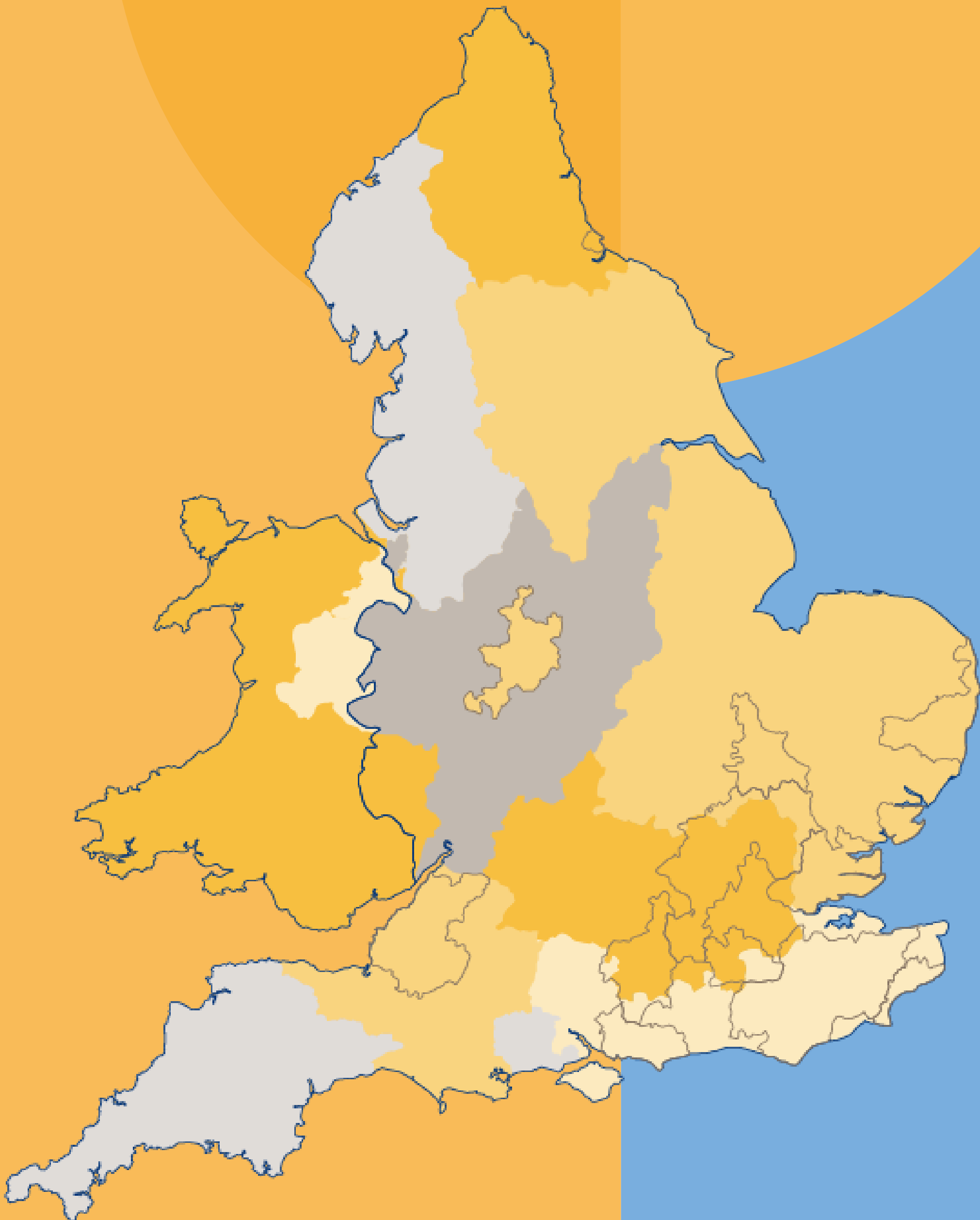
July 2019

Trust in water

PR19 draft determinations

Dŵr Cymru draft determination



Ofwat

www.ofwat.gov.uk

PR19 draft determinations: Dŵr Cymru draft determination

About this document

This document, together with the 'Notification of the draft determination of price controls for Dŵr Cymru', sets out for consultation the details of the draft determination of price controls, 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 draft determination 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.

The draft determination covers six price controls for the 2019 price review (PR19):

- water resources;
- water network plus;
- wastewater network plus;
- bioresources;
- residential retail; and
- business retail.

This draft determination is in accordance with our PR19 methodology, our statutory duties and the Welsh Government's statement of strategic priorities and objectives for Ofwat. 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.

All of the responses to the initial assessment of business plans, including all of the companies' revised business plans, provided by 1 April 2019 are taken into account in our decisions where relevant. Where appropriate, we explicitly set out our response to points and issues raised by respondents.

Our decisions also take into account the representations made on the fast track draft determinations where points and issues raised are relevant to the slow track and significant scrutiny draft determinations. We will deal with the other elements of the representations on the fast track draft determinations as part of the final determinations.

We have not necessarily been able to take full account of all late evidence, submitted after 1 April 2019 business plans, and we will consider this information for the final determination.

The appendices to this document provide more detail and form part of the draft price control determination:

- PR19 draft determinations: Dŵr Cymru - Cost efficiency draft determination appendix
- PR19 draft determinations: Dŵr Cymru - Outcomes performance commitment appendix
- PR19 draft determinations: Dŵr Cymru - Accounting for past delivery appendix
- PR19 draft determinations: Dŵr Cymru - Allowed revenue appendix

For all other documents related to the Dŵr Cymru draft determination, please see the draft determinations webpage.

How to respond

Written representations on the draft determinations should be provided to us by 10am on 30 August 2019. Representations can be made by all stakeholders. Representations can be sent either to our PR19 inbox (PR19@Ofwat.gov.uk) or by post to our Birmingham office address: Ofwat, Centre City Tower, 7 Hill Street, Birmingham, B5 4UA.

To ensure transparency, we expect companies to publish their representations in full. We also intend to publish all the written representations we receive on our website once our final determinations are made.

In view of this, if respondents consider that some of the information in their representations should not be disclosed (for example, because they consider it is commercially sensitive information) they should identify that information and explain why. We would expect strong, robust reasons that are specific to the information concerned. We will take such explanations into account, but we cannot give an assurance that information included in representations will not be disclosed.

Where companies are making representations, they should consider what further evidence may be necessary to submit with their representations as a result of this draft determination. Where companies consider that we have not appropriately considered any points previously raised by the company, companies should include this within their representations. Companies should provide a completed ‘All company representation pro forma’ alongside any representations.

We will publish Dŵr Cymru’s final determination on 11 December 2019 after considering representations (from all stakeholders) on the draft determination and other relevant matters. If Dŵr Cymru accepts the 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.

Contents

1 Summary

Through PR19 we are enabling, incentivising and challenging water companies to address the key issues facing the sector of climate change, a growing population and ever increasing customer expectations about service. We expect companies to look well beyond the five year price review period to meet needs of future customers and protect and improve the natural environment.

Our PR19 methodology sets out a framework for companies to address these challenges, with a particular focus on improved service, affordability, increased resilience and greater innovation. Our draft determinations are based on our detailed review of the revised plans submitted to us on 1 April. We are intervening, where required, to protect customers.

The Welsh Government has set out strategic priorities and objectives[1] that we are required to act in accordance with in carrying out our relevant functions relating wholly or mainly to Wales. Our PR19 methodology takes full account of the specific circumstances in Wales, including the specific legal requirements in Wales. We have assessed Welsh companies' business plans against how they propose to deliver for Welsh customers and the environment during 2020-25 and over the long term.

1.1 What the draft determination will deliver

Our draft determination for Dŵr Cymru will cut average bills by 13.9% in real terms in the 2020-25 period compared to the company's proposed 5.1% reduction. Table 1.1 below sets out the difference in bill profile between the company's business plan submission in April 2019 and our draft determination. Average bills are lower than proposed by Dŵr Cymru, to reflect our view of efficient costs. 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)	£439	£417	£417	£417	£417	£417
Draft determination	£439	£378	£378	£378	£378	£378

Our draft determination allows Dŵr Cymru £477 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £214 million to improve the environment by efficiently delivering its obligations as set out in its National Environment Programme (NEP);

- £75 million to improve reservoir safety and meet new legal requirements;
- £59 million to improve the acceptability of its water quality to customers;
- £33 million to deliver improvements to the water supply demand balance;
- £17 million to install more than 75,000 new meters; and
- £14 million to increase replacing lead pipes and to meet potential future tightening in the Welsh Government lead standards.

We also provide £13.6 million of funding for the company to develop and procure its proposed Cwm Taf water treatment works via direct procurement for customers.

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

Our draft 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. Each performance commitment also has a financial or reputational incentive to hold the company to account for delivery of these commitments.

The performance commitments require Dŵr Cymru to deliver service improvements by reducing water supply interruptions and internal sewer flooding. Dŵr Cymru will deliver environmental benefits by reducing per capita consumption, pollution incidents and leakage. The company will increase the number of lead pipes replaced by 2024-25. Further details of performance commitments are set out in Table 1.2 below and in section 2.

Table 1.2: Key commitments for Dŵr Cymru

Area	Measure
Overall incentive package	Overall, the likely range of returns from the outcome delivery incentive package in our draft determination equates to a return on regulatory equity range of -1.50% (P10) to + 0.42% (P90).
Key common performance commitments	• 15% reduction in annual level of leakage by 2025 from the 2020 level[1]. • 6.3% reduction in per capita consumption by 2024-25 • 25% reduction in pollution incidents by 2024-25 • 30% reduction in internal sewer flooding incidents by 2024-25 • 75% reduction in water supply interruptions by 2024-25
Bespoke performance commitments	• 25% reduction in external sewer flooding incidents by 2024-25 • An increase in the number of lead pipes replaced from 1,400 in 2020-21 to 7,000 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)

Note: The calculations behind these numbers are outlined in the 'Dŵr Cymru - Outcomes performance commitment appendix'

1.2 Allowed revenues

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

[1]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, the overall performance commitment target is a reduction in average annual leakage of 15% (from 2019-20 baseline) by 2024-25.

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

	Water Resources	Network plus - water	Network plus - wastewater	Bioresources	Wholesale Total	Residential retail
Final allowed revenues (£ million)	171.5	1,114.8	1,706.9	200.4	**3,193.6**	215.9

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

As set out in the ‘Cost of capital technical appendix’, we are updating our assessment of the cost of capital for Dŵr Cymru’s draft determinations. The updated cost of capital is 3.19% (on a CPIH basis, 2.19% on a RPI basis) at the level of the appointee, a reduction of 0.21% from our early view set out in the ‘PR19 methodology’.

We consider that Dŵr Cymru’s draft determination is financeable, based on an efficient company, with the notional capital structure, and is sufficient to deliver its obligations, including to ensure a long term resilient service. Each company is responsible for ensuring its capital and financial structure allows it to maintain financial resilience over the short and the long term. We expect Dŵr Cymru to take account of this requirement and of the reasonably foreseeable range of plausible outcomes of their final determination including evidence of further downward pressure on the cost of capital in very recent market data. We expect Dŵr Cymru to provide appropriate Board assurance that it will remain financeable on a notional and actual basis and can maintain its long term financial resilience in its response to our draft determination. Further detail on our assessment of financeability is set out in section 5.

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 has committed to meeting the expectations set out in our ‘Putting the sector in balance position statement’. It has confirmed it will apply our gearing outperformance mechanism. The company is taking steps to demonstrate how its dividend and performance related executive pay policies in 2020-25 will align with customer interests. However we expect the company to continue to take steps in these areas to meet our expectations so that customers can have more trust in the water sector.

In the 'Putting the sector in balance' position statement, we also encouraged companies to adopt voluntary sharing mechanisms, particularly where, for example, companies outperform our cost of debt assumptions. Dŵr Cymru has proposed the WaterShare scheme which will return net outcome delivery incentive rewards to customers. Under this mechanism, 50% of any net reward will immediately be returned to customers via bill reductions and 50% set aside in a WaterShare fund, to be used for bill reductions, extra funding for social tariffs or additional service, environmental and resilience-related investment. The fund will be allocated in consultation with customers, ourselves and the customer challenge group.

1.3 Where we intervene

Our initial assessment of Dŵr Cymru's plan on 31 January 2019 assessed the plan as slow-track. We identified a number of areas where material interventions were required to protect customers' interests. In its 1 April 2019 revised business plan, Dŵr Cymru has not adequately responded to our concerns. In our draft determinations we intervene in Dŵr Cymru's plan in the following areas:

- We align total expenditure (totex) allowances to our view of efficient costs using the comparative information available to us and reflecting that the company did not provide convincing evidence to explain why its proposed costs were substantially higher. This intervention involves a 16% reduction in Dŵr Cymru's totex costs, saving customers £571 million.
- We do not allow enhancement expenditure for leakage (the company is not forecasting to go beyond upper quartile performance) or for reducing pollution incidents and water supply interruptions (we don't allow additional expenditure to achieve upper quartile). Dŵr Cymru must deliver its performance commitments at no additional cost to customers. Outperformance in these areas is rewarded through the outcome delivery incentive framework.
- We include an allowance for the costs of Loughor Estuary in line with our stated methodology at both the 2014 price review and the 2019 price review;
- We significantly increase expected performance on some common performance commitments to reach upper quartile, including water supply interruptions, per capita consumption, pollutions incidents and internal sewer flooding.
- We significantly increase expected performance on its external sewer flooding performance commitment.
- We amend a number of outcome delivery incentives rates and remove financial incentives from five proposed performance commitments concerning asset resilience due to insufficient evidence of customer benefits.
- We bring an extra £10 million of funding forward from future customers to ensure that Dŵr Cymru's draft determination is financeable for the notional structure.

We set out further detail of our interventions in this document and in the Dŵr Cymru actions and interventions documents.

2 Outcomes

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 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 incentives 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 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 expect 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 continue our assessment of customer engagement evidence following each company's submission of its response to our initial assessment of its plan in April 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 some 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, the company has undertaken 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. The main field work included 1,002 participants (789 online, 213 in home), with results weighted to match the customer profile. We find this research to be of a satisfactory quality.

However, Dŵr Cymru provides insufficient evidence to support its response to some actions that we set out following our initial assessment of the plan. For example, the company notes that the recent 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. Also, the level of customer support for some of the company's proposals is low: for example, only 44% of customers agree 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'.

The 1 April 2019 assurance report from the Dŵr Cymru customer challenge group explains its involvement in the design of the recent research, and the customer challenge group provided additional commentary on the research findings on 1 May 2019. The customer challenge group states that 'the research indicates customer priorities for service and asset health, which are largely consistent with previous research and triangulated data'. In a covering email it states 'the customer challenge group saw the research to be both essential and acceptable in addressing the concerns raised on customer engagement with [outcome delivery incentives]' and 'the actions and amendments proposed by the company are consistent with customer views identified in this research'.

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 detail of these performance commitments and outcome delivery incentives are set out in the 'Dŵr Cymru - Outcomes performance commitment appendix'. The performance commitments and outcome delivery incentives include the revisions accepted by the company in response to our 31 January 2019 initial assessment of business plans and any additional interventions we are making in the draft determination.

The material interventions we are making in the draft determination are set out in Table 2.1 below. 'Dŵr Cymru – Delivering outcomes for customers actions and interventions' sets out in detail our interventions in the company's performance commitments and outcome delivery incentives following our 31 January 2019 initial assessment of plans.

Table 2.1: Summary of key interventions on outcomes

Intervention description
Accepting the company's leakage reduction proposals of 15% reduction in annual level of leakage by 2025 from the 2020 level, which will make it a better performer than the industry's upper quartile for rural companies by 2024-25. Accepting the company's proposed outcome delivery incentive rates in regards to leakage.
Increasing the reduction in per capita consumption to 6.3% which is the sector upper quartile reduction, because the company has some supply demand balance issues in the region. Adding an underperformance payment and setting the outcome delivery incentive rate in relation to per capita consumption at the industry average to introduce financial incentives for this performance commitment and reflect the results of the company's customer research.
Setting the performance commitment level for water supply interruptions at the forecast industry upper quartile performance by 2024-25, a 75% improvement. We are setting an industry wide glide path for all years before 2024-25. Increasing underperformance and outperformance rates in relation to water supply interruptions to make them more reflective of the results of the company's customer research.
Setting the performance commitment level for pollution incidents to forecast industry upper quartile performance by 2024-25, a 25% improvement. Reducing the outperformance rate in relation to pollution incidents to reflect our concerns around the quality of evidence of customer support for outperformance payments.
Setting the performance commitment target for internal sewer flooding at forecast industry upper quartile performance by 2024-25, a 30% improvement. Increasing the underperformance rate in relation to internal sewer flooding to ensure they provide sufficient protection for customers, given the company's proposed rates are comparatively low. We are also increasing the outperformance rate to appropriately balance incentives.
Removing financial incentives for the five proposed performance commitments concerning asset resilience due to insufficient evidence of customer benefits or a level of external assurance on measures that justify significant financial incentives.
Changing the customer trust performance commitment to be reputational due to insufficient justification for financial incentives.
Increasing the target improvement in external sewer flooding to 25%, equivalent to proposals by other companies, as the company's current performance is among the worst in the industry. Increasing underperformance and outperformance rates in relation to external sewer flooding, which the company proposed to set below the industry level, to adequately incentivise the company to improve its performance.

Table 2.2: Summary of performance commitments: common performance commitments

Name of common performance commitment	Type of outcome delivery incentive	Price controls outcome delivery incentives will apply to
Water quality compliance (CRI) [PR19WSH_Wt1]	Financial - Under; In-period	Water network plus
Water supply interruptions [PR19WSH_Wt2]	Financial - Out & under; In-period	Water network plus
Leakage [PR19WSH_En4]	Financial - Out & under; In-period	Water network plus
Per capita consumption [PR19WSH_En5]	Financial - Under; In-period	Water network plus
Mains repairs [PR19WSH_Wt4]	Financial - Under; In-period	Water network plus
Unplanned outage [PR19WSH_Wt5]	Financial - Under; In-period	Water network plus
Risk of severe restrictions in a drought [PR19WSH_Ft1]	Reputational	N/A
Priority services for customers in vulnerable circumstances [PR19WSH_Sv5]	Reputational	N/A
Internal sewer flooding [PR19WSH_Rt1]	Financial - Out & under; In-period	Wastewater network plus
Pollution incidents [PR19WSH_En3]	Financial - Out & under; In-period	Wastewater network plus
Risk of sewer flooding in a storm [PR19WSH_Ft2]	Reputational	N/A
Sewer collapses [PR19WSH_Rt3]	Financial - Under; In-period	Wastewater network plus
Treatment works compliance [PR19WSH_En1]	Financial - Under; In-period	Wastewater network plus
C-Mex: Customer measure of experience [PR19WSH_Sv1]	Financial - Out & under; In-period	Residential retail
D-Mex: Developer services measure of experience [PR19WSH_Sv2]	Financial - Out & under; In-period	Water network plus; Wastewater network plus

Table 2.3: Summary of performance commitments: bespoke performance commitments

Name of bespoke performance commitment	Type of outcome delivery incentive	Price controls outcome delivery incentives will apply to
Acceptability of drinking water [PR19WSH_Wt3]	Financial - Out & under; In-period	Water network plus

Name of bespoke performance commitment	Type of outcome delivery incentive	Price controls outcome delivery incentives will apply to
Tap water quality event risk index [PR19WSH_Wt6]	Reputational	N/A
Water catchments improved [PR19WSH_Wt7]	Reputational	N/A
Lead pipes replaced [PR19WSH_Wt8]	Financial - Out & under; In-period	Water network plus
Wastewater treatment works 'look-up table' compliance [PR19WSH_En2]	Reputational	N/A
km of river improved [PR19WSH_En6]	Financial - Under; End of period	Water resources; Wastewater network plus
Bioresources product quality [PR19WSH_En7]	Financial - Out & under; In-period	Bioresources
Bioresources disposal compliance [PR19WSH_En8]	Financial - Under; In-period	Bioresources
Customer trust [PR19WSH_Sv3]	Reputational	N/A
Business customer satisfaction [PR19WSH_Sv4]	Financial - Out & under; In-period	Business retail
Customers on Welsh language register [PR19WSH_Sv6]	Reputational	N/A
Sewer flooding on customer property (external) [PR19WSH_Rt2]	Financial - Out & under; In-period	Wastewater network plus
Total complaints [PR19WSH_Rt4]	Financial - Out & under; In-period	Water network plus; Wastewater network plus; Residential retail
Worst served customer for water service [PR19WSH_Rt5]	Reputational	N/A
Worst served customer for wastewater service [PR19WSH_Rt6]	Reputational	N/A
Change in average household bill [PR19WSH_Bl1]	Reputational	N/A
Vulnerable customers on social tariffs [PR19WSH_Bl2]	Reputational	N/A
Company level of bad debt [PR19WSH_Bl3]	Reputational	N/A
Unbilled properties [PR19WSH_Bl4]	Financial - Out & under; In-period	Residential retail; Business retail
Financial resilience [PR19WSH_Bl5]	Reputational	N/A
Energy self-sufficiency [PR19WSH_Ft3]	Reputational	N/A
Surface water removed from sewers [PR19WSH_Ft4]	Financial - Out & under; In-period	Wastewater network plus
Asset Resilience (reservoirs) [PR19WSH_Ft5]	Reputational	N/A

Name of bespoke performance commitment	Type of outcome delivery incentive	Price controls outcome delivery incentives will apply to
Asset Resilience (water network+ above ground) [PR19WSH_Ft6]	Reputational	N/A
Asset Resilience (water network+ below ground) [PR19WSH_Ft7]	Reputational	N/A
Asset Resilience (waste network+ above ground) [PR19WSH_Ft8]	Reputational	N/A
Asset Resilience (waste network+ below ground) [PR19WSH_Ft9]	Reputational	N/A
Community education [PR19WSH_Ft10]	Reputational	N/A
Visitors to recreational facilities [PR19WSH_Ft11]	Reputational	N/A
Reportable injuries [PR19WSH_Co1]	Reputational	N/A
Employee training and expertise [PR19WSH_Co2]	Reputational	N/A
Employee Engagement [PR19WSH_Co3]	Reputational	N/A
Delivery of our reservoirs enhancement programme [PR19WSH_Bl6]	Financial - Under; In-period	Water resources
Delivery of our water network improvement programme [PR19WSH_Bl8]	Financial - Under; End of period	Water network plus
Combined sewer overflow storage systems [PR19WSH_En9]	Financial - Under; End of period	Wastewater network plus
WINEP Delivery [PR19WSH_NEP01]	Reputational	N/A

Figure 2.1 and Figure 2.2 below provide an indication of the financial value of each of Dŵr Cymru's outcome delivery incentives (taking into account the impact of our draft determination interventions) 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 over performed to the P90 level. The figures cover common and bespoke commitments respectively.

Table 2.4 below 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 regulated equity)) and the overall impact of our draft determination interventions. The estimates are based on the company's own view of the plausible bounds of performance. 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.

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

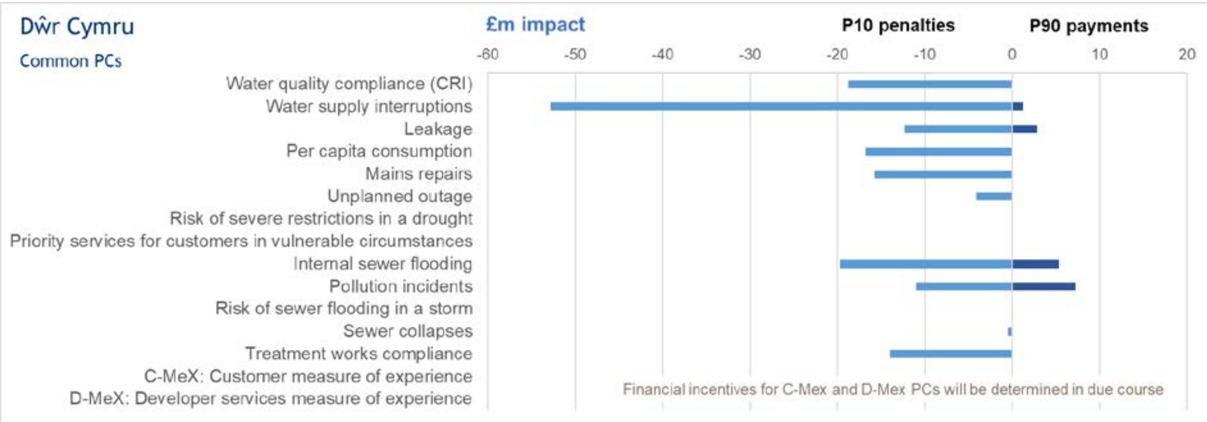


Figure 2.2: Projected P10 penalties and P90 payments for bespoke performance commitments over 2020-25 (£ million)

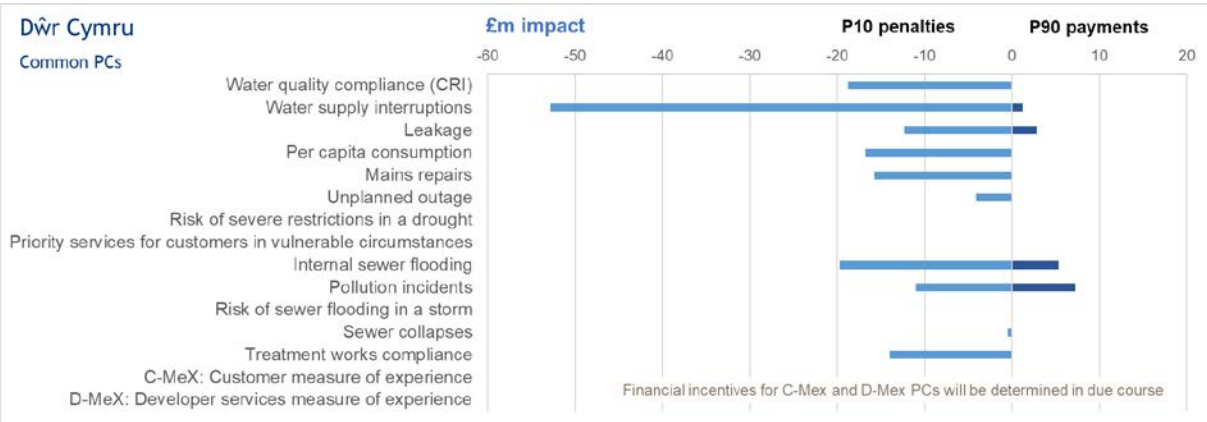


Table 2.4: Impact of draft determination interventions on RoRE range

	April 2019 business plan		Draft determination	
	% of 5 year regulatory equity		% of 5 year regulatory equity	
	P10	**P90**	**P10**	**P90**
Dŵr Cymru	**-1.18**	**+1.01**	**-1.50**	**+0.42**

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.

The company states it does not need to implement our proposed outperformance sharing mechanism above 3% Return on Regulatory Equity (RoRE) as its proposal goes further by sharing 50% of all net outperformance payments through bill reductions, with the remainder invested or used to reduce bills further. We intervene to ensure 50% of gross outperformance payments above 3% RoRE goes to bill reductions in line with our sector-wide policy. This complements the company's proposal and provides greater protection coverage for customers. We set out further detail of the mechanism in 'Delivering outcomes for customers policy appendix'.

In our PR19 methodology, we decided to replace the current Service Incentive Mechanism (SIM) with two new mechanisms to incentivise companies to provide a great 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 be operational from April 2020. We set out further details on C-MeX and D-MeX in the 'Delivering outcomes for customers policy appendix'. We will publish our decisions on C-MeX and D-MeX incentive designs for 2020-25 as part of the final determinations in December.

We will finalise the company's performance commitments and outcome delivery incentives in the light of representations on this draft determination, so that these can be reflected as appropriate in the company's final determination to be published in December.

2.3 Linking outcomes to resilience

In our initial assessment of plans, we were concerned that Dŵr Cymru's plans lacked a clear line of sight between the identified risks to resilience, the proposed mitigations to tackle these risks, and how these mitigation plans were reflected as service improvements in the form of stretching performance commitments. In this context, we are intervening to ensure Dŵr Cymru's asset health challenges are reflected in its outcomes and performance commitments, particularly in relation to the incentives attached to its mains repairs, unplanned outage and bespoke resilience performance commitments ('Asset resilience' performance commitments).

Our initial assessment of plans also noted that Dŵr Cymru provided high level evidence linking priority risks to its systems and to groups of performance commitments, including evidence of its strategic approach and of the level of development of its systems in relation to resilience. However, Dŵr Cymru provided insufficient evidence to demonstrate the benefit that specific investments have in mitigating quantified levels of risk (and/or in increasing system resilience) and supporting stable or improved commitment targets. We expect companies to address this and other issues associated with the way they integrate resilience across their business in the action plans that will be submitted by 22 August 2019 and in their responses to the draft determinations in relation to specific investment proposals. We will take into account the quality of companies' response in our final determinations.

3 Cost allowances

We set out in our PR19 methodology that we expect company business plans to show a step change in efficiency. Overall, we find Dŵr Cymru proposed costs to be higher than our view of efficient costs. On base costs, our greatest challenge to Dŵr Cymru proposals are in the wastewater network plus and residential retail price controls, we consider that the proposed costs for water network plus and water resource and bioresources controls are broadly efficient.

For enhancement expenditure we have challenged the scope of work, the evidence provided to support solution options and the efficient delivery of programmes. We are challenging the need for additional cost allowances to catch-up with the sector in the areas of leakage and supply interruptions in the water network plus price control and pollution incidents in the wastewater network price control. We do not make allowances for these proposals. The company also proposes expenditure to catch-up with the sector on customer contacts about the acceptability of water, for which its performance is the worst in the sector. We consider that a significant proportion of the proposed investment for enhancement activities are covered by base allowances and make an allowance for half the amount proposed.

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 draft determination appendix’ we provide more detailed information on our cost challenge for enhancement expenditure, our allowance for cost adjustment claims and transitional expenditure and how we will deal with the uncertainty in the NEP.

3.1 Wholesale total expenditure

Table 3.1 shows the totex allowances by year and by wholesale price control for the period 2020-25. We have phased our allowed totex over 2020-25 using the company business plan totex profile.

Table 3.1: Totex[1] (excluding pension deficit recovery) 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 view - total
Water Resources	59.2	74.8	74.1	69.7	56.2	333.9	322.3
Water network plus	223.1	216.6	210.9	203.7	207.2	1,061.5	1,402.9
Wastewater network plus	289.6	233.9	241.9	233.2	231.2	1,229.8	1,451.4
Bioresources[2]	34.3	33.8	34.1	33.1	32.2	167.4	125.5
Total	**606.1**	**559.1**	**561.1**	**539.6**	**526.8**	**2,792.6**	**3,302.0**

1 Totex includes all costs except pension deficit recovery costs. This includes 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 build-up of our totex allowance from base and enhancement costs. Base expenditure refers to routine, year on year costs, which companies incur in the normal running of their business. Enhancement expenditure refers to investment for the purpose of enhancing the capacity or quality of service beyond base level.

For draft determinations, we have changed the scope of costs included under base expenditure compared to the initial assessment of plans. Our base costs for wholesale water now include costs associated with the connection of new developments (ie new developments and new connection costs) and costs for addressing low pressure. Our base costs for wholesale wastewater now include new connections and growth, growth at sewage treatment works and costs to reduce flooding to properties that were previously assessed as enhancement expenditure.

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

	Our cost allowance					Company view
	Water resources	Water network plus	Wastewater network plus	Bioresources	Total	Total
Base expenditure[1]	155.3	939.4	1,004.3	160.1	2,259.1	2,295.9
Enhancement expenditure	132.9	112.4	224.5	7.3	477.1	949.5
Third party costs	45.7	9.6	1.0	-	56.2	56.2
Total – excluding pension deficit recovery	**333.9**	**1,061.4**	**1,229.8**	**167.4**	**2,792.4**	**3,301.6**
Pensions deficit recovery costs[2]	-	-	-	-	-	13.9
Total	**333.9**	**1,061.4**	**1,229.8**	**167.4**	**2,792.4**	**3,315.5**

1 We display base costs under the new definition. Company business plan base costs exclude enhancement opex.
2 We are displaying pension deficit recovery costs separately as they are not included in the calculation for PAYG (see section 4).
3 Table 3.2 does not include operating lease adjustments, allowances related to the development of strategic regional water resource solutions. Any ex-ante cost sharing adjustments and costs that are assumed to be recovered through grants and contributions are also excluded. This is to allow a simpler comparison with base and enhancement costs. Table 3.6 sets out a reconciliation of inclusions and exclusions in totex for cost sharing and for the financial model.
4 The company view of pension deficit recovery costs is the full cost, not just the cost the company expects to include within price controls.

3.2 Base expenditure

Table 3.3 shows our challenge to company proposed base expenditure. We distinguish between ‘modelled base costs’ and ‘unmodelled base costs’. We challenge modelled based costs based on comparative assessment (using econometric models). Our efficiency challenge is based on cost performance within the sector as well as evidence from the wider economy.

Unmodelled base costs include business rates; abstraction charges; costs to meet the Traffic Management Act and costs to meet the wastewater Industrial Emissions

Directive where applicable. Our assessment of these costs sits outside of our econometric models and we explain our approach in 'Securing cost efficiency technical appendix'. Dŵr Cymru's wastewater business rates forecasts include increases due to revaluation and asset growth. We have not included increases due to these factors in our allowance. Our approach to setting allowances for business rates is set out in our 'Securing cost efficiency technical appendix'.

Table 3.3: Base totex expenditure, 2020-25 (£ million, 2017-18 CPIH deflated prices)

Price Control	Company business plan - base cost	Modelled base costs efficiency adjustment	Unmodelled base costs adjustment	Base cost allowance
Water Resources	155.1	0.2	0.0	155.3
Water Network plus	939.4	-0.2	0.2	939.4
Wastewater Network plus	1,082.7	-63.3	-15.1	1,004.3
Bioresources	118.7	42.3	-0.9	160.1
Total	2,295.9	-21.1	-15.8	2,259.1

Note: Base costs include operating and maintenance costs as well as new development, new connections and addressing low pressure costs in water, and new connections and growth, growth at sewage treatment works, costs to reduce flooding to properties and transfer to private sewers and pumping stations in wastewater. Company business plan base costs exclude enhancement opex.

3.3 Enhancement expenditure

Table 3.4 summarises our allowances for enhancement expenditure.

Our draft determination allows Dŵr Cymru £477 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £214 million to improve the environment by efficiently delivering its obligations as set out in its NEP;
- £75 million to improve reservoir safety and meet new legal requirements;
- £59 million to improve the acceptability of its water quality to customers;
- £33 million to deliver improvements to the water supply demand balance;
- £17 million to install more than 75,000 new meters; and
- £14 million to increase replacing lead pipes and to meet potential future tightening in the Welsh Government lead standards.

We also provide £13.6 million of funding for the company to develop and procure its proposed Cwm Taf water treatment works via direct procurement for customers.

The most material areas of enhancement cost challenge for Dŵr Cymru are for investments in supply demand balance, particularly leakage and Cwm Taf supply strategy; the wastewater programme within the NEP resilience; interruptions to supply; network water quality; and Loughor.

Leakage

For leakage our expectation for base service levels is that an efficient company should achieve industry forecast upper quartile performance by 2024-25 in both normalised measures (per property and per kilometre of main). This performance is funded through the base allowance. We allow enhancement costs only where a company's performance commitment goes beyond the forecast upper quartile threshold. As this is not achieved by Dŵr Cymru, we do not allow the requested funding under enhancement. This applies to both the leakage expenditure included in the leakage freeform line and that associated with Project Cartref. Companies are able to earn outperformance payments if they deliver leakage reductions beyond their stretching performance commitment levels.

Cwm Taf supply strategy

We identify the cost adjustment claim for the Cwm Taf water supply strategy programme as appropriate for delivery via direct procurement for customers and we allow funding on this basis. We allow the company funding to set up and administer direct procurement for customers rather than the funding to construct the whole solution itself, consistent with our PR19 methodology (see section 3.8 below). This will provide long term certainty to fund scheme over two price review periods (2020-30) and open up scope for innovation to provide better service for customers and the environment. We make a negative adjustment to the base allowance to account for the maintenance savings that will result from consolidation of the water treatment plant assets.

National Environment Programme (NEP)

We have allowed the entire scope of the wastewater programme of the Water NEP. Our assessment of cost efficiency compares the requested investment to the sum of our assessments in each area. Based on our assessment we apply a 5% challenge to Dŵr Cymru's requested costs. Looking at a programme level improves robustness of costing by helping ensure that the cost challenge is based on efficiency rather than a result of cost allocations between activities. Dŵr Cymru appears efficient in delivering schemes across a number of areas, particularly event duration monitoring at intermittent discharges and storage at sewage treatment works. The company appears less efficient at delivering phosphorus removal schemes.

Resilience

For resilience, Dŵr Cymru's draft determination allowance is materially lower than the investment the company requests in this area. We consider that the majority of Dŵr Cymru's proposed investments are for business as usual activities funded by our base allowances, such as capital maintenance (eg service reservoir replacement) or investment to deal with ongoing issues on the network or at treatment sites. We do not make enhancement allowances for these investments in order to protect customers from paying twice for maintaining current levels of service resilience. We also do not make additional enhancement allowances for investments to reduce flood risk for properties, as these are now modelled within wholesale base plus costs and the company receives an implicit allowance for this.

For other disallowed activities in resilience there may be a case for additional allowances, but Dŵr Cymru provides insufficient evidence that the proposed investments meet our criteria for resilience enhancements (explained in the 'Securing cost efficiency technical appendix'). Investments in enhanced resilience must address low probability high consequence risks. However, we consider that the company does not provide sufficient evidence of the specific risks mitigated or how these are beyond management control and so why additional funding is required to control the risk. We invite Dŵr Cymru to consider our assessment and present further evidence in response to draft determinations.

Company defined enhancements

Dŵr Cymru proposes a number of enhancement investments it considers are outside the description of any of the standard enhancement lines. The proposed freeform enhancement expenditure for improving supply interruptions performance is disallowed. Supply interruptions is a common performance commitment. We expect companies to achieve forecast upper quartile performance within our base allowance and outperformance of this is funded through our outcome delivery incentives framework.

Dŵr Cymru proposes significant expenditure to improve acceptability of water to customers and network water quality. We acknowledge that the company's performance needs to improve in this area but consider this to be partially covered by our base allowance. We make a partial allowance for this programme, apply a programme level efficiency challenge and intervene to set a more stretching customer acceptability performance commitment target to ensure delivery of an improved service to customers.

We assess the freeform enhancement expenditure that will help to reduce the discharges to the Loughor estuary that have been found by the European Court of Justice in May 2017 to be in breach of the Urban Wastewater Treatment Directive. We make an allowance for only the proportion of the company's proposed 2019-20 expenditure that satisfies our policy requirement on transition programme expenditure. The expenditure prior to April 2019 is part of 2015-20 activities and recovered, consistent with cost sharing rates for PR14.

Our document 'Dŵr Cymru - Cost efficiency draft determination appendix' sets out in more detail the cost allowances by investment area for each price control, and we give full details in our published models.

Table 3.4: Enhancement totex expenditure, 2020-25 (£ million, 2017-18 CPIH deflated prices)

Service	Company requested totex	Scope and efficiency adjustment	Our allowance
Water Resources	58.9	74.0	132.9
Water Network plus	516.5	-404.1	112.4
Wastewater Network plus	366.9	-142.4	224.5
Bioresources	7.2	0.1	7.3
Total	949.5	-472.3	477.1

3.4 Cost sharing

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 calculate 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 propose to calculate the company's view of costs based on a 50% weight on the company's final cost proposals in its 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 3.5: Totex cost sharing for cost performance for 2020-25, %

	Water resources	Network plus - water	Network plus - wastewater
Cost sharing rate – outperformance	35.0%	35.0%	36.2%
Cost sharing rate – underperformance	65.0%	65.0%	63.8%

Table 3.6 sets out the costs that are subject to cost sharing. We apply cost sharing to net totex. Net totex excludes grants and contributions, costs of operating leases, strategic regional water resources development costs, third party costs and pension deficit recovery cost.

We adjust allowed costs 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 have followed the approach set out in IN 18/09 Guidance for reporting operating leases in PR19 business plans. Dŵr Cymru did not propose any adjustment.

Table 3.6: Totex subject to cost sharing rates – 2020-25, £ million[1]

	Water resources	Network plus – water	Network plus – wastewater	Company view
Gross totex (excluding third party costs)	288.2	1,051.9	1,228.8	3,120.3
Grants and contributions	0.0	-66.7	-66.3	-150.4
Operating leases adjustment	0.0	0.0	0.0	0.0
Net totex (subject to cost sharing)	**288.2**	**985.2**	**1,162.5**	**2,969.9**
Strategic regional water resource solutions[2]	0.0	0.0	0.0	0.0
Third party costs	45.7	9.6	1.0	56.2
Ex-ante cost sharing adjustment	0.0	0.0	0.0	0.0
Net totex (for financial model)	**333.9**	**994.8**	**1,163.4**	**3,026.1**

[1] Table 3.6 does not include pension deficit repair expenditure, as this is not included in cost sharing.
[2] The standard totex cost sharing does not apply to strategic regional water resource solution expenditure, see 'Strategic regional water resources solution appendix' for more details.

3.5 Transition expenditure

Table 3.7 sets out expenditure allowed under the transition programme. The transition programme allows companies to bring forward planned investment from 2020-25 to 2019-20, where it is efficient to do so. Although the expenditure would be incurred in 2019-20, for the purpose of cost performance incentives it is considered as expenditure incurred in the following regulatory period (2020-25).

We allow costs when reasonably justified in order to make efficient use of resources to minimise whole life costs, where it is efficient or in customers' interests to bring forward an investment, or to enable companies to meet early statutory deadlines.

Table 3.7: Summary of wholesale water and wastewater requested and allowed transitional capex expenditure 2019-20, (£ million, 2017-18 CPIH deflated prices)

	Company requested expenditure	Our allowed expenditure	Rationale
Wholesale water	0.0	0.0	-
Wholesale wastewater	72.4	20.9	We allow transition expenditure for the L2 Loughor driver consistent with our policy on this type of expenditure and consistent with the final allowance in the freeform model for this investment.

3.6 Residential retail

We determine the residential retail control from the expenditure set out in Table 3.8, using an econometric modelling approach to set our allowance. The residential retail draft determination 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	41.4	41.4	41.4	41.4	41.4	207.0
Company view	54.1	54.2	54.2	52.9	52.8	268.1

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.

3.7 Business retail

We determine the business retail control from the information provided by tariff bands.

In response to our initial assessment of plans documentation, Dŵr Cymru has reviewed and revised the allocation of applicable costs items between residential and non-residential customers. The changes were justified with supporting evidence and are in line with regulatory guidelines. Furthermore, Dŵr Cymru proposed costs per customer observe a decline from their PR14 reported values.

Therefore, we consider the company's requested costs as appropriate, and we have allowed these costs in full. These costs and the related retail margins are set out in section 4.

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

We were unconvinced by Dŵr Cymru's conclusion that the Cwm Taf water treatment works (also referred to as the Merthyr water treatment works) scheme would offer greater value for customers if delivered through a traditional in-house procurement. Dŵr Cymru accepted that the scheme was technically suitable to be delivered through a direct procurement for customers process and clearly identified the potential direct benefit for customers from delivering the scheme using direct procurement for customers, including the associated transfer of risk to an external provider. In addition, we are unconvinced that the potential direct benefits for customers associated with delivery using a direct procurement for customers process (which would be secured when a contract was signed) would be outweighed by the possible incremental long-term indirect benefits that Dŵr Cymru suggests a traditional in-house procurement would deliver through customer dividends as this will mean that customers also bear some of the risks associated with the scheme and so any such benefits would vary and could become negative in some scenarios.

We expect Dŵr Cymru to develop the Cwm Taf Water Treatment Works through a direct procurement for customers process, including a review of detailed costs and commitments and market-testing prior to procurement, to ensure that customers receive the best value. We have allowed efficient costs to progress the Cwm Taf Water Treatment Works scheme under a direct procurement for customers process.

Under direct procurement for customers the need to create regulatory mechanisms to manage uncertainty as a result of change is recognised. If a change in external factors dictates that a scheme no longer demonstrates value for money through direct procurement for customers, a scheme may pass from direct procurement for customers back to a traditional in-house procurement process.

Where we expect companies to develop projects through a direct procurement for customers process at the final determination stage, we propose to include an uncertainty mechanism in final determinations which, unless a scheme is deferred to a future price control, facilitates the transfer of a scheme back into the traditional in-house model to ensure timely delivery.

Our preferred uncertainty mechanism in those circumstances would be a Notified Item detailed in a company's final determination and which could, subject to relevant thresholds, trigger an interim determination.

The uncertainty mechanism would only apply in respect of a scheme where there was an agreed need and the scheme had been approved by Ofwat.

We discuss both the uncertainty mechanism and licence changes which we consider necessary to facilitate the delivery of direct procurement for customers schemes, further in 'Delivering customer value in large projects'.

4 Calculation of allowed revenue

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

4.1 Allowed revenue

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

Wholesale controls

For the wholesale controls (that is water resources, 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 cost of 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 will include income from connection charges and infrastructure charges. This does not necessarily agree to the total grants and contributions deducted from totex, as only the income relating to the price control is included here.

- 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. 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.
- 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 cost of 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	Company view - total
Pay as you go	172.6	456.9	585.0	101.0	1,315.5	1,473.1
RCV run-off	45.3	365.2	576.0	70.9	1,057.5	1,086.2
Return on capital	35.2	232.1	479.8	29.2	776.3	868.1
Revenue adjustments for PR14 reconciliations	0.0	-1.3	8.2	0.0	6.9	3.6
Tax	0.0	0.0	0.0	0.0	0.0	0.0
Grants and contributions (price control)	0.0	66.5	60.7	0.0	127.2	108.6
Deduct non-price control income	-81.6	-4.8	-3.2	-0.8	-90.4	-90.4
Revenue re-profiling	0.0	0.2	0.3	0.0	0.6	-0.3
Final allowed revenues	171.5	1,114.8	1,706.9	200.4	3,193.6	3,448.8

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 Table 1.4.

Residential retail control

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

- Retail cost to serve – this reflects our efficient view of costs per customer for the retail business.

- Net margin on wholesale and retail activities – this is calculated based on the wholesale revenue applicable to residential retail customers, plus the retail cost to serve, with a net margin applied. Net margins are calculated excluding any adjustments to residential retail (see Table 4.2 below) – the full calculation is set out in our financial models.
- 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 draft determination.

Allowed revenue for the residential retail control is set on a nominal basis and therefore we present the make-up of the allowed revenue in nominal prices in Table 4.2.

Table 4.2: Retail margins (nominal price base)

	2020-25	Company view 2020-25
Total wholesale revenue - nominal (£ million)	3,341.5	3,687.8
Proportion of wholesale revenue allocated to residential (%)	76.60%	76.44%
Residential retail costs (£ million)	207.0	268.1
Total retail costs (£ million)	2,766.7	3,087.1
Residential retail net margin (%)	1.00%	1.00%
Residential retail net margin (£ million)	28.0	36.4
Residential retail adjustments (£ million)	2.6	5.1
Residential retail revenue (£ million)	237.5	308.4

Note: retail revenue is the sum of the net margin, retail costs, and adjustments. Company view may not sum as this may include other adjustments.
Note: The proportion of wholesale revenue allocated to residential customers is provided by the company in the business plan tables. This is provided for each wholesale control separately, so although we have used the same proportions for each control as the company, our interventions on costs in each control mean that the combined proportion is slightly different.

We set out the calculation of residential retail revenue on an annual basis in the 'Dŵr Cymru – Allowed revenue appendix' in Table 1.5.

Business retail control

The business retail control allows an average revenue for each customer type. For Welsh companies, 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 average retail cost per customer multiplied 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.

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	30.49	30.17	30.13	30.00	30.03
	Net margin (%)	1.00%	1.00%	1.00%	1.00%	1.00%
Wastewater services	Average Retail Costs	39.82	39.64	39.78	39.83	40.09
	Net margin (%)	1.00%	1.00%	1.00%	1.00%	1.00%

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 now propose not to retain the supplementary cap, because retaining it would maintain a regulatory burden, yet:

- For medium and 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 relax regulatory protections for medium and 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.

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

PAYG

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 - 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 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	Company view - Total
Totex allowance (£ million)	333.9	994.8	1,163.4	167.4	2,659.6	3,185.6
Draft determination PAYG rate (%)	51.7%	45.9%	50.3%	60.3%	49.5%	
Pay as you go totex (£ million)	172.6	456.9	585.0	101.0	1,315.5	1,473.1
Pension deficit recovery cost (£ million)	-	-	-	-	-	-
Total pay as you go (£ million)	172.6	456.9	585.0	101.0	1,315.5	1,473.1
Company plan PAYG rate (%)	51.9%	43.2%	46.6%	60.2%		46.2%

Dŵr Cymru's approach to PAYG rates is to recover in each year an amount equivalent to operating costs. Dŵr Cymru sets out in its revised business plan that it is not proposing to bring forward revenue from future periods. However, the company has not amended PAYG rates to reflect the changes it has made to costs resulting in £52 million of PAYG totex revenue being pulled forward. We accept the approach stated by the company and have applied a technical intervention to amend the PAYG rates proposed in the business plan to reflect the company's stated approach and our view of the mix of operating and capital expenditure following our totex interventions. Our technical intervention removes this additional £52 million of PAYG totex.

Our view of efficient totex is lower than the company's plan and contains a lower proportion of capital expenditure than the company proposed. Therefore, using Dŵr Cymru's approach to recovering costs, a higher proportion of totex is recovered in the period through PAYG and less is added to the RCV. We are intervening to increase PAYG rates by 3.4% for the water and wastewater network plus controls in relation to a financeability constraint on the basis of the notional structure, increasing PAYG totex allowed revenue by £62 million. We discuss our financeability assessment in section 5.4: Financeability.

We set out how we apply the interventions in 'Aligning risk and return technical appendix' and we have published our calculation of the PAYG rates for each company alongside our draft determinations.

Opening RCV adjustments

As part of the 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 have followed the approach set out in IN 18/09 Guidance for reporting operating leases in PR19 business plans. Dŵr Cymru did not propose any adjustment.

Table 4.6: Opening RCV, 1 April 2020 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources
RCV – 31 March 2020	1,789.7		3,849.5	
% of RCV allocated by control	10.57%	89.43%	94.29%	5.71%
RCV – 31 March 2020	189.1	1,600.6	3,629.9	219.6
Midnight adjustments to RCV	4.6	38.8	-28.8	
Midnight adjustments relating to operating leases	-	-	-	-
Opening RCV – 1 April 2020 (before fast-track reward)	193.7	1,639.3	3,601.1	219.6

Return on capital

Companies are allowed a return on the RCV, equal to the Weighted Average Cost of Capital (WACC).

Our PR19 methodology set out an 'early view' cost of capital for all wholesale controls. Dŵr Cymru's business plan incorporates the early view cost of capital for the wholesale price controls of 3.30% - CPIH deflated (2.30% - RPI deflated). We have updated our view of the cost of capital for the wholesale price controls to 3.08% – CPIH deflated (2.08% – RPI deflated). We set out the basis for the updated view in the 'Cost of capital technical appendix'. We have used our updated cost of capital in this draft determination.

The PR19 methodology confirmed we will transition to CPIH as the primary inflation rate 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 4.7 and Table 4.8 set out the opening and closing balance for each component of RCV.

The PR19 methodology confirmed our protection of the value of the RCV as at 31 March 2020 across each of the wholesale price controls. Totex that is added to the RCV from 1 April 2020 is stated as 'post 2020 investment'.

In determining the 'return on capital' revenue building block, we apply the relevant deflated cost of capital to the average RCV for the year for each component (RPI inflated, CPIH inflated and post 2020 investment). This results in a return on capital for each wholesale control over the period 2015-20 as set out in Table 4.9.

Table 4.7: Opening RCV by wholesale control for each component of RCV, 1 April 2020 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	96.9	819.7	1,800.5	109.8	2,826.9
CPIH inflated RCV	96.9	819.7	1,800.5	109.8	2,826.9
Other adjustments	-	-	-	-	-
Total RCV	193.7	1,639.3	3,601.1	219.6	5,653.7

Table 4.8: 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	85.1	697.3	1,612.5	83.5	2,478.4
CPIH inflated RCV	81.3	665.6	1,539.0	79.7	2,365.5
Post 2020 investment	147.6	484.8	532.1	56.5	1,221.0
Other adjustments	-	-	-	-	-
Total RCV	314.0	1,847.6	3,683.6	219.6	6,064.9

Table 4.9: 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	9.5	78.9	177.7	10.0	276.0
CPIH inflated RCV	13.7	114.0	256.6	14.5	398.7
Post 2020 investment	12.0	39.3	45.5	4.7	101.5
Other adjustments	-	-	-	-	-
Total return on capital	35.2	232.1	479.8	29.2	776.3
Company view – total return on capital	37.3	268.9	531.5	30.4	868.1

Note: Total 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 return on capital for each year of the price control for each wholesale control are shown in the 'Dŵr Cymru - Allowed revenue appendix' in tables 3.1 to 3.16 and 4.1 to 4.4.

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 4.10 sets out the resultant RCV run-off revenue for each component of RCV for each wholesale control.

Table 4.10: RCV run-off on the RCV (5 year) (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
CPIH inflated RCV	15.6	154.1	261.5	30.2	461.4
RPI inflated RCV	16.0	158.0	268.2	30.9	473.1
Post 2020 investment	13.7	53.1	46.3	9.9	123.0
Total RCV run-off	45.3	365.2	576.0	70.9	1,057.5
Company view – total RCV run-off	44.6	387.1	586.0	68.5	1,086.2

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).

Dŵr Cymru's RCV run-off rates are based on a range of estimates of average asset lives for assets within each wholesale control. The range of estimates is wide and the company provides little evidence to support the final rates chosen. However the company RCV run-off rates are lower than the sector average and we accept its RCV run-off rates for the draft determination. The interventions to allowed totex changes the post-2020 investment added to RCV and therefore the total RCV run-off shown in Table 4.10. Table 4.11 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 determination.

Table 4.11: RCV run-off rates for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources
Original company plan (%)	3.45%	4.08%	3.09%	6.22%
Draft determination (%)	3.45%	4.08%	3.09%	6.22%

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 mechanism), water trading and land sales. It is important to reconcile the financial impacts of these mechanisms in PR19 to ensure that customers only pay for the service the company delivers.

We are also applying adjustments to reflect performance in the final year of the 2010-2015 period, which could not be fully taken into account in PR14. 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 actions and interventions' provides a detailed explanation of all policy interventions we are making in the models. Table 4.12 summarises our interventions. Table 4.13 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 4.6.

We are publishing the results of the reconciliation of the service incentive mechanism for all companies alongside the draft determinations for slow track and significant scrutiny companies in the 'Accounting for past delivery technical appendix'.

For outcome delivery incentives, the information we have used 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 planned 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 will designate 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 would not expect a significant impact on bills. If, contrary to expectations the bill impact were to be more significant, we would 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 have used forecast information for 2018-19 and 2019-20 to reconcile these outcome delivery incentives. For the avoidance of doubt, no application is required in 2019 for in-period determinations.

Table 4.12: 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 including a figure of 3.74% for the 'Materiality threshold for financing adjustment - Discount Rate' in line with the 'PR14 reconciliation rulebook.' Overall, our minor interventions do not result in any changes to the total residential retail revenue payment at the end of the 2015-20 period which remains at £4.374 million.
Wholesale revenue forecasting incentive mechanism	No interventions required.
Totex	We are intervening to add the Loughor Estuary costs incurred between 2016-17 and 2018-19 back into PR14 actual totex as set out in the company's data table commentary. We are doing this because we do not accept the company's view that all of these costs should be treated as transition expenditure and be reported in 2019-20. Overall, our intervention reduces the wastewater totex menu revenue adjustment from - £8.273 million to - £5.162 million and increases the wastewater totex menu RCV adjustment from - £23.180 million to £1.395 million.
Land sales	No interventions required.
Service incentive mechanism	We are intervening to set Dŵr Cymru's service incentive mechanism adjustment to - 0.94% of household retail revenue to reflect its performance from 2015-16 to 2018-19. This equates to - £2.133 million in total revenue over the period. This decreases revenue relative to the company's estimate of the mechanism's impact. The service inventive mechanism for non-household customers will be reconciled for the final determination. See 'Accounting for past delivery technical appendix' for further details.
PR09 blind year adjustments	No interventions required.

Table 4.13: Reconciliation of PR14 incentives, 2020-25 (£ million, 2017-18 prices)

Incentive	RCV adjustments		Revenue adjustments	
	Company view	Ofwat view	Company view	Ofwat view
Outcome delivery incentives	0.0	0.0	1.1	1.1
Residential retail revenue	N/A	N/A	4.4	4.4
Wholesale revenue forecasting incentive mechanism	N/A	N/A	-0.6	-0.6
Totex	18.0	42.6	15.2	18.3
Land sales	-0.5	-0.4	N/A	N/A
Service incentive mechanism	N/A	N/A	0.0	-2.1
PR09 blind year adjustments	-27.6	-27.6	-12.3	-12.3
Water trading	N/A	N/A	0.0	0.0
Total	-10.1	14.5	7.7	8.7
Total post profiling	N/A	N/A	9.5	9.3

Note: 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.

These reconciliations are based on data from the 1 April company submissions. We will update these reconciliations to reflect the July data submissions for the final determinations.

4.4 Other allowed revenue

Other components of allowed revenue are:

- 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 will include income from connection charges and infrastructure charges;

- 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 4.14: Calculation of other allowed revenue (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total	Company view - total
Tax	0.0	0.0	0.0	0.0	0.0	0.0
Grants and contributions (price control)	0.0	66.5	60.7	0.0	127.2	108.6
Deduct non-price control income	-81.6	-4.8	-3.2	-0.8	-90.4	-90.4

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 UK corporation tax rates and associated reliefs and allowances. Due to the level of deductions and allowances available to the company, both the company view and our view result in a zero tax allowance.

Dŵr Cymru provided information in data tables relevant to the calculation of the expected tax charge. The information has been updated as part of the resubmission of various data tables to take account of the recent changes to capital allowances. We have accepted the information provided by the company and applied this to the draft determination.

Our interventions in other areas may impact on forecast levels of capital expenditure and in the area of new connections our assumed recovery rates may differ from what Dŵr Cymru assumes in the business plan. The resulting impact on allowances used for the calculation of taxation has not been reflected. Where these changes result in significantly different inputs for capital allowances or tax deductions, we expect Dŵr Cymru to identify this as part of its representations on the draft determination.

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total	Company view - total
Tax	0.0	0.0	0.0	0.0	0.0	0.0

Grants and contributions (price control)

Companies receive grants and contributions from developers towards the costs of 'new developments', expenditure to reinforce the network, and 'new connections', expenditure to connect a property, for example the meter and connection pipe. We calculate the grants and contributions receivable by applying a recovery rate to our view of new developments and new connections expenditure. This ensures that developers pay a fair share towards costs to connect new properties. We use this calculation of grants and contributions receivable from developers to ensure that the amounts billed to water and wastewater customers correctly reflect only that share of any new development spend which should be borne by them.

The recovery rates are calculated as follows;

- For water new developments we use the rate implied by the Dŵr Cymru business plan which is 65.5%; and
- for water new connections and wastewater new developments we use a rate of 100% based on our understanding of historical practice in the industry and is broadly supported by company business plans.

Table 4.16: Calculation of other allowed revenue (£ million) – Grants and contributions

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total	Company view - total
Grants and contributions	0.0	66.5	60.7	0.0	127.2	108.6

Table 4.16 shows our assumed amounts of grants and contributions. For water our view of new developments and new connections expenditure is lower than Dŵr Cymru's forecast. The reasons behind the differences in our view of 'base expenditure' are set out above in the 'cost allowances' section. However the

company view of the connection charge recovery rate is lower than our assumed 100%. This gives a higher view of grants and contributions than the company forecast. Our forecast also includes the contribution for Natural Resources Wales (NRW) towards reservoir safety. Wastewater grants and contributions are higher than the company forecast as our view of new developments expenditure is higher than Dŵr Cymru's forecast.

For diversions activities, where companies move their assets to make way for new infrastructure, we use the company view of the associated income and assume that this represents 100% of the costs. In modelling our draft determinations we assume that all diversions income is inside the price control. For the final determinations we consider that we should make a distinction between diversions that are inside or outside the scope of section 185 of the Water Industry Act 1991. Works that are outside the scope of section 185 are, for example, works under the New Roads and Street Works Act 1991 or those associated with High Speed 2. We are yet to have sufficient data to be able to distinguish section 185 diversions from non-section 185 diversions. For the final determination we will assume diversions expenditure is inside the price control unless it relates to non-section 185 diversions. Where companies forecast diversions works outside of section 185 then they should provide details of the income relating to this, on an annual basis, in the data request that accompanies the draft determination. This should be returned with the representations to the draft determination.

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. 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 draft determination.

Table 4.17: Calculation of other allowed revenue (£ million) – Non-price control income

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

Note: negative numbers represent a deduction from the allowed revenue.

Uncertainty mechanisms

The PR19 methodology makes limited provision for companies to propose bespoke uncertainty mechanisms. In response to our initial assessment of plans, Dŵr Cymru withdrew a proposed uncertainty mechanism in respect of business rates. It has not proposed any other uncertainty mechanisms in its revised business plan.

As noted in section 3.8, we propose to set out an uncertainty mechanism in our final determination for Dŵr Cymru in relation to costs associated with the possibility, in some circumstances, of bringing direct procurement for customers schemes back in-house. Further information on this is provided in the 'Delivering customer value in large projects' technical appendix.

5 Assurance, returns and financeability

This section sets out the accountability the company's Board has demonstrated for delivering its plan, the accuracy and consistency of the information within the plan and company proposals for aligning the interests of company management and investors with its customers. We summarise Dŵr Cymru's response to our actions on securing confidence and assurance, including Dŵr Cymru's proposals in response to our 'Putting the sector in balance: position statement'. We comment on the possible range of returns for the notional financial structure. We comment also on the financeability of the draft determination and any adjustments that we have made to the bill profile.

5.1 Assurance

The PR19 methodology set out that stakeholders should have confidence in the information presented in business plans. We set expectations that:

- the data and information presented in the plan must be subject to good assurance processes to ensure it is consistent and accurate; and
- a company's full Board should own, be accountable for and provide assurance of the business plan.

In the initial assessment of plans, we identified two actions in relation to Dŵr Cymru's data tables and financial model. Dŵr Cymru has satisfactorily responded to both of these actions as set out in its response to our actions on securing confidence and assurance.

We had no concerns with Dŵr Cymru's forward-looking Board assurance statements and therefore set no actions in the initial assessment of plans.

5.2 Putting the sector in balance

In July 2018 we published our 'Putting the sector in balance: position statement'. The position statement set 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 their actual financial structures and performance related executive pay policies show appropriate alignment between returns to owners and executives and what is delivered for customers[2];
- companies with high levels of gearing will share financing gains from high gearing with customers; and
- companies provide assurance and supporting evidence to demonstrate their long term financial resilience and management of financial risks for the actual financial structure.

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

Our assessment of Dŵr Cymru's proposals is in Table 5.1.

Table 5.1: Our assessment of Dŵr Cymru's proposals to balance the interests of customers

Issue	Our assessment
Gearing outperformance benefit sharing	Dŵr Cymru is geared at 56% and projects gearing below 70% over 2020-25. It expects gearing to remain around 60%. The company has included our default mechanism in its business plan.
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.
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. But our expectations around transparency and demonstrating a link to delivery for customers equally apply to Dŵr Cymru. Dŵr Cymru has committed to the expectations on dividend policy as set out in our 'Putting the sector in balance: position statement'. It has indicated a base dividend yield of 2.6% for 2020-25, based on its notional structure. It has confirmed 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 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 committed to publishing a statement on its dividend policy annually in its statutory Report and Accounts. We expect the company to demonstrate that its 'customer' dividend policy for 2020-25 takes account of obligations and commitments to customers

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

Issue	Our assessment
	and other stakeholders, including performance in delivery against the final determination. We expect the company to be transparent in this area, to demonstrate that in paying or declaring dividends it has taken account of the factors we set out in our position statement and we expect the company to be clear about publishing information on its dividend policy in its Annual Performance Report. We expect the company to respond to these issues in its response to our draft determination.
Performance related executive pay policy for 2020-25	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). • Incentives which are calibrated against the prior year's performance and against the performance of other companies as assessed by Ofwat and other regulators. The Remuneration Committee operating 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. Commitment 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 understand that there remain some details to be finalised, for example details of the underlying metrics and associated weightings in both the annual and long term bonus schemes. The policy demonstrates the company's commitment to move in the direction of the expectations set out in 'Putting the sector in balance: position statement'. We expect Dŵr Cymru to provide an update on this in response to its draft determination. We expect Dŵr Cymru to demonstrate that its policy on performance related executive pay demonstrates a substantial link to stretching performance delivery for customers through 2020-25. We expect the company and its remuneration committee to ensure executives have stretching targets linked to performance delivery for customers and that any further updates to the policy for 2020-25 are transparently reported to stakeholders in its annual performance report.
Financial resilience of the company's actual financial structure	Dŵr Cymru was not required to take any actions in respect of its financial resilience assessment following our initial assessment of plans. It expects its gearing to remain at around 60% during 2020-25 and to maintain a strong investment grade credit rating. In its assurance statement that accompanied the revised business plan, the company's Board says that the plan remains fundamentally responsive to customers' views and is designed to deliver long-term resilience and improved outcomes for customers and the environment. It also says that none of the changes proposed by the company in its revised plan impact on the financeability of the business plan.

Issue	Our assessment
	The assessment of financial resilience does not take account of our interventions in Dŵr Cymru's business plan, which include, for example, our updated view of the cost of capital, our assessment of efficient costs and our assessment of outcome delivery incentives. Each company is responsible for ensuring its capital and financial structure allows it to maintain financial resilience over the short and the long term and so we expect Dŵr Cymru to take account of these issues in its commentary on its long term financial resilience in response to our draft determination, taking account of the reasonably foreseeable range of plausible outcomes of the final determination including evidence of further downward pressure on the cost of capital in very recent market data as we discuss in the 'Cost of capital technical appendix'. In its future reporting, we expect Dŵr Cymru to apply suitably robust stress tests in its long term viability statements in 2020-25.

5.3 Return on regulatory equity

The PR19 methodology sets out that we expect companies to demonstrate a clear understanding of risk to the delivery of their business plans and to explain and demonstrate how they manage and mitigate risk. We expect 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 P10/P90 confidence limit values[3].

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 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[4]. The proportion of RCV (and notional regulatory equity) that is linked to RPI or CPIH will vary 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.

Table 5.2 sets out the annual average RoRE ranges in Dŵr Cymru's updated PR19 business plan submission, and the values in our draft determination. The base RoRE in our draft determination reflects our updated cost of equity. The base RoRE in our draft determination reflects our updated cost of equity. The RoRE ranges reflect our

[3] 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.

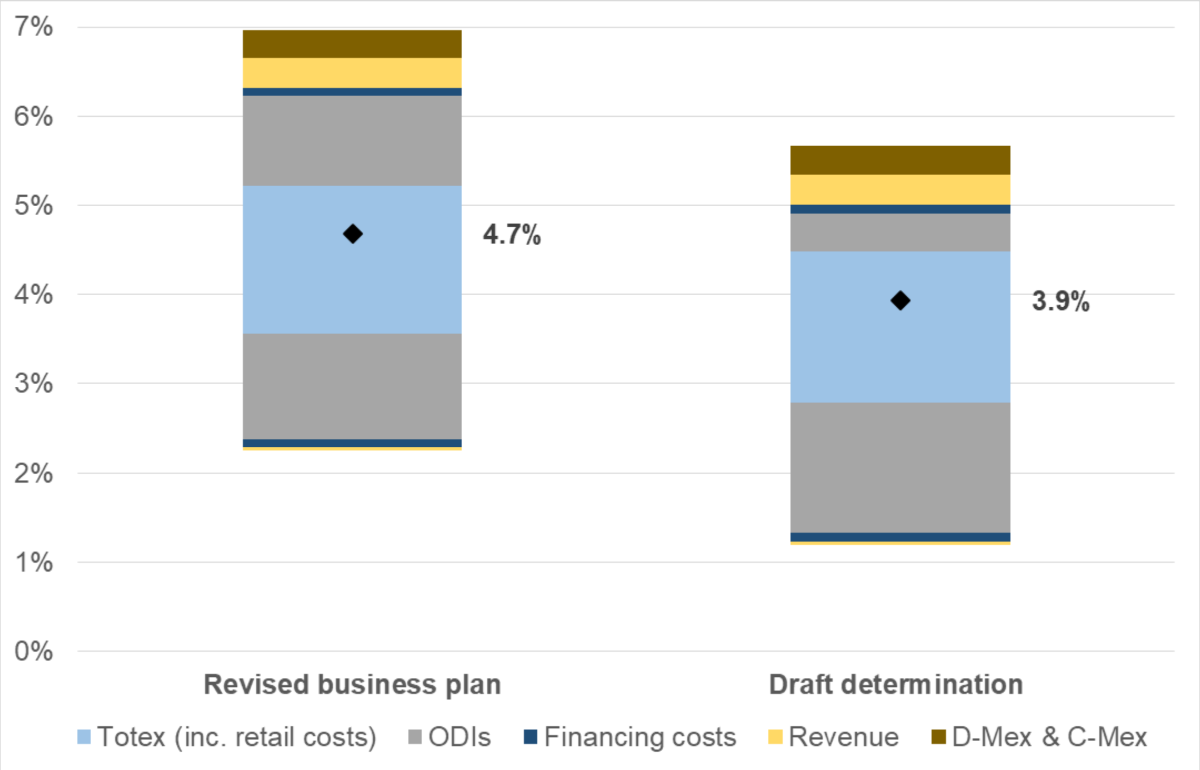
[4] RPI is the retail price index; CPIH is the consumer price index including owner-occupiers' housing costs; both are published by the Office for National Statistics.

interventions outlined below, and other interventions we are making as part of our draft determination.

Table 5.2: Dŵr Cymru RoRE ranges

	Updated business plan (Apr 19)		Draft determination ranges reflecting our interventions	
Base RoRE	4.7%		3.9%	
Risk ranges	**Lower bound**	**Upper bound**	**Lower bound**	**Upper bound**
Totex	-0.87%	0.48%	-0.89%	0.49%
Outcome delivery incentives	-1.18%	1.01%	-1.50%	0.42%
Financing costs	-0.09%	0.09%	-0.09%	0.09%
Retail costs	-0.25%	0.06%	-0.25%	0.06%
D-Mex & C-Mex	0.00%	0.31%	0.00%	0.31%
Revenues (includes Retail)	-0.03%	0.34%	-0.04%	0.34%
Total	**-2.42%**	**2.29%**	**-2.77%**	**1.71%**

Figure 5.1: RoRE ranges



The draft determination risk ranges shown in Table 5.2 and Figure 5.1 reflect one intervention we are making with respect to values in Dŵr Cymru's updated business plan:

- We are intervening to align the RoRE risk ranges for outcome delivery incentives shown in Table 5.2, Figure 5.1, and in the PR19 financial model with the RoRE risk range values for outcome delivery incentives set out in section 2 (outcomes). The revised values reflect our interventions on outcome delivery incentives under the outcomes framework which seek to take account of covariance of performance on individual outcome delivery incentives in the presentation of the overall outcome delivery incentive range.

Dŵr Cymru presents a positive skew on its revenue range because it has identified the potential for additional sales under existing bulk supply agreements as well as the potential for new water trading for the last three years 2020-25.

We note that Dŵr Cymru considers it has no downside financial risk in respect of C-Mex and D-Mex. We have included an action for the company to explain this view, referring, where appropriate, to its historical performance under the service incentive mechanism and in the C-Mex pilot study.

In all other areas we have retained Dŵr Cymru's proposed RoRE range, which produces a negative skew overall, driven primarily by costs and outcome delivery incentives. Our view is that an efficient company should be able to achieve the base equity return on the notional structure. We expect Dŵr Cymru to consider necessary revisions to its overall RoRE range in response to the draft determination.

5.4 Financeability

We interpret our financing duty as a duty to secure that an efficient company can finance the proper carrying out of its functions, in particular by securing reasonable returns on its capital. In coming to our determinations we assess whether allowed revenues, relative to efficient costs, are sufficient for a company to finance its investment on reasonable terms and to deliver activities in the long term, while protecting the interests of current and future customers.

Our PR19 methodology requires companies to provide Board assurance that the business plan is financeable on both the notional and their actual capital structures. Our PR19 methodology 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. Dŵr Cymru's Board has provided assurance that, based on the assumptions in its business plan, both 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 an investment grade credit rating ensuring that resilience and customers' interests are maintained in the short and long term.

We consider that companies and their shareholders should bear the risk of their capital structure and financing choices, not customers. Therefore, we have focused on whether our draft determination is financeable based on the notional capital structure that underpins our cost of capital using our own financial model.

Our financeability assessment uses a suite of financial metrics based on those used in the financial markets and by the credit rating agencies. Our initial assessment of financeability, prior to intervening, is that financial ratios in the round do not provide sufficient headroom to a minimum investment grade credit rating. We are intervening to increase PAYG rates by 3.4% to the network plus control, advancing PAYG revenue from future customers by £62 million, £10 million more than the £52 million PAYG revenue that was advanced in the plan. We consider the use of financial levers is an appropriate method to address the notional financeability constraint in this instance. We discuss our approach to addressing financeability constraints in the 'Aligning risk and return technical appendix'. Following our intervention, based on the financial ratios from the financial model alongside evidence in the business plan, we consider that Dŵr Cymru's draft determination is financeable for the notional structure.

The results for key financial ratios after our intervention to increase PAYG rates are set out below. Key financial ratios for the notional company structure in our draft determination are broadly in line compared to the ratios set out by Dŵr Cymru in its business plan. We note that the funds from operations to net debt ratio remains weaker than other financial ratios but is broadly consistent with historic PR14 levels for the company as noted by Dŵr Cymru.

Table 5.3: Financial ratios – Notional structure before reconciliation adjustments (5 year average)

	Business plan	Draft determinations
Gearing	60.39%	60.49%
Interest cover	3.33	3.27
Adjusted cash interest cover ratio (ACICR)	1.57	1.50
Funds from operations (FFO)/Net debt	7.76%	7.56%
Dividend cover	0.89	0.54
Retained cash flow (RCF)/Net debt	6.14%	5.50%
Return on capital employed (RoCE)	3.75%	3.57%
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.		

As set out in section 4 we have amended PAYG rates to reflect our view of efficient totex and the mix of operating and capital expenditure and are intervening to increase PAYG rates by 3.4% to the network plus controls to address a notional financeability constraint.

We are not intervening to amend RCV run-off rates. The reduction in expenditure means that the RCV will now increase by a smaller amount than set out in the original business plan as shown in Table 5.4.

Table 5.4: PAYG rates, RCV run-off and RCV growth

	PAYG	RCV run-off	RCV growth
Company plan	46.2%	3.52%	13.25%
Draft determinations	49.5%	3.52%	7.27%

Dŵr Cymru is responsible for the financeability and long term financial resilience of its actual structure. We comment further on the financial resilience of the company's actual structure in Table 5.1.

We expect companies to provide further Board assurance that they will remain financeable on a notional and actual basis, and that they can maintain the financial resilience of their actual structure, taking account of the reasonably foreseeable range of plausible outcomes of their final determination including evidence of further downward pressure on the cost of capital in very recent market data as we discuss in the 'Cost of capital technical appendix'.

6 Affordability and bill profile

6.1 Bill Profile

Dŵr Cymru's acceptability research, undertaken prior to September 2018 with a representative sample of 1000 customers, outlines that 93% of customers find its nominal and real terms bill for 2020-25 to be acceptable. However, the company's question on acceptability is leading as it contains a reference to the bill reduction being proposed by the company, which could bias responses. The customer challenge group is positive on the company's testing, stating 'the final acceptability research indicates high levels of support'.

Taking account of its acceptability results, its proposed reduction in real terms bills and its testing of nominal bills and real bills, in the round Dŵr Cymru provides sufficient evidence on the acceptability of its 2020-25 bills.

Dŵr Cymru undertakes acceptability testing of its nominal and real terms bill profile over the whole 2020-30 period, establishing that 40% of customers find the 2020 - 30 bill profile acceptable and 23% find it unacceptable. Those who had previously stated that they find their current bill 'very unaffordable' are significantly more likely to say that the proposed profile is unacceptable. The customer challenge group notes that 19% of customers find the profile both unacceptable and unaffordable and states it is 'keen for the company to take this finding into account and demonstrate how they are going to factor this into their future financial planning'.

The average bill profile put forward by Dŵr Cymru provides a bill that falls by 5.1% in the 2020 to 2025 period. Our amended profile increases this to a reduction of 13.9%. The table below sets out the difference in bills between the company's submission and our amended draft determination figures. We adjust the bill profile so that it provides a decrease in 2020-21 followed by flat bills, similar to the company's proposed bill profile.

Table 6.1: Bills in real terms

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Company plan	£439	£417	£417	£417	£417	£417
Bill profile – before re-profiling	£439	£378	£380	£379	£376	£374
Draft determinations	£439	£378	£378	£378	£378	£378

In its business plan, the company sets out its intention to increase bills by around 2% in the 2025 – 30 period. Its 2020 – 30 bill profile is acceptable to 40% of customers and unacceptable to 23%.

Table 6.2: Long term bills

	2020-25	2025-30
Company view of plan	£417	£426

6.2 Help for customers who are struggling to pay

Our draft determinations for Dŵr Cymru will deliver a real terms reduction to the average bill between 2020 and 2025.

In addition, Dŵr Cymru commits to:

- increase the number of customers that receive support through social tariffs and WaterSure from around 136,000 in 2020 to 160,000 by 2025;
- increase the company contribution to its social tariff to £11 by 2025;
- 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);
- increase the number of customers it reaches through its affordability support schemes to 160,000 by 2025;

Companies will be reporting their performance against the Priority Services Register 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 6.3 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 6.3: Allowed revenue by year (£ million, 2017-18 prices)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Water resources	29.7	32.5	35.5	37.6	36.2	171.5
Water network plus	221.9	219.8	221.0	223.3	228.9	1,114.8
Wastewater network plus	335.7	340.7	343.2	342.6	344.7	1,706.9
Bioresources	39.8	39.7	40.0	40.1	40.7	200.4
Residential retail	44.6	43.9	43.2	42.5	41.8	215.9
Total	671.7	676.6	682.9	686.1	692.2	3,409.5

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 6.4 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 6.4: Base Revenue and K factors by charging year (2017-18 prices)

	Base (£ million)	2020-21	2021-22	2022-23	2023-24	2024-25
Water resources	29.7	0.00%	9.67%	9.37%	6.22%	-3.86%
Water network plus	221.9	0.00%	-0.92%	0.56%	1.07%	2.58%
Wastewater network plus	335.7	0.00%	1.58%	0.75%	-0.18%	0.62%

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'. 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 6.5 sets out our view of the share of revenue to remunerate fixed costs.

Table 6.5: Classification of proportion of revenue to remunerate fixed costs and variable costs for bioresources

	Company view	Ofwat view based on company submitted data	Ofwat view based on draft determination
Part 1: Revenue to remunerate fixed costs £ million 2017-18 FYA CPIH deflated prices (2020-25)			
Total return on capital	N/A	30.394	29.212
Total run-off	N/A	68.475	70.935
Revenue to service RCV	**N/A**	**98.869**	**100.147**
Local authority and Cumulo rates for both treatment and disposal	N/A	3.417	3.417
Fixed share of other direct costs of treatment and disposal	N/A	7.988	10.683
Fixed share of other indirect cost of treatment and disposal	N/A	7.774	10.397
Fixed PAYG revenue	**N/A**	**19.178**	**24.496**
Fixed share of revenue to cover tax	N/A	0.000	0.000
Pension deficit repair contributions	N/A	0.000	0.000
Other fixed costs	**N/A**	**0.000**	**0.000**
Revenue to remunerate fixed costs	**160.739**	**118.047**	**124.643**
Part 2: Variable revenue (£/TDS) 2017-18 FYA CPIH deflated prices (2020-25)			
Unadjusted revenue (£ million)	173.584	173.584	200.397
Revenue to remunerate fixed costs	160.739	118.047	124.643
Revenue to remunerate variable costs (£ million)	**12.845**	**55.537**	**75.754**
Forecast volume of sludge (TDS)	375,400	375,400	375,400
Variable revenue (£/TDS)	**34.218**	**147.942**	**201.794**

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 6.6: Bioresources control

	2020-21	2021-22	2022-23	2023-24	2024-25	2020-25
Unadjusted revenue (£ million)	39.183	39.610	40.090	40.517	40.998	200.397
Forecast volume of sludge (TDS)	73,400	74,200	75,100	75,900	76,800	375,400
Variable revenue (£/TDS)	N/A	N/A	N/A	N/A	N/A	201.794

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We regulate the water sector in England and Wales. Our vision is to be a trusted and respected regulator, working at the leading edge, challenging ourselves and others to build trust and confidence in water.

Ofwat
Centre City Tower
7 Hill Street
Birmingham B5 4UA

Phone: 0121 644 7500
Fax: 0121 644 7533
Website: www.ofwat.gov.uk
Email: mailbox@ofwat.gov.uk

July 2019

This document is also available from our website at www.ofwat.gov.uk.

Any enquiries regarding this publication should be sent to us at mailbox@ofwat.gov.uk.

OGL