechanism works as intended. We also reject Dŵr Cymru's alternative approach to fully funding the Loughor Estuary project costs for 2015-19 set out in its representation. We explain our assessment in detail in 'Dŵr Cymru - Accounting for past delivery additional information.' We are also intervening to change the 'Sewerage: Final menu choice' figure to full decimal accuracy as calculated in the 'PR14 populated final determination models'. Overall, our interventions reduce the wastewater totex menu revenue adjustment at the end of the period from - £8.377 million to - £5.826 million and reduce the wastewater totex menu RCV adjustment from - £25.394 million to - £5.657 million.
Land sales	No interventions required.
Residential retail service incentive mechanism	We are intervening to set Dŵr Cymru's residential retail service incentive mechanism adjustment to -0.44% of residential retail revenue to reflect its performance from 2015-16 to 2018-19. This equates to -£1.0 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.
Business retail service incentive mechanism	We are intervening to set Dŵr Cymru's business retail service incentive mechanism adjustment to allowed average retail costs to: £0.77 per 'Water supplies less than 50 Ml' customer £0.00 per 'Water supplies 50 Ml and over' customer £1.02 per 'Wastewater' customer This reflects the company's performance relative to other business retailers from 2015-16 to 2018-19. Using the company's forecasts for business retail customer numbers this equates to £0.665 million, or 1.77% of business retail revenue for water customers using less than 50Ml a year and wastewater customers over the period. The company did not estimate the impact of the mechanism in its business plan.
PR09 blind year adjustments	No interventions required.

Table 4.14: Reconciliation of PR14 incentives, 2020-25 (£ million, 2017-18)

Incentive	RCV adjustments		Revenue adjustments	
	Company view[1]	Ofwat view[1]	Company view[1]	Ofwat view[1]
Outcome delivery incentives	0.0	0.0	0.1	0.1
Residential retail revenue	N/A	N/A	2.0	2.0
Wholesale revenue forecasting incentive mechanism	N/A	N/A	-23.9	-24.0
Totex	26.5	47.0	21.0	23.9
Land sales	-0.5	-0.5	N/A	N/A
Residential retail service incentive mechanism	N/A	N/A	0.0	-1.0
Business retail service incentive mechanism	N/A	N/A	N/A	0.7
PR09 blind year adjustments[2]	-27.5	-27.6	-12.3	-12.3
Water trading	N/A	N/A	0.0	0.0
Other adjustments	0.0	0.0	0.0	0.0
Total	-1.5	18.8	-13.1	-10.7
Total post profiling[3]	N/A	N/A	-13.9	-11.3

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

4.4 Other allowed revenue

Other components of allowed revenue are:

- The fast track reward, where applicable;

- Corporation tax allowance – this is estimated from projected corporation tax rates, profit forecasts and assumed levels of tax relief contained in our financial model for the final determination.
- Grants and contributions – this represents revenue that we expect to be received from developers in respect of work undertaken by companies to service new developments.
- Non-price control income – this forecast income is deducted from the total allowed revenues, as this revenue is not recovered from the charges covered by the price control – but is expected to cover some of the costs included in the calculation of the price control.

Table 4.15: Calculation of other allowed revenue (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresou To update following remodelling 6/12/2019rces	Total
Fast track reward	0.0	0.0	0.0	0.0	0.0
Tax	0.0	0.0	0.0	0.0	0.0
Grants and contributions (price control)	0.9	68.2	36.6	0.0	105.7
Deduct non-price control income	-81.6	-4.8	-3.2	-0.8	-90.4

4.4.1 Taxation

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

Dŵr Cymru 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 4.16: Tax (£ million) – Breakdown by price control

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

4.4.2 Grants and contributions

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

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

Grants and contributions (price control)

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

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

Our approach to calculating 'gross' and 'net' grants and contributions is outlined in 'Cost efficiency technical appendix'. The main difference from draft determinations is that we no longer estimate a cost recovery rate for each company. The starting point for each calculation is 'gross' grants and contributions reported in companies' business plans. To arrive at 'net' grants and contributions we deduct company-

specific income offset allowances rather than assume a common recovery rate for all companies. We also apply the modelled base cost efficiency challenge to grants and contributions to ensure alignment between grants and contributions and cost assessment.

Table 4.17 below shows our assumed amounts of 'gross' grants and contributions (price control) that is used to calculate net totex for cost sharing. This includes two one-off contributions that sum to £10.4 million that Dŵr Cymru did not originally include within grants and contributions in its business plan:

- Contribution from Natural Resources Wales for reservoir safety, as described in Dŵr Cymru's business plan (water network plus: £9.5 million).
- Enabling natural resources and wellbeing grant (ENRAW) from Llywodraeth Cymru for visitor centres, as described in Dŵr Cymru's business plan (water resources: £0.9 million).

Table 4.17: Grants and contributions before the deduction of income offset allowances (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Grants & contributions (before deduction of income offset allowances)	0.9	99.8	43.5	0.0	144.2

Table 4.18 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 4.18: 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)	0.9	68.2	36.6	0	105.7

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

Table 4.19: 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	6.3	8.0	0	14.2

4.4.3 Non-price control income

Non-price control income is income from the excluded charges defined in licence condition B. For example, it includes bulk supplies, standpipes, unmeasured cattle troughs, and other services. For the final determination we confirm that diversions which are not requested under section 185 of the Water Industry Act 1991, for example, works under the New Roads and Street Works Act 1991 or those associated with High Speed 2, are also excluded from the price control. These are capital contributions and so do not get shown in tables 4.1 and 4.20.

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Non-price control income	-81.6	-4.8	-3.2	-0.8	-90.4

Note negative numbers represent a deduction from the allowed revenue.

4.4.4 Uncertainty mechanisms

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

We are including a PR24 reconciliation mechanism for business rates in our final determination for Dŵr Cymru 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 Dŵr Cymru along with all other companies serving England[11] because:

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

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

We have specified a Notified Item as we consider that an interim determination is the appropriate mechanism should the Cwm Taf Water supply strategy scheme need to be delivered in-house.

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

5 Risk analysis and financeability

Key changes from the draft determination

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

- For the final determination, we apply our view of a sector risk range for totex, C-Mex, D-Mex and financing costs (including embedded debt) as part of our assessment of risk ranges for our final determination. We also apply updated views on risk ranges for outcome delivery incentives, determined under our Outcomes Framework.
- We revise our notional dividend yield to 3.00% (from 3.15% in the draft determination) and apply a dividend growth of 1.18% in our notional financeability assessment for Dŵr Cymru. 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.
- For the final determination we advance allowed revenue by £83.5 million to ensure our determinations are financeable on the basis of the notional structure.

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

Dŵr Cymru is responsible for ensuring it delivers its obligations and commitments in the context of its choice of capital and financing structure. We will closely monitor changes in levels of the company's gearing, credit ratings and other key financial metrics during 2020-25.

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

5.1 Risk analysis

The PR19 methodology set out that we expect companies to demonstrate a clear understanding of financial risk to the delivery of their business plans and to explain and demonstrate how they manage and mitigate that risk. It required companies to use return on regulatory equity (RoRE) analysis to assess the impact of upside and downside risk on the basis of their notional capital structures based on a prescribed suite of scenarios using the company's assessment of P10/P90 confidence limit values[12].

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

Our PR19 methodology aims to increase the strength of financial incentives to better align the incentives placed on companies with the interests of customers. Our determinations aim to be stretching to encourage companies to deliver further efficiencies and better levels of service to customers. The incentives we put in place incentivise companies to outperform the cost allowances and performance

[12] 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.

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

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

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

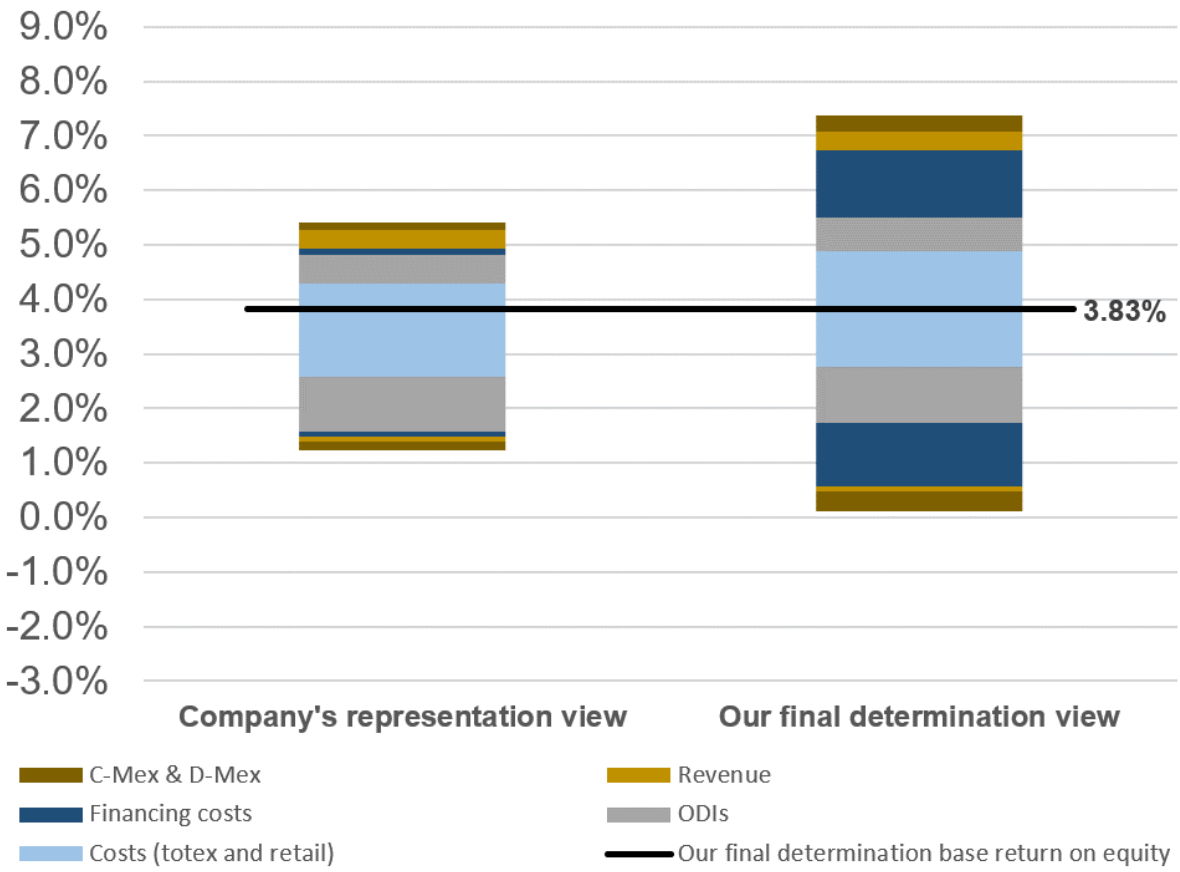
We asked companies to update their risk ranges in their representations. We state those risk ranges in table 5.1 against the cost allowances and base return on regulatory equity in our final determinations. These risk ranges are not fully comparable with our final determination ranges as they take account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

Table 5.1: Dŵr Cymru final determination risk ranges

	Range implied in company representation		Final determination ranges	
Base RoRE	-		3.83%	
Risk ranges	**Lower bound**	**Upper bound**	**Lower bound**	**Upper bound**
Totex	-1.00%	0.39%	-0.84%	0.82%
Outcome delivery incentives	-1.01%	0.54%	-1.03%	0.61%
Financing costs	-0.09%	0.09%	-1.16%	1.23%
Retail costs	-0.25%	0.07%	-0.23%	0.23%
C-MeX and D-MeX	-0.17%	0.15%	-0.37%	0.29%
Revenues (includes Retail)	-0.09%	0.35%	-0.09%	0.35%
Total	**-2.61%**	**1.59%**	**-3.71%**	**3.53%**

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

Figure 5.1: Company representation and final determination RoRE ranges for Dŵr Cymru



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 Dŵr Cymru'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 understand Dŵr Cymru's expected downside skew for retail costs relates to a reducing bad debt provision for 2020-25 and the risk that customer contact savings might not be achieved. However, we consider there remains scope for Dŵr Cymru to outperform its retail cost allowances and so we have revised the upside risk range to be symmetrical with the downside risk range.

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

5.2 Financeability

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

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

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

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

of our regulatory duties and with the approach we and other regulators have taken in previous reviews.

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

In its April business plan, Dŵr Cymru set 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 stated that its plan targeted a credit rating of Baa1 on a notional basis.

Subsequently, we asked companies to provide additional Board assurance, in their representation to our draft determination, that they will remain financeable, taking account of the reasonably foreseeable range of plausible outcomes of their final determination including evidence of further downward pressure on the allowed return. Companies also took account of these issues in the risk analysis presented in section 5.1.

In its representations, Dŵr Cymru states it is unable to give assurance that the draft determination is financeable, given the significantly weaker set of key financial ratios for the notional company in the draft determination compared to other companies in sector.

We have carefully considered the representations made by Dŵr Cymru including the qualified statement on the assurances. 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[14]. 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

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

for Dŵr Cymru to meet its obligations and commitments to customers on the basis of the notional structure. We comment on the financial resilience of the actual structure in section 5.3.

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

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

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

Our financial modelling of the notional company suggests that Dŵr Cymru faces a financeability constraint. Therefore, consistent with the approach in the PR19 methodology, our final determination increases RCV run-off rates to bring forward £40.5 million and increases PAYG rates to bring forward £43 million of revenue to improve cash flows and financial ratios. As set out in section 4.2.4, we consider an approach to increase PAYG and RCV run-off is appropriate given the company's low RCV run-off rates compared to the sector average and to align more closely to the notional financial ratios included in the company's plan. In doing so we apply an uplift to RCV run-off rates to target the funds from operations / net debt in the company plan. We then advance revenue with the use of a PAYG adjustment to target the company's proposed level of adjusted interest cover in its business plan. The financial ratios stated in table 5.2 include the effect of the increase to PAYG and RCV run-off rates.

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 the company's position in its representations 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 Dŵr Cymru's final determination is financeable based on the allowed revenues which include a reasonable allowed return on capital.

The final determination is sufficient to ensure it will be in a position to deliver its obligations and commitments to customers.

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

	Business plan	Draft determinations	Final determinations
Gearing	60.39%	60.49%	59.52%
Interest cover	3.33	3.27	3.64
Adjusted cash interest cover ratio (ACICR)	1.57	1.50	1.51
Funds from operations (FFO)/Net debt	7.76%	7.56%	8.28%
Dividend cover	0.89	0.54	0.82
Retained cash flow (RCF)/Net debt	6.13%	5.50%	6.24%
Return on capital employed (RoCE)	3.75%	3.57%	3.75%

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.

For Dŵr Cymru the financial ratios are net of the £55 million of revenue that is included in the final determination that the company commits to forego associated with its voluntary contribution to its social tariff.

We set out the average PAYG and RCV run-off rates along with the RCV growth over 2020 to 2025 for Dŵr Cymru in table 5.3. RCV growth for the final determination is lower than in the company's April plan and in the draft determination. Overall, changes to allowed expenditure, the revised approach to determining the mix of operating and capital expenditure, the uplift to RCV run-off rates and the change to the PAYG rates means less expenditure is added to RCV.

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

	PAYG	RCV run-off	RCV growth
Company April 2019	46.2%	3.52%	13.25%
Draft determinations	49.5%	3.52%	7.27%
Final determinations	55.8%	4.12%	2.68%

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 £250 million above an adjusted cash interest cover of 1.0 times, providing headroom to our totex downside of £91 million and outcome delivery incentives downside of £116 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.

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

Figure 5.2: Financial resilience of Dŵr Cymru's actual financial structure

Dŵr Cymru reported gearing of 56.0% as at 31 March 2019. In its business plan it forecast gearing to be 58% at 31 March 2021 and 54.8% at 31 March 2025.

At the time of our final determination Dŵr Cymru has a credit rating of A2 (negative) with Moody's, A (negative) with S&P and A (negative) with Fitch.

The Board provided assurance that the company is financially resilient under its plan. The company raises concerns about the financeability of the draft determination and provides limited information about its financial resilience following the draft determination in the context of its representation.

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.

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.

Dŵr Cymru is a company limited by guarantee and as such does not pay an equity dividend. However we will closely monitor changes in levels of the company's gearing, credit ratings and other key financial metrics during 2020-25 to test that adequate steps are being taken by management and that financial resilience is being maintained.

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

6.1 Bill profile

Dŵr Cymru proposes an average bill profile with a 5.5% reduction. Our bill profile contains a greater reduction of 9.4% over 2020-25.

Dŵr Cymru does not submit additional evidence on bill profiles or acceptability in its August 2019 representation to our draft determination but states that its customers support its proposed bill and performance commitments. Dŵr Cymru's customer challenge group states that customers prefer the company's bill and higher investment in service and resilience over a greater bill reduction. We do not accept these representations for the following reasons:

- Our models and assessments allow for efficient expenditure where there is sufficient evidence of need. Dŵr Cymru's customers were not told that the independent regulator found the company was inefficient, and its levels of service fell below those of other companies in a number of areas. And they were not asked whether they preferred the expenditure, bills and outcomes in its plan versus the expenditure, bills and outcomes in our draft determination.
- Equally, Dŵr Cymru's customers were not asked whether they preferred the expenditure, bills and outcomes in its plan versus the expenditure, bills and outcomes that will be delivered by other companies. This would be a more valid way for them to gain an understanding of the true support for their plans.
- Our approach ensures customers only pay for efficient costs. Dŵr Cymru has not provided evidence to demonstrate that its customers are willing to pay for inefficient costs to obtain required service levels. If Dŵr Cymru had provided sufficient evidence to justify higher efficient investment then we would have included this in its final determinations.

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

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

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

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Company April 2019	£441	£417	£417	£417	£417	£417
Draft determinations	£441	£378	£378	£378	£378	£378
Final determinations – before reprofiling	£441	£421	£422	£418	£413	£409
Final determinations	£441	£434	£425	£416	£408	£399

Throughout the price control we have put a strong emphasis on companies planning for the long term, both in terms of their goals and their bills. Following actions we set out at initial assessment of business plans, nine companies including Dŵr Cymru 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 Dŵr Cymru will deliver a real terms reduction to the average bill between 2020 and 2025.

In addition, Dŵr Cymru commits to:

- run at least five more resilient communities projects by the end of 2025 to help identify and serve seldom heard customers; and
- establish an annual event to work with partners and better understand how best to serve customers in vulnerable situations.

Dŵr Cymru has two bespoke performance commitments on affordability and vulnerability, which will require it to:

- ensure the percentage year-to-year change on its average bill is less than CPIH (consumer price inflation including owner occupiers' housing costs); and
- maintain the number of customers it reaches through its affordability support schemes at 133,000 through to 2025.

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

6.3 Total revenue allowances and k factors

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

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

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Water resources	34.4	36.7	38.5	39.4	37.6	186.6
Water network plus	271.5	263.9	259.6	256.4	257.0	1,308.4
Wastewater network plus	375.5	374.6	370.2	365.4	360.2	1,846.0
Bioresources	36.8	35.6	34.8	34.0	33.4	174.6
Residential retail	43.6	43.2	42.8	42.4	41.9	213.9
Total	**761.9**	**754.0**	**745.9**	**737.6**	**730.3**	**3,729.6**

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	34.4	0.00%	6.76%	5.09%	2.49%	-4.59%
Water network plus	271.5	0.00%	-2.86%	-1.57%	-1.24%	0.26%
Wastewater network plus	375.5	0.00%	-0.23%	-1.14%	-1.29%	-1.45%

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 Dŵr Cymru is set out in the 'Bioresources revenue to remunerate fixed costs – Dŵr Cymru' model.

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

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

	Company view	Draft determination	Final determination
Part 1: Revenue to remunerate fixed costs £m 2017-18 FYA CPIH deflated prices (2020-25)			
Total return on capital	N/A	29.2	25.9
Total run-off	N/A	70.9	71.5
Revenue to service RCV	**N/A**	**100.1**	**97.4**
Local authority and Cumulo rates for both treatment and disposal	N/A	3.4	3.4
Fixed share of other direct costs of treatment and disposal	N/A	10.7	8.3
Fixed share of other indirect cost of treatment and disposal	N/A	10.4	8.0
Fixed PAYG revenue	**N/A**	**24.5**	**19.7**
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	**160.7**	**124.6**	**117.1**
Part 2: Variable revenue (£/TDS) 2017-18 FYA CPIH deflated prices (2020-25)			
Unadjusted revenue (£m)	173.6	200.4	174.6
Revenue to remunerate fixed costs	160.7	124.6	117.1
Revenue to remunerate variable costs (£m)	**12.8**	**75.8**	**57.5**
Forecast volume of sludge (TDS)	396,500	375,400	396,500
Variable revenue (£/TDS)	**32.4**	**201.8**	**145.0**

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 Dŵr Cymru', 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)	34.2	34.6	34.9	35.3	35.6	174.6
Forecast volume of sludge (TDS)	77,700	78,500	79,300	80,100	80,900	396,500
Variable revenue (£/TDS)	N/A	N/A	N/A	N/A	N/A	145.0

7 Putting the sector in balance

Key points

- Dŵr Cymru reported gearing of 56.0% as at 31 March 2019. Dŵr Cymru forecasts that its level of gearing (58.0% by 2021 and 54.8% by 2025) will remain well 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.
- Dŵr Cymru is a company limited by guarantee. It does not pay an equity dividend, however we expect the company to report transparently its performance through 2020-25 in its annual performance reports.
- Dŵr Cymru proposes performance related executive pay measures that are 100% aligned to customer delivery, which we acknowledge as being sector leading and best practice. We retain our expectation of the company that it will ensure its performance related executive 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[15];
- companies with high levels of gearing share financing gains from high gearing with customers; and

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

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

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

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

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

Table 7.1: Our assessment of Dŵr Cymru's proposals to balance the interests of customers

Our assessment of the company's proposals to balance the interests of customers
Gearing outperformance benefit sharing mechanism The company has confirmed it would implement our default gearing outperformance mechanism, though the company forecasts that its gearing level through 2020-25 will remain well below the threshold that triggers the mechanism.
Voluntary sharing mechanisms Dŵr Cymru has proposed a voluntary sharing scheme – WaterShare – which will share any net outperformance from outcome delivery incentives. 50% of the total will be shared via bill reductions, with the remaining 50% set aside in a WaterShare fund which will be reinvested to improve performance, the environment, or resilience, or to benefit communities. Over 2020-25, Dŵr Cymru also commits to making a company contribution to its social tariff, and a hardship fund (its Customer Assistance Fund) which helps reduce the arrears of customers in financial difficulty. Dŵr Cymru in its representation state that its business plan is financeable, however now cannot commit to its April business plan social tariff proposal. The company propose an increase in RCV run-off to fund the social tariff. Dŵr Cymru proposes a company contribution of £55 million to its social tariff between 2020 and 2025.
Dividend policy for 2020-25 We note Dŵr Cymru's unique position as a company limited by guarantee, and having no shareholders, all financial surpluses are reinvested for the benefit of customers. Dŵr Cymru has committed to the expectations on dividend policy as set out in our 'Putting the sector in balance' position statement but under our current assessment it falls short in a number of areas as set out below. Dŵr Cymru is a company limited by guarantee and so does not pay equity dividends, but maintains a 'customer dividend' for the benefits of its customers. The company indicated a base dividend yield of 2.6% for 2020-25, based on its notional structure. The company's dividend policy refers to all of the areas referenced in the 'Putting the Sector in balance' position statement (out/under-performance and benefit sharing, employee interest & pension obligations, actual capital structure, need for future investment and financial resilience). The company confirms that all dividend pay-outs for customers will be transparent and explained in detail in the context of how the dividend policy takes account of factors such as obligations and

Our assessment of the company's proposals to balance the interests of customers
promises to customers, delivery of service to customers, financial resilience and employee interests, only paying out once all of these factors have been taken into account. The company has consulted with its customers on how its customer dividend should be applied for their benefit. The company has detailed the specific obligations and commitments to customers that will be considered, but has not confirmed that the level of performance delivery considered will be as set out in the final determination. The revised base dividend yield we indicate is in our view reasonable for a company performing in line with its price determination but the company has not indicated that dividends may be either increased or lowered from the base depending on the actual performance of the company and provides insufficient detail on how performance delivery will impact on dividends paid. Consistent with the lower allowed cost of equity in our final determination, we have revised our calculation of the dividend yield that we consider to be reasonable for assessing the base dividend for water companies in 2020-25. We consider the acceptable level of base dividend yield is up to 4% this but can be expected to vary depending on the scale of a company's RCV growth and future investment needs. We set out further details in 'Aligning risk and return: technical appendix'. The company has committed to publishing a statement on its dividend policy annually in its statutory Report and Accounts. This commitment includes the use of this annual statement to signal clearly any change in its policy on dividends. We expect Dŵr Cymru to be transparent when explaining its dividend policy and reporting on dividends paid over 2020-25, to demonstrate how it has delivered on the commitments in relation to its dividend policy and to ensure it meets the expectations we set out in 'Putting the sector in balance' as updated in the final determination 'Aligning risk and return: technical appendix'. Specifically, the company should provide further transparency on: • how it has delivered against performance levels as set out in the final determination and elsewhere; and, • how performance delivery has impacted on the dividends paid.
Performance related executive pay policy for 2020-25 In our 'Aligning risk and return technical appendix' we identify that 60% alignment to delivery for customers is current good practice among the companies that we regulate. Based on our calculations, Dŵr Cymru's measures are 100% directly aligned to customer delivery, which we acknowledge as being sector leading and best practice. Dŵr Cymru states it considers that it fully meets the expectations set out in our 'Putting the sector in balance: position statement'. The company also states that as it has no external shareholders, all of the measures are aligned to delivery of service to customers. The objectives and weightings for 2020-25 have not yet been agreed but will retain the key features of the current scheme, namely: • an annual bonus based on a set of measures, to be confirmed (currently drinking water quality, environmental compliance, customer satisfaction and complaints, customer service and cost reduction). • a long-term bonus (currently based on three year customer service (SIM) performance and customer value creation). • targets will be set by reference to the final determination, its business plan, past performance and comparative sector performance. • the remuneration committee will set stretching annual targets for the annual bonus by reference to current and target performance and for the long-term variable pay, targets will be set on the basis that they are likely to continue to be stretching throughout the five-year period. The company proposes the Remuneration Committee will operate both schemes according to their respective scheme policies, with the committee having discretionary powers to take into account factors such as significant safety or reputational issues or significant deterioration of performance. The company commits to publish the policy each year in the remuneration report in the annual report and accounts, including any changes and the underlying reasons for the changes. 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

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

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