

Delivering Water 2020: Our final methodology for the 2019 price review

December 2017

About this document

This document sets out our methodology for the 2019 price review (PR19) for the water and wastewater monopoly service providers in England and Wales.

The methodology sets out:

- our expectations and requirements for companies preparing their business plans to meet the needs of their customers from 2020 to 2025 and beyond;
- how these expectations form the basis for how we assess company business plans;
- the approach that we will use if we need to intervene in those plans to ensure that companies deliver the step change required by customers; and
- how our assessment will flow through into companies' price limits, service commitments and the wider incentive framework.

We [consulted on our methodology](#) in July 2017.

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Ofwat's price review: delivering more of what matters

Water is vital for life – not just for people but for the environment and ecosystem on which we depend. This means that customers in England and Wales feel differently about water to other services: they need to trust that water and wastewater companies are serving the public benefit.

At the same time, customers expect great service, at least comparable to the service they get elsewhere. They expect water and wastewater services to be resilient to both short-term shocks and long-term challenges such as population growth and climate change. And they expect those services to be affordable for all, including those struggling to pay.

What is a price review?

A price review is when, together with their customers, water companies create plans for the future that will deliver customers' wants and needs.

- We **set the framework** for these plans so that they innovate to push forward the performance of the whole sector and stretch the current boundaries for delivery and efficiency.
- We **scrutinise and challenge** the plans to make sure that they are efficient, affordable, provide resilience in the round and great customer service; and meet companies' statutory and licence obligations.
- We **set the five-year price, service and incentive package** that the water companies will deliver between 2020 and 2025.

Companies report each year on how they are delivering that package so that we, and others, can hold them to account for their performance.

The only way water companies will achieve all this, is to find new and better ways of delivering those services. Our 2019 price review enables, incentivises and encourages water companies to achieve exactly that, so that customers will get more of what really matters to them.

Great customer service

Great customer service starts with an in-depth understanding of customer preferences and priorities and involves them in the development and delivery of services. In our price review:

- we expect companies to make performance commitments that reflect their customers' priorities and we will challenge individual companies to go further where necessary;
- where companies deliver great service that customers want and set new standards for the sector, they will receive payments reflecting the improvements they achieve and the risk they have taken. Where companies do not deliver their promises, customers will get money back through lower bills;
- we will compare water customers' experience with that of other sectors. The satisfaction of all customers, not only those who have contacted their company, will matter;
- we expect companies to identify and support customers in vulnerable circumstances, including temporary circumstances;
- for the first time, we are setting an explicit incentive to improve customer service to developers; and
- Customer Challenge Groups (CCGs) will provide independent assurance to Ofwat on the quality of a company's engagement with its customers to develop their business plan.

Affordable bills

Water and wastewater services must be affordable to customers. This means affordable overall, in the long term and for those struggling, or at risk of struggling, to pay.

- We expect companies to ensure that customers that are struggling to pay have easy and effective access to assistance.
- We expect companies to make a step change in cost efficiency providing scope for lower bills and help with affordability.
- Our initial view of the cost of capital – based on market evidence – is 3.4% (on a real CPIH basis). In RPI terms it is 2.4%, which is a reduction of 1.3% from the 2014 price review. The effect of this change alone should lower bills of an average water and wastewater customer by about £15 to £25.



Resilience in the round

Customers expect reliable water and wastewater services supplied by infrastructure that can avoid, cope with and recover from, disruption. The water companies that deliver these services need to make the best long-term decisions about operations, maintenance and investment. This in turn means they need the right information, systems, processes, governance and capabilities; and resilient balance sheets, cash flows and finances. They need to be resilient ‘in the round’. In our price review, we expect companies to:

- Improve day-to-day resilience by reducing the number of supply interruptions, sewer flooding incidents and pollution incidents;
- reduce water leakage by at least 15%;
- make performance commitments specifically on improving resilience to drought and flooding;
- assess a wide range of options for securing water supply resilience including investment in new infrastructure, water transfers and measures to significantly improve water efficiency and reduce consumption;
- take a system-wide approach to understanding, planning and managing risks to the delivery of wastewater services;
- take account of our seven principles for resilience planning, including a naturally resilient sector reflecting the importance of ecosystems and biodiversity; and
- demonstrate the financial resilience of their businesses as part of their business plans.

We will take into account the quality of companies’ information when we assess their plans and we expect companies’ Boards to provide assurance on their plans.

Innovation

Innovation must be at the core of every company to deliver long-term resilience, great customer service and affordability. We expect companies to look beyond their boundaries in addressing the challenges they face. New markets such as direct procurement for customers for large infrastructure projects, the water resource and bioresource markets and markets for eco-services all offer companies scope for greater innovation and more effective co-operation with third parties to deliver for customers.

We will assess how innovative companies’ plans are. Companies with the most innovative and ambitious plans delivering real benefits for customers and raising the bar for others will receive an additional return. This is in recognition of the additional effort and risk they will have taken preparing their plans.

Next steps

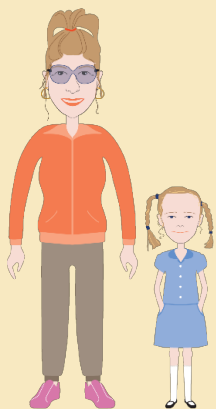
Company submission of business plans	3 September 2018
Ofwat's initial assessment of business plans and categorisation of plans	Late January 2019
Early draft determinations	March/April 2019
Other draft determinations	July 2019
Final determinations	December 2019

How to find out more

Find out more on our [website](#), on [Twitter](#), [Instagram](#), [LinkedIn](#), or by [email](#).

#pr19 #moreofwhatmatters #imagine2025

**What will you be doing over the next few years?
We'll be keeping water bills low and improving
service. Simple.**



1. Overall framework

1.1 Introduction

Appointed water and wastewater companies¹ in England and Wales are monopoly providers of water and wastewater services². We use price controls to regulate the price and service package that these companies offer to ensure that customers are protected. Where we refer to companies in this document and associated documents, we mean the appointed water and wastewater companies, in particular, the 17 largest companies for whom we are setting full price controls.³

The current price control period for appointed water companies in England and Wales ends on 31 March 2020. This document sets out our final methodology for the 2019 price review (PR19), which we will use to set price controls for the period from 2020 to 2025. This PR19 final methodology has been developed following full consideration of the views expressed by respondents to our [draft methodology proposals](#), published in July of this year.

Our PR19 final methodology sets out:

- our expectations and requirements for companies preparing their business plans to meet the needs of their customers from 2020 to 2025 and beyond;
- how these expectations form the basis for the tests we will use to assess companies' business plans (our initial assessment of business plans);
- the approach we will use if we need to intervene in those plans to make sure companies deliver the step change customers need; and
- how our assessment will flow through into companies' price limits and service commitments and the wider incentive framework.

In this chapter, we put this PR19 final methodology into a broader context and explain the overall framework in which we operate. The remainder of this chapter is structured as follows:

¹ By water and wastewater companies we mean companies holding appointments as water and/or sewerage undertakers under the Water Industry Act 1991.

² Some services are subject to competition, for example following business retail market opening.

³ We are not referring to the water supply and/or sewerage licensees (retailers) operating in the business retail market or smaller appointed water and wastewater companies for whom we will not be setting full price controls.

- building on PR14 (section 1.2);
- addressing future challenges (section 1.3);
- our strategy and the legal framework for our PR19 methodology (section 1.4);
- our key themes for PR19 (section 1.5);
- PR19 and the environment (section 1.6);
- what have we already determined about the framework for PR19? (section 1.7);
- our overall approach to PR19 (section 1.8); and
- navigating our PR19 final methodology (section 1.9).

1.2 Building on PR14

For the 2014 price review (PR14), we set a framework that focused on companies delivering the services that matter to customers and the environment. This framework included the following key elements.

- **Customer engagement.** Companies were given responsibility to engage with their customers to understand their priorities and preferences.
- **Focus on outcomes.** Each company developed a set of outcomes along with associated performance commitments, to reflect its customers' priorities as identified through the engagement process.
- **Risk-based review.** We adopted a risk-based approach to assessing companies' business plans, focusing on the issues that could have the biggest impact on customers. Companies that demonstrated their plans were in the best interests of customers received direct financial and reputational benefits.
- **Totex approach.** Rather than split companies' expenditure allowance into capital expenditure and operational expenditure, we considered their total expenditure (totex) as a whole.
- **Balanced package of risk and return.** We allocated risks to the party best able to manage them, and required companies to have meaningful outcome delivery incentives. This means that companies are incentivised to provide the best service for customers.

Our final methodology for PR19 builds on this framework and makes further changes to empower and incentivise companies to address the future challenges that the industry faces.

1.3 Addressing future challenges

While some companies have used the new regime to improve delivery for customers, it is clear that the sector as a whole needs to do much more to step up and address future challenges. These include the following.

- **Environmental challenges** – climate change and population growth will place increasing pressure on scarce water resources, particularly in drier areas, as well as challenging companies to ensure effective drainage and environmental quality.
- **Customer expectations** of the service and information they receive are growing, driven by ever greater improvements in the service provided by other competitive sectors and new opportunities from changes in technology.
- **Resilient systems and services** – to meet the challenges outlined above, the sector will need to do more to anticipate trends and variability. The sector will also need to be able to cope with, and recover from, disruption, to maintain services for customers and the economy and protect the natural environment, now and in the future.
- **Affordability of customer bills for all** – despite real terms price reductions from PR14, affordability remains an issue for many customers, so, companies will need to innovate to deliver more for less. There is also more that companies can do to identify and support customers in circumstances that make them vulnerable.

1.4 Our strategy and the legal framework for our PR19 methodology

Our PR19 final methodology furthers our vision for trust and confidence in water and wastewater services. It reflects our statutory duties, the strategic policy statements of both the UK Government and the Welsh Government, and is in line with regulatory best practice.

Our statutory duties⁴ require us (in summary) to set price controls in the manner we consider is best calculated to:

- further the consumer objective to protect the interests of consumers, wherever appropriate, by promoting effective competition;
- secure that water companies properly carry out their functions;
- secure that the companies are able (in particular, by securing reasonable returns on their capital) to finance the proper carrying out of those functions; and
- further the resilience objective to secure the long-term resilience of companies' systems and to secure that they take steps to enable them, in the long term, to meet the need for water supplies and wastewater services.

Subject to those duties, we also have duties to (among other things):

- promote economy and efficiency; and
- contribute to the achievement of sustainable development.

We must also set price controls in accordance with the UK and Welsh Governments' strategic priorities and objectives for Ofwat⁵. The UK Government's strategic priorities and objectives for Ofwat, referred to as the [UK Government's 'strategic policy statement'](#) throughout the rest of this document, came into force on 22 November 2017. The Welsh Government's strategic priorities and objectives for Ofwat, referred to as the [Welsh Government's 'strategic policy statement'](#) throughout the rest of this document, was laid before the National Assembly for Wales on 23 November 2017⁶.

⁴ The general statutory duties for most of our work as an economic regulator are set out in section 2 of the Water Industry Act 1991.

⁵ The statements setting out strategic priorities and objectives for Ofwat that the UK and Welsh Governments can publish under sections 2A and 2B of the Water Industry Act 1991.

⁶ We anticipate that, unless the Assembly resolves not to approve it, the strategic policy statement will be published in the following few weeks.

Table 1.1 summarises the strategic priorities set out in the strategic policy statements of both the UK and Welsh Governments. We then summarise the applicability of our PR19 final methodology across England and Wales, given differences in these strategic policy statements. You can find more detail on how the PR19 final methodology is delivering the UK and Welsh Governments' strategic priorities and objectives in [UK Government priorities and our 2019 price review final methodology](#) and [Welsh Government priorities and our 2019 price review final methodology](#).

Table 1.1 UK and Welsh Government strategic priorities

UK Government	Welsh Government
Securing long-term resilience Protecting customers Making markets work	Affordability Innovation Long-term Markets and competition, where appropriate Resilience Strong customer focus Sustainable management of natural resources

Our strategy, '[Trust in water](#)', describes a shared vision for the water sector in England and Wales – one where customers and wider society have trust and confidence in water and wastewater services. Our strategy is the means through which we will fulfil our duties as we look to the future.

Our PR19 final methodology also reflects our [enduring price control principles](#). We set out these principles in PR14 to guide the development of our future price control methodology.

Applicability to England and Wales



Our methodology provides significant scope for companies to reflect the different needs of their nations, regions and communities – its common building blocks are designed to facilitate the development of business plans that reflect differences in operating and legal environments and give effect to the relevant government’s strategic policy statement (SPS) and customers’ needs. There is considerable consistency in our methodology, across England and Wales, reflecting the common themes in both governments’ SPSs and the ability to tailor business plans within our framework. Consistency of approach, where appropriate, will benefit both Welsh and English customers by increasing comparability of performance and cost information across companies. This will increase our ability to set stretching cost baselines and service levels, holding companies to account and protecting customers. However, there are also important differences between the Welsh and UK Governments’ strategic policy statements and this is reflected in our approach.

For example, the **UK Government’s SPS** includes the following specific provisions (summarised here).

- Ofwat should further a **reduction in long-term risk to water supplies from drought and other factors** and a ‘twin track’ approach to improve water supply resilience through both new supply and reduced demand. Our PR19 methodology will facilitate this through: the neutral treatment of demand and supply based solutions under our cost assessment framework; our outcomes framework, including a common performance commitment on the risk of severe water supply restrictions in a drought; and our initial assessment of business plans, which will assess companies’ approaches to managing resilience.
- Ofwat should **promote markets to drive innovation and achieve efficiencies**, including promoting upstream markets for water resources and bioresources. Our water resources price control will help promote a level playing field for the English bilateral water resources market if it opens during 2020-25.
- Ofwat should monitor the developing business retail market and **recognise small business customers as potentially vulnerable**. For all customers, including small businesses, we will challenge the wholesale component of bills and expect full company engagement to understand their expectations.

For example, the **Welsh Government’s SPS** includes the following specific provisions (summarised here).

- Welsh Government notes that **sustainable development** is its central organising principle and has set a priority for Ofwat on this issue. Our initial assessment of plans will consider companies’ approaches to ecosystem resilience and biodiversity as part of their decision making processes. Companies will also be incentivised to deliver on outcomes such as the environment, resilience and asset health.
- Ofwat should ensure its approach is consistent with **Welsh Government policy on retail and upstream competition**. Reflecting the Welsh policy, for Welsh water companies we will set revenue controls for retail activities to protect all business retail customers. We will not put in place mechanisms to enable any opening of a Welsh bilateral market for water resources.
- **Innovation** is a priority – Ofwat should incentivise new ways of delivering services for customers and the environment more efficiently. The outcomes and totex frameworks provide flexibility for companies to develop and apply innovative approaches and develop ecoservices markets, where appropriate.

1.5 Our key themes for PR19

To address the future challenges that the industry is facing, and given the strategic policy statements of the UK and Welsh Governments, there will be four key themes for PR19.

- **Great customer service** that shows real innovation, reliability and responsiveness, matching the experience that customers get from the best companies in other sectors.

Customers should be active participants in water and wastewater services. Their actions can directly affect system resilience and affordability. Companies will need to do much more to understand customers' needs, and to use this insight to set stretching and powerful performance commitments on what matters most to customers and the environment.

- **Long-term resilience in the round**, building on our resilience framework.

Resilience has always been important to customers. There is now an increased focus on resilience following our new additional duty on resilience, introduced by the Water Act 2014, and the emphasis on resilience in the strategic policy statements of both the UK and the Welsh Government.

- Resilience in the round is about considering all aspects of resilience, including – operational, corporate and financial resilience. Resilience is not just about outcomes and expenditure. It means making sure the right people, leadership, infrastructure, systems and processes, are all in place and working effectively. Our seven resilience planning principles capture how companies should plan for resilience in their business plans.
- Operational resilience is about reducing the probability of water supply interruptions and wastewater flooding, as well as mitigating the impact of any disruption through efficient handling, good communication and quick recovery. It also means long-term resilience to environmental pressures, demographic change, shifts in customer behaviour and the impacts of climate change.

Each element of operational, financial and corporate resilience reinforces overall resilience. Companies will not be able to have good operational resilience if they do not have good corporate and financial resilience.

- **Affordable bills** should offer value for money and the scope for price reductions if this is what customers want.

Affordability remains an issue for many customers, not only those struggling to pay their bills. In PR19, we expect companies to understand and address affordability concerns for both current and future customers, and to develop effective measures to help customers who find themselves in circumstances that make them vulnerable and those struggling to pay. Companies will need to deliver a step change in efficiency to provide more for customers and the environment, while reducing bills.

- **Innovation** and new ways of working.

Companies will need to innovate to deliver more of what matters to customers and the environment, including:

- effectively working with customers to co-create and co-deliver;
- greater use of markets: where appropriate, in water resources, bioresources, through direct procurement and more widely across the value chain;
- demand management, water efficiency measures and leakage reduction;
- developing and implementing new ways of working, including changing the culture and focus of companies and the ways they work with their supply chain and wider stakeholders; and
- building on best practice from the water sector and other sectors.

1.6 PR19 and the environment

The environment, and the water environment in particular, is fundamental to the water sector

The water environment has improved significantly in recent decades. Since 1994, the amount of water lost through leakage has been reduced by around a third and, since 1990, there has been a 137% increase in the share of UK bathing waters achieving 'excellent' status. During the current control period, water companies are investing £44 billion in water and wastewater services, much of which benefits the environment. However, much remains to be done – climate change and population growth will put increasing pressure on scarce water resources, effective drainage and environmental quality.

For PR19, our ambition for the environment is higher than ever. Both the UK and Welsh Governments' SPSs recognise the importance of sustainably managed natural resources and a resilient ecosystem. Water companies must work with stakeholders to deliver their statutory and licence obligations and the environmental improvements customers want. Our PR19 final methodology contributes to this as follows.

Focus on the environment and long-term sustainability. Our resilience principles explicitly consider ecosystem resilience. Water companies should consider the wider costs and benefits to the economy, society and the environment, including the sustainable use of natural capital. Companies must also adopt a long-term approach, providing assurance that their plans address long-term issues and setting indicative performance commitment levels for at least ten years beyond 2025.

Engaging with customers on the environment. When developing their business plans, we expect companies to actively, meaningfully and effectively engage with customers and stakeholders to gain an in-depth understanding of customers' requirements for environmental outcomes and investment.

Real incentives to meet environmental challenges. There will be **common performance commitments** for all companies on the environment including: pollution incidents, per capita consumption and treatment works compliance. We expect companies to adopt ambitious leakage commitments, justified against our challenges: a 15% reduction by 2025 and forward-looking upper quartile performance on leakage per property per day. We expect companies to have **bespoke performance commitments** on the environment and a commitment to reduce water abstraction at environmentally sensitive sites.

Assessing the innovation in companies' plans. Innovation can help to address environmental challenges, for example by adopting innovative catchment approaches and reaching agreements with abstractors and polluters. We will reward companies with high quality, innovative and ambitious plans.

Promoting markets. Markets can promote better environmental outcomes and make better use of existing resources: bioresources markets can realise the value of a wastewater by-product, water trading can alleviate water scarcity, and ecoservices markets can promote efficient catchment approaches.

1.7 What have we already determined about the framework for PR19?

We recognise that the long-term nature of the challenges faced by the sector means the regulatory framework needs to evolve to meet those challenges. Over the past two years we have developed the regulatory framework for water and wastewater companies in England and Wales, consistent with our statutory duties. This culminated in the publication of [Water 2020: Our regulatory approach for water and wastewater companies in England and Wales](#) in May 2016.

The Water 2020 regulatory framework identifies where, and how, we need to evolve our regulatory approach for PR19 and beyond. In particular, it promotes greater use of markets for water resources and bioresources to deliver improvements in efficiency and resilience, as well as making other improvements to price controls. The box below summarises the key features of the Water 2020 regulatory framework. PR19 is the first price control which reflects this framework.

Box 1.1 Water 2020 framework

The framework:

- strengthens our expectations about companies' customer engagement and the outcomes companies intend to achieve, with even greater emphasis on companies understanding the needs of all their customers and a strengthened role for customer challenge groups (CCGs);
- moves to a more credible, robust and legitimate index of inflation – the consumer price index (CPIH)⁷ – for customers' bills and indexation of the regulatory capital value (RCV);
- promotes markets in water resources and bioresources (recognising the value of sludge as a resource) in England and, where it aligns with Welsh Government policy, in Wales, through:
 - separate binding price controls for bioresources and water resources, as well as water and wastewater network plus, and retail activities;
 - an information platform so that data is made available on bioresources facilities to assist trading;

⁷ consumer price inflation including a measure of owner occupiers' housing costs

- an information platform for water resources, so that data is made available on supply demand deficits and water resource costs to facilitate conversations between companies that require water and those that have water resources, or have demand management solutions;
- a framework for monopoly companies to assess bids to provide new water resources; and
- a new access pricing framework to facilitate entry by companies that can provide new water resources in England; and
- encouraging the greater use of markets in the financing, design and delivery of new water assets by third parties, rather than incumbent water companies.

Licence modifications to facilitate these changes were supported by all 17 water companies for whom we will set full price controls, successfully laying the foundation for PR19.

1.8 Our overall approach to PR19

Our final determinations for PR19, which will be published in December 2019, will set out companies' price limits, service commitments and the wider incentive framework for six separate binding controls⁸:

- water resources;
- water network plus⁹;
- wastewater network plus¹⁰ (where applicable¹¹);
- bioresources (where applicable);
- residential retail; and
- business retail (where applicable)¹².

⁸ Note that we are also proposing a separate control for Thames Water's wastewater services interfacing activities for the Thames Tideway Tunnel project.

⁹ water treatment and raw and treated water distribution

¹⁰ wastewater collection and treatment

¹¹ Wastewater network plus and bioresources controls will only apply to water and sewerage companies (WaSCs).

¹² We will set a revenue control for all business retail customers of companies whose areas are wholly or mainly in Wales and for companies whose areas are wholly or mainly in England that have not exited the business retail market.

The number of controls applicable to each company will depend on their particular circumstances. For example, a water only company (WoC) in England, that has exited the business retail market will be subject to only the water resources, water network plus and residential retail controls. In contrast, Dŵr Cymru will be subject to all six of the controls listed above given its wastewater activities and the Welsh Government's policy not to extend business retail competition.

As figure 1.1 shows, there are a number of themes and building blocks that are common across the controls. These include: the assessment of efficient costs and customer engagement, or the specification of the outcomes that will be delivered for customers and the environment. Our PR19 final methodology, and our initial assessment of business plans, is structured to reflect these common themes.

Figure 1.1 Structure of our PR19 final methodology

Wholesale controls				Retail controls	
Water resources	Water network plus	Wastewater network plus	Bioresources	Residential	Business (Wales*)
Initial assessment of business plans					
Customer engagement					
Affordability and vulnerability					
Performance commitments and outcome delivery incentives					
Resilience					
Wholesale form of control				Retail form of control	
Total revenue control	Total revenue control	Total revenue control	Average revenue control	Average revenue control	Average revenue control
Direct procurement for customers					
Efficient totex allowance	Efficient totex allowance	Efficient totex allowance	Efficient totex allowance	Efficient totex allowance	Efficient CTS** per customer group
Return on capital	Return on capital	Return on capital	Return on capital	Retail margins	Retail margins
Financeability					
Accounting for past delivery					
Confidence and assurance					

* We will set an average revenue control for all business retail customers in Wales and business retail customers of non-exited retailers in England.

** Cost-to-serve

On the following page, we summarise the key changes since our draft methodology proposals.

A summary of key changes since our draft methodology proposals

Engaging customers. We have clarified our approach on environmental and business retailer engagement.

Addressing affordability and vulnerability. We have revised our list of common metrics for business plans.

Delivering outcomes for customers. We will challenge companies to achieve forecast upper quartile (UQ) performance each year, rather than 2024-25 UQ performance from 2020-21. We have replaced the common performance commitment on non-infrastructure asset failures leading to pollution incidents with one on treatment works compliance, and amended the definitions of three others.

Securing long-term resilience. We have clarified our approach and expectations.

Wholesale controls. For **network plus**, companies must show how they are implementing integrated drainage solutions. For **water resources**, we have clarified our policy for the long-term risk sharing arrangements for large investment and streamlined the access pricing reporting requirements for English companies. For **bioresources**, we have modified the average revenue control so that when measured volumes vary from forecasts, the adjustments to allowed revenues are based on the increment, rather than the average, to better protect customers from over-recovery of costs and make sure companies bear appropriate volume risk.

Retail controls. We will set five-year price controls for all market segments and encourage water companies to tackle gap sites and voids.

Cost efficiency. A stronger cost sharing incentive and higher cost adjustment claim materiality thresholds.

Aligning risk and return. We have revised the financial incentives for the initial assessment of business plans (IAP) and the totex cost sharing rates. We provide an early view on the cost of capital. For **financeability**, we have clarified how we will treat legacy adjustments and address the impact of DPC.

Accounting for past delivery. We will allow, on request, two extra weeks for companies to publish their proposed reconciliations under the PR14 reconciliation rulebook.

Securing confidence and assurance. We have revised our data requirements, definitions and guidance. We will publish the 2018 CMF assessment with the IAP in January 2019. We have introduced a new IAP test, requiring Board assurance that their plan enables customers' trust and confidence through transparency and engagement on issues such as its corporate and financial structures.

The initial assessment of business plans. Exceptional and fast-track companies will receive an amount equivalent to, respectively, a 20-35 basis points (bp) and 10bp addition to the return on regulated equity (RoRE). For these companies, we will also apply an 'early certainty' principle to specific components of the early draft determination.

1.9 Navigating our PR19 final methodology

Our PR19 final methodology is set out across a number of documents. In this, **the main document**, we set out our PR19 final methodology across the key regulatory building blocks and themes of PR19. Figure 1.2 below shows how each of these areas relates to the chapters of our PR19 final methodology.

Figure 1.2 Mapping of regulatory building blocks to our PR19 final methodology chapters

		Chapter #
Initial assessment of business plans: test areas	Initial assessment of business plans: key test areas, characteristics, categories and incentives	14
Engaging customers	Enhanced customer engagement; customer participation; engaging customers on long-term issues including resilience	2
Addressing affordability and vulnerability	Addressing affordability and vulnerability: affordability for all, now and in the long term, including those struggling to pay and services that are easy to access.	3
Delivering outcomes for customers	Stretching performance commitments, including new customer experience measures; powerful outcome delivery incentives	4
Securing long-term resilience	Resilience 'in the round'; clarified principles; focus through business plan tests and outcomes	5
Targeted controls, markets and innovation	Four separate wholesale revenue controls Encouraging use of markets with clarity on post 2020 investments where markets apply 5 year retail controls for all market segments and measures to address gap sites and voids Direct procurement for customers: focus through principles; tendering models	6, 7, 8
Securing cost efficiencies	Step change in efficiency; Increased efficiency challenge; more symmetric adjustment process; benchmarking with historical and forecast data; cost-sharing incentive; benchmarking retail costs	9
Aligning risk and return	Increased revenue at risk from service performance and sharper cost sharing incentives; cost of debt indexation; tax pass-through mechanism; increased focus on assessment of risk CPIH as a legitimate measure of inflation Financeability	10, 11
Accounting for past delivery	2015-2020 reconciliation; confidence in business plans	12
Securing confidence and assurance	Business plan expectations: data and assurance	13

There are a number of **appendices** to this document, which provide additional detail of our PR19 final methodology, where appropriate. These appendices, which are published as separate documents, are as follows:

- [appendix 1: addressing affordability and vulnerability;](#)
- [appendix 2: delivering outcomes for customers;](#)
- [appendix 3: customer measure of experience \(C-MeX\) and developer services measure of experience \(D-MeX\);](#)
- [appendix 4: resilience;](#)
- [appendix 5: water resources control;](#)
- [appendix 6: bioresources control;](#)
- [appendix 7: network plus water and wastewater controls;](#)
- [appendix 8: company bid assessment frameworks – the principles;](#)

- [appendix 9: direct procurement for customers](#);
- [appendix 10: assessment of the duration of retail controls and measures for the appropriate management of voids and gap sites](#);
- [appendix 11: securing cost efficiency](#);
- [appendix 12: aligning risk and return](#);
- [appendix 13: initial assessment of business plans](#);
- [appendix 14: approach to impact assessment](#); and
- [appendix 15: responses to our draft methodology](#).

The following **additional documents** have also been published to complete the suite of PR19 final methodology documents:

- **[Welsh Government priorities](#)** and our 2019 price review final methodology;
- **[UK Government priorities](#)** and our 2019 price review final methodology;
- **[driving innovation in water](#)**;
- **[final guidance on business plan data tables](#)** for companies to provide a consistent set of information, which will allow us to carry out analysis and complete our assessments for each price control;
- the **[PR19 financial model and rulebook](#)**¹³, which we intend to use to set price controls and test company financeability;
- **[PR19 feeder models, true up models and incentive models](#)**; and
- updates to the **[PR14 reconciliation rulebook and models](#)**¹⁴.

We are also publishing a number of independent reports, which are referenced by our PR19 final methodology.

Our PR19 final methodology documents, including the independent reports and all of our models can be found on our [website](#).

¹³ Model version PR19 08z has been published alongside our PR19 final methodology

¹⁴ [PR14 reconciliation water trading model](#) and [PR14 reconciliation WRFIM model](#)

2. Engaging customers

Key themes of PR19

Our approach to engaging customers supports the key themes of PR19.

Companies must engage with their customers on how they will address **affordability** and ensure that they have taken account of customers' views in their proposals.

Understanding customers is essential for companies if they are to improve and tailor their **customer service** in line with their customers' preferences.

We are specifically encouraging companies to engage with their customers on longer-term issues, including **resilience**. A greater focus in this area should help companies innovate and invest for the longer term in the best interests of their customers.

We are expecting companies to be much more **innovative** in their approaches to customer engagement. It will also be important for customers to be engaged in the innovative approaches needed to address the challenges facing the sector.

Engaging customers

Companies need to understand their customers' preferences and priorities and deliver the outcomes that matter to them over the long term. This includes all customers, including those in circumstances that might make them vulnerable and those that are hard to reach.

Customer challenge groups (CCGs) will provide independent challenge to companies and provide 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 are expecting a step change in customer engagement at PR19, with companies using a wider range of techniques to address our principles of good customer engagement.

Customer engagement will be central to our assessment of companies' business plans at PR19, as part of the initial assessment of business plans process.

Customer engagement will provide essential evidence for companies' proposals in their business plans, such as their performance commitments to customers.

We are encouraging companies to take forward customer participation. We published our '**Tapped in**' report on this topic in March 2017. We expect companies to take into account the themes of customer participation.

Companies need to make **better use of data** and **work with others to share data** to drive better outcomes for customers.

We will meet companies during the first three months of 2018 to understand their approaches to customer engagement.

- We set out more detail on our approach to customer engagement in **Ofwat's customer engagement policy statement and expectations for PR19** in May 2016.

Applicability to England and Wales

Our final methodology for engaging customers **applies to both** companies whose areas are wholly or mainly in England and whose areas are wholly or mainly in Wales.



Both the UK and Welsh Governments' strategic policy statements set expectations of companies engaging with their customers.

Our methodology requires companies to understand their customers and their particular priorities, which can vary between England and Wales and between regions within England and Wales.

Responses to our draft methodology proposals

There were no consultation questions on customer engagement in our methodology consultation, because we were confirming our existing policy as set out in our customer engagement policy statement in May 2016. Nevertheless, we received a number of responses.

Overall, there was strong support for our emphasis on customer engagement and participation at PR19. Respondents raised three main issues.

1. It is not just customers' views that should inform companies' business plans, but also environmental and social concerns.
2. We and companies need to engage with, and take account of, the views of business retailers.
3. We could provide more support to CCGs.

Our consideration of respondents' views

In relation to the three main points raised on customer engagement, our responses are as follows.

1. Our PR19 model of customer and stakeholder engagement, including CCGs, allows for environmental and social issues to be addressed in companies' business plans. In this methodology we clarify how we take the environment into account.
2. We consider wholesalers should engage with business retailers as part of the customer engagement process to learn about their views and the views of their customers. We will engage actively with retailers as we prepare for and carry out the price review.
3. We have shared with the CCG chairs a draft 'aide memoire' summarising the main points for them to be aware of in the methodology. We will publish the final aide memoire early in 2018. We are holding meetings with all the CCG chairs every two months until July 2018 to provide on-going support.

2.1 Introduction

This chapter sets out our final methodology for PR19 with respect to engaging customers. By customer engagement we mean companies listening to their customers to understand their preferences and priorities and reflecting them in all aspects of their business operations, including their business plans.

We consulted on our approach to customer engagement in [Towards Water 2020](#) in July 2015. We set out our approach to customer engagement in our [Customer engagement policy statement for PR19](#) in May 2016. Since then, we have continued to inform, enable and incentivise the industry to push the frontiers of customer engagement, including exploring [customer participation](#), [the use of customer data](#) and communications.

Customer engagement is a vital element of PR19, because companies need to understand their customers' preferences to deliver the outcomes that matter to them over the long term. Customer engagement will provide essential evidence for company proposals in their business plans. In addition, companies need high levels of engagement with their customers to earn their trust and confidence, for example, on issues such as companies' corporate and financial structures as discussed in chapter 13 (securing confidence and assurance).

This remainder of this chapter is structured as follows:

- roles in customer engagement (section 2.2);
- customer engagement principles (section 2.3);
- customer participation (section 2.4);
- longer-term issues, including resilience (section 2.5);
- customer engagement and the business retail market (section 2.6);
- customer data (section 2.7);
- communications (section 2.8); and
- initial assessment of business plans – customer engagement (section 2.9).

There were no consultation questions on customer engagement in our draft methodology proposals because we were confirming our existing policy for engaging customers for PR19. However, in section 1 of [appendix 15](#), we outline respondents' views on customer engagement and provide (or reference) our responses.

2.2 Roles in customer engagement

Our customer engagement policy statement summarised the roles that companies, CCGs and we will play at PR19 in relation to customer engagement.

Table 2.1 Companies', CCGs' and our role in customer engagement

	Role
Companies	Companies will be responsible for carrying out direct local engagement with their customers to understand their priorities, needs and requirements, which should then drive decision making and the development of the company's business plan.
CCGs	CCGs will provide independent challenge to companies and provide 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. In chapter 13 (securing confidence and assurance), we recap the CCGs' assurance role, which we set out in our Customer engagement policy statement for PR19 .
Ofwat	We will inform, enable and incentivise good customer engagement and will: <ul style="list-style-type: none"> • facilitate more CCG collaboration; and • continue to provide information and clarity about our expectations (but not provide detailed or prescriptive guidance on how companies should engage with their customers). We will continue to work with the CCG chairs to ensure they are clear on what we expect their CCG reports to include.

2.3 Customer engagement principles

At PR14, we identified seven principles of good customer engagement (see box below). We reviewed these principles after PR14 when developing our customer engagement policy statement for PR19 and consider them to remain fit for purpose. We developed additional principles of good customer engagement for PR19, which we describe further below.

Box 2.1 - Principles of good customer engagement

Principle 1 – Water companies should deliver outcomes that customers and society value at a price they are willing to pay.

Principle 2 – Customer engagement is essential to achieve the right outcomes at the right time and at the right price.

Principle 3 – Engagement should not simply take place at price reviews. Engagement means understanding what customers want and responding to that in plans and ongoing delivery.

Principle 4 – It is the companies' responsibility to engage with customers and to demonstrate that they have done it well.

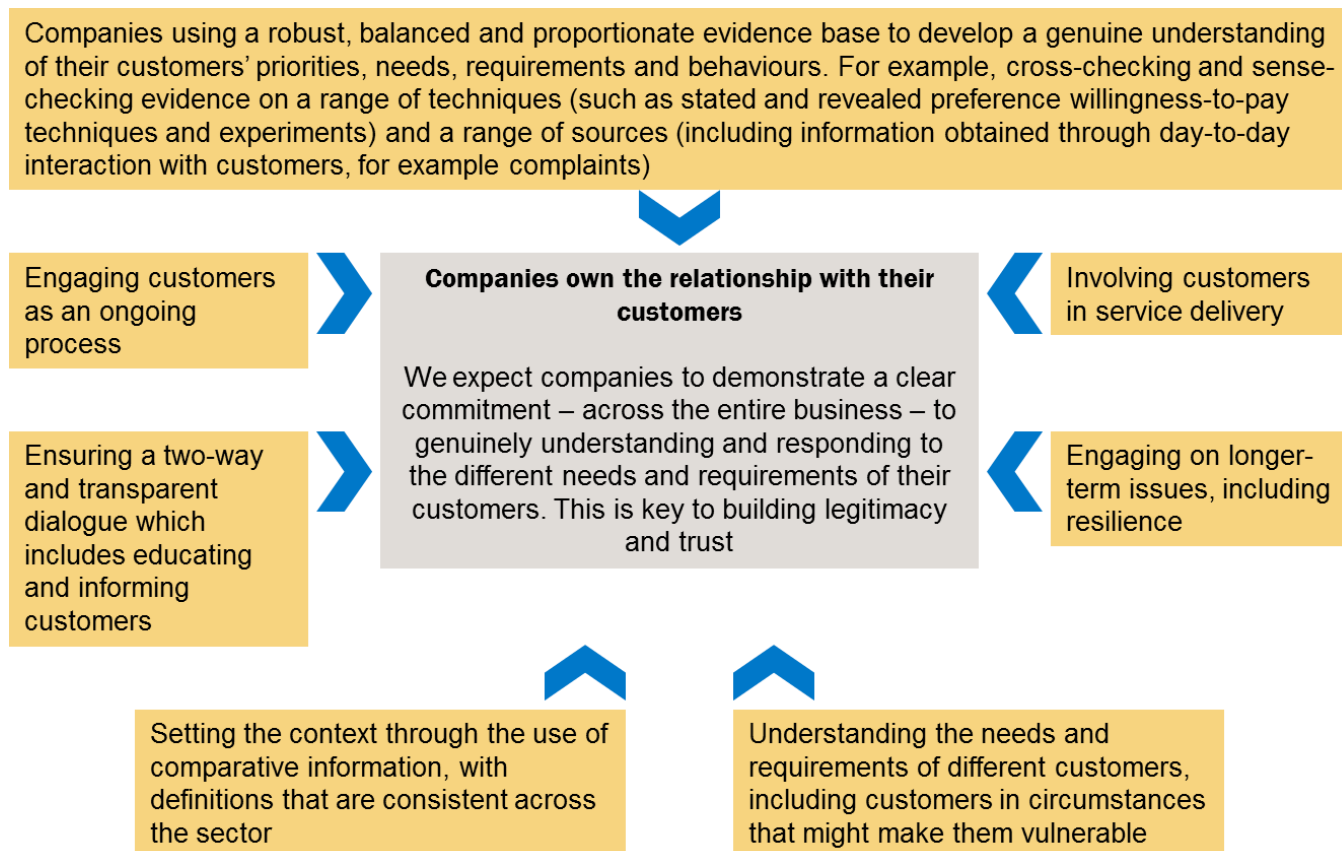
Principle 5 – Customers and their representatives must be able to challenge the companies throughout the process. The engagement process should ensure this challenge happens. If this is not done effectively, we must be able to challenge on customers' behalf. In doing so, we will fulfil our duty to protect customers.

Principle 6 – Engagement is not a 'one-size-fits-all' process, but should reflect the particular circumstances of each company and its various household and non-household customers.

Principle 7 – The final decision on price limits is entrusted to Ofwat. We will use a risk-based approach to challenge company plans if this is necessary to protect customers' interests.

Despite acknowledging the significant improvement in the quality of customer engagement that companies and CCGs achieved at PR14, stakeholders support our view that this is an area in which companies should be striving to make further improvements at PR19. To facilitate this, we set out a number of additional principles for good quality customer engagement (see figure 2.1 below). We provide more detail on each of the additional principles in our [Customer engagement policy statement for PR19](#).

Figure 2.1 Additional principles of good customer engagement



2.4 Customer participation

One of our seven additional principles of good customer engagement is involving customers in service delivery.

Our report [Tapped in – from passive customer to active participant](#), published in March 2017, defined customer participation as the active involvement of customers in the design, production, delivery, consumption, disposal and enjoyment of water, water services and the water environment in the home, at work and in the community.

'Tapped in' suggested some practical ways of carrying out customer participation and gave our stakeholders a better understanding of what they could achieve. It also explained the potential benefits of customer participation such as contributing to great customer service and a resilient supply at a price all of us can afford.

We expect companies to show in their business plans how they have started to take into account the four themes of this report.

- **Futures** – customer participation to improve the current and future sustainability of water services.
- **Action** – customer behaviour change, including saving water and helping to reduce sewer blockages.
- **Community** – community ownership of particular aspects of water as an essential resource.
- **Experience** – increasing customers’ control of water in their home and of the service experience.

2.5 Longer-term issues, including resilience

Another of the seven additional principles of good customer engagement is engaging on longer-term issues such as resilience, security of services and the long-term affordability of bills. In chapter 5 (securing long-term resilience), we set out our resilience planning principles.

Resilience planning principle 2 on customer engagement states that:

“Aspirations on levels of resilience should be informed by engagement with customers, to help companies understand their customers’ expectations on levels of service. This will also help companies understand their customers’ appetite for risk and how customer behaviour, in matters such as water efficiency, might influence approaches to resilience.”

Companies should make sure their plans reflect the needs and requirements of future customers, as well as current ones, to avoid unduly deferring investment into the future and passing the bill onto future generations. We expect companies to be creative about exploring the best ways to engage customers on long-term issues.

2.6 Customer engagement and the business retail market

The introduction of the competitive market for the provision of retail services to eligible business customers in England and Wales means that, in many cases, wholesalers are no longer providing retail services to business customers. As we said in [Ofwat's customer engagement policy statement and expectations for PR19](#), we want wholesalers to continue to engage with business end-customers on the wholesale services they provide to them. We do not want wholesalers to lose this link with their end customers.

In the [July 2015 Water 2020 consultation](#) we said that retailers to business customers might be better informed and better resourced than end customers, and might have stronger incentives and more buying power with which to negotiate wholesale service improvements on behalf of their customers. We consider that wholesalers should engage with business retailers as part of the customer engagement process to learn about their views and the views of their customers.

We will engage actively with retailers as we prepare for and carry out the price review. This is not a substitute for wholesaler engagement with business retailers.

We explain in chapter 4 (delivering outcomes for customers) that we will be monitoring the development of the business retail market and will work with Market Operator Services Limited (MOSL), retailers and wholesalers to encourage wholesalers to deliver good quality customer service to retailers.

2.7 Customer data

One of our additional principles of good customer engagement is using a robust, balanced and proportionate evidence base – including customer data – to understand customers' preferences.

We published [Unlocking the value in customer data: a report for water companies in England and Wales](#) in June 2017. In the report, we explained that better use of data can be used to drive better customer service and satisfaction, improve efficiency and encourage smarter network management. Companies can also use good customer data to help identify and support customers who are struggling to pay their bills, or who find themselves in vulnerable circumstances. It can also allow companies to reduce levels of bad debt by taking better targeted approaches to different customer groups.

We want to see the water sector putting customers first and lead the way in how it uses customer data. Our report found that there have been large changes in the volume and type of data people create in recent years – and that the water sector is lagging behind other sectors in the ways it uses insights and intelligence from that data to do more for customers.

In October 2017, through the UK Regulators Network (UKRN) and together with Ofgem, the energy regulator, we published a joint report on [Making better use of data: identifying customers in vulnerable situations](#). In the report, we set out expectations for companies across the energy and water sectors to work

collaboratively to deliver better outcomes for customers through the better use of data.

We highlighted that data sharing in particular has the potential to enhance the way that customers are supported. For example, more targeted identification of customers in vulnerable situations can help make sure they receive the right support when they need it. The report sets out our expectation that the joint working group, established by Water UK and the Energy Network Association, will report quarterly to Ofwat and Ofgem jointly, as part of UKRN, on progress towards delivering cross-sector data sharing.

We expect to see evidence of how companies plan to make better use of customer data and data sharing over the next price control period, and over the longer term, in their business plans.

2.8 Communications

Good communication with customers is a foundation of effective customer engagement. There is a big opportunity for companies to use all their communication tools to listen and respond to customers and communities. Communications can drive behaviour change: transforming what customers think, feel, believe and do.

Communications can help raise awareness of the value of water among customers and employees, encourage customers to save water and change what people put down sinks and toilets. Communications can also reduce unnecessary calls, help customers take early action to reduce the risk of debt and change the behaviour of stakeholders such as farmers and local authorities. Communication can be a route to collaboration with others to create new social norms or to prompt more water-efficient behaviours.

We launched our expectations for how companies will communicate in PR19 at an event with communications directors on 27 June. We covered the evidence we would be looking for in five areas of communications: channels, messaging, audience, governance and evaluation.

2.9 Initial assessment of business plans – customer engagement

We will test customer engagement in our initial assessment of business plans as follows.

Initial assessment test on customer engagement

What is the quality of the company's customer engagement and participation and how well is it incorporated into the company's business plan and ongoing business operations?

In assessing this test, we will take into account evidence that the company has:

- effectively addressed the principles of good customer engagement including, but not limited to, evidence from its CCG;
- effectively taken forward the themes of customer participation including, but not limited to, evidence from its CCG;
- engaged effectively with customers on longer-term issues such as resilience, and taken into account the needs and requirements of future customers.

3. Addressing affordability and vulnerability

Key themes of PR19

Our approach to affordability and vulnerability supports the key themes of PR19.

Affordability is one of the four key themes of PR19, which will promote affordability for all customers, now and in the long term, including those struggling to pay.

Great **customer service** means that companies really know and understand their customers, and can provide more effective support to customers who are in circumstances that make them vulnerable. Our methodology incentivises companies to provide customer service to match the best in other sectors.

We are encouraging companies to **innovate** to improve their assistance for customers who struggle to pay and who are in circumstances that make them vulnerable.

Greater efficiency and lower financing costs provide scope for companies to improve affordability and to improve **resilience** and service.

Affordability

We are incentivising companies to develop business plans that address:

- overall affordability, providing value for money;
- affordability in the long term; and
- affordability for those struggling, or at risk of struggling, to pay.

We will use five principles to assess the affordability of business plans:

- customer engagement;
- customer support;
- effectiveness;
- efficiency; and
- the accessibility of companies' financial assistance measures.

Our assessment will be supported by evidence provided by companies, the independent reports from CCGs, and evidence from other expert organisations.

Vulnerability

We will assess how companies plan to support customers who are in circumstances that make them vulnerable, based on the challenges set out in our [2016 vulnerability focus report](#). We will assess:

- how well companies use good-quality available data to understand their customers and identify those who are in circumstances that make them vulnerable;
- how well companies engage with other utilities and third parties to identify vulnerability and support those customers who are in circumstances that make them vulnerable; and
- how targeted, efficient and effective companies' approaches to address vulnerability are.

Companies must have at least one bespoke performance commitment for addressing vulnerability in their business plans following customer engagement and challenge from their CCGs.

Applicability to England and Wales



Our final methodology for affordability and vulnerability **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales. Research carried out by the Consumer Council for Water shows that one in eight customers find their water bill unaffordable across England and Wales. As much as half the population, irrespective of where they live, will find themselves at some point in temporary circumstances that may make them vulnerable. Both the UK and Welsh Governments' strategic policy statements for Ofwat recognise the need for fair and affordable bills and support for customers in circumstances that make them vulnerable (see section 3.1).

Responses to our draft methodology proposals

There was general support for us using qualitative and quantitative information in the round to assess how a company **addresses affordability** in its business plan against our five principles. There was also general support for the assessment of companies' business plans against the challenges set out in our 2016 **vulnerability** focus report and for each company to have a **bespoke performance commitment on vulnerability**.

There were mixed views on our proposal to collect **common quantitative metrics** through the business plan tables to assess how companies are addressing affordability and vulnerability. Some respondents considered that affordability and vulnerability were too complex and dynamic to capture in individual metrics, while some respondents disagreed with the particular metrics we proposed. Some stakeholders suggested that we require companies to have **common performance commitments** on affordability and vulnerability to reflect the importance of these issues.

Our consideration of respondents' views

We welcome the overall support for our approach from stakeholders.

We have engaged further with our stakeholders on the **common metrics** of affordability and vulnerability, including through discussion with CCG chairs and a stakeholder workshop, and have revised our list of common metrics as a result. We confirm that we are considering common metrics in the round alongside other qualitative and quantitative information provided by companies. We are not proposing a **common performance commitment** on affordability or vulnerability because no single measure captures the complex and dynamic nature of affordability and vulnerability, and because the challenges vary across companies. We consider that our strong emphasis on affordability and vulnerability in PR19 will incentivise companies to address these issues effectively in their business plans. We will build on experience in PR19 and consider common performance commitments for affordability and vulnerability at PR24.

3.1 Introduction

This chapter sets out our final methodology for PR19 with respect to affordability and vulnerability. This PR19 final methodology has been determined following full consideration of views expressed by respondents to our [draft methodology proposals](#), published in July of this year.

Affordability is the ability of a customer to pay their water bill. It is one of the four key themes of PR19.

Vulnerability relates to customers whose characteristics, situation or circumstances mean that they may need sensitive, well-designed and flexible support and services to access, read or understand information. For example, customers with hearing difficulties may need a home visit to be told about an interruption to their service.

The UK Government's strategic policy statement sets a priority for Ofwat to challenge the water sector to go further to identify and meet the needs of customers who are struggling to afford their charges. It then sets Ofwat an objective to challenge companies to improve the availability, quality, promotion and uptake of support to low income and other residential customers in circumstance that make them vulnerable.

The Welsh Government's strategic policy statement sets Ofwat a customer protection objective for the short term and long term, to challenge companies to take into account variations in the priorities of customers. It then sets Ofwat priorities for customer protection including:

- access to social tariffs for those who struggle to pay;
- support of appropriate efforts by companies to manage customer debt and minimise write-offs; and
- incentivising companies to engage with vulnerable customers and produce business plans which are acceptable and affordable.

Both statements from the English and Welsh Governments emphasise the importance of affordability in the long term.

The remainder of this chapter is structured as follows.

Affordability (section 3.2):

- why affordability is important (section 3.2.1);
- our approach to affordability (section 3.2.2);

- assessing how well companies address affordability (section 3.2.3); and
- the initial assessment of business plans – affordability (section 3.2.4).

Vulnerability (section 3.3):

- why addressing vulnerability is important (section 3.3.1);
- assessing how well companies address vulnerability (section 3.3.2); and
- the initial assessment of business plans – vulnerability (section 3.3.3).

[Appendix 1 \(addressing affordability and vulnerability\)](#) sets out the reasons for, and the detailed explanation of, our approach to addressing affordability and vulnerability. It sets out the background, including full details of our proposals as they appeared in the draft methodology, the responses to our draft methodology proposals, our consideration of those responses and an explanation of any changes we have made in the final approach.

Section 2 of [appendix 15](#) outlines respondents' views to the four questions we posed on affordability and vulnerability in our draft methodology proposals. Appendix 15 also provides (or references) our responses to the issues raised by respondents.

3.2 Affordability

3.2.1 Why affordability is important

Customers must feel confident they are receiving affordable, value for money services, both now and in the long term. Customers' satisfaction with their services and their ability to pay bills underpins trust and confidence in water and wastewater services. Therefore, getting the best deal and service for customers is at the heart of what we do.

Our report, [Affordability and debt 2014-15](#), published in December 2015, identified that:

- for English companies, 23% of households spend more than 3% of their income on water, while 11% of households spend more than 5%; and
- for Welsh companies, 32% of households spend more than 3% of their income on water, while 15% of households spend more than 5%.

According to [CCWater's recent report 'Staying afloat: Addressing customer vulnerability in the water sector \(2016-17\)'](#), one in eight households find their water

bill unaffordable. And, according to [findings from the Financial Conduct Authority \(FCA\) survey 'Understanding the financial lives of UK adults'](#), an estimated 4.1 million people are in financial difficulty because they have failed to pay domestic bills or meet credit commitments in three or more of the last six months.

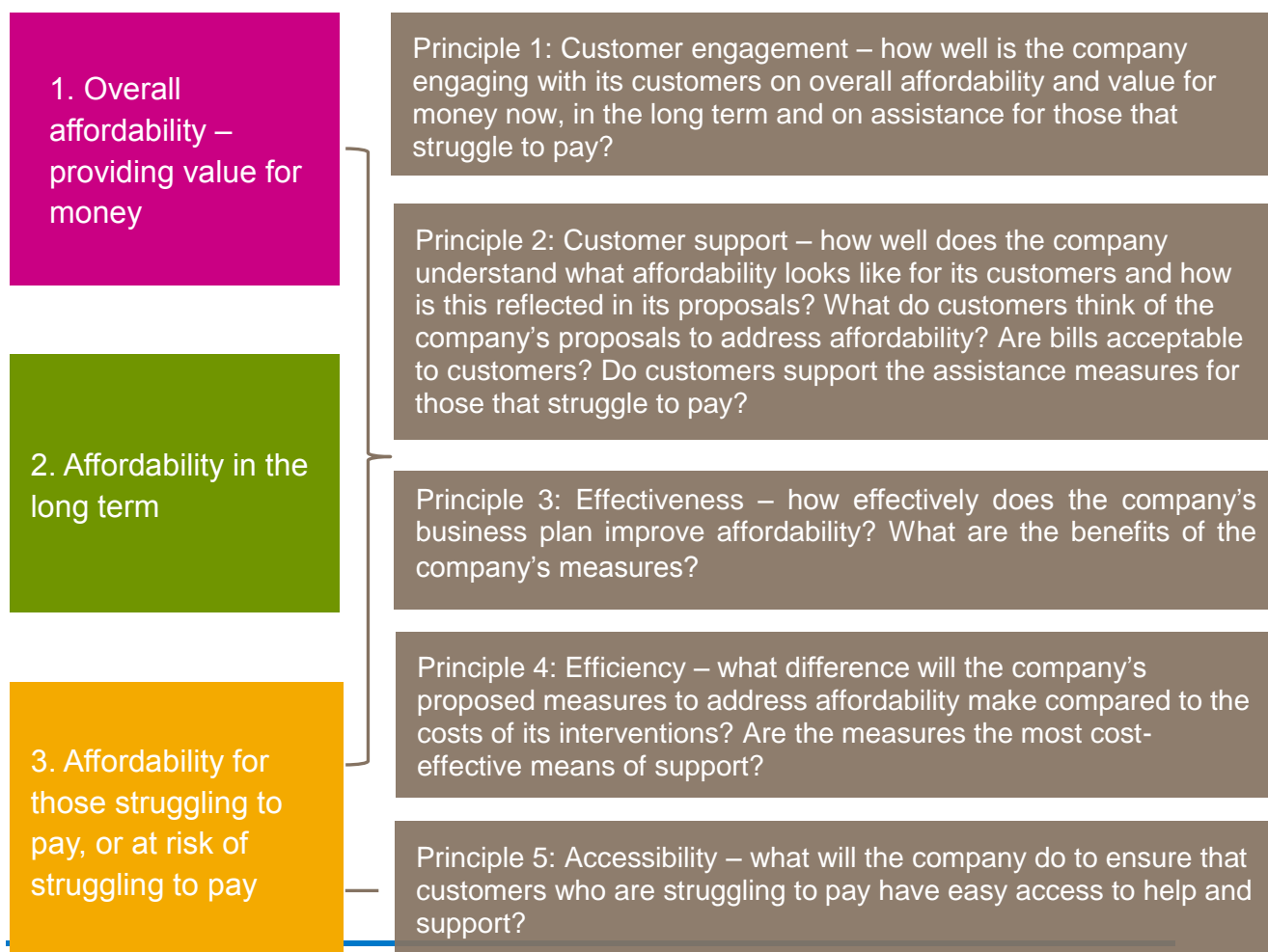
3.2.2 Our approach to affordability

Our approach to affordability is to incentivise companies to develop business plans that address:

- overall affordability – providing value for money;
- affordability in the long term; and
- affordability for those struggling, or at risk of struggling to pay.

We will use five principles to assess the affordability of business plans: customer engagement; customer support; effectiveness; efficiency; and accessibility. The following figure illustrates how the five principles relate to the three areas of affordability we will be testing at PR19.

Figure 3.1 How the five principles interact with the three areas of affordability



In addition to our assessment of affordability, our other price review assessments will promote affordability in the following ways.

- Our cost efficiency challenge, including on bad debt, and our approach to the cost of capital, will promote **overall affordability and create scope for lower bills**.
- Our stronger challenges on companies' service quality through our outcomes assessment, and through the customer measure of experience (C-MeX) and the developer services measure of experience (D-MeX), will promote value for money – see chapter 4 (delivering outcomes for customers).
- Our financeability test promotes **affordability in the long term** as we will assess how companies' proposed pay as you go (PAYG) rates and regulatory capital value (RCV) run-off rates reflect the levels of proposed expenditure, bill profiles, affordability and customer views (see section 11.6). Our resilience planning principles also require companies to consider customers' expectations and the best value solutions for customers in the long term – see chapter 5 (securing long-term resilience).
- Our challenges to companies to improve how they manage customer debt will improve **affordability for those struggling, or at risk of struggling to pay** – see chapter 9 (securing cost efficiency) – such as making sure customers who are eligible for help, receive it; and tailoring revenue collection and recovery to different customer circumstances using a wide range of communication channels.
- We are also expecting companies' Board assurance statements to include assurance that the companies' business plans address affordability for all customers, including in the long term and including those struggling, or at risk of struggling, to pay – see chapter 13 (securing confidence and assurance).

3.2.3 Assessing how well companies address affordability

Our approach to assessing affordability looks across all aspects of companies' business plans and requires companies to provide evidence of how they will address affordability.

Following the consultation responses and further engagement with stakeholders, we consider that there is benefit from us collecting a set of common metrics of affordability to provide comparative information and transparency for customers and other stakeholders. We will consider the common metrics alongside the quantitative and qualitative evidence provided by companies, and information from the independent CCG reports, when **making our assessment in the round**.

In appendix 1 (addressing affordability and vulnerability) we illustrate the type of qualitative information we could use to assess companies' approaches to affordability, as well as the common metrics we will collect after considering responses to the consultation and following further engagement with our stakeholders.

We will not require companies to have a common performance commitment for affordability because we recognise that no single measure reflects the complexity and dynamism of affordability and that the challenges vary across companies. Companies can propose bespoke performance commitments on affordability that reflect their specific challenges. We are requiring companies to provide data on a number of common metrics of affordability to help us to better understand the nature of affordability issues and the variations between companies, but we are not requiring companies to set commitments on these common metrics. We consider our strong emphasis on affordability at PR19 will sufficiently incentivise companies to address these issues effectively in their business plans. We will build on experience in PR19 and reconsider common performance commitments for affordability at PR24.

The UK and Welsh governments issued guidance in 2012 and 2013 to companies and Ofwat on social tariffs in England and Wales respectively, to which companies and Ofwat must have regard. We will expect to see strong evidence that customers are supportive of social tariffs that go beyond revenue neutral levels of assistance and that this assistance is provided in the most efficient way.

3.2.4 Initial assessment of business plans - affordability

We will test how companies address affordability in our initial assessment of business plans as follows.

Initial assessment test on affordability

1. How well has the company demonstrated that its bills are affordable and value for money for the 2020-25 period?
2. How well has the company demonstrated that its bills will be affordable and value for money beyond 2025?
3. To what extent has the company demonstrated that it has appropriate assistance options in place for those struggling, or at risk of struggling, to pay?

In assessing these tests we will take into account evidence which includes:

- good engagement with customers on affordability;
- customer support for the affordability of the plan;
- the effectiveness of the company's approach;
- the efficiency of the approach; and
- the accessibility of the company's support for those struggling, or at risk of struggling, to pay.

3.3 Vulnerability

3.3.1 Why addressing vulnerability is important

If the sector is to build and maintain trust and confidence, it is essential that water companies thoroughly understand who their customers are and the specific needs of different types of customers. Companies can use this information to ensure that the vital services they provide are inclusive and accessible to those who need them.

This is the first time we will have an explicit test for vulnerability in a price review. This will help incentivise companies to ensure they provide sensitive, well-designed and flexible support and services to customers in circumstances that make them vulnerable. This includes customers who are at risk of being in circumstances that make them vulnerable.

Vulnerability takes many forms and can be a transient state, for example, following a bereavement. It is essential that water companies do not have a one-size-fits-all approach. Instead, they need to understand and actively respond to each customer's specific needs, characteristics and situation.

Alongside the incentives we provide through PR19, we are continuing to promote the key themes in our [2016 vulnerability focus report](#). For example, our 2017 report: '[Unlocking the value in customer data - a report for companies in England and Wales](#)', highlighted the scope to make better use of customer data to provide support to customers in circumstances that make them vulnerable. We have carried out work through the UK Regulators Network (UKRN) on data sharing, to help make it easier for the water and energy companies to identify and coordinate support for customers in circumstances that make them vulnerable. This is explained in the UKRN's report: '[Making better use of data: identifying customers in vulnerable situations - A report for water and energy companies](#)'.

3.3.2 Assessing how well companies address vulnerability

We will assess how companies plan to support customers who are in, or about to be in, circumstances that make them vulnerable, based on the challenges set out in our [2016 vulnerability focus report](#). We will assess:

- how well companies use good-quality available data to understand their customers and identify those that are in circumstances that make them vulnerable;
- how well companies engage with other utilities and third parties to identify vulnerability and support those that are in circumstances that make them vulnerable; and
- how targeted, efficient and effective companies' approaches to address vulnerability are.

Following consultation and further engagement with our stakeholders, we still consider that there is benefit from us collecting a set of common metrics of vulnerability to provide comparative information and transparency for customers and other stakeholders. We will consider the common metrics alongside the quantitative and qualitative evidence provided by companies and their CCGs, when **making our assessment in the round**. We set out the revised list of common metrics of vulnerability, following engagement with our stakeholders, in appendix 1 (addressing affordability and vulnerability).

We will not require companies to have a common performance commitment for vulnerability because we recognise that no single measure reflects the complexity and dynamism of vulnerability and the extent to which the challenges vary across companies. We are requiring companies to provide data on a number of common metrics of vulnerability to help us to better understand the nature of vulnerability issues and the variations between companies, but we are not requiring companies to set commitments on these common metrics. We consider that our strong emphasis on vulnerability in PR19 will sufficiently incentivise companies to address these issues effectively in their business plans. We will build on experience in PR19 and reconsider common performance commitments for vulnerability at PR24.

We are requiring companies to include at least one **bespoke performance commitment for addressing vulnerability** in their business plans, after engaging with customers and taking on board challenges from their CCGs. The bespoke performance commitments will require companies to engage with their customers and CCGs on their future commitments to addressing vulnerability.

We are also considering the use of a **third party expert panel** and the **further development of common metrics** to assess and advise companies' approaches to vulnerability across all companies during 2020-25. We will discuss this with the sector after the PR19 final determinations.

3.3.3 Initial assessment of business plans - vulnerability

We will test how companies address vulnerability in our initial assessment of business plans as follows.

Initial assessment test on vulnerability

To what extent does the company identify and provide accessible support for customers in circumstances that make them vulnerable, including proposing a bespoke performance commitment related to vulnerability?

In assessing this test, we will take into account evidence which includes:

- the quality of the company's customer engagement on vulnerability;
- evidence that the company's approach to vulnerability is targeted, efficient and effective, including evidence from the independent CCG report;
- evidence that there will be an improvement in accessibility and support to customers in circumstances that make them vulnerable; and
- evidence of good approaches to using customer data and working with third parties, including other utilities, to better identify, and target support when addressing vulnerability.

4. Delivering outcomes for customers

Key themes of PR19

Our approach to outcomes supports PR19's key themes.

Our approach ensures companies set stretching commitments for all aspects of **customer service**.

We promote long-term operational **resilience** by five common commitments on day-to-day resilience, four common asset health commitments, two new forward-looking common commitments and requiring companies to have bespoke performance commitments on resilience.

We promote **innovation** by encouraging companies to propose enhanced payments for frontier-shifting performance on the common performance commitments. We also expect companies to propose innovative, bespoke performance commitments that reflect customers' preferences.

We address **affordability** by requiring companies to propose performance commitments and ODIs that represent value for money.

Performance commitments

Companies make performance commitments to their customers on the quality of the services they will deliver for them. Companies must support their five-year performance commitments with long-term projections.

Companies must have **14 common performance commitments**, with standard definitions, covering the issues that matter most to all customers. Companies should propose **bespoke performance commitments** to reflect their own customers' preferences.

Companies should use a **broad evidence base** on customer preferences to challenge the degree of stretch in their proposals. For some of the common performance commitments, we expect companies to set commitment levels at least at the **forecast performance level of the best (upper quartile) companies** each year. We are challenging companies to reduce their **leakage** by 15% over 5 years among other challenges.

We will create the customer measure of experience (**C-MeX**) and the developer services measure of experience (**D-MeX**). C-MeX and D-MeX are both financial and reputational incentives to improve the satisfaction of residential and new connections customers, respectively.

Outcome delivery incentives (ODIs)

At PR19, our approach to ODIs will better align the interests of company management and investors with those of customers. **ODIs should be financial** rather than reputational as the default. Companies' ODIs should also be **in-period** as the default. Any end-of-period ODIs should impact companies' revenue as the default. Companies can deviate from the default if they provide good reasons supported by evidence.

Companies can propose **enhanced outperformance payments** for frontier-shifting performance improvements, which must be accompanied by **underperformance penalties** for very poor performance.

We will not cap the total amount a company can earn from ODIs. We are setting an indicative range of **±1% to ±3% of RoRE** for financial ODIs.

Applicability to England and Wales



Our final methodology for outcomes **applies both to** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales. The 14 common performance commitments apply to all companies, as they reflect issues that customers in England and Wales value highly. We expect all companies in England and Wales to develop bespoke performance commitments to reflect their customers' particular preferences and their respective government's policy.

Responses to our draft methodology proposals

There was broad support for the overall outcomes framework, including the balance between common and bespoke performance commitments, strengthening ODIs, and introducing C-MeX and D-MeX.

There were mixed views on our proposals for the common performance commitments, including their definitions. There was disagreement with our proposal that companies should be challenged or expected to achieve performance at forecast upper quartile levels for 2024-25 from 2020-21 onwards.

There were comments about the design of C-MeX and D-MeX, including incentives on reducing complaints.

Our consideration of respondents' views

We have changed one of the common performance commitments from non-infrastructure asset failures leading to pollution incidents to treatment works compliance. We have amended the definitions of three of the common performance commitments: pollution incidents and the two resilience metrics on drought risk and wastewater flooding risk. We will be working with Water UK to improve the consistency of the definitions and reporting of seven common performance commitments, completing in early 2018.

We have modified our approach to performance commitments so that we challenge companies to achieve the forecast upper quartile performance level for each year of the price control period, rather than applying 2024-25 upper quartile performance from 2020-21 onwards. For supply interruptions, internal sewer flooding and pollution incidents, we expect companies to propose performance commitment levels that are at least the forecast upper quartile performance level for each year.

We have held working groups on C-MeX and D-MeX since the methodology consultation and will continue to work with our stakeholders. We have changed C-MeX to make the higher financial payments conditional on a company's performance on complaints. For D-MeX we will include an element based on performance metrics. We will run pilots for both incentives in 2018-19 and run them in shadow form in 2019-20.

4.1 Introduction

Outcomes are the high-level objectives valued by customers and society. This chapter sets out our final methodology for outcomes for PR19. Our PR19 final methodology has been determined after considering the views expressed by respondents on our [draft methodology proposals](#) published in July of this year. We had previously [consulted on our approach to outcomes in November 2016](#).

Our vision for the water sector is one in which customers and wider society in England and Wales have trust and confidence in vital public water and wastewater services. The aim of the outcomes framework is to help realise this vision by focusing companies on delivering the high-level objectives that matter to today's customers, future customers and the environment.

The remainder of this chapter is structured as follows:

- approach to performance commitments (section 4.2);
 - common performance commitments (section 4.2.1);
 - asset health performance commitments (section 4.2.2)
 - bespoke performance commitments (section 4.2.3);
 - stretching performance commitment service levels (section 4.2.4);
 - transparency of performance commitments (section 4.2.5);
- approach to ODIs (section 4.3);
 - reputational ODIs (section 4.3.1);
 - financial ODIs (section 4.3.2);
- two new customer experience measures: C-MeX and D-MeX (section 4.4); and
- the initial assessment of business plans – outcomes (section 4.5).

In [appendix 2](#) we provide further detail on, and reasons for, our PR19 final methodology for outcomes and how we have taken account of respondents' views.

In [appendix 3](#) we provide further detail on, and reasons for, our approach to C-MeX and D-MeX and how we have taken account of respondents' views.

Section 3 of [appendix 15](#) outlines respondents' views to the five questions we posed on outcomes in our draft methodology proposals. In appendix 15, we provide (or reference) our response to the issues raised by respondents that are not covered by appendices 2 or 3.

4.2 Approach to performance commitments

We are expecting companies to propose stretching performance commitments so that customers benefit from better service. This section covers our approach to:

- **common performance commitments**, including the new common resilience performance commitments;
- **asset health**, including discussion of the four common asset health performance commitments;
- **bespoke performance commitments** (that is, ones that are specific to each company) including the requirement to cover certain areas, such as the environment, with bespoke performance commitments;
- our expectations around using additional information and methods for setting **stretching performance commitment levels** for both bespoke and common performance commitments, including leakage; and
- the **transparency** of performance commitments.

4.2.1 Common performance commitments

The outcomes approach is rooted in customer engagement. Companies engage with their customers on their high-level objectives, their performance commitments, their associated service levels and their ODIs. At PR14, companies set their own performance commitments, which led to a number of similar, but not identical, definitions. As a result, it was more difficult to compare companies' performance than it would have been using measures with common definitions.

It became clear at PR14 that there were core performance commitments, valued highly by all customers across Wales and England. It also became clear that it would be beneficial for these core performance commitments to be common for all companies, with common definitions. This would allow customers, customer challenge groups (CCGs), other stakeholders and us to compare performance and to challenge companies on their proposed performance commitment levels more effectively.

The common performance commitments ensure that our framework focuses on the issues that matter to customers. The list includes the quality and reliability of the water and wastewater supply, resilience, asset health and customer service. By measuring and incentivising companies against service failures, these performance commitments motivate water companies' management to identify and mitigate risks to their services.

We have taken into account responses to the 14 common performance commitments we proposed in [our draft methodology proposals](#). We have decided on the **14 common performance commitments** shown in figure 4.1 below. All companies in England and Wales will have these performance commitments at PR19¹⁵.

Figure 4.1 The 14 common performance commitments for PR19



Area of focus

■ Customer experience
 ■ Day to day performance
 ■ Future performance/resilience

1 to 6 and 9, 11 and 12 apply to WoCs and WaSCs

7, 8 and 10, 13 and 14 apply to WaSCs only

We have changed one of the common performance commitments since our draft methodology proposals from ‘non-infrastructure asset failures leading to pollution incidents’ to ‘treatment works compliance’. This was following feedback from stakeholders that our proposed metric was too similar to the other common performance commitment on pollution incidents. We consulted a group of industry asset health experts about using treatment works compliance as the replacement, as a number of respondents to the consultation had proposed. The group supported our approach. Therefore we have made the change.

Our approach to common and bespoke performance commitments requires companies to address their environmental challenges. Our list of common performance commitments includes leakage, per capita consumption, pollution incidents and treatment works compliance. The two forward-looking resilience metrics also relate to the environment by encouraging companies to plan for the long term and mitigate drought and flooding risk. As explained below, and in appendix 2 (delivering outcomes for customers), we are requiring companies to have comprehensive coverage of their environmental challenges in their bespoke

¹⁵ The wastewater common performance commitments do not apply to water-only companies.

performance commitments and to take into account customer preferences and, where appropriate, impacts on the environment, biodiversity and natural capital when setting their performance commitment levels and ODIs.

The common performance commitments rely on consistent definitions and reporting. Companies and other stakeholders have worked together, co-ordinated by Water UK and with our support, to agree common definitions of leakage, supply interruptions and sewer flooding. For seven¹⁶ of the common performance commitments, including these three, we are taking forward a joint project with Water UK, completing early in 2018, to further improve the consistency of the definitions and reporting against them. We provide more details in appendix 2 and on our [definitions webpage](#), where we will publish status updates on the detailed definitions and the final versions.

We expect companies to implement the common definitions and consistent reporting so that they can use them in their business plans. We will take into account companies' progress in the initial assessment of business plans. We recognise that it is more difficult to set performance commitments for new metrics and metrics with new data. In appendix 2 we provide guidance on how to set performance commitment levels in such cases.

Resilience and the common performance commitments

Our overall approach to resilience in the round, including our seven resilience principles, is set out in chapter 5 (securing long-term resilience).

In the outcomes framework, we are promoting operational resilience through: two forward-looking common performance commitments, one on reducing drought risk and one on reducing flooding risk; common performance commitments covering day-to-day resilience issues such as supply interruptions and sewer flooding; requiring companies to have bespoke performance commitments relating to their particular resilience challenges; and four common performance commitments on asset health, such as mains bursts and sewer collapses.

We have worked to embed resilience in the common performance commitments. For example, we have worked with the sector to make sure that the common

¹⁶ The seven common performance commitments the project will look at are: leakage, supply interruptions, internal sewer flooding, per capita consumption, unplanned outage, mains bursts and sewer collapses. External sewer flooding will also be covered. The other common performance commitments have established definitions or there are separate projects to define them.

performance commitments do not include any exemptions for extreme weather, which are precisely the events we want the sector to be resilient to. We also consider that C-MeX will incentivise companies to avoid system failures and improve the quality of their responses to, and recovery from, disruption, including street works. C-MeX will do this by capturing customers' views on their wider experience of water companies' performance.

We have decided that companies' performance commitments for 2020-25 should be supported by long-term projections for at least another ten years. These projections will encourage companies to consider their long-term ambitions and help them to engage their customers and stakeholders on longer-term issues.

Companies should also expect us to continue to incentivise the outcomes that are reflected in the 14 common performance commitments in the long term. This will incentivise companies to plan to improve their performance on these outcomes to ensure they can deliver good-quality services to customers over the long term.

Two of the common performance commitments particularly focus on forward-looking resilience:

- the risk of severe water supply restrictions in a (1-in-200 year) drought; and
- the percentage of the population at risk of sewer flooding in a severe (1-in-50 year) storm.

Two working groups have been progressing development of the relevant metrics since our draft methodology proposals. On the basis of the work done to date we consider that we can include both forward-looking resilience metrics in the list of 14 common performance commitments. We will be looking to the industry to carry out more work over the price control period to further develop infrastructure and environmental resilience metrics. Companies will need to propose stretching performance commitment levels on these metrics, following engagement with their customers and stakeholders. A company's performance commitment level for the drought resilience metric should be consistent with its water resources management plan.

We are, however, cautious about requiring companies to have financial ODIs related to the two forward-looking resilience metrics, because they are at relatively early stages of development and so lack historical and comparative performance data. Companies should only propose financial ODIs related to these two common performance commitments if they reflect the particular resilience challenges facing them, are supported by evidence and by their customers and do not involve ODI

outperformance payments that overlap with funding received through the cost allowances.

The two new resilience metrics, alongside the existing ones, will enable customers and other stakeholders to better understand the resilience of the water and wastewater services provided by their water companies.

As we explain in section 4.2.3, we also expect companies to propose metrics on resilience as bespoke performance commitments that reflect their own specific resilience challenges. Companies can draw on the continuing work of the different groups that have been working on resilience metrics¹⁷, as well as other sources of information. Companies should consider whether to propose financial ODIs for their bespoke resilience performance commitments based on engagement with their customers and the particular resilience challenges facing the company. We will not allow the inclusion of ODI outperformance payments for performance commitments related to increasing a company's resilience if customers are already paying for this through cost allowances, as this would mean customers paying twice for the same improvements.

4.2.2 Asset health performance commitments

Companies need to make sure that their assets are being maintained appropriately for the benefit of current and future generations. This is a key area of network and service resilience.

At PR14, we encouraged companies to develop bespoke approaches to asset health. While this has produced some innovation, such as the use of different indicators and different methods of assessing performance, it has also led to inconsistency in approaches across companies and reduced comparability and transparency.

Our proposals on asset health were generally supported by consultation respondents, whose comments focused on their definitions. We address these comments in appendix 2 (delivering outcomes for customers) and appendix 15 (responses to our draft methodology). Following comments from respondents, we

¹⁷ These are the Water and Wastewater Resilience Action Group (WWRAG) and UK Water Industry Research (UKWIR).

changed one asset health common performance commitment as we describe in section 4.2.1 above.

We expect companies to:

- have four common performance commitments on asset health: mains bursts, unplanned outages, sewer collapses and treatment works compliance¹⁸. This will enable customers, CCGs and us to compare performance and challenge companies about their proposed levels for these commitments;
- select metrics for bespoke performance commitments from our long list of asset health metrics with standard definitions (see appendix 2), enabling customers, CCGs and us to compare performance and challenge companies about those selected;
- choose, where appropriate, their own asset health performance commitments outside of the common performance commitments and the long list, to enable companies to innovate in their approach to asset health and reflect any asset health issues specific to the company;
- use individual performance commitments for asset health – that is, not to aggregate a number of metrics into more complex performance commitments on asset health. This will promote transparency on asset health both in companies' customer engagement and in the reporting of their asset health performance during the price control period; and
- fulfil our expectations about how companies communicate asset health outcomes (see appendix 2). Our expectations include that companies: (i) clearly present their approach to asset health outcomes in their business plans; (ii) engage with their customers on how their asset health performance commitments protect current customers, future customers and the environment; and (iii) ensure their asset health performance commitments are easy to understand.

Transparency around asset health and resilience performance commitments is particularly important in the context of companies potentially proposing additional resilience expenditure at PR19. This improved transparency will give customers, CCGs and us greater clarity on companies' asset health and resilience proposals, making it easier to challenge and scrutinise companies' proposals.

¹⁸ Only water and sewerage companies must have sewer collapses and treatment works compliance.

The initial assessment of business plans will involve us assessing companies' assurance around the resilience of their systems and services, including their asset health – see also chapter 13 (securing confidence and assurance).

4.2.3 Bespoke performance commitments

In addition to the common performance commitments, we expect companies to propose **bespoke performance commitments**, so that they can reflect their customers' preferences and develop innovative performance commitments. For example, this allows companies operating in Wales to reflect Welsh customers' priorities and government policy in Wales. Companies should engage with their customers and local stakeholders on their bespoke performance commitments.

Companies should make sure that the definitions of their bespoke performance commitments are clear. There should be no, or very few, exemptions included in the definitions. Any exemptions need to be well justified and supported by the company's customers.

If companies do not intend to continue with any of their PR14 performance commitments, they will need to justify why. We will expect evidence and reasoning for removing a performance commitment, particularly if the company was performing poorly against the performance commitment during the last control period.

We are requiring companies to propose bespoke performance commitments to cover the five areas listed below:

- the different price controls – for companies whose areas are wholly or mainly in Wales this includes the business retail price control;
- vulnerability;
- the environment;
- resilience; and
- the abstraction incentive mechanism (AIM) – see appendix 2.

We consider these areas matter to customers and society, but we want to give companies the ability to develop bespoke performance commitments that reflect their customers' preferences, their particular challenges and to allow for innovation.

We expect companies' common and bespoke performance commitments together to provide comprehensive coverage of their environmental challenges. Appendix 2 (delivering outcomes for customers) provides a list of environmental metrics

suggested by environmental organisations, which companies can choose from, although companies can also propose their own metrics.

As explained in chapter 8 (targeted controls, markets and innovation: retail controls), we have concerns about the incentives for water companies to manage gap sites and voids¹⁹ appropriately. In this context, we are requiring water companies to come forward with bespoke performance commitments on gap sites and voids or justify why this is not appropriate.

We encourage companies to consider ways of making their performance commitments more challenging at PR19. This could include making bespoke performance commitments to their customers based on innovative metrics that genuinely challenge the company and lead to significant changes in operating practices or culture for the benefit of customers or the environment. It could also include performance commitments that involve working together with others, such as new approaches to catchment management.

4.2.4 Stretching performance commitment service levels

We expect companies to set stretching levels for their performance commitments for the five years from 2020-21 to 2024-25, and to support these with long-term projections for at least another ten years. Our approach to setting stretching performance commitment levels covers the following areas:

1. setting the initial service level – the performance level in the year, usually 2019-20, before the performance commitment levels start, which acts as the baseline for future improvements;
2. setting out the approaches companies should use when challenging the level of stretch in their performance commitments and engaging with customers;
3. setting performance commitment levels for common performance commitments; and
4. setting performance commitment levels for reducing leakage and water usage.

The first element of setting performance commitments is **setting the initial service level**. At PR19, we expect companies to forecast appropriate initial service levels

¹⁹ A gap site is a property where water and/or wastewater services are being consumed, but the property is not on a water company's system and is therefore not billed. Voids are properties classed by water companies as being vacant.

(usually for the year 2019-20). We will scrutinise the initial service levels closely at PR19, including with reference to any PR14 commitments companies made for that year. We will intervene when assessing business plans if the initial service levels are insufficiently demanding. Where the data for a performance commitment is new, a company could make its commitment in the form of a percentage improvement from a base level.

The second element of setting stretching performance commitments is what **approaches companies should take to set performance commitment levels**. Our approach to setting stretching performance commitment levels for PR19 is that companies should:

- engage with their customers on their performance commitment levels; and
- challenge the level of stretch in their performance commitments with their customers, CCGs and other stakeholders against a range of approaches including, but not limited to, the following:
 - cost–benefit analysis – taking a wide range of information on customer preferences into account as set out in [our customer engagement policy statement for PR19](#) and taking account of forecast cost efficiencies;
 - comparative information – companies should use a forecast upper quartile level for each year of the price control;
 - historical information;
 - minimum improvement;
 - maximum level attainable; and
 - expert knowledge.

We provide more detail on these approaches in appendix 2 (delivering outcomes for customers). We want companies to challenge themselves against the approaches above so that when engaging with customers they are not using their current performance as the starting point, but starting from what excellent performance looks like. CCGs will challenge companies on their approaches to setting performance commitments including how well they reflect customers' views and how stretching they are.

During our initial assessment of business plans, we will review how well companies' proposed performance commitment levels meet our expectations. We will intervene if we consider there is not sufficient customer engagement or challenge when setting the performance commitment levels.

We discuss the practicalities of setting performance commitment levels for performance commitments that have new or amended definitions in appendix 2.

The third element of setting stretching performance commitments is the approach to the **common performance commitments**. The approach for common performance commitments is the same as for the other performance commitments. The one exception is that for three of the common performance commitments, which have particularly good-quality data and where there is no clear reason why companies should not be achieving the same stretching level of performance, we expect companies to set their commitment levels to at least the forecast upper quartile level in each year of the price control. These three are:

- water supply interruptions;
- internal sewer flooding; and
- pollution incidents.

There should be no transition period for currently poor performing companies to move from 2019-20 performance to achieve the forecast upper quartile efficient performance level in 2020-21.

The fourth element of setting stretching performance commitments is that we have developed specific approaches for **leakage and water usage**. These remain a top priority for customers and the UK and Welsh Governments. Managing leakage and water usage is important for delivering a resilient network in the long term and reducing over abstraction of our water resources.

The industry achieved large reductions in **leakage** in the late 1990s, but since 1999-00 leakage levels have remained relatively static. We therefore expect to see a renewed vigour in companies reducing leakage.

We are challenging companies to set stretching leakage performance commitment levels to:

- achieve forecast upper quartile performance (in relation to leakage per property per day and leakage per kilometre of main per day) where this is not being achieved – or justify why this is not appropriate;
- achieve at least a 15% reduction in leakage (one percentage point more than the largest reduction commitment at PR14) – or justify why this is not appropriate; and
- achieve the largest actual percentage reduction achieved by a company since PR14 – or justify why this is not appropriate.

Companies should also justify their leakage performance commitments relative to the minimum level of leakage achievable.

Companies should consider how to innovate to reduce leakage. For example, they could include an enhanced outperformance payment in their ODI to incentivise a major improvement in leakage performance (see section 4.3.2 for more details about enhanced outperformance payments).

Companies can make the case for leakage reductions that do not achieve our challenges above where they can provide robust evidence and a strong rationale for this. For example, a rationale could be that a company is already a frontier performer or has strong customer support not to reduce leakage to this extent.

We expect companies to report leakage levels on a consistent basis²⁰ using a three-year average. Companies must justify why they have adopted a company-wide commitment level or sub-company regional commitment levels for leakage.

We expect companies to explain how their five-year performance commitment levels and long-term projections for leakage:

- take into account the views of their customers (with CCG assurance on how those views have been taken into account) and local stakeholders;
- relate to their water resources management plans (WRMPs);
- relate to their sustainable economic level of leakage (SELL)²¹, including the upper and lower limits;
- take into account the future value of water, water trading and resilience;
- take into account the additional benefit that reducing leakage can have, of encouraging customers to reduce their water usage; and
- take into account expected improvements and innovation in the efficiency of reducing leakage.

There are more details about our approach to setting leakage performance commitment levels in appendix 2 (delivering outcomes for customers).

For **water usage**, we expect to see companies propose more ambitious reductions relative to previous years and to support their proposals using the approaches to

²⁰ We are aware that some companies need to change how they collect performance data to align to the new leakage definition and that in some cases, it will take some time to obtain robust data. We expect companies to implement and report against the common definition, so it can be used in final determinations. We will take into account companies' progress in the initial assessment of business plans.

²¹ SELL requires companies to repair leaks where the cost of doing so is less than the cost of not doing so – for example, the cost of developing new water resources to compensate for the water lost through leaks.

setting performance commitments outlined above and in appendix 2. Companies should challenge themselves against the levels and reductions achieved by other water companies, including in other countries.

We clarify that setting more stretching performance commitment levels does not cost customers more money in itself. We have a separate test for cost efficiency, which challenges companies to have efficient levels of cost, and we do not allow companies a higher cost allowance for a more stretching performance commitment. Indeed, doing so would undermine the benefit of more stretching performance commitments for customers. Companies need to make their case separately for additional costs – see chapter 9 (securing cost efficiency). If a company incurs expenditure to improve its service performance customers will bear a share of that expenditure through totex efficiency sharing, but companies have strong incentives to keep their costs down.

4.2.5 Transparency of performance commitments

We confirm our proposals to promote more transparent performance commitments at PR19.

- Company performance commitments should be clear, unambiguous, complete and concise.
- Companies should not aggregate their performance commitments. This is to increase the transparency of all performance commitments so that they will be easier for customers to engage with, CCGs to challenge and us to evaluate.
- Companies should explain in their business plans how they will publicise their performance information during the 2020-25 period to make sure it is visible to customers, CCGs and other stakeholders.
- Companies should commit to keeping the definitions of their performance commitments unchanged during 2020-25 and to follow our procedures for any changes.
- Companies should commit that their ODI payments will only relate to real performance changes and not definitional, methodological or data changes in the performance commitment.

We expect companies to submit the definitions of their performance commitments to us on 3 May 2018, four months ahead of their business plans in September 2018. This will enable us to review the definitions to check, for example, that companies are using the standard definitions for the common performance commitments and that there are no inappropriate exemptions in the definitions of their bespoke performance commitments. We will provide companies with feedback about their

performance commitment definitions before they submit their business plans, where it is appropriate to do so.

4.3 Approach to outcome delivery incentives

In section 4.2, we set out an approach that should lead to companies committing to more stretching service levels for their customers. ODIs can help ensure that companies deliver for their customers. These incentives can be reputational or financial. Financial ODIs include underperformance penalties if companies do not deliver their performance commitments for their customers and, where appropriate, outperformance payments for going beyond the stretching performance commitment level and delivering additional value for customers.

We consider outperformance and underperformance payments to be important elements of the outcomes framework. Outperformance and underperformance payments, where supported by customer engagement, align customer, management and shareholder interests by increasing the focus on improving the services that customers care about. They also give shareholders a return for the additional effort and risk-taking needed to deliver stretching performance improvements.

A company with average current performance that maintains the same absolute level of performance into the next price control period would incur underperformance penalties on its ODIs. This is because we are expecting companies to improve and are setting challenges for performance commitments, including a forward-looking, upper-quartile challenge. Average performance now will not equate to efficient performance in the future. It is possible, if unlikely, for all companies to outperform their performance commitments and earn net ODI outperformance payments in the next price control period.

We note that early evidence from PR14 shows that companies that expected ODI underperformance penalties have been able to offset this by outperforming on their performance commitments. While our approach means that companies that do not deliver stretching levels of service for customers will incur net ODI underperformance penalties, this risk is within companies' control as those companies that deliver for their customers will avoid penalties.

Some companies might respond strongly to the increased incentives and significantly improve their service performance, beyond stretching expectations. In these cases, customers might see higher bills than otherwise, in return for which, these customers will benefit from considerable improvements in service in areas that are important to them. We expect companies to propose approaches to protecting

customers in case their ODI payments turn out to be much higher than their expected RoRE ranges for ODIs (see below).

There could be concern that linking a higher proportion of revenue to in-period ODIs could potentially increase bill volatility. As we explain below in section 4.3.2 companies must set out how they propose to limit undue bill volatility over the period in their business plans. We also note that the move from RPI to CPIH inflation indexation of prices is expected to significantly reduce the volatility of bills because RPI is a more volatile measure of inflation than CPIH. If required, we can intervene at PR19 and subsequent in-period ODI determinations to make sure companies adopt appropriate bill smoothing.

The rest of this section covers in more detail:

- our approach to strengthening **reputational ODIs**; and
- our approach to strengthening **financial ODIs**.

We discuss our detailed approach to **ODI design**, including averaging, deadbands and gates, in appendix 2 (delivering outcomes for customers).

4.3.1 Reputational ODIs

All performance commitments are accompanied by reputational ODIs. By reporting their performance to customers and CCGs, companies have an incentive to fulfil their performance commitments to customers.

Companies submit their annual performance reports (APRs) to us in July and also publish them. We, and the sector, are already increasing the existing ODIs' impact on reputation through the increased transparency and discussion around the publication of APRs, as well as through improvements to [Discover Water](#). We would welcome any further work to increase the impact and reach of Discover Water to the general public.

There are three main ways in which we will enhance the reputational impact of ODIs at PR19.

- **Initial assessment of business plans test** – we expect companies to propose how they will approach their reputational ODIs in their business plans. We will assess the quality and ambition of companies' reporting on ODIs, including how they plan to increase their effect on reputation, as part of the 'delivering outcomes for customers' tests for the initial assessment of plans.

- **Context** – companies should provide contextual information to increase the impact of their ODIs on reputation. For common performance commitments, we will work with Discover Water to look at including forecasts of upper quartile performance to show the stretch companies can achieve.
- **Link to financial ODIs** – our approach to increasing the financial strength and timeliness of ODIs will increase stakeholders' and the media's focus on ODIs, increasing their impact on a company's reputation.

4.3.2 Financial ODIs

Investors in the water sector earn their return from various elements of the price control, including the allowed return on capital, cost efficiency and improvements in performance on the outcomes that matter to customers.

Based on experience so far this price control period, we can see the power of financial ODIs to improve service performance. We see scope to sharpen the incentives for service performance and we consider this should be reflected in the range of returns for outperformance or underperformance in 2020-25. We also consider there is scope to further incentivise companies to innovate to deliver improved service performance, where customers support this.

We set out our approach to financial ODIs at PR19 in the following sections:

- linking a higher proportion of revenue to service performance;
- bringing ODI payments closer in time to the service performance that generated them;
- encouraging companies to propose enhanced outperformance payments; and
- our expectations for ODIs for asset health performance commitments.

Linking a higher proportion of revenue to service performance

Our approach to linking a higher proportion of revenue to service performance is as follows.

- **A greater onus on financial ODIs.** Companies should justify, with supporting evidence, whenever a performance commitment is not supported by a financial

ODI²². This will help ensure that companies are suitably incentivised to meet their performance commitments to customers.

- **Removing the aggregate RoRE²³ cap and collar on ODIs.** At PR14, we specified an overall range for ODI outperformance and underperformance payments of between $\pm 1\%$ and $\pm 2\%$ of RoRE, with an aggregate cap and collar set at $\pm 2\%$. We are removing the aggregate RoRE cap and collar to give companies an opportunity to propose higher outperformance and underperformance payments in their business plans, where customers support this.
- **Setting an indicative RoRE range for ODIs.** We are suggesting an indicative range for the size of companies' ODI outperformance and underperformance payments of $\pm 1\%$ to $\pm 3\%$ of RoRE at PR19. This indicative range excludes C-MeX and D-MeX, which have an additional impact on RoRE. The upper end of the outperformance payments range will only be achievable in extremely stretching circumstances, where companies deliver step changes in performance across all their performance commitments. We expect companies to develop their ODIs in consultation with their customers, and obtain customer support for the overall RoRE range proposed in their business plan.

In practice, the RoRE range companies propose may not be symmetrical. This is because the availability of outperformance and underperformance payments will be informed by customer engagement and some ODIs will likely have underperformance penalties only. Additionally, commitment levels set at forecast upper quartile levels will require companies to deliver stretching performance to achieve outperformance payments.

We expect companies to propose approaches to protecting customers in case their ODI payments turn out to be much higher than their expected RoRE ranges for ODIs. These could involve companies' demonstrating their understanding of the 'tail' of the distribution of potential returns and proposing protections for customers from extreme outcomes such as through the use of caps and collars on individual ODIs or other measures to manage actual returns exceeding the expected RoRE range. We set out further information on setting caps and collars for individual ODIs in appendix 2.

²² We explain the approach companies should take to proposing financial ODIs for the two new forward-looking resilience common performance commitments in section 4.2.1.

²³ RoRE is calculated as the incentive impact divided by regulated equity, where regulated equity = RCV x (1 – notional gearing).

We will consider capping, including down to zero, the ODI outperformance payments on bespoke performance commitments for a company categorised as being under significant scrutiny in the initial assessment of business plans. This is because for bespoke performance commitments data quality will depend on information provided in the significant scrutiny company's business plan, in which we are likely to have identified significant issues. We will also consider capping the ODI outperformance payments for the common performance commitments for a company categorised as being under significant scrutiny. However, a cap is less likely to be appropriate for these ODIs, given our ability to test the degree of stretch in the performance commitment levels across companies' plans.

Bringing the financial impact of an ODI closer in time to the performance that generated it

Bringing the financial impact of an ODI closer in time to the performance that generated it focuses management on service delivery and improves companies' accountability to their customers. It also reduces the extent to which outperformance and underperformance payments related to current performance are paid for, or received by, future customers.

We consulted in July about achieving this through further use of in-period ODIs and linking end-of-period ODIs to revenue rather than the RCV. We describe our approach for PR19 below.

In-period ODIs are reconciled each year rather than at the following price review. All companies have now accepted a change to their licence to allow in-period ODIs. We want companies to strengthen the incentives for improving service performance by increasing the number of in-period ODIs. We set out our decisions on in-period ODIs for PR19 in appendix 2. In summary, we expect companies to adopt in-period ODIs as the default for all their ODIs unless they can justify why an in-period ODI is not appropriate. Companies must also set out how they propose to limit undue bill volatility over the price control period.

End-of-period ODIs linked to revenue, rather than the RCV, to bring outperformance and underperformance payments closer in time to the performance that generated them and strengthen the incentive for companies to fulfil their service commitments to customers. Our decision is that end-of-period ODIs, by default, should be linked to revenue unless companies can justify, and provide strong evidence, why this should not be the case. We provide more detail on our approach in appendix 2.

Encouraging enhanced outperformance and underperformance payments

We want to encourage companies to improve performance beyond the best level currently achieved by any company to deliver benefits for all customers over the long term. This is likely to involve innovation and risk-taking by companies as they seek to significantly improve their performance.

Calculating outperformance and underperformance payments based purely on customer valuations does not take into account the wider benefits that customers would obtain from the kind of significant shifts in performance that would set a new benchmark for industry performance. We are therefore encouraging companies to propose higher outperformance payments for very high levels of performance against the common performance commitments – high enough, that is, to shift the industry frontier. We can then set new improved performance levels in future price controls to benefit the customers of all companies.

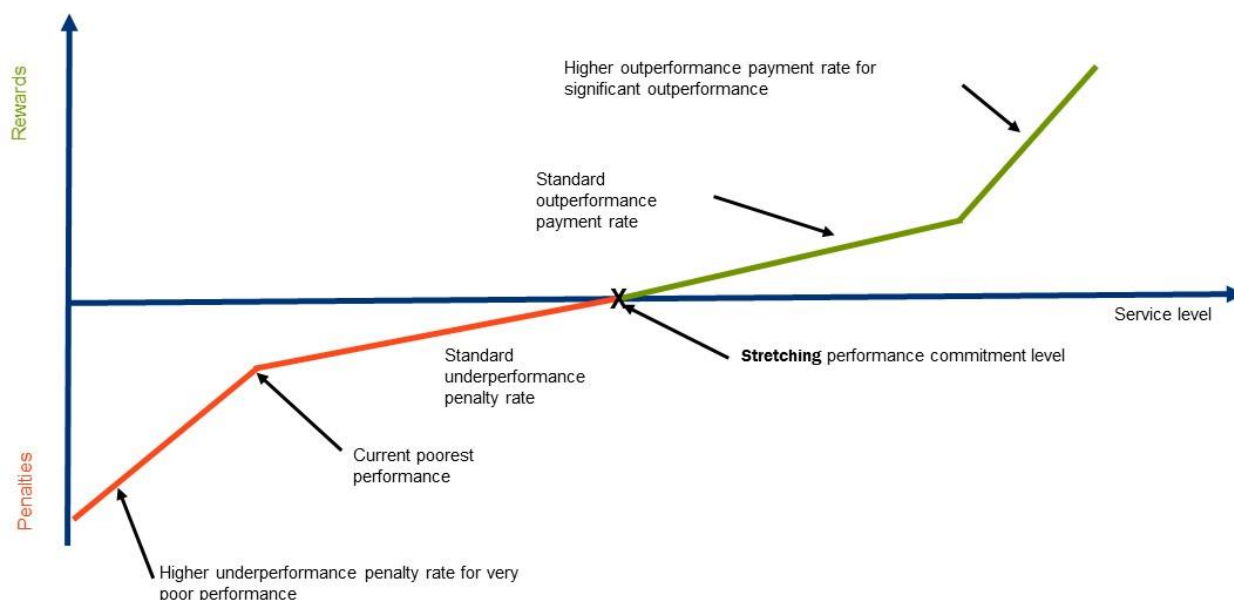
Our approach to enhanced outperformance and underperformance payments is set out in appendix 2, but the key points are as follows.

- Enhanced outperformance and underperformance payments are only appropriate for the **common performance commitments**, which are based on comparable data so that customers, CCGs and Ofwat can be more certain that the enhanced outperformance threshold truly represents frontier-shifting performance.
- The **enhanced outperformance payment rate** will be accompanied by an **enhanced underperformance penalty rate** for below-standard, poor and unacceptable performance²⁴, to provide balanced incentives and to protect customers in case companies take unreasonable risks to achieve high performance and end up with very poor performance.
- A company should propose its **threshold** for the enhanced outperformance payments at **the performance level of the current leading company, or preferably higher**. We expect that enhanced underperformance penalties would apply at least at the current lower quartile company performance.
- Companies proposing enhanced outperformance and underperformance payments should explain in their business plans how they will **share the knowledge** behind their success with companies across the sector by the end of the 2020-25 price review period or soon after. Receiving the enhanced

²⁴ This approach only relates to ODI policy. Very poor performance could be a licence or statutory duty breach with attendant enforcement consequences including, where appropriate, financial penalties.

outperformance payments will depend on whether the company has a credible plan for sharing its approach with the sector.

Figure 4.2 Enhanced outperformance payments and underperformance penalties at PR19



ODIs for asset health performance commitments

Our approach to ODIs for asset health performance commitments aims to improve transparency and enable stakeholders to compare different companies' performance on asset health. Our approach is as follows.

- As with other performance commitments, companies should set their asset health underperformance penalties using a **wide variety of customer research** so that they can strengthen their incentives in line with customer preferences.
- Companies should explain to their customers, CCGs and Ofwat how their asset health outperformance and underperformance payments **relate to their past performance and the asset health challenges they face**. If companies are delivering below the levels of asset health customers have funded them for in the past they should be incurring underperformance penalties.
- Companies should **report their proposed asset health underperformance penalties as a percentage of RoRE** so that they are comparable across companies. We will intervene to increase the asset health underperformance penalties at PR19 if we consider the proposed underperformance penalties to be too low when compared across companies and compared to the level needed to incentivise a company to deliver asset health.

- Companies can only propose **outperformance payments for asset health performance commitments** if they can show there are benefits for customers and their proposals reflect evidence of customer preferences.

4.4 Two new customer experience measures

The customer measure of experience (C-MeX) is our new incentive to improve the customer experience of residential customers in England and Wales.

The developer services measure of experience (D-MeX) is our new incentive to improve the customer experience of developer services customers in England and Wales.

We are making final decisions on the high-level features of C-MeX and D-MeX in our PR19 final methodology. However, we are not making final decisions on all aspects of the design of C-MeX and D-MeX. This is because we plan to pilot both of these incentive mechanisms in 2018-19 and the final design decisions will be informed by the pilots. The pilots will inform our decisions on methodological issues such as survey sample sizes, the frequency of the surveys and the channels we will use. We will judge the methodology that results from the pilots for each incentive mechanism on the extent to which it:

- encourages companies to improve customer experiences and innovate;
- is simple and meaningful for companies and customers;
- is proportionate;
- is practical to implement; and
- measures performance across companies consistently, reliably and fairly.

We will produce final guidance for both the incentive mechanisms by March 2020. We provide more detail on the timetable for C-MeX and D-MeX in [appendix 3](#).

4.4.1 The customer measure of experience (C-MeX)

We are replacing the existing service incentive mechanism (SIM) with C-MeX. We have decided that the financial incentive for C-MeX will be based on:

- a customer service satisfaction survey of customers who have contacted their companies – this will incentivise companies to improve their handling of customer contacts and complaints; and

- a customer experience satisfaction survey of customers selected at random (which may include those who have contacted their company) – this will incentivise companies to improve the overall customer experience for all their customers, for example in relation to street works, and not just those who have made direct contact with their companies.

Each year we will combine the results of the two surveys into a single C-MeX score. Our preference is for the C-MeX score to be based on an equal weighting of the two surveys, but we will decide the precise weighting after the results of the pilot. Our preference is also to conduct both surveys ourselves to ensure they are consistent across companies. However, we are still exploring the possibility of companies administering the contact survey, under clear guidance from us, if it will reduce the time gap between the contact being made and the survey taking place.

We will test the use of the net promoter score (NPS) in the C-MeX pilot. NPS is a measure of the customer's likelihood to recommend their company. We will decide after the pilot whether to incorporate NPS into C-MeX in some form.

The financial incentives for C-MeX will be up to 6% of residential retail revenues for high performing companies, with higher performance payments of up to 12% of residential retail revenues (over the five years of the control period) available to the best performing companies. The collar on performance penalties will remain at 12% of residential retail revenues.

The higher performance payments (between 6% and 12% of allowed residential retail revenues) will only be available if a company meets all three of the following conditions.

- If a company performs at or above a threshold based on cross-sector performance. This threshold could be the upper quartile all-sector performance on the UK customer satisfaction index (UKCSI) converted to a C-MeX equivalent, to ensure higher performance payments are only available for truly stretching levels of performance. However, we will decide this during PR19 when we have new information on how stretching this threshold looks and after the design of C-MeX has been confirmed following the pilot.
- If a company is demonstrating satisfactory complaints performance, as measured for example by the number of complaints received per household. This approach will avoid the (perhaps unlikely) situation in which we award a performance payment to a company that is achieving strong satisfaction scores on C-MeX by serving most of its customers very well, but which is serving a small proportion of customers poorly and receiving a high number of complaints per household, relative to other companies. We are not defining satisfactory performance on

complaints in detail in our PR19 final methodology, but we intend to work with stakeholders to do this as part of the C-MeX piloting process.

- If a company is one of the top three companies, by highest C-MeX score, if more than three companies meet the first two criteria.

We are working with the Consumer Council for Water (CCWater) to modify the definition of “complaint” to include complaints made via social media, where they can be attributed to a customer. The annual publication of industry complaints data by CCWater, will continue to provide a strong reputational incentive on companies to manage complaints effectively.

We are also requiring companies to offer at least five communications channels, including at least three online channels, for receiving customer contacts and complaints. We propose to apply a downwards adjustment to a company’s C-MeX score if it does not adhere to this.

We will apply the C-MeX financial incentives in-period (reconciled for each year individually) to strengthen the incentive for companies to improve their customers’ overall experience more quickly. The annual financial incentives are capped at 2.4% of residential retail revenues for high and low performance payments (12% of residential revenues divided by five years). We are putting a cap and collar on C-MeX because it is an incentive mechanism we design and we consider customers and companies need some certainty over the potential scale of payments in advance.

Retailers

We will continue to monitor the development of the business retail market and work with Market Operator Services Limited (MOSL), retailers and wholesalers to ensure that wholesalers are encouraged to deliver good-quality customer service to retailers. Within the retail market review, we will continue to explore if and how wholesalers are incentivised in relation to the services they provide to retailers. If it is appropriate to introduce an incentive mechanism we expect to do this in the draft determinations.

C-MeX for business customers served by companies whose areas are wholly or mainly in Wales

In Wales, most business customers cannot choose their retail provider. We consulted on a C-MeX for business customers who are served by companies whose areas are wholly or mainly in Wales and who cannot choose their supplier. Based on the consultation responses and subsequent stakeholder engagement, we have

decided that it would be more appropriate for companies whose areas are wholly or mainly in Wales to use their bespoke performance commitments to commit to providing excellent quality services to their business customers rather than having a C-MeX for this group of business customers. We provide our reasoning for this approach in [appendix 3 \(customer measure of experience and developer services measure of experience\)](#).

4.4.2 The developer services measure of experience (D-MeX)

We have decided that the financial incentive for D-MeX will be based on:

- feedback from a regular qualitative satisfaction survey; and
- a quantitative measure of water company performance against a set of key metrics based on Water UK's existing metrics of service levels for developer services customers.

We have decided to rank company performance annually on D-MeX, and apply financial performance payments of up to 2.5% of annual developer services revenue, and performance penalties of up to 5% of annual developer services revenue for the best and worst performers, respectively. We will apply these performance payments and penalties annually, in keeping with the approach for the other common performance commitments.

We will continue to work with the D-MeX working group of developer services customers, water companies and other stakeholders to further explore issues including:

- how best to design and implement the survey(s);
- the precise metrics to be used for the quantitative measure;
- whether different approaches are needed for different types of developer services customers;
- the weightings to be applied to the two elements of the financial incentive;
- the design of the D-MeX pilot in 2018-19; and
- how to adapt D-MeX, if necessary, based on the results of the D-MeX pilot.

4.5 Initial assessment of business plans – outcomes

We will test outcomes, performance commitments, ODIs and the focus on service performance in our initial assessment of business plans as follows.

Initial assessment test on delivering outcomes for customers

1. How appropriate, well-evidenced and stretching are the company's proposed performance commitments and service levels?
2. How appropriate and well-evidenced is the company's package of outcome delivery incentives?
3. How appropriate is the company's focus on service performance in its risk/return package?

Our assessment will focus on the following:

- the link between a company's proposed bespoke performance commitments and its customer engagement;
- the evidence and justification for a company's performance commitment levels for its common and bespoke performance commitments;
- the evidence and justification for a company's ODIs;
- the proposed use of enhanced outperformance and underperformance payments, as well as how the company will share information about how it achieved the performance improvement that earned it an enhanced outperformance payment;
- a company's plans for reporting and assurance in relation to its performance commitments and ODIs;
- the overall acceptability of the package of performance commitments and ODIs to customers; and
- the CCG's independent report.

As explained in chapter 13 (securing confidence and assurance), the Board assurance statement should cover:

- assurance that the business plan will deliver – and that the Board will monitor delivery of – its outcomes and performance commitments;
- assurance that the company's proposed outcomes, performance commitments and outcome delivery incentives (ODIs) reflect customer preferences and are stretching; and
- assurance that the company's proposed approach to reporting on its performance commitments, ODIs and projections of outcomes is robust.

5. Securing long-term resilience

Key themes of PR19

Resilience is one of the key themes of PR19. Our final methodology includes a package of measures designed to drive long-term resilience.

Our approach to resilience supports the other key themes of PR19:

- Resilience is a key element of **customer service** and our approach to resilience emphasises that customers should be at the heart of resilience proposals.
- Our approach emphasises that companies should consider the full range of resilience management options to provide the best long-term value for money for customers, helping to ensure **affordable** bills now and in the long term.
- Finally, our approach encourages companies to consider **innovative** approaches to resilience.

Resilience

Resilience is the ability to cope with, and recover from, disruption and anticipate trends and variability, in order to maintain services for people and protect the natural environment now and in the future.

Our PR19 final methodology will drive the overall long-term resilience of water networks. This is supported by our resilience in the round approach. Resilience in the round is achieved by having strong operational resilience as well as strong corporate and financial resilience. This means having robust infrastructure and services underpinned by the right skills, leadership and systems. For example, a company needs strong board leadership and governance, and an appropriate capital structure, to ensure it delivers an excellent service and plans effectively for long-term challenges.

We have developed seven resilience principles, which set out our expectations for resilience planning in PR19 business plans.

Our outcomes framework will play an important role in ensuring operational resilience by ensuring that companies address current and future resilience challenges through a range of common performance commitments, including: day-to-day performance, asset health and forward-looking metrics on resilience to drought and flooding. Companies will be required to provide projections to at least 2035 to provide a long-term resilience focus.

We have set out two specific initial assessment of business plans tests on resilience.

- How well has the company used the best available evidence to objectively assess and prioritise the diverse range of risks and consequences of disruptions to its systems and services, and engaged effectively with customers on its assessment of these risks and consequences?
- How well has the company objectively assessed the full range of mitigation options and selected the solutions that represent the best value for money over the long-term and have support from customers?

Applicability to England and Wales



Our final methodology for securing long-term resilience **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales. The UK and Welsh Governments' strategic policy statements for Ofwat both emphasise the importance of securing long-term resilience of water and wastewater services and the ecosystems that underpin these services.

Responses to our draft methodology proposals

Respondents were broadly positive about our proposals. Key issues raised were:

- we should rebalance our assessment to give more weight to the **natural environment**, and draw more on approaches such as the natural capital approach;
- the need to consider a range of solutions to deliver resilience, including socially and economically optimal approaches to achieve **smart resilience**;
- potential changes to our metrics for **measuring resilience**, to better take account of past investment and good ecological status;
- the need for increased and **systems thinking** and collaboration across company and sector borders; and
- that we should make a clearer distinction between risk management and resilience.

Our consideration of respondents' views

Following consideration of respondents' views, our PR19 final methodology takes the following approach.

- We have amended our resilience principles to make the treatment of the natural environment more explicit and make it clear that companies can use natural capital approaches where appropriate.
- We have added text to make it clear that we expect companies to consider water efficiency and recovery and response as smart resilience options.
- We consider the resilience metrics already adequately reflect the long term and past investment. We have amended the definition of several of the common performance commitments to better reflect resilience such as removing exclusions for extreme weather in the sewer flooding metric (see appendix 2).
- We have added text to make explicit reference to the need for companies to adopt systems thinking and consider the interdependencies between different parts of their business and the wider system in which these businesses operate.
- We have added text to make it clear that resilience is broader than risk management.

5.1 Introduction

This chapter sets out our final methodology for PR19 with respect to securing long-term resilience. This PR19 final methodology has been developed following full consideration of views expressed by respondents to our [draft methodology proposals](#), published in July of this year.

Resilience is also covered by other chapters in this document. Chapter 4 (delivering outcomes for customers) sets out how the outcomes framework will enable and help to hold companies to account to improve their operational resilience through performance commitments and outcome delivery incentives. Chapter 11 (aligning risk and return: financeability) sets out measures relating to financeability which is one factor we consider in relation to financial resilience and chapter 13 (securing confidence and assurance) contains measures relating to corporate resilience.

The remainder of this chapter is structured as follows:

- why resilience is important (section 5.2);
- how we see resilience (section 5.3);
- resilience planning principles (section 5.4); and
- initial assessment of business plans – resilience (section 5.5).

In [appendix 4 \(resilience\)](#), we set out our overall approach to resilience, our consideration of the responses to our draft methodology proposals and an explanation of our reasons and any changes to the final methodology and our progress against the recommendations of the sector ‘task and finish’ group.

Section 4 of [appendix 15](#) outlines respondents’ views to the two questions we posed on resilience in our draft methodology proposals. In appendix 15, we provide our response to the issues raised by respondents.

5.2 Why resilience is important

Resilience is important to current and future customers. The operational, financial and corporate resilience of companies affect all customers. Customers expect continuous water and wastewater services, and the impact of disruptions on

customers can be significant.²⁵ Disruptions to clean and wastewater services may also have negative effects on wider society, for example, through the impact on the environment, on the economy and on communities. It is therefore vital that companies provide resilient services for customers today and over the long term.

Companies need to address the challenges to resilience from climate change and population growth, such as pressures on surface water drainage and drought resilience. There is significant potential to address these challenges using new and innovative approaches and working with customers. Companies need to consider not only steps that improve their ability to withstand those pressures, but also steps that improve their response to and recovery from any resulting service disruption.

Companies are already taking steps to address these external challenges, but more needs to be done. For example, a Water UK led study, published in 2016, acknowledged the significant and growing risk of drought, looking ahead to 2040 and 2065. It suggested that extensive measures to manage demand and enhance supplies of water are needed to address the implications of drought risk.²⁶

The Water Act 2014 added an additional duty for Ofwat to further the resilience objective, alongside our other duties²⁷. This focuses on the long-term resilience of water supply and sewerage systems as regards environmental pressures, population growth and changes in consumer behaviour to meet the needs of consumers in the long term. This includes appropriate long-term planning and investment and using a range of measures to manage water resources in sustainable ways, increase water efficiency and reduce demand.

The UK Government's strategic policy statement sets a priority for Ofwat to challenge the water sector to plan, invest and operate to meet the needs of current and future customers, in a way which offers best value for money in the long term. It then sets Ofwat objectives for resilience concerning water supply, wastewater, the full range of potential hazards and threats and the resilience of ecosystems.

The Welsh Government strategic policy statement sets a resilience objective for short-term and long-term challenges, including:

²⁵ See, for example, [Consultation on the outcomes framework for PR19](#), Ofwat, November 2016, page 15.

²⁶ ['Water resources long-term planning framework \(2015-2065\)'](#), July 2016, Water UK

²⁷ s2(2A)(e) and s2(2DA) Water Industry Act 1991.

- companies ensuring their assets and services are resilient against, for example, natural hazards, asset failure and other threats including cyber security; and
- Ofwat encouraging and incentivising companies to maintain and enhance the resilience of ecosystems.

Alongside resilience considerations, both statements from the English and Welsh Governments also emphasise the importance of affordability considerations.

Resilience has always been part of our regulation of the water sector. Water companies have a duty to maintain a water supply system and provide a wastewater system, so that they continue to meet their statutory security of supply and service obligations.²⁸ These are legal obligations, which water companies must fulfil and their business plans at this and previous price reviews must take account of these obligations. We allow companies to recover efficient costs through regulated revenues. But if a company subsequently finds itself having to spend more than this in order to fulfil these obligations, the company must do that with additional funds from investors as necessary.

Further aspects of how we conduct our price reviews encourage resilience. The regulatory framework provides long-term certainty for company decision making and investment. The 2014 price review (PR14) incentivised better customer engagement and a focus on outcomes, including outcomes which related to resilience and asset health. We also required company Boards to provide assurance that companies are meeting their statutory and licence obligations.

Following PR14, we established an independent Task and Finish Group to consider what resilience means for the water sector.²⁹ We set out our response to the recommendations of the Task and Finish Group in '[Towards resilience](#)', published in December 2015, and subsequently consulted on how to better incentivise resilience through our outcomes framework. Appendix 4 sets out our progress against the Task and Finish Group recommendations.

We have recently undertaken a targeted review of asset health looking at how water and wastewater companies in England and Wales are approaching the measurement and management of asset health and how this contributes to their wider approach to resilience. The study highlights several issues of concern to Ofwat

²⁸ Section 37 and 94 [Water Industry Act 1991](#).

²⁹ Ofwat, '[Resilience task and finish group](#)', 2015

for companies and their Boards to focus on³⁰ including: engaging effectively with customers; driving greater innovation; ensuring a long-term mind-set; and developing a stronger understanding of how asset health affects service, especially for high impact, low probability events. We expect companies to have identified and, if necessary, addressed any existing issues in the current price control period. Their business plans for PR19 should not seek funding from customers to address any shortcomings of the past.

Our approach, as set out in this chapter, now embeds the UK Government's and Welsh Government's strategic policy statements. We want companies to carefully identify risks to their resilience and consider a full range of measures to manage these risks over the long term. Companies should engage and work with customers on their approach to resilience, and be innovative in how they manage and address risks to resilience. We want companies to focus on the long term, as well as the next five years. This will help secure better value for customers. Companies should also exploit opportunities to collaborate with partners and other water companies, and to better integrate water and wastewater resources. Further details of good practice are set out in our '[resilience in the round](#)' document, published in September.

5.3 How we see resilience

The 'Task and Finish Group' defined resilience as: the ability to cope with, and recover from, disruption, and anticipate trends and variability in order to maintain services for people and protect the natural environment, now and in the future.

The Cabinet Office [stated](#) that the resilience of critical infrastructure and essential services could be secured through four key strategic components, also known as the 4R's.

- Resistance: preventing damage or disruption by providing the strength or protection to resist the hazard or its primary impact.
- Reliability: ensuring that the infrastructure components are inherently designed to operate under a range of conditions, and hence mitigate damage or loss from an event.
- Redundancy: this is concerned with the design and capacity of the network or system. The availability of backup installations or spare capacity will enable

³⁰ <https://www.ofwat.gov.uk/publication-targeted-review-asset-health/>

operations to be switched or diverted to alternative parts of the network in the event of disruptions to ensure continuity of services.

- Response and recovery: enabling a fast and effective response to, and recovery from, disruptive events. The effectiveness of this element is determined by the thoroughness of efforts to plan, prepare and exercise in advance of events.

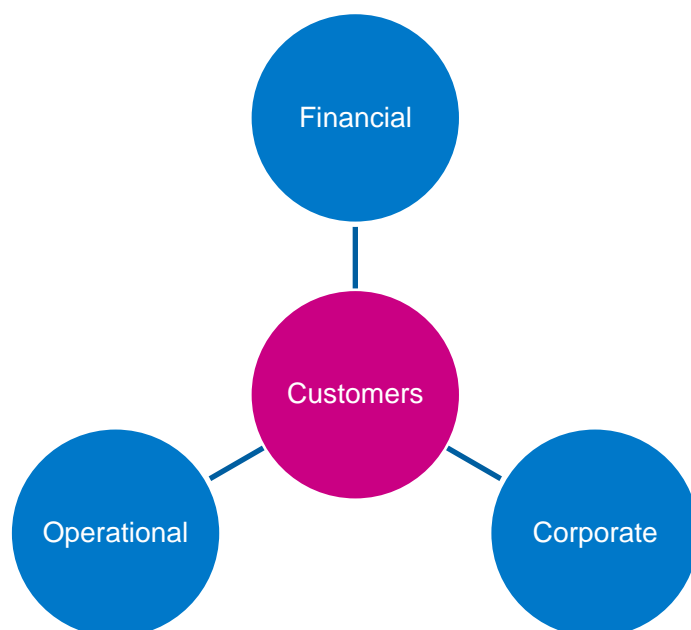
These components of resilience need to be considered across all aspects of an organisation. This means having the right skills, the right leadership and the right systems, as well as having a robust infrastructure. We term this 'resilience in the round'. It includes, but is not limited to, the following:

- operational resilience - the ability of an organisation's infrastructure, and the skills to run that infrastructure, to avoid, cope with and recover from disruption in its performance;
- financial resilience - the extent to which an organisation's financial arrangements enable it to avoid, cope with and recover from disruption; and
- corporate resilience - the ability of an organisation's governance, accountability and assurance processes to help avoid, cope with and recover from disruption and to anticipate trends and variability in all aspects of risk to delivery of services.

These factors are interdependent, so effective resilience requires companies to consider their systems as a whole, taking into account the relationship between different aspects of their business (as well as external factors). The delivery of the services on which customers depend is not only a function of operational resilience. For example, companies will not be able to invest for the long term, if they have insufficient financial resilience and may be tempted to cut corners. Similarly, companies will not be able to make effective decisions about the management of risk to services if they do not have the information, systems, process, governance and capability to enable them to do so. Each element of resilience, be that operational, financial or corporate resilience, will reinforce overall resilience. It will not be possible for companies to have good operational resilience, if they do not have good corporate and financial resilience.

Effective resilience also means not only considering the next five-year period, but looking well beyond that and considering resilience in the long term. If delivery of reliable services today increases the risk to service delivery in the future, the company is not securing long-term resilience.

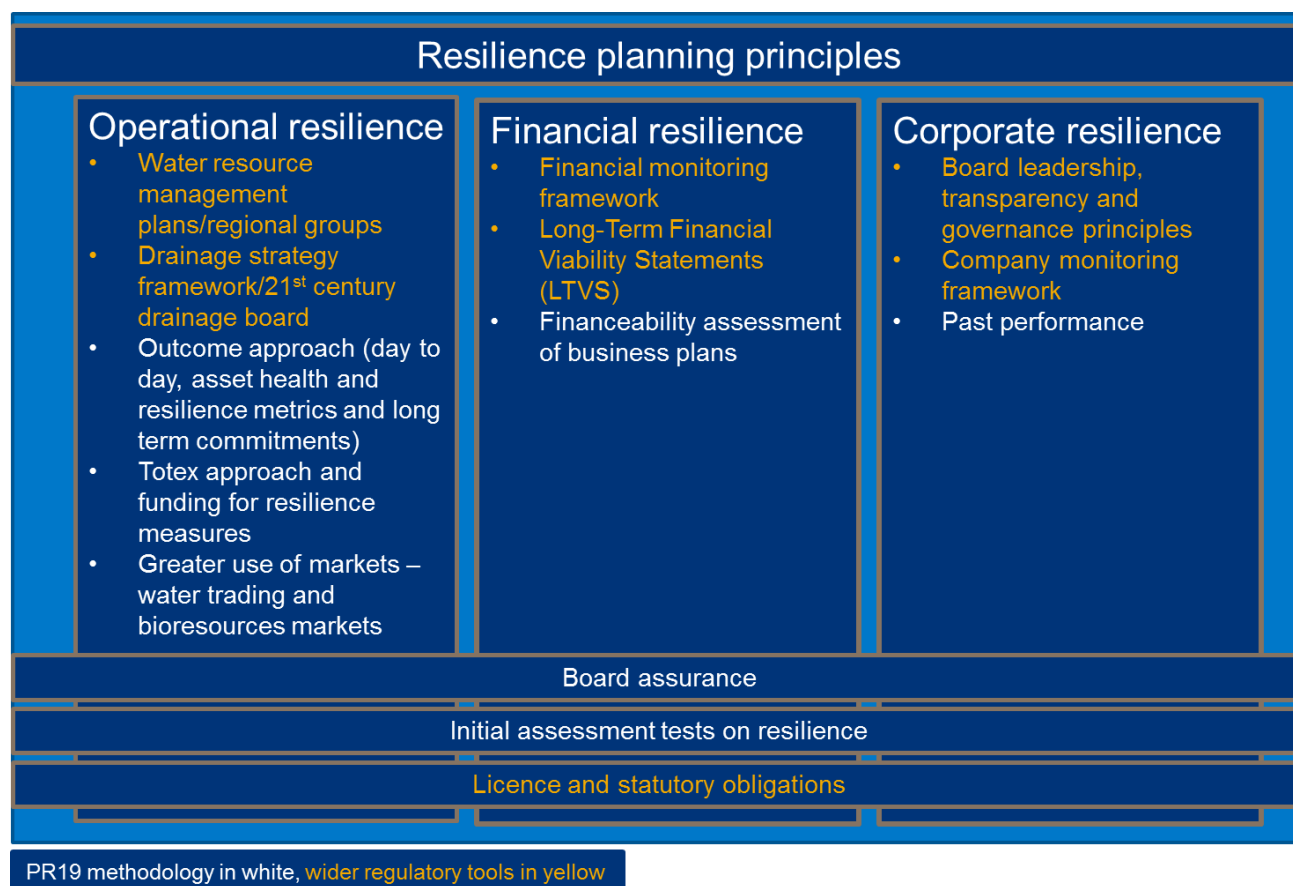
Figure 5.1 Resilience in the round



5.4 Our overall approach to resilience

Our PR19 approach, in combination with wider regulatory tools, provide a comprehensive and strongly incentivised approach to manage resilience in the round, including operational, financial and corporate resilience. It should be emphasised that these areas overlap and feed into each other.

Figure 5.2 Illustration of our overall approach to resilience



The following sections set out our resilience planning principles and our initial assessment of business plan tests. These build on, and link to, other parts of the PR19 methodology and the wider regulatory tools. Key elements of the PR19 methodology for resilience are set out below.

- Operational resilience: our outcomes framework, with its performance commitments and financial and reputational incentives, encourages companies' management teams to identify and mitigate risks to operational resilience. The framework ensures that companies address current and future resilience challenges through the following.
 - Day-to-day performance commitments, such as an expectation of achieving forward-looking upper quartile performance for supply interruptions, sewer flooding and pollution incidents for all companies. We have set a challenge to companies of a 15% reduction in leakage over five years.
 - Asset health performance commitments: challenging companies on mains bursts, unplanned outage, sewer collapses and treatment works compliance.

- Risk-based resilience metrics: introducing new forward-looking resilience common performance commitments for resilience to drought and flooding.
- Longer-term performance commitments and planning: we are requiring companies to provide projections for their performance commitments beyond the price control period out to at least 2035 to support a longer-term focus.
- Financial resilience: We expect companies to provide evidence of their financial resilience. In making this assessment, we expect companies to take into account the overall assessment of the risks that the company faces. This includes risks relating to their actual capital structure and financing arrangements as well as the impact of potential cost shocks arising from, for example, underperformance against their plans or from additional financial liabilities which are not funded by customers. In confirming that they are financially resilient, companies will need to be open and transparent about their ownership and financial structures. And we are asking companies to provide specific Board assurance on their notional and actual financeability (chapter 11)
- Corporate resilience: we expect companies' plans to demonstrate that they have the necessary capability, systems and processes. Alongside operational and financial resilience, this is essential for an effective plan which will deliver resilience.

We emphasise the importance of companies taking an integrated systems approach to these elements and assessing each of the above in the round. Appendix 4 (resilience) provides further details of our overall approach to resilience and the links to the PR19 methodology and wider regulatory tools.

5.5 Resilience planning principles

We have developed a set of principles, which clarify our view on good practice for resilience planning in PR19 business plans. These build on the principles proposed in our outcomes consultation (included in appendix 4).³¹

We have updated the resilience principles to reflect the consultation responses. In particular, the updated principles clarify that:

- the natural environment is at the core of water and wastewater service provision;

³¹ [Consultation on the outcomes framework for PR19](#) consultation on the outcomes framework for PR19, Ofwat, November 2016

- aspirations of levels of resilience should be informed by customer expectations; and
- companies should consider smart solutions, such as water efficiency.

Our final resilience planning principles are set out below.

Resilience planning principles

Principle 1: Considering resilience in the round for the long term

The assessment of resilience should show a systematic and integrated understanding of service and systems risk across the entire business. Companies should assess resilience of their systems, and the services they provide, in the round. They should show a clear understanding of the interdependencies across operational, financial and corporate aspects of their business. This assessment should consider short, medium and long-term risks.

Principle 2: A naturally resilient water sector

Resilient ecosystems and biodiversity underpin many of the key services provided by companies. Promoting ecosystem resilience and biodiversity is a key part of the decision-making process for ensuring resilient services (where this is consistent with companies' role as providers of water and wastewater services).

Principle 3: Customer engagement

Aspirations on levels of resilience should be informed by engagement with customers, to help companies understand their customers' expectations on levels of service. This will also help companies understand their customers' appetite for risk and how customer behaviour, in matters such as water efficiency, might influence approaches to resilience.

Principle 4: Broad consideration of intervention options

Companies' plans to manage resilience should consider a full set of mitigating actions and interventions that consider all of the components of resilience, including response and recovery. They should also explicitly consider options that involve cooperation and collaboration with other companies at a regional or even national level (where they offer best value). For example, transfers and cross border planning.

Principle 5: Delivering best value solutions for customers

Companies' plans to manage resilience should consider the best value solutions for customers in the long term, which may involve long-run solutions.

Principle 6: Outcomes and customer-focused approach

Companies' plans to manage resilience should inform the outcomes they propose. The proposed outcomes on resilience, and the associated stretching performance commitments they set, should also take into account future risks and customer preferences.

Principle 7: Board assurance and sign-off

Companies' Boards will need to assure us that companies' business plans have been informed by:

- a robust and systematic assessment of the resilience of the company's systems and services;
- customer views on managing resilience; and
- comprehensive and objective assessment of interventions to manage resilience in customers' long-term interests.

5.6 Initial assessment of business plans – resilience

Our initial assessment of business plans will look specifically at companies' operational, financial and corporate resilience. In line with the framework set out in chapter 14 (the initial assessment of business plans: securing high quality, ambition and innovation), companies' resilience will contribute to our decision on the categorisation of companies' plans.

We will consider companies' approach to resilience planning by applying the following two tests. We have clarified the first test to be explicit that we will be considering all risks. This includes risks to operational, financial and corporate resilience. We have also revised the text describing how we apply the tests to provide more clarity over our expectations, for example, on the consideration of the environment.

Initial assessment tests on securing long-term resilience

1. How well has the company used the best available evidence to objectively assess and prioritise the diverse range of risks and consequences of disruptions to its systems and services, and engaged effectively with customers on its assessment of these risks and consequences?

2. How well has the company objectively assessed the full range of mitigation options and selected the solutions that represent the best value for money over the long term, and have support from customers?

When assessing how well companies meet these tests, we will consider the extent to which companies follow the resilience planning principles set out above. We explain how, below. We also highlight key issues that we will consider when assessing against the test. Our '[resilience in the round](#)' document provides examples of good practice around the delivery of resilience.

5.7 Initial assessment of business plans test 1: evidence to assess and prioritise the range of risks to resilience

In line with principle 1, we expect companies to look at resilience in the round, including the risks to operational, financial and corporate resilience. Their appraisals should include a robust, objective, comprehensive and quantitative assessment of the principal risks they see to the resilience and delivery of the services on which their customers depend, over the next five years and over the longer term. This must include the consideration of possible failure points across the organisation (and through the supply chain), covering operational, corporate and financial resilience. This should include:

- the risks of a failure occurring in each area;
- the impact on customers if that risk transpires; and
- the extent to which this risk has already been mitigated.

These appraisals should be wide-ranging, covering risks associated with infrastructure and assets to those associated with systems, processes and people. They should consider the full range of potential hazards and threats that could impact on service provision, including natural hazards like flooding of water and wastewater infrastructure, burst water mains or other infrastructure failures or physical or cyber-attacks. These appraisals should also consider longer-term risks created by factors, such as population growth and climate change, as well as social, economic and environmental challenges. It should also consider threats to delivery of its plans and how its corporate and financial arrangements ensure that it will cope with these.

The appraisal of the principal risks will require the company to look at the challenges holistically. We have drawn out some examples to illustrate the need to look at issues in the round.

- When looking at asset health and, in particular as highlighted by the targeted review of asset health, high impact, low probability events, companies need to consider how the health of their assets impacts services and how capital maintenance impacts asset health.
- Companies should also explicitly consider their relationships with suppliers in the context of resilience. This, for example, includes considering requirements for assurance before new assets are taken into service. It also includes ensuring that relationships through the supply chain support, and do not undermine, corporate resilience by ensuring clear accountabilities, good governance and the flow of information between supply chain partners and the company, including its Board, to enable effective and timely decision making.
- When considering financial resilience in their business plans, companies have to consider how their financial arrangements will ensure they can deliver resilient services even in the face of challenges. Building on the long-term viability statements that companies are required to include in their annual performance reports, we expect companies to explain how the assumptions that underpin their plan relate to the forward-looking assumptions that underpin their long-term viability statements. Companies should set out the reasons for any changes in the assumptions made or scenarios considered by their Boards in reaching their conclusions on financial resilience.

We encourage companies to publish the results of their resilience assessments in their business plans to provide greater transparency to stakeholders. We will consider the extent to which the appraisals are supported by global best practice techniques, understand and appraise risk and uncertainty and the extent to which there is Board and third-party assurance.

In line with principle 2, the environment underpins so much of the services water companies deliver. The ‘water industry strategic environmental requirements’ (WISER) from the Environment Agency and Natural England, and the PR19 ‘expectations and obligations’ from Natural Resources Wales provide a framework for protecting and enhancing the environment. Companies will need to deliver environmental schemes where they have a legal duty to do so. And where, consistent with the company’s role as providers of water and wastewater services, it is the best value way of delivering an outcome in line with customers’ preferences and priorities and is affordable. Taking account of the impact on ecosystem resilience and biodiversity will be particularly important where companies’ operations depend on ecosystems and the natural environment, for example, abstraction, treatment and discharges.

Companies should also have regard to the wider costs and benefits of the resilience of their services to the economy and society. The natural capital approach provides

an opportunity for the value of ecosystems to be better incorporated within the evaluation of resilience and, where appropriate, could be incorporated into the assessment of the impact of company activities.

As highlighted in our 'resilience in the round' document, it will be important for companies to take a systems-based approach to their assessment of pressures and risks. The interconnectivity across systems, and the knock-on impacts from one system to another, will likely form an essential component of a company's assessment of prioritised risks to resilience of services. Resilience is different from simply managing risk exposure. It requires a much broader range of options, often systems based ones, which not only reduce risk, but enhance the ability to cope with, and recover from, pressures and shocks.

In assessing risks, we expect companies to take a long-term approach in the context of wider water and wastewater planning. Planning for clean water services, including statutory water resource management plans and drought plans, has a well-developed framework. This enables companies to assess pressures and risks objectively and effectively engage with customers. We also expect companies to take account of regional work, such as Water Resources South East and Water Resources East. This can provide essential assessments for resource sharing and collaborative approaches. Where appropriate, companies should consider a reduction in the long-term risk to water supply resilience from drought and other factors.

For wastewater, we expect companies to base their assessment of risks to resilience on the principles of the [drainage strategy framework](#). The drainage strategy framework should form the basis of wastewater planning in the short to long term. We also expect companies to take a risk based approach to wastewater planning and go beyond the drainage strategy framework. For example, using outputs from the 21st Century Drainage Board, where appropriate. We expect companies to take a system-wide approach to understanding, planning and managing risks to the delivery of wastewater services. As set out in the drainage strategy framework, this may well see companies using partnership working with other organisations such as councils, canals and rivers trusts, developers, the Environment Agency and Natural Resources Wales, who have responsibility for different aspects of wastewater, drainage and flooding.

In line with principle 3, we will assess the extent to which customers are at the heart of the process, throughout. This includes the extent to which accurate and high-quality comparative data has informed customers' choices and how these choices have been taken into account in companies' plans. Our customer engagement policy statement for PR19 sets out the principles of good customer engagement. This

includes the principle that companies should engage with their customers on long-term issues, such as resilience. It also said that companies will need to work with customers to co-create and co-deliver some aspects of resilience. We consider these issues in more detail in chapter 2 (engaging customers).

5.8 Initial assessment of business plans test 2: mitigating and managing risk to provide the best value for money over the long term

We expect companies to ensure long-term resilience in the round. That is, including operational resilience, financial resilience and corporate resilience. We will assess whether companies have developed a business plan which will mitigate and manage risks to resilience in the round in a way that delivers best value now and in the long term.

In line with principles 4 and 5, we expect companies to provide clear evidence that they have objectively considered the full range of resilience management options, with a view to providing the best value for customers over the long term. This includes:

- **infrastructure** - such as treatment, network, storage and transfers;
- **soft infrastructure** - such as ecoservices markets and catchment schemes;
- **behaviours** - for example from improving customer use of water; and
- **response and recovery** – for example from improving contingency planning.

We also expect companies to take advantage of and work with natural processes, where appropriate, such as sustainable urban drainage systems (SuDs) and catchment management approaches, which can provide long-term, sustainable and best-value options in many situations. A wider variety of such approaches is now well established and so we expect companies' plans to build on the evidence that is available regarding when and how these approaches work best.

Long-term, best value solutions are likely require a range of options, operating together, for example supply side solutions such as additional supply or leakage reduction, and demand side options such as reducing water use. Our 'resilience in the round' document sets out good practice with regards to smart resilience interventions and the essential role of innovation. It will be important that proposed mitigations have the ability to adapt and flex over time and take account of the option value of learning further information about risks and challenges over time. Companies will also need to demonstrate how they have ensured that they are not

prioritising short-term fixes over a long-term approach because of any constraints imposed by their own choices of financial arrangements, for example.

We will take account of companies' approach to collaboration in their business plans. We expect companies to work together with other companies and stakeholders (such as local councils, other utilities and highways agencies) to identify the most efficient and cost effective resilience solutions through groups like Water Resources South East, Water Resources East and the 21st Century Drainage Board. Companies should consider whether, and how, resilience risks could be best managed across company boundaries, at a regional level, or even national level. For example, through public campaigns to promote water conservation and lower per capita consumption.

We also expect companies to work more effectively to integrate water resources and drainage management. We see scope for considerable innovation in respect of integrated water resource planning. Such approaches may well also involve collaboration across company boundaries, or between water companies and other organisations such as councils and developers.

In order to be corporately resilient, companies must ensure that they have the capability within their workforce to provide the services their customers expect not only today but over the long term, in the face of potentially significant changes in how they do this and in the wider employment landscape. A focus on long-term resilience should therefore also include companies identifying and addressing possible skills gaps in the future. The Energy and Utilities Skills Partnership 'workplace renewal and skills strategy' (2017), which includes the water and wastewater sector, estimates that a third of vacancies are "hard to fill". It also suggests that over 220,000 new recruits will be required by 2027. Companies therefore need to ensure that they have plans in place to secure access to the workforce they need, including transferring knowledge and increasing diversity.

We expect companies to work effectively across sectors to address issues with resilience. This includes the recommendations of the [national flooding resilience review](#) that utilities work together with Government to improve mechanisms for cooperation and information sharing, identify interdependences between different sectors and in an emergency, make the link between different industry sectors and the relevant local resilience forums and central Government.

In line with principles 3 and 6, when mitigating risks, it is critical that companies actively involve their customers. Customer action may well prove a cost-effective way of managing risk to service delivery, so companies should consider how best to work with customers to secure their participation in co-creation and co-delivery of

resilience solutions. It is also crucial that companies work with customers to understand the impact of service disruption, so that this can best inform the steps they take on response and recovery. And, overall, it is critical that companies' work on resilience is aimed at delivering outcomes in line with customers' preferences and priorities, at a price that is affordable for all.

In line with principle 6, company management and mitigation of operational risks should be reflected in the stretching outcome performance commitments they set. We expect to see strong links between company mitigation and management of operational resilience risks and their outcome performance commitments. These commitments should also reflect future risks and customer preferences.

When companies put forward their plans for resilience, they should also bear in mind that previous price controls funded firms for the efficient cost of meeting their legal obligations and maintaining serviceable assets. Where companies' actual costs of meeting their obligations exceeded their funding, investors bore this risk and should have ensured the company was funded to deliver its obligations. In PR19 we only expect to allow companies to recover from their customers the efficient costs of activities which are additional to the investment they should have undertaken in previous periods, so that customers are not paying for the same activity twice.

Where the need for investment arises because of historical issues in a company's approach to resilience, we will also consider the extent to which those issues relate to evolution in best practice or simply result from companies not having done what they should have done in earlier periods. We will also consider whether companies have provided credible assurance that processes, structures and governance would avoid similar situations reoccurring in future.

6. Targeted controls, markets and innovation: wholesale controls

Key themes of PR19

Our approach to wholesale controls supports the key themes of PR19.

Our methodology for PR19 will promote long-term **resilience** and help secure **affordable** bills and great **customer service** through separate controls.

Separate controls enable targeted regulation of monopolistic activities, which helps companies to identify and deliver efficiency gains and investment needs to support a more resilient service. This ensures customers are protected and get secure, sustainable, and affordable water and wastewater services.

Separate controls also promote wholesale markets, by revealing improved information that will incentivise companies to **deliver better value for customers, the environment and wider society**.

Promoting wholesale markets will encourage greater **innovation, resilience** and efficiency across the sector as companies make better use of water resources and bioresources and improve connectivity between companies.

Overall approach to wholesale revenue controls

We will set the following wholesale revenue controls at PR19:

- network plus water;
- network plus wastewater;
- water resources;
- bioresources; and
- Thames Water's Tideway Tunnel activities (TTT).

Network plus controls will take the form of total revenue controls which:

- include an adjustment mechanism for developer services;
- include a revenue forecasting incentive with in-period adjustment; and
- support a robust long-term strategy for drainage and wastewater planning, which meets customer and environmental needs.

Water resources controls will take the form of total revenue controls which include:

- a revenue forecasting incentive with in-period adjustments;
- water trading incentives;
- additional mechanisms for English companies to facilitate the bilateral market (in-period adjustment and reporting requirements);
- long-term risk-sharing arrangements for large investment in new water resources; and
- a water resources bid assessment framework, to create more clarity and confidence for third party bidders to supply water resources, leakage or demand management services.

Bioresources controls will:

- take the form of average revenue controls (volume: tonnes of dry solids) with an adjustment to protect customers and companies from over or under-recovery of fixed costs;
- include in-period reconciliation for collected/allowed revenue variance; and
- include a sludge volume forecasting accuracy incentive.

Applicability to England and Wales

Our final methodology for wholesale controls **applies to both** companies whose areas are wholly or mainly in England and those whose areas are wholly or mainly in Wales.

However, our proposals for additional mechanisms to facilitate the bilateral market will **apply only** to companies whose areas are wholly or mainly in England.



Responses to our draft methodology proposals

There was strong support for our overall approach to setting wholesale controls. For **network plus**, there was general support for our proposals, but some respondents questioned the inclusion of developer services in the controls. In response to the methodology, several stakeholders said that companies should show that they have designed and agreed **integrated drainage solutions** as part of their plan. For **water resources**, there was support for our approach, but mixed views on our proposals for **securing legitimacy around large investment in new water resources** and **data requirements for access pricing**.

For **bioresources**, comments about certain aspects were mixed but there was general support for the bioresources control. Some respondents were concerned that the proposals added complexity and introduced volume risk. While all companies supported the need to protect customers, many raised concerns about our proposal for the **revenue forecasting incentive**; namely, our asymmetric approach. They raised issues of forecasting inaccuracy that may be due to areas outside management control. Others commented on aspects of the **allowed average revenue**.

Our consideration of respondents' views

For **network plus**, we will continue to include developer services within the scope of the network plus revenue controls, as proposed in our draft methodology proposals. We also agree that companies need to show evidence of how they are implementing **integrated drainage solutions**.

For **water resources**, we have clarified our policy intent for the **long-term risk sharing arrangements for large investment in new water resources** and **revised our access pricing reporting requirements**.

For **bioresources**, we have refined our approach by formulating a **modified average revenue control** which more closely aligns the incremental changes in revenues to the incremental changes in costs, rather than average costs. This will protect customers by removing the incentives for companies to under-forecast volumes. It also addresses concerns raised by companies that significant over-forecasting would result in an under-recovery of fixed costs under our previous proposals. Our revised approach ensures that incumbents bear an appropriate level of volume risk. We will provide some protection for companies that see step changes in volumes due to improving measurement. The sludge quantities and the forecasting incentive do not account for traded volumes – neither exporting, nor importing sludge or other organic material. Companies will need to explain their intended approaches to trading in their business plans to provide context to their total expenditure (totex) requirements for bioresources over the period 2020-25.

6.1 Introduction

This chapter sets out our final methodology for PR19 with respect to the wholesale controls. This PR19 final methodology has been determined following full consideration of views expressed by respondents to our [draft methodology proposals](#) published in July of this year.

The remainder of this chapter is structured as follows:

- background to setting wholesale revenue controls (section 6.2);
- network plus water and wastewater (section 6.3);
- water resources (section 6.4);
- bioresources (section 6.5);
- additional wholesale controls: Thames Tideway Tunnel (TTT) (section 6.6); and
- initial assessment of business plans – wholesale (section 6.7).

Appendices 4 to 8 inclusive are referenced within the relevant parts of this section.

The appendices set out the background, including full details of our proposals as they appeared in the draft methodology, the responses to our draft methodology proposals, our consideration of those responses and an explanation of any changes to the final methodology.

Section 5 of [appendix 15](#) outlines respondents' views to the five questions we posed on wholesale controls in our draft methodology proposals. In appendix 15, we provide our response to the issues raised by respondents.

6.2 Background to setting wholesale revenue controls

Wholesale activities account for around 90% of the water and wastewater value chain. Our approach to the price control framework reflects our statutory duties (including our duty to further the resilience objective) and aligns with our strategy, our enduring price control principles, the UK Government's strategic policy statement and the Welsh Government's strategic policy statement.

Our revenue controls remain a key part of the way we regulate to make sure customers are protected and get secure, sustainable and affordable water and wastewater services. They are an important regulatory tool, providing incentives that encourage companies to deliver better value for customers, the environment and wider society.

6.2.1 Targeted regulation of wholesale services

For PR19, we will set separate binding wholesale revenue controls covering the following sets of activities:

- water resources;
- network plus water;
- network plus wastewater; and
- bioresources (sludge treatment, transport, recycling and disposal).

In PR14, we set only two wholesale controls for water and wastewater.

Network plus activities, which represent the majority of the wholesale value chain, will remain monopolies and will continue to be regulated during 2020-25. However, water resources and bioresources have the scope to become more competitive. We have therefore introduced separate binding controls as a targeted and proportionate response to the challenges facing the sector. This will help us to set better targeted incentives, which will support company decision-making. The separate controls help us:

- protect customers, through better targeted regulation; and
- adapt the regulatory framework to create value by: increasing the scope for innovation, efficiency and new ways to promote resilience, through wholesale markets (where appropriate).

We will set total revenue controls for network plus water, network plus wastewater and water resources. For bioresources, we will set a modified average revenue control, to help reveal more information about the volumetric unit costs of delivering bioresources services. Each of the wholesale revenue controls will be set for five years using a 'building block' approach (set out in section 6.3 below).

6.2.2 Promoting wholesale markets

In PR19, we aim to facilitate a greater role for markets in England and, where it aligns with Welsh Government policy, in Wales to encourage greater efficiency and innovation as well as to promote resilience.

Innovation is at the centre of PR19. When we refer to innovation, we not only mean technology, but also companies developing a culture of innovation where every process is geared towards innovation, and customers are engaged as active participants, and companies collaborate within and outside of their sector. Without

innovating, companies will not and cannot deliver enough of what matters to customers and the environment or play a leading part in helping the sector face a range of significant challenges. We will publish a paper alongside the final methodology, '[Driving innovation in water](#)'.

New markets – places where buyers meet sellers – create opportunities for companies to look beyond traditional company boundaries and their own in-house solutions to meet the long-term needs of customers. This can promote choice of wholesale services, which also helps facilitate resilience, as alternative sources of supply are available, if an existing source fails.

Markets can also encourage:

- sharing of existing capability to improve efficiency and maximise the value of existing resources;
- the collaborative and co-ordinated development of new resources, to meet the long-term needs of customers, the environment and wider society; and
- third party involvement in developing innovative approaches and solutions to deliver new services that create value for customers, the environment and wider society.

We consider that the water resources market, in particular, can benefit from significantly more trading. There is also scope for participation from third parties to sell water into the public water supply and, looking further ahead, for third parties in England to sell water directly to water retailers as the retail business market develops in line with changes introduced by the Water Act 2014 (the bilateral market).

In relation to bioresources, evidence shows there is scope for increased optimisation of activities across the companies and greater participation from firms operating in wider waste markets. This will help realise benefits deriving from greater efficiency. For companies in both England and Wales, there may be cross-boundary opportunities which could lead to more efficient operations and lower costs. There are also other organic waste (OOW) facilities that may be able to offer bioresources treatment services to companies in both England and Wales. The realisation of these opportunities could enhance the economic, social and environmental wellbeing of people and communities.

We have introduced market information requirements to increase transparency in [bioresources](#) and [water resources](#). These requirements will enable others to identify opportunities to offer services, if they can provide them at a lower cost and/or a higher quality.

For water resources, we have introduced a requirement for companies to produce a bid assessment framework to give third parties more clarity and confidence that their bids to supply water resources, leakage or demand management services will be assessed fairly, in particular, against the company supplying its own in-house solution. These principles are set out in [appendix 8 \(company bid assessment frameworks – the principles\)](#).

6.3 Network plus water and wastewater

Applicability to England and Wales

Our final methodology for network plus water and wastewater controls **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales.



The network plus water and wastewater controls will apply to the parts of the wholesale water and wastewater businesses that remain, once designated water resources and bioresources activities are excluded. These parts of the water value chain will remain as monopolistic activities during 2020-25. By retaining our incentive-based approach during this period, we can align companies' interests with those of customers and the environment.

We have set the network plus controls using a building block approach to determine the total revenue each company can earn. Figure 6.1, below, illustrates these building blocks, which incorporate:

- returns on, and depreciation of, the RCV;
- an assessment of:
 - efficient totex during the 2020-25 period;
 - funding expenditure to be recovered within the period (determined by the pay as you go (PAYG) ratio); and
 - expenditure added to the RCV and recovered in future periods (through future returns and depreciation); and
- a tax allowance.

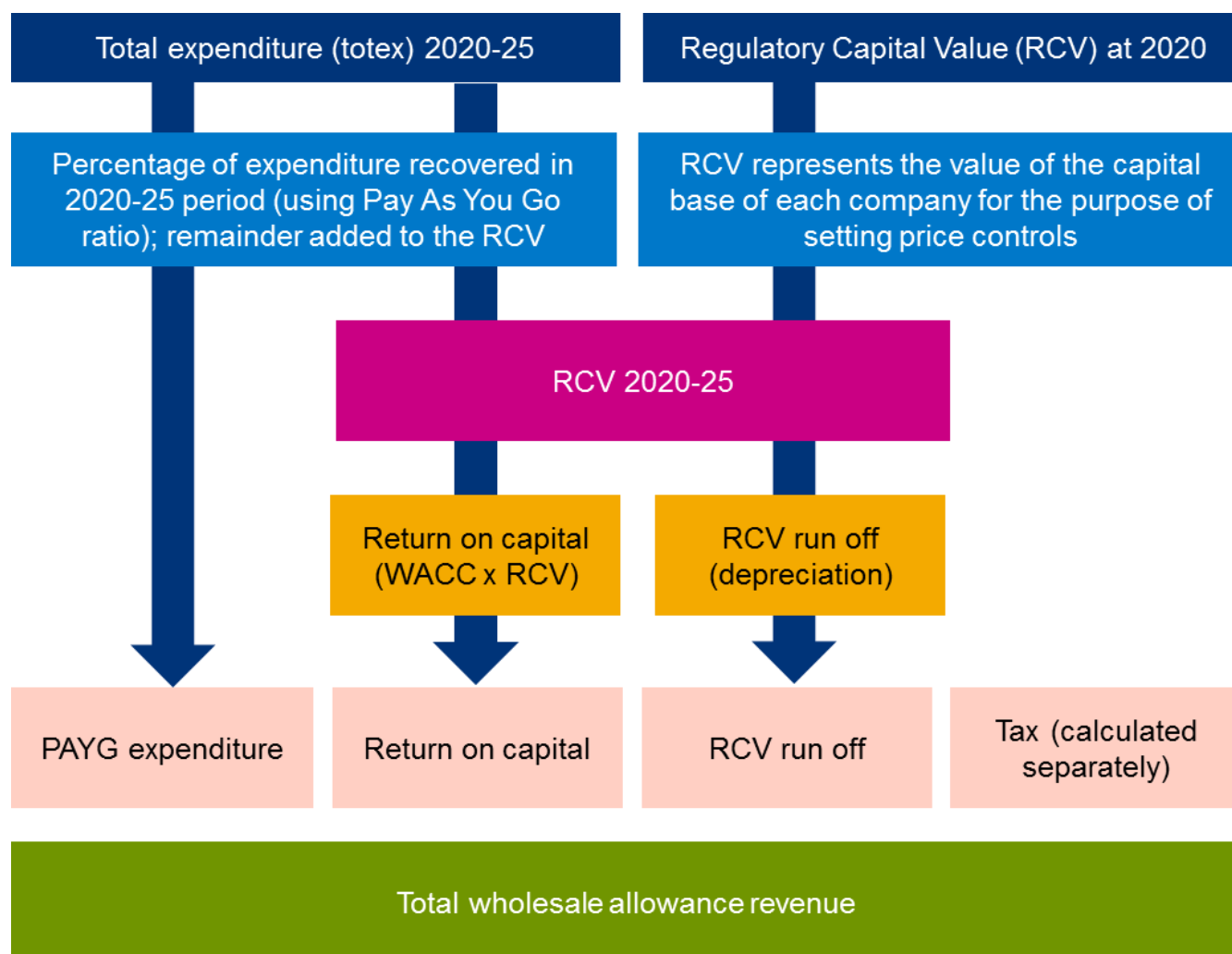
We will extend our protection of past efficiently-incurred investments included in the RCV up to 31 March 2020, to make sure that all elements of the wholesale controls

(including water resources, bioresources and network plus) will have the same type and degree of regulatory protection as at present.

Beyond 31 March 2020, we are not providing a further explicit commitment to protect investments added to the RCV over and above our existing commitments. We expect companies to be able to recover efficiently incurred costs over the 2020-25 period. This approach is consistent across the network plus controls. At PR24, we will consider the design of controls, including any further separation of network plus activities, such as the treatment of raw water, and the role of any further extension of the RCV protection, consistent with our approach at previous price reviews.

You can find our approach to determining each of these building blocks in the following chapters.

- Chapter 9 (securing cost efficiency) sets out our approach to assessing the efficient costs for the wholesale controls.
- Chapter 10 (aligning risk and return) discusses how we will set an appropriate return for the wholesale controls, and our approach to tax.
- Chapter 11 (aligning risk and return: financeability) sets out our approach to recovering costs, which determines the PAYG rates and RCV run-off for the wholesale controls.

Figure 6.1 The building blocks of the wholesale revenue controls

For PR14, we set the wholesale revenue forecasting incentive mechanism to encourage companies to accurately set charges to recover allowed revenues. The application of this across our wholesale controls is discussed in section 6.3.2.

6.3.1 Developer services

For PR14, the wholesale water and wastewater controls included income from developer services provided by the wholesale business (including infrastructure charges and payments for the requisition of new infrastructure) as well as income from wholesale charges. This was to provide flexibility to rebalance connection and infrastructure charges with other wholesale charges in response to possible changes to the UK or Welsh Government charging guidance provided under the provisions of the Water Act 2014.

For PR19, we will continue to include developer services within the scope of the network plus revenue controls, as proposed in our draft methodology proposals.

However for PR19, we will make an adjustment at the end of the price control period for changes in the volume of developer services provided by the company, recognising that the demand for new connections and other developer services is closely linked to the health of the local economy. The UK Government's strategic policy statement emphasises the importance of company planning and delivery keeping pace with housebuilding, making a revenue control less appropriate. Our approach will cover both non-contestable services, which can only be provided by the incumbent and activities which are open to competition, meaning they could be provided by a third party. Some respondents considered that growing competition and the charging rules for new connections provided adequate protection for new connection customers meant some or all of the developer services should be excluded from the network plus price control. Another respondent noted that variation between developer services contributions and those forecast had not caused volatility in wholesale charges, so there was little need for regulatory intervention.

We have considered these responses and acknowledge that competitive markets can enable and encourage greater efficiency, higher quality and innovation in the provision of services and deliver long-term benefits to developers and customers more generally. Nevertheless, where the market is not effective, or where services are not contestable, then targeted price regulation has an important role in protecting the interests of customers and developers.

There are regional variations in the extent and nature of competition for the provision of new connections and other developer services. Therefore, it appears some incumbents may face no or limited competitive constraint from other providers of developer services. There are also variations in the extent and nature of competition across different elements of developer services.

We need to ensure that the interests of customers are adequately protected. Removing developer services from the scope of the controls will dilute regulatory protection for developers, particularly in areas where incumbents face limited competitive pressure, meaning relying on the effectiveness of competition and ex-post regulatory tools (such as licence enforcement and Competition Act powers) to protect their interests. Alternatively, the inclusion of the contestable element of developer services within the scope of the network plus price controls may protect the incumbent from competition risk and may reduce incentives for incumbents to respond to competition or serve developers efficiently. We have sought to balance these considerations.

In light of these considerations, for the 2020-25 period, our approach is to:

- include developer services and connection charges within the scope of the network plus revenue controls;
- introduce a symmetrical volume based revenue correction mechanism to encourage companies to respond to changing demand for developer services (as their revenues will increase, if they serve more developers), and to make sure costs are recovered appropriately from customers and developers – this mechanism will adjust revenues for changes in new connection volumes, based on assumptions about the average revenues of providing developer services for different development sizes and types;
- apply no adjustment for changes in the average cost of delivering developer services to preserve the incentives for cost efficiency in the delivery of these services;
- apply the revenue correction mechanism at the end of the control period, given that developer services are a relatively small proportion of wholesale activities and that the volume of new connections and developer services may shift within the period without affecting overall costs and volumes; and
- encourage companies to forecast the overall volume of new connections and other developer services, within reasonable limits, through the interest rates applied to large volume differences.

We will monitor the market during the price control period and revisit our approach to the treatment of developer services for PR24. To support this, we will require incumbents to report upon their contestable and non-contestable developer services activity, by volume, as part of their annual performance report.

Full details of the background, our proposal in the draft methodology, responses to our draft methodology proposals, our consideration of those responses and an explanation of the changes to our approach are set out in [appendix 7 \(network plus water and wastewater controls\)](#).

6.3.2 Revenue forecasting incentive (water resources and network plus controls)

Companies set charges in advance of the start of the year, based on the best information available, to ensure that their expected revenues from charges are aligned with the revenues allowed under their controls. Nevertheless, revenues they earn from charges may still vary from the revenue allowance.

There are many factors that may cause collected revenues to vary from the limits set by the revenue controls. These include risks that are controllable by companies, such as forecast accuracy, and other factors that management cannot fully control, such as the impact of weather on demand and metering uptake. At a sector level, we estimate that a 2% revenue over-recovery, without correction, would be equivalent to an impact of around 0.9% on RoRE³² in companies' favour. Moreover, large systematic over- or under-recoveries may drive end of period movement in customer bills. It may also mean future customers may pay more or benefit at the expense of current customers.

Specifically, for water resources, network plus water and network plus wastewater controls, which limit total revenues, it is necessary to allow companies to 'true-up' for under or over-recovered revenues in any year of the control period, rather than at the end of the review period, to help smooth variation in customer bills. We want companies to take responsibility for accurately forecasting revenues they will collect, to align their interests with those of customers. As companies cannot entirely control demand risks, we envisage that a small but meaningful financial incentive applied to each year's revenue would be enough to achieve this aim. We do not consider an additional revenue forecasting incentive to be appropriate for bioresources as the modified average revenue control does not limit companies' ability to earn more revenue for greater sludge volumes.

We will propose a licence modification to make sure that such in-period adjustments are allowed in 2020-25 and future price review periods. This will be equivalent to the licence modification we made for most companies in 2016 to implement the wholesale revenue forecasting incentive mechanism in the current price review period.

Further detail on our approach, responses to our draft methodology proposals and an explanation of where we have modified our approach in response are set out in [appendix 7 \(network plus water and wastewater controls\)](#).

³² The impact on RoRE is calculated as the average of total revenues over five years divided by the average regulated equity. It is based on sector figures that underpinned the 2014 final determinations, it hasn't been adjusted for bioresources, and will vary between companies depending on the relationship between revenue and RCV.

6.3.3 Resilience in the round and long-term planning

Resilience is a key focus of PR19, and we will assess how companies have considered and planned for resilience in our initial assessment of company business plans for their wholesale controls. As set out in the resilience chapter, section 5.6 above, we expect incumbents to demonstrate improved risk assessment, planning and investment by producing robust long-term strategies for managing drainage and wastewater in an integrated and sustainable way. This is in addition to following statutory processes in planning for clean water services.

6.4 Water resources

Applicability to England and Wales

All of our PR19 final methodology for water resources **applies to** companies whose areas are wholly or mainly in England. For companies whose areas are wholly or mainly in Wales all elements apply apart from those linked to the bilateral market, consistent with the Welsh Government policy not to introduce this market.



PR19 will be the first time we set a total revenue control for water resources which is separate from network plus water. Our control will provide a framework to protect the interests of customers through better targeted regulation and increased management focus. It will also enable greater collaboration between companies and other water resources service providers, to maximise the value of existing resources and incentivise the efficient development of new water resources options, including:

- more trading of existing water resources between water companies;
- water companies to more actively procure water resources and innovative demand-side solutions from third party service providers; and
- a co-ordinated collaborative approach to developing new water resources solutions.

In the future, business retailers may also procure water resources from third parties directly when the relevant provisions of the Water Act 2014 are fully in force. Our control is designed to facilitate the development of this bilateral market in 2020-25. The Welsh Government has decided not to extend business retail competition in Wales. For England, we recognise that the UK Government has not yet decided when to bring the relevant provisions into force.

[Appendix 5 \(water resources control\)](#) sets out the full detail of the decisions set out below. This includes the background, including full details of our proposals as they appeared in the draft methodology, the responses to our draft methodology proposals, our consideration of those responses and an explanation of any changes to the final methodology.

6.4.1 Total revenue control

Applicability to England and Wales

The form of the bioresources control **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales.



We will set the total revenue control for water resources using a building block approach which incorporates:

- returns on, and depreciation of, the pre-2020 water resources RCV;
- an assessment of:
 - efficient totex during the 2020-25 period;
 - funding expenditure to be recovered within the period (determined by the PAYG ratio); and
 - expenditure recovered in future periods (return and depreciation on post-2020 RCV); and
- a tax allowance.

For companies whose areas are wholly or mainly in England, we will include an in-period revenue adjustment mechanism to accommodate the development of the bilateral market in 2020-25. Our approach to this is set out in section 6.4.3 below.

Companies will need to set separate charges for water resources and network plus water to demonstrate compliance with the separate controls.

Our approach ensures that water companies can fully recover efficiently incurred investments in existing water resources up to 31 March 2020 and enables greater use of water resource markets where appropriate.

Maintaining our building block approach to pre- and post-2020 investment provides greater certainty about revenues in the longer term. The wholesale water RCV at 31

March 2020 will be allocated on an unfocused basis between water resources and network plus water controls. RCV allocated to water resources at 31 March 2020 will receive the same type and degree of regulatory protection as it would have received under the wholesale water revenue controls.

From 1 April 2020, expenditure added to the post-2020 RCV will not receive additional regulatory protection; revenues will need to be recovered on a standalone basis from water resource activities. This is consistent with the position we set out in May 2016 in Water 2020: [Our regulatory approach for water and wastewater in England and Wales](#) ('May 2016 decision document').

We will use capacity as the measure to distinguish between pre- and post-2020 investment. Drawing this distinction means we can retain our approach to protect efficiently incurred pre-2020 RCV and limit the change in regulatory protection to post-2020 investment in new water resources capacity.

Our capacity measure is water resources yield. This captures the average volume of water available from the environment, dependent on the service level and planning period, and constrained by water resources control assets. This is a component of the standard supply-demand balance calculation water companies use for water resources planning.

Our total revenue form of control, will provide companies with a high level of regulatory certainty. This form of control exposes companies to limited volume risk compared to the historical approach to controls before PR14 where allowed revenues were directly linked to customer volumes.

Appendix 8 of our draft methodology proposals (published in July) sets out our requirements for companies to submit their proposed allocation of the legacy RCV to the water resources control. We received no substantive comments on this appendix. This remains unchanged and our guidance on the approach that companies should follow remains as set out in appendix 8 of our draft methodology proposals. We have not republished them with the final methodology documents. We require companies to submit their proposed allocation in January 2018.

6.4.2 Water trading incentives

Applicability to England and Wales

Water trading incentives for new water exports and imports **apply to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales. These recognise the wider benefits of trading and are designed to encourage more companies to participate in water trading, which will benefit both exporters and importers of water.



Water trading incentives for new water exports and imports were introduced in PR14 in order to boost water trading, the levels of which had changed little since privatisation. Water trading is where a company that is responsible for supplying water in an area buys it from either another water company or a third party, rather than developing new resources or demand-side measures. It is a part of the mix of solutions to the long-term challenges the sector faces and can have significant benefits for customers and the environment.

We will adopt water trading incentives at the same level as PR14. We will allow exporters to retain 50% of the lifetime economic profits (that is, the profits over and above the normal return on capital invested) for all new qualifying trades in 2020-25. Importers will benefit from an import incentive of 5% of the costs of water imported under new agreements during 2020-25.

To protect customers, we will cap both incentives. The export incentive is capped at 100% of the economic profit for the years the export operates in 2020-25. The import incentive is capped at 0.1% of the importer's wholesale water revenue in each year of the control period. We will also maintain the requirement for incumbents to show that the trade complies with an Ofwat-approved trading and procurement code. This code ensures that only economically and environmentally beneficial trades will receive an incentive payment. This is assessed as part of our price review, and reflecting this, the payments would be made in subsequent review periods.

A key advantage of maintaining the incentives is that it is consistent with the long-term nature of water trading as a solution to promote resilience. We have already seen a number of new small scale water trades and approved five company trading and procurement codes, a requirement for receiving PR14 water trading incentives. We are aware from our pre-consultation meetings on the 2019 water resources management plans (WRMP19) that a number of potential water trades are being considered, which suggests the existing incentives are promoting water trades. We

welcome evidence of increasing trading and will retain incentives for PR19 to promote further trades.

6.4.3 Additional mechanisms to facilitate bilateral market entry

Applicability to England only

Additional mechanisms to facilitate the bilateral market in England **apply to only** companies whose areas are wholly or mainly in **England**, consistent with the Welsh Government policy not to introduce this market. These include the in-period revenue adjustment to accommodate bilateral entry and access pricing reporting requirements.



For companies whose areas are wholly or mainly in England, a bilateral market would allow business retailers to procure water resources directly from third parties and to seek ways to meet customers' demand for water more efficiently. Bilateral market entry may, therefore, decrease the investment a company needs to make to provide enough capacity to meet future demand.

To reflect this, where bilateral market entry displaces the need for the incumbent's capacity, it will trigger an in-period revenue adjustment. Otherwise, customers would be funding duplicate investment in water resources and we would be protecting companies from exposure to the bilateral market. The size of this in-period revenue adjustment mechanism will depend on the scale of bilateral market entry. We anticipate that the bilateral market is likely to be small and nascent in the period before 2025, but significant within the context of long-term water resources development. Our working assumption is that 2022 is a likely implementation date for bilateral markets.

Our adjustment mechanism is based on the water resources yield displaced by unanticipated bilateral market entry. The revenue adjustment evaluates the ratio between forecast additional capacity needed and the additional capacity that was actually provided (including capacity provided by third parties). The adjustment only accounts for bilateral entry risk and not the risks associated with the company having to make significant investment in new water resources. The financial value of the adjustment reflects the costs of the post-2020 capacity funded through the control.

Our approach to the adjustment mechanism is compatible with our approach to access pricing, which is designed to ensure that the control will facilitate the future bilateral market. Companies whose areas are wholly or mainly in England must submit information as part of their business plans to ensure that the control is robust

to future market development. This includes a revised focus, based on stakeholders' feedback, on ensuring that the cost of post-2020 capacity is properly estimated.

The architecture of the bilateral market and the detailed design of access pricing are outside the scope of the PR19 methodology. We plan to hold a consultation on how to take forward wholesale markets in early 2018.

6.4.4 Securing the legitimacy of large investments in new water resources

Applicability to England and Wales

Our focus on securing the legitimacy of significant investments in new water resources **applies principally to** companies whose areas are wholly or mainly in England. This is because the higher levels of available water in Wales mean it is less relevant at this time for companies whose areas are wholly or mainly in Wales.



Large water resources assets typically have a long lead time to deliver, are very long lasting and are built to provide secure supplies to customers. New large water resources investment will be added to the post-2020 RCV, which means that customers and not companies bear the majority of the risk of over-investment. This issue is particularly acute for schemes which include a large fixed capital expenditure (capex) requirement, which may mean that companies do not face an appropriate incentive to choose between options with large fixed cost and more flexible options which could reduce future risk to customers.

For PR19, we want companies to take a long-term approach to significant investments in new water resources; one that considers the real option value of any decisions and the long-term uncertainty associated with them. Securing the legitimacy of large investments in new water resources means sustaining long-term investor confidence in the sector, while protecting the interests of both current and future customers. This in turn means making sure companies manage uncertainty effectively over the long term and bear an appropriate share of risk around the delivery of future outcomes.

Having a long-term approach to significant investments in new water resources should ensure that companies face a strong incentive for robust decision making and that companies remain accountable for their decisions. This applies in the context of the need to plan for droughts and increased resilience, rather than of the company's day-to-day optimisation decisions.

We expect water companies proposing significant investment in new water resources to set out how they will share the risk around the delivery of future outcomes with their customers, guided by a set of principles. This approach gives companies the flexibility to develop risk sharing arrangements that apply to the outcomes they propose to deliver from their proposed investments, including the appropriate use of mechanisms such as deadbands. We will review the arrangements to assess their suitability and alignment with customers' interests using the guiding set of principles set out in appendix 5 (water resources control) as part of the initial assessment of business plans

This approach will safeguard the legitimacy underpinning significant post-2020 investments in new water resources and complement our outcomes framework, which provides clear incentives around leakage, water efficiency and long-term resilience. It is also an important addition to the overall set of incentives that aim to make sure companies' interests are aligned with the interest of their customers.

This is a targeted and proportionate approach and one that allows the risk sharing arrangements to be tied to the nature of the investment over the long term. Where companies are not proposing any significant investment in water resources – for example, if their areas have surplus water, we would not expect them to propose risk sharing arrangements at this time.

6.5 Bioresources

Applicability to England and Wales

Our final methodology for bioresources **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales. The UK Government recognises that promoting effective competition to treat and sell on energy and nutrient-rich bioresources will help to achieve innovation and efficiency. The Welsh Government considers that companies should be incentivised to seek solutions which deliver wider benefits to society and the environment, where this is justified by sound evidence.



PR19 will be the first time we set a separate revenue control for bioresources. Introducing a separate revenue control for bioresources will enable and encourage effective markets by revealing improved information.

Our revenue control will provide a framework to protect the interests of customers. It will enable greater participation from companies and other firms operating in wider waste markets, maximising the value of existing capability to treat, transport and

recycle organic waste. This will help realise benefits deriving from greater efficiency and broader environmental benefits. We expect our approach to encourage:

- more trading between water and wastewater companies for the treatment, transport, recycling and disposal of sewage sludge;
- water and wastewater companies to explore opportunities to trade with firms operating in other waste markets; and
- greater collaboration to develop new capability to treat sewage sludge, maximising potential economies of scale to create value for customers and the environment.

For PR19, we will expect each company to set out a long-term bioresources strategy. The strategy should explain how companies will obtain and deliver bioresources services for their customers, making effective use of markets where appropriate. We expect companies to adopt a mix of solutions to ensure that they provide bioresources services in a sustainable and efficient way. Companies should show the value that in-house solutions and market based approaches contribute to meeting their future needs.

A market based approach is likely to improve efficiency and create value for money over the long term, taking into account the wider costs and benefits to the economy, society and the environment. In England and Wales, careful treatment and recycling of bioresources will enhance the economic, social and environmental wellbeing of people and communities.

Our controls will encourage companies to take a long-term perspective on how best to obtain and deliver bioresources services for their customers, including how to maximise the opportunities to create value through the use of markets. Adopting a separate revenue control encourages companies to improve their understanding of the costs and service performance of their activities, encouraging a commercial culture and greater focus from management.

The form of control provides an incentive to optimise activities around treatment sites that deliver the greatest value (or deliver services at the lowest cost). It is neutral about the distinction between services procured from third parties and those provided in-house.

We stated that, from 1 April 2020, investment would not receive the same regulatory protection as pre-2020 investment and, that revenues would need to be recovered on a standalone basis from bioresources activities to promote efficient decision making, provide a level playing field and minimise risk of cross-subsidy. We

recognise that there might be a greater risk of stranding once the market has developed, if the regulatory framework changes.

In future, if we move to setting more 'gate fee' type charges derived from evidence of efficient costs (including post-2020 investment), then an efficient company should be able to recover past efficiently incurred expenditure, subject to volume changes.

One consultation respondent expressed concern that our approach would not alleviate the potential risk of stranding efficiently incurred pre-2020 investments. Others were concerned about the level of volume risk and the asymmetry of the revenue forecasting incentive by providing some protection from under-recovery of sunk costs.

Having considered the responses to our draft methodology proposals, and how best to protect both customers and companies, we have refined our approach to the average revenue control set out in our draft methodology proposals.

We have developed our PR19 final methodology to better protect customers and in doing so we have minimised the potential risk of stranding efficiently incurred investments in the 2020-2025 period. We have formulated a modified average revenue control which better aligns the incremental changes in revenues to the incremental changes in costs. Our approach is consistent with the way bioresources and organic waste processing services are contracted, so supports a level playing field for third party providers.

Our refined approach will protect customers from paying too much for bioresources services where a company has under-forecast its sludge production, limiting the scope for windfall profits due to forecasting error. Our approach will also provide some protection for companies against the risk of under-recovery of fixed costs where volumes are much lower than anticipated. This should provide a better alignment of incentives for companies to forecast sludge production accurately, ensuring that customer bills better reflect the cost of providing bioresources services. Our refined approach will also make sure that incumbents bear an appropriate level of volume risk, minimise the risk of potentially stranding efficiently incurred pre-2020 investments and continue to provide some protection for companies that see step changes in volumes due to improving measurement.

The modified average revenue control means that:

- companies will have an allowed revenue per tonne of dry solid (TDS), expressed as £/TDS;
- if volumes do not vary from forecast volumes, the total revenues companies can collect from customers will equal the measured volume of bioresources they

produce by treating wastewater (in TDS) multiplied by the average revenue allowance; and

- where volumes vary from the forecast we will use a revenue adjustment factor to adjust allowed revenues.

The revenue adjustment factor substantially reduces the risk of companies significantly under or over estimating sludge volumes (which could lead to over or under recovery of revenues). To further protect customers from excessive bill variation driven by differences between forecast and measured sludge volumes, we have introduced a forecasting accuracy incentive. This is discussed further in section 6.5.3 below. [Appendix 6 \(bioresources control\)](#) sets out the full detail of the decisions set out below. This includes the background, including full details of our proposals as they appeared in the draft methodology, the responses to our draft methodology proposals, our consideration of those responses and an explanation of any changes to the final methodology.

6.5.1 Modified average revenue control

We will set a modified average revenue control using a building block approach to calculate bioresources revenues. This will be expressed as a standard average revenue allowance in £/ TDS with a revenue adjustment factor. The revenue adjustment factor ensures that the average revenue control better aligns incremental allowed revenues to incremental costs of providing bioresources services. The revenue adjustment factor will only apply when outturn sludge volumes differ from the forecast volumes.

Our approach removes the incentives for companies to under forecast sludge production. This incentive occurs because there are economies of scale in sludge treatment. Economies of scale mean that incremental costs are relatively low and average costs will fall as volumes increase. Under a pure average control, we would allow the same average cost to be funded through revenues regardless of actual sludge production. Companies would earn windfall profits, under a pure average revenue control, if volumes are greater than forecast. Similarly, companies would face financial losses if volumes outturn lower than expected.

This approach is consistent with our principles for bioresources transfer pricing for short term contracts, which can be found in [RAG 5.07](#). The adjustment will only be required if measured volumes are different to forecast volumes. There is more information about the calculation of the revenue adjustment factor in [appendix 6 \(bioresources control\)](#).

Where a company exports its own sludge to neighbouring companies or other waste operators, costs will be recovered in the bioresources control and treated the same as a company's own cost of processing.

Where companies offer services to neighbouring wastewater companies and other waste operators, thus import sludge or organic waste, this will be considered non-appointed activity. Companies will be free to negotiate their charges for these services, subject to compliance with competition law and transfer pricing rules. The volumes of sludge treated through non-appointed activities will not be subject to the modified average revenue control and companies will assume the volume risk.

6.5.2 Bioresources volume forecasting accuracy incentive

Our calculation of the average revenue control relies on accurate company volume forecasts. This is the first time we have asked companies to forecast volume for bioresources.

The revenue adjustment factor (discussed above) substantially reduces the risk of significant under or overestimation of sludge volumes (which could lead to under- or over-recovery of revenues). However, to protect customers from excessive bill variation driven by differences between forecast and measured sludge volumes, we have introduced a forecasting accuracy incentive.

A number of companies responded to our draft methodology proposals with specific comments on the calibration of the forecasting accuracy incentive. We held a workshop with companies to discuss the incentive on 4 October. In the light of the consultation responses and taking into account the additional customer protection afforded by the adjustment to the average revenue control, we have increased the level of the deadband from 3% to 6% and changed the penalty rate. This penalty will apply when outturn volumes over the five year period are outside the deadband around the five year total forecast. No penalty will apply to measured volumes that fall within the $\pm 6\%$ deadband over the five year period.

We have set a fixed financial penalty rate of 10% of the revenue generated by the difference between actual and forecast sludge volumes. We will apply the penalty symmetrically to differences between forecast and measured volumes which fall outside the 6% deadband. We will apply the forecasting accuracy incentive as part of the reconciliation of 2020-25 performance.

6.5.3 Managing in-period revenue variations for the bioresources control

We expect that companies will set charges based on the best information available at the time and make sure that the revenues they earn are consistent with the limits determined by the bioresources modified average revenue control.

Companies set wastewater charges in advance of the start of the year, based on the best information available, to make sure that their expected average revenues from charges are aligned with their average revenue allowance from the control. Nevertheless, actual average revenues that wastewater companies earn from bioresources may still vary from the average revenue allowance, depending on the design of company charges. For example, charges may be based on rateable value for properties that do not have meters, but rateable value does not change with occupancy whereas bioresources quantities do. In this case, a mechanism may be required to correct for under or over-recovery in average revenues.

We expect companies to adjust the allowed average revenue, in £/TDS, in subsequent years to correct for any under or over-recovery of average revenue in an earlier year. This is similar to the PR14 wholesale revenue correction mechanism and more detail is provided in appendix 6 (bioresources control). For other wholesale controls, which limit total revenues, there are arrangements (such as the revenue forecasting incentive mechanism) both to correct revenues in-period and to incentivise accurate revenue forecasting (see section 6.3.2). We are not applying a revenue forecasting incentive to the bioresources control, as the modified average revenue control does not limit companies' ability to earn more revenue for greater sludge volumes. Additional wholesale controls: Thames Tideway Tunnel (TTT)

Thames Water's wastewater services interfacing activities for the TTT project during the period 2015-2020 have been delivered through a separate wholesale control (the 'TTT control'). This was made possible by an amendment to Thames Water's licence during the PR14 process.

When we set the TTT control in PR14, we anticipated keeping a separate control in place for the 2020-25 period, because of Thames Water's continuing interfacing activities. We have therefore decided once again to set a separate TTT control for Thames Water in 2019, to cover the 2020-25 period.

We have discussed this approach with Thames Water and intend to consult on a licence modification, which will allow us to set a separate TTT control as part of the PR19 process. We intend the TTT control to operate in the same way as a wholesale network plus control, as summarised in table 6.7.

Table 6.7 Approach for the TTT control

Component	Approach
Form of control	RCV-based building block approach to calculating revenues
Length of control	Five years
RCV indexation	Index 50% of the RCV at 1 April 2020 to the retail price index (RPI) Index the remainder of the 1 April 2020 RCV and all future RCV additions to CPIH
Indexation of revenues (these are discussed in chapter 10 (aligning risk and return))	Annual adjustment to reflect any percentage change in CPIH, plus or minus an adjustment factor

Because of its separate project licence, the main TTT works, which are being delivered by Bazalgette Tunnel Limited ('Tideway'), will not be considered as part of the PR19 process.

6.6 Initial assessment of business plans – wholesale

A number of our initial assessment of business plans tests on the use of targeted controls, markets and innovation relate to the form of the wholesale revenue controls, while also touching on other areas of our PR19 approach. All the questions covered under the targeted controls, markets and innovation test areas are shown below; some of these are covered in subsequent chapters. Chapter 14 provides an overview of our approach to the initial assessment of business plans.

Initial assessment tests for targeted controls, markets and innovation: wholesale controls

1. How well does the company's business plan demonstrate that it has the right culture for innovation which enables it, through its systems, processes and people, to deliver results for customers and the environment from innovation?
2. How well does the company use and engage with markets to deliver greater efficiency and innovation and to enhance resilience in the provision of water and wastewater services to secure value for customers, the environment and the wider economy; and to support ambitious performance for the 2020-25 period and over the longer term?
3. To what extent has the company set out a well evidenced long-term strategy for securing resilient and sustainable water resources, considering a twin track

approach of supply-side and demand-side options and integrating third party options where appropriate, to meet the needs of customers and the environment in the 2020-25 period and over the longer term?

4. To what extent does the company have a well-evidenced long-term strategy for delivering bioresources services, integrating an assessment of the value from the delivery of bioresources services by third parties for the 2020-25 period and over the longer term?

5. How appropriate is the company's proposed pre-2020 RCV allocation between water resources and water network plus – and, if relevant, between bioresources and wastewater network plus – taking into account the guidance and/or feedback we have provided?

6. To what extent has the company produced a bid assessment framework for water resources, demand management and leakage services that demonstrates a clear commitment to the key procurement principles of transparency, equality/non-discrimination and proportionality, and the best practice recommendations?

In assessing these tests, we will take into account evidence of:

- the company's ability to use innovation to deliver for customers, the environment and wider society – including details of plans, systems, processes and people needed to support innovation;
- the company's long-term strategy for managing drainage and wastewater in an integrated and sustainable way, including how partnership working is supporting effective delivery;
- effective use of markets to harness innovation and reveal information about efficient cost of service, for companies whose areas are wholly or mainly in England;
- a robust strategy for meeting water resources and bioresources needs now and in the future, having assessed the opportunities for third party providers to help deliver outcomes in a resilient and affordable manner;
- the robustness of the company's WRMP which sets out the company's long-term plan to ensure a secure supply of water;
- active and effective consideration of third party delivery options for water resources and bioresources for both this review period and the longer term – strong evidence to support this should include details of third party engagements, a strategy for maximising the use of third party resources where it is economic to do so, and (for companies in England) a demonstrable understanding of how the future bilateral market for water resources will affect future supply requirements;

- how well the company has set out the bioresources volumes it expects to treat on behalf of other wastewater companies – strong evidence to support this should include information about how costs vary with volumes and how the company will determine the appropriate share of benefit between the appointed and non-appointed businesses;
- the company's governance and management being aligned to implement separate controls and facilitate the development of new resource markets;
- transparent, well evidenced and acceptable proposals on pre-2020 RCV allocation; and
- a company bid assessment framework for water resources, demand management and leakage services that provides clarity and confidence to third party bidders about the procurement process and that their bid will be assessed fairly against the company's own in-house solution (for companies in England and Wales). The framework must show a clear commitment to the key procurement principles of transparency, equality/non-discrimination and proportionality and the best practice recommendations.

7. Targeted controls, markets and innovation: direct procurement for customers

Key themes of PR19

Our approach to direct procurement for customers supports the key themes of PR19.

Our proposals will promote **innovation** and **resilience** by allowing new players to bring new ideas and approaches to the delivery of key projects.

Our proposals will ensure companies consider using direct procurement to deliver large-scale projects efficiently, contributing to **affordable** bills for customers. Our proposals will improve the delivery of projects, which in turn will improve the **customer experience**.

Direct procurement for customers

Direct procurement for customers (DPC) means arrangements where a water company competitively tenders for a third party (a competitively appointed provider, or CAP) to design, build, finance, operate and maintain infrastructure that would otherwise have been delivered by the incumbent water company.

We want companies to use DPC where this is **likely to deliver the greatest value for customers**. We are providing companies with guidance on identifying the most suitable projects. Companies should consider DPC for discrete, large-scale enhancement projects expected to cost over £100 million, based on whole-life totex.

Our initial assessment of business plans will include **tests to assess whether companies have considered DPC** for relevant projects and how well business plans have considered potential DPC projects.

We are not mandating which tender model is used for DPC such as whether to use an 'early' or 'late' tender model.

Companies will be the purchaser and run the procurement process. They will then manage the CAP. We expect companies to run a **fair and open procurement process** for DPC. Companies may not award a DPC contract to an associated company.

We expect companies to enter into a long-term contract with the CAP for a revenue stream to be paid to the CAP for the provision of infrastructure. We will **amend companies' licences to allow them to recover the CAP's revenue** from their customers. We will allow companies to **recover the efficient cost of tendering a project and on-going cost of managing the contract with the CAP**.

Applicability to England and Wales



Our final methodology for direct procurement for customers **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales. DPC has the potential to benefit customers through providing an option for lower cost delivery of the most expensive new assets and allowing scope for greater innovation, with new providers able to bring new ideas. Our policy reflects the UK Government's strategic policy statement that states we should challenge the sector to plan, invest and operate to meet the needs of current and future customers, in a way which offers best value for money over the long term. We should also promote markets to drive innovation and achieve efficiencies in a way that takes account of the need to further the long-term resilience of water and wastewater systems and services and / or the protection of vulnerable customers. We have also designed the policy to ensure that, where DPC is used, the consumer interest is protected, value for money is achieved and that we receive appropriate assurances from water companies that their duties will be met to an equivalent or better standard.

Our policy also reflects the Welsh Government's strategic policy statement. We are incentivising companies to continuously seek efficiency gains to deliver more for less in order to improve the value for money of water and wastewater services, having regard to resilience and service over the long term, and seek new ways of delivering services for customers and the environment more efficiently. Our policy is designed to be consistent with the Welsh Government's view that the activity of new entrants should not reduce water companies' accountability for the delivery of excellent services to customers and the environment, or threaten the integrity and efficiency of the management of the network systems as a whole.

Responses to our draft methodology proposals

Respondents generally welcomed the introduction of DPC. However, some respondents suggested the threshold for projects which should be considered for DPC was too low and that companies should be able to bid to provide their own projects. Respondents generally agreed that we do not need to specify a tender model. A range of detailed points were raised for us to address, in relation to both the scope of the principles and their content, as well as around the treatment of costs associated with DPC.

Our consideration of respondents' views

We note respondents' views that we do not need to specify a tender model and we confirm that we do not intend to do so for PR19. We have not seen any persuasive arguments that would justify allowing associated companies to compete for DPC projects. Our policy design has appropriate safeguards to ensure that an appointee can deliver a project where this can provide the best value for money for customers. We note respondents' views about the threshold for projects, but consider that our emphasis that appointees should focus on using DPC where it has the potential to drive the greatest possible value for customers provides an appropriate safeguard against projects being inefficiently tendered.

7.1 Introduction

This chapter sets out our final methodology for PR19 with respect to direct procurement for customers (DPC). This PR19 final methodology has been developed following full consideration of the views expressed by respondents to our [draft methodology proposals](#), published in July of this year.

By DPC, we mean arrangements where a water company competitively tenders for a third party (a competitively appointed provider, or CAP) to design, build, finance, operate and maintain large scale infrastructure that would otherwise have been delivered by the incumbent water company.

DPC is different to other tendering and contracting arrangements that appointees³³ currently use, for example, outsourcing agreements or market testing. DPC involves companies tendering to deliver more aspects of a service, including most importantly, the financing for the project. We consider that this makes DPC a different process to appointees' existing commercial arrangements. We do not intend for DPC to replace the provisions companies currently make for outsourcing services to third party providers to deliver ongoing operations and maintenance. We still expect companies to consider the most efficient delivery model for all their activities. We view DPC as a complementary approach that will provide an alternative delivery route for large-scale enhancements at PR19. We consider that DPC has the potential to realise significant customer benefits by:

- reducing the direct costs that customers pay for the largest / most expensive new assets;
- lowering project costs by focusing competitive pressure on capital and operational expenditure (capex and opex);
- involving the market, rather than the regulator, in setting the cost of capital for a specific project – we consider that the evidence from the water and other sectors (for example, electricity transmission) shows that this has the potential to lower financing costs for projects;
- promoting innovation by encouraging new providers to deliver and operate infrastructure – we note the evidence from other sectors, where tendering has led to more technical and commercial innovation and greater scope for supply chain participation; and

³³ We use the term 'appointee' in this chapter and appendix 9 (direct procurement for customers) in relation to appointed water and wastewater companies in England and Wales who are monopoly providers of water and wastewater services.

- providing both us and appointees with benchmarks for efficient costs, which we can reflect in future price controls.

The details set out in this chapter and appendix 9 (direct procurement for customers) will help appointees appraise the potential projects they plan to bring forward at PR19, to see whether or not DPC is a suitable delivery route.

The remainder of this chapter is structured as follows:

- projects appointees should consider for DPC at PR19 (section 7.2);
- assessing value for money (section 7.3);
- DPC tender models (section 7.4);
- DPC commercial model (section 7.5);
- assurance (section 7.6); and
- initial assessment of business plans (section 7.7).

In [appendix 9](#) we set out further details of, and reasons for, our DPC methodology. This appendix is structured as follows:

- guidance for companies on identifying suitable projects for DPC;
- further details on the commercial model, including our principles for procurement and contracting;
- our proposed changes to appointees' licence conditions in relation to DPC;
- our approach to cost assessment;
- contingency arrangements where a tender process is unsuccessful; and
- an updated cost benefit assessment.

Section 6 of [appendix 15](#) outlines respondents' views to the three questions we posed on direct procurement for customers in our draft methodology proposals. In appendix 15, we provide our response to the issues raised by respondents or note where we have addressed the issue in this chapter or in appendix 9.

7.2 Projects appointees should consider for DPC at PR19

Appointees should consider DPC for discrete, large-scale enhancement projects expected to cost over £100 million, based on whole-life totex. We note that not all projects that meet this threshold will necessarily be suitable for DPC, however we expect companies to use this threshold as a trigger for exploring DPC as an option. To maximise benefits to customers from DPC, appointees should focus on using this approach where it has the potential to drive the greatest possible value for

customers. This is particularly important at PR19, given that DPC will be a new process for us, appointees and the potential bidding market.

Below we provide appointees with high-level guidance (table 7.1) to help identify projects that are suitable for DPC. We provide fuller details in appendix 9 (direct procurement for customers). Appointees should also consider the findings of an independent [technical review](#) (commissioned from KPMG), which expands further on the technical characteristics that are likely to make a project suitable for DPC.

Table 7.1 Guidance on potential DPC projects for PR19

Area	Guidance
Definition of a 'project'	A project should be an efficient package of works, or multiple packages of works to be delivered together, which meet a common need. A project should not include a range of different asset types, addressing different needs, grouped together without the justification of synergies that can be achieved.
Types of project suitable for DPC	DPC projects could come from any part of the water and wastewater value chain and services appointees provide, except bioresources (we have separate proposals to develop markets in bioresources). We do not expect one type of project to be more suitable than another, subject to the other parameters we set out here (such as costs).
Technical guidance	Appointees should consider technically discrete projects which are most likely to deliver the greatest value for customers. A project is more likely to be technically discrete and suitable for DPC where, among other factors: <ul style="list-style-type: none"> • there are limited economies of scale and scope with the rest of the appointees' network system or where economies of scale or scope could be maintained through contracts; • there are simple or limited, well understood and manageable physical and operational interactions with the appointees' network; • assets have capacity that is shared by multiple appointed companies; and • assets are more 'passive' and are not actively managed as part of the overall system.
Identifying projects with greatest customer benefits	Appointees should use DPC for projects where it maximises customer benefits to the greatest extent. Such benefits are likely to be associated with larger projects and come from financing, innovation or a more integrated approach between the design and maintenance and operation of assets over their lifetime. These benefits must outweigh the costs of the procurement and ongoing administering of the DPC contract. A high proportion of capex, relative to opex, increases the scope for financing benefits. We expect that competitive pressure could help realise significant customer benefits.

Area	Guidance
Project delivery	We consider that, in general, tendering should not delay delivery, as the early pre-construction works could be progressed alongside a tender for a provider. However, for projects where pre-construction works are nearing completion, we expect appointees to consider any impact the tender process may have on delivery timings.

We have developed this guidance alongside our proposals for other aspects of DPC, including specifically our procurement and contracting principles. We will review our approach at future price reviews, incorporating any lessons learned from PR19.

7.3 Assessing value for money

In order to ensure that companies put forward projects for DPC which deliver the greatest value for customers, we expect them to assess the value for money of delivering a project through DPC against a baseline delivery approach. Our assumption will be that projects that meet the £100m totex threshold and that are consistent with our technical guidance should proceed through a DPC procurement process, unless the value for money assessment provides robust evidence that a baseline delivery approach (that is, delivery by the appointee) provides better value for customers. We will test the value for money assessment in our initial assessment of business plans. It is for appointees to decide how they will undertake a value for money assessment, but we expect them to be well-evidenced and well-reasoned.

We expect each large project that might be suitable for DPC to be explored through a robust and iterative business case, using a best-practice approach. This could be the HM Treasury [Five Case Model](#) ('five case') approach, or another proven approach. Evidence suggests that taking the five case approach improves transparency of decisions on selecting the procurement and delivery approach to deliver value for money public services. We expect appointees' analysis to include strategic, economic and commercial evaluations of the DPC delivery option, versus a baseline delivery approach.

Using a business case approach should enable appointees in their value for money assessments to document key assumptions and set out:

- a transparent risk-allocation process;
- a procurement approach justification;
- an exploration of opportunities for innovation; and
- a consideration of the management capability needed to deliver value for money, over the life-time of the contract.

In common with other areas of the business plan, we expect to see evidence that customers have been involved in discussions about delivery. We provide further details about the value for money assessment in appendix 9 (direct procurement for customers).

7.4 DPC tender models

There is a range of possible tender models, in terms of scope, to tender at different stages in the project lifecycle. We outline these models in appendix 9 (direct procurement for customers). We consider all models have the potential to drive significant customer benefits, albeit by focusing competitive pressure in different areas. 'Early' models, for example, offer greater scope for innovation in design and delivery method, while 'late' models offer a lower delivery risk and will focus competitive pressure on financing.

As different project types may lend themselves to different tender models, we are not prescribing the tender model that appointees must use. They have the flexibility to select the model which best suits their requirements. However, we expect to see companies explain in their business plans why the tender model they propose using for each project will deliver the greatest customer benefits.

7.5 DPC commercial model

7.5.1 Our overall approach to developing DPC

Consistent with our overall approach for PR19, we see appointees and their customers at the heart of developing arrangements for DPC, not ourselves. We will not be running tenders, nor will we regulate CAPs directly. Instead, we will regulate the appointee, which will procure the project on behalf of its customers. Therefore, we expect appointees to take responsibility for developing their DPC proposals and to act as buyers on behalf of customers. We do not expect that projects would be tendered prior to our final determinations for PR19.

However, we still have a role to ensure that the interests of customers are protected. We will do this through:

- requiring appointees to follow our principles for procurement and contracting when undertaking DPC projects;
- seeking a level of assurance during the procurement process; and

- where appropriate, collecting and reviewing information in relation to the management and termination of a DPC contract.

In appendix 9 (direct procurement for customers), we set out more detail on our contract and procurement principles for DPC and proposed licence changes.

7.5.2 Delivery through contract or through licence

The core element of the DPC model is a long-term (for example, a 15-25 year) contract between the appointee and the CAP. The terms of this contract would set out the scope of the services the CAP is required to provide, including any performance commitments, in return for an entitlement to a revenue stream. Over the contract life, the appointee would be responsible for managing the CAP's performance. We outline further details of the principles we expect appointees to follow in setting contract terms in appendix 9.

In certain circumstances, we may be able to award an infrastructure provider project licence to a CAP. This could be the case if a project meets the criteria to be specified under the Water Industry (Specified Infrastructure Projects) (English Undertakers) Regulations 2013 (SIPR)³⁴. A current example of a SIPR project is the Thames Tideway Tunnel. Under a project licence model, some of the arrangements that would otherwise be included in a contract may be specified in, or supplemented by, licence conditions for the CAP and the appointee.

7.5.3 Compliance with statutory and licence obligations

DPC will not change an appointee's existing responsibility for ensuring compliance with the requirements and standards that apply to it as a water and/or sewerage undertaker. These include, but are not limited to, requirements and standards enforced by Ofwat, the Environment Agency, the Drinking Water Inspectorate or Natural Resources Wales. We expect that appointees would make sure, for example through their contract with the CAP, that they can meet all their statutory duties as water or sewerage undertakers and their licence obligations. We expect DPC projects to be able to deliver the highest level of compliance with statutory and licence obligations and a high quality of service. We also expect appointees, as part of their DPC proposals, to provide clarity and appropriate assurances about how

³⁴ Ofwat, '[Criteria for selecting specified infrastructure projects – Ofwat guidance](#)', May 2015

these arrangements will be managed to ensure compliance with their legal obligations.

7.5.4 Who can compete to provide services under DPC

Appointees may not award DPC contracts to an associated company.³⁵ However, appointees (and their associated companies) can compete for the DPC projects of other water companies as part of their non-appointed (unregulated) business.

This restriction is needed in order to maximise competition (and therefore benefits to customers in terms of innovation, financing and other costs). Potential bidders must not be deterred on the basis that they perceive that competition is subject to distortion through a perception of incumbents having an advantage that would disincentivise other bidders. Appointees must also be in a position to effectively manage their relationship with the CAP over the duration and at the end of the contract, in the interests of customers. It must:

- have ongoing oversight of the performance of the CAP;
- take steps to remedy poor performance; and
- take action to enforce compliance under the contract, where appropriate.

It is still possible that, after careful consideration, the company will conclude that it is best placed to provide the infrastructure and will not proceed with external procurement.

7.6 Assurance

After we have made licence changes at final determinations to enable them to do so, companies can proceed with DPC procurement processes. The nature and the length of the process will vary by project. While we expect appointees to take ownership of this process, to ensure customers' interests are protected we will seek assurance throughout the process that it is being run effectively. For the projects run

³⁵ By 'associated company' we mean an 'Associated Company' as defined in Condition A (Interpretation and Construction) of an appointee's licence. DPC contracts will be used where it has already been decided that a third party (a CAP) will design, build, finance, operate and maintain infrastructure that would otherwise have been delivered by the appointee. The appointee itself will therefore never be its own CAP. It will be the procurer, and therefore a counterparty to the DPC contract.

during the PR19 price control period we expect to engage with appointees throughout the procurement process. Where necessary, we will be able to discuss any remedial action required during the process to ensure a good outcome is achieved for customers. Appointees should be guided through their procurement, development and management of contracts with CAPs by the principles we have set out in this methodology. We set out further guidance in appendix 9 (direct procurement for customers) on the range of contingency actions we may take to minimise the possibility of a failed procurement process and to ensure that customers' interests are protected.

7.7 Initial assessment of business plans – direct procurement for customers

We will test appointees' approach to direct procurement for customers in our initial assessment of business plans as follows:

Initial assessment tests on direct procurement for customers

To what extent has the company clearly demonstrated that it has considered whether all relevant projects are technically suitable for direct procurement for customers? Where it has one or more such projects, to what extent has the company provided a well-reasoned and well-evidenced value for money assessment supporting its decision on whether or not to take forward each technically suitable project using direct procurement for customers?

In assessing these tests, we will take into account evidence that all relevant projects above the £100m totex threshold have been considered for DPC. We will assess how well the suitability of projects has been assessed against our technical guidance. We will also assess how well a best practice business case assessment framework has been applied to undertake a value for money assessment in support of decisions whether or not to take forward each suitable project by DPC. We expect the value for money assessment to be consistent with our guidance in appendix 9 (direct procurement for customers) and to:

- document key assumptions;
- clearly explain and quantify risks, and consider how these can be best allocated;
- clearly explain and quantify benefits;
- assess possible procurement approaches, including different DPC tender models;

- assess opportunities for innovation; and
- consider the management capability needed to deliver value for money, over the lifetime of the contract.

8. Targeted controls, markets and innovation: retail controls

Key themes of PR19

Our approach to retail controls supports the key themes of PR19.

Our methodology will promote **affordability** by encouraging companies to increase efficiency. It does this by limiting how much revenue companies can collect per customer and encouraging them to create great business plans for their retail activities and manage their gap sites and voids effectively.

Our methodology will promote **innovation** and **great customer service** by facilitating competition for all eligible customers and setting five-year price controls that will protect the interests of customers.

Residential retail controls in England and Wales

We will set a **weighted average revenue control**, taking account of any difference in costs by customer type.

Business retail controls in Wales

We will set an **average revenue control** for all business retail customers in Wales. For customers using up to 50 megalitres of water a year and wastewater customers, this will be based on a cost to serve and net margin approach. For other customers this will be based on a gross margin cap.

Business retail controls in England

We will set an **average revenue control** for all eligible business retail customers of non-exited retailers in England. For customers using up to five megalitres a year, this will be based on a cost to serve and net margin approach. For other customers we will use a gross margin cap.

Duration of retail controls

We will set average revenues for a **five-year period** for all these controls.

Gaps sites and voids

We have put in place a range of measures to encourage water companies to tackle gap sites and voids more effectively, as reducing gaps and voids will benefit all customers.

Applicability to England and Wales

Our PR19 final methodology for **residential retail controls and the duration of all retail controls applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales.



Our PR19 methodology for **business retail controls is different** for companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales. The difference in our approach is driven by the different policies of the UK and Welsh Governments regarding the scope of retail competition – all eligible business retail customers of companies whose areas are wholly or mainly in England can switch supplier, whereas for customers of companies whose areas are wholly or mainly in Wales this is limited to water supplies for those using more than 50 megalitres of water a year.

Responses to our draft methodology proposals

There was support for the use of:

- a weighted average revenue control for residential retail activities;
- an average revenue control for English water companies that have not exited the market; and
- an average revenue control for Welsh companies not subject to competition.

There were mixed views regarding:

- whether price controls were needed for customers of Welsh companies who can switch supplier (that is, using more than 50 megalitres a year); and
- whether a three-year duration of retail price controls was more appropriate than a five-year duration.

Some stakeholders said we should create a financial incentive to ensure gap sites and occupied voids are charged.

Our consideration of respondents' views

After considering stakeholders' views, we have:

- decided to set price controls for **all** market segments;
- decided to set a five-year duration for all controls (and updated our assessment of options – see appendix 10); and
- put in place a range of measures to encourage water companies to tackle gap sites and voids (and provided an assessment of options – see appendix 10).

8.1 Introduction

This chapter sets out our final methodology for PR19 with respect to retail controls. This PR19 final methodology has been determined following full consideration of views expressed by respondents to our [draft methodology proposals](#).

The approach we take to retail activities is important. Our retail controls directly impact customers' bills and the incentives on water companies to improve customer service.

The remainder of this chapter is structured as follows:

- residential retail controls (section 8.2);
- business retail controls (section 8.3);
- duration of controls (section 8.4);
- gap sites and voids (section 8.5); and
- initial assessment of business plans – retail controls (section 8.6).

Section 7 of [appendix 15](#) outlines respondents' views to the five questions we posed on retail controls in our draft methodology proposals. In appendix 15, we provide (or reference) our response to the issues raised by respondents.

[Appendix 10](#) assesses in more detail points concerning the duration of the retail controls and measures to encourage appropriate management of voids and gap sites and the reasons for our decision. These are significant issues where we have changed our position from our draft methodology proposals.

8.2 Residential retail controls

Applicability to England and Wales

Our PR19 methodology for residential retail controls **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales.



Residential retail customers do not have access to competition in England or Wales. We will therefore set price controls for residential retail activities to protect the interests of customers.

In PR14, we used a weighted average revenue control. This was expressed as a total revenue control with annual adjustments for the outturn number of customers by customer type. To reflect differences in the cost to serve, we used adjustment factors for five different customer types:

- single service (water or wastewater) unmeasured (that is, unmetered);
- dual service (water and wastewater) unmeasured;
- water only measured (that is, metered);
- wastewater only measured; and
- dual service measured.

The revenue allowance is made up of the retail cost to serve plus an allowance for a net margin on wholesale and retail activities. This form of control allows companies to manage residential retail revenues at an aggregate level, but ensures that companies receive an allowance that reflects the costs they face.

In PR19 we will examine differences in retail costs by customer type. If there are differences in retail costs by customer type, we will continue to use a weighted average revenue control, so that these differences can continue to be reflected in revenue allowances. If there are no differences in retail costs across customers, then we will set an average revenue control to reflect the variation in retail costs by customer numbers.

8.3 Business retail controls

We set a safeguard price control in PR14 to take account of the planned opening of the business retail market. This was an average revenue control by customer group (these groups were proposed by companies), with a reopening of controls to align with market opening in 2017.

The revenue allowance comprised a retail cost per customer and a net retail margin on total wholesale and retail cost allowances. These business retail price controls provide backstop protection for customers in the competitive market and a comparison point for these customers against market offers.

In PR16 we reviewed the form of business retail controls to make sure they were still appropriate for the retail market opening in England. PR16 reset business retail price controls in both England and Wales. In PR16 we introduced two simplifications to the controls:

- reducing the number of controls by allowing companies to decrease the number of customer groupings, which would enable the simplification of the tariff structure; and
- gross margin controls for customers using at least five megalitres of water a year for companies whose areas are wholly or mainly in England and 50 megalitres a year for companies whose areas are wholly or mainly in Wales. This replaced the retail cost to serve and net margin approach, which was retained for all other customers.

8.3.1 Business retail controls in Wales

Applicability to England and Wales

Our PR19 methodology for business retail controls below **applies to only** companies whose areas are wholly or mainly in **Wales**.



Wastewater business retail customers of companies whose areas are wholly or mainly in Wales – and water business retail customers of companies whose areas are wholly or mainly in Wales using less than 50 megalitres a year – do not have access to competition. This reflects the policy position of the Welsh Government. These customers will require price and service level protection in a similar way to residential customers. So for these customers we will continue to set average revenue controls, using a cost to serve and net margin approach.

Business customers of companies whose areas are wholly or mainly in Wales who use at least 50 megalitres of water a year can switch from their existing water supplier. Although these customers are well placed to take advantage of the freedom provided by competition to drive a better deal on retail services, we will not remove all protection from these customers until we are confident the retail market is working well for these customers. Therefore, for these customers we will set an average revenue control based on a gross margin cap.

8.3.2 Business retail controls in England

Applicability to England and Wales

Our PR19 methodology for business retail controls below **applies to only** companies whose areas are wholly or mainly in **England**.



The opening of the business retail market in England has created new opportunities. New water supply and/or wastewater licensees can enter the business retail market and compete for eligible customers. It has also allowed appointed companies to exit the business retail market – and most did so in the lead-up to the opening of the business retail market. Customers of an exited company were transferred to an acquiring licensee who is either an associated company, as defined in the exited company's licence (for example, a separate retail licence holder in the same group of companies) or an entirely separate retail licensee.

As these water companies have exited the market, they will not have a business retail operation that could be subject to a price control. Instead, former customers of these companies are protected in relation to the charges they pay by the retail exit code and, where relevant, competition law. The retail exit code requires the retail licensees that have acquired business retail businesses to offer default tariffs that are no higher than would have been available if the water company had remained in the market. We will review the price requirements in the retail exit code by the end of the current control period, to ensure they remain appropriate.

A small number of water companies in England have not exited the business retail market. The retail exit code does not apply to these water companies, so does not protect the customers of these companies. While competition is evolving, customers of non-exited companies require protection at least to the same extent that customers of exited companies do. Indeed, the need for protection may be greater, because the wholesaler in that area may have a greater incentive to inhibit competition in order to favour its vertically-integrated downstream-arm. Therefore, we have decided to keep a price control in place for these companies.

The form of control will be an average revenue control based on a cost to serve and net margin approach for customers using less than five megalitres a year, and a gross margin cap for other customers.

8.4 Duration of controls

Applicability to England and Wales

Our PR19 final methodology for the duration of retail controls **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales.



Apart from the business retail controls in PR14 and PR16, water and wastewater sector price controls have been set for five-year cycles. This reflects the longer-term approach that is important for infrastructure businesses and the time required to realise efficiency gains within a price review period. A disadvantage of longer-term controls is that they allow less flexibility to adjust to changing circumstances over time and expose incumbents and customers to risks that controls are no longer appropriate as new information becomes available. For retail activities, our price determination powers allow us to set price controls for up to five years. In PR14, we set business retail controls for a two-year period (followed by a three year period in PR16), while for residential controls we set controls for a five-year period.

We considered the argument for having price controls that were shorter than five years for all retail controls. However, we consider that a five-year control is the most appropriate for PR19. Although a three-year control could allow us to reflect new information revealed following the introduction of competition in the business sector in England (on 1 April 2017), we consider that the benefits would not be sufficiently large in comparison to the costs.

A three-year control would impose a greater regulatory burden on water companies and other stakeholders, as we would need to set new controls to take effect by 2023. Even if the subsequent control was a relatively light touch process, it would still require evidence from companies and other stakeholders and assessment.

We also considered a five-year control with the option of a reopener, to reflect any new cost information from the retail business market. However, reliance on a reopener would present similar challenges to a three-year control. It would also be more difficult to implement. For example, it would require a licence change, which would need agreement by each company. The circumstances for a reopener would also need to be clearly defined to give certainty on when controls could be reopened.

8.5 Gap sites and voids

Applicability to England and Wales

Our PR19 final methodology for gap sites and voids **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales.



Voids are properties classed by water companies as being vacant. However, some voids are actually occupied, so they may be erroneously billed, that is, either too little or nothing at all. A gap site³⁶ is a property where water and/or wastewater services are being consumed, but the property is not on a water company's system and is therefore not billed.

We regulate water companies to ensure that they recover the right amount of revenue. The consequence of a water company not billing gap sites or voids appropriately is that other customers are charged more, as a water company will use this reduced customer base to recover its allowed **wholesale** revenue. Therefore, minimising gap sites and voids is important for affordability and fairness of charges.

Retail water businesses have a financial incentive to bill voids and gap sites, because otherwise they lose out on revenue allowed through our **retail** control. Wholesale businesses are also incentivised to ensure that bills are issued for sites incorrectly classified as voids and gap sites, as a way to manage estimated leakage³⁷; they also face a reputational incentive to minimise average bills³⁸.

However, there are currently also disincentives to taking action:

- it costs money to do so;
- it could harm a water company's service incentive mechanism (SIM) score, if it led to more complaints; and

³⁶ Such sites are sometimes referred to as 'missing properties' in the residential market. We use the term 'gap site' to cover both the residential and business markets.

³⁷ Estimated leakage accounts for estimated water entering water companies' networks and estimated consumption into the system. Therefore, gap sites and occupied voids can increase estimated leakage, because they are not included in estimated consumption while the water entering the system is unaffected.

³⁸ Water companies' average bills can be found at discoverwater.co.uk/

- it could increase water companies' bad debt charge, if the newly identified customers are particularly likely to default.

For PR19 we are challenging companies to improve affordability. And we are replacing SIM with the customer measure of experience (C-MeX) – as discussed in chapter 4 (delivering outcomes for customers). Our move to C-MeX will help to reduce the disincentive to take action, because the number of customer complaints and unwanted phone contacts that a company receives will no longer form a direct part of the financial incentive of C-MeX. Instead, we have now decided that water company performance on complaints will act as a gate to accessing the higher financial performance payments available under C-MeX. This aspect of C-MeX is partly designed to reduce the disincentive for companies to undertake activities, such as pursuing bad debt (in case it generates complaints), and should help to lower bills and improve affordability overall.

These changes will help encourage companies to tackle gap sites and voids. We did not propose any additional measures in our draft methodology proposals. However, we have decided stronger and more targeted incentives are required to achieve fairer bills and improved affordability for existing customers. We consider this appropriate because:

- we want to ensure that water companies face the right incentives and we are concerned that without further action this would not be achieved;
- [recent research](#) suggests the level of residential voids is often overstated, because of poor quality customer data and the different approaches to void management adopted by the water companies; and
- some stakeholders (two business retailers in response to our consultation and, more recently, a company specialising in customer data) have said there is insufficient incentive to charge gap sites and/or voids, so they support an explicit financial incentive to encourage this.

Accordingly, we expect water companies to come forward with **bespoke performance commitments** to manage their voids and gap sites for the residential market and business market or explain why they have not. This is discussed further in appendix 2 (delivering outcomes for customers).

We also expect water companies' **business plans** to clearly explain their void numbers and how they plan to manage voids and identify and manage gap sites in both the residential market and business market. We will make this part of our assessment in our initial assessment of business plans. As part of this, we expect water companies to:

- explain how they use internal and external data to inform and validate their approach; and
- consider providing a financial incentive to retailers in the business market to identify gap sites and occupied voids, if they have not already done so.

Separately, we will consider the level and management of voids when we set our cost baselines for retail.

8.6 Initial assessment of business plans – retail controls

A number of tests under our initial assessment of business plans related to retail activities are covered in other chapters of this document (for example, those related to cost assessment). Questions related to our retail controls are shown below. Chapter 14 provides an overview of our approach to the initial assessment of business plans.

We will test retail controls in our initial assessment of business plans as follows.

Initial assessment test on retail controls

- How well does the company use and engage with markets to deliver greater efficiency and innovation and to enhance resilience in the provision of water and wastewater services to secure value for customers, the environment and the wider economy; and to support ambitious performance for the 2020-25 period and over the longer term?

Note that the test question we set out in chapter 14 (initial assessment of business plans: securing high quality, ambition and innovation) on assessing companies' capacity and readiness to innovate will also apply to retail controls. This question asks: "How well does the company's business plan demonstrate that it has the right culture for innovation and that it is able, through its systems, processes and people, to deliver results for customers and the environment from innovation?"

In our assessment, we will take into account evidence of:

- how water companies are looking for lessons learned and innovation adopted from the business retail market and how they plan to adopt a similar approach in non-contestable markets; and
- how water companies:

- explain their level of voids; and
- plan to identify and manage voids and gap sites – as part of this, water companies should explain how they will use internal and external data to inform and validate their approach.

We will take a proportionate and risk-based approach. Therefore, we want business plans to focus on retail services which are not open to competition – that is, retail services for residential retail customers and business customers in Wales (other than water supplies to those using 50 megalitres or more). For the avoidance of doubt though, we still expect water companies whose areas are wholly or mainly in England to cover gap sites and voids in their business plans and we will make this part of our assessment, as discussed above.

9. Securing cost efficiency

Key themes of PR19

Our approach to securing cost efficiency supports the key themes of PR19.

Our methodology will incentivise companies to deliver efficient business plans, to help deliver **affordable** bills.

We will promote long-term **resilience** by ensuring a robust approach to the assessment of cost adjustment claims.

We will set challenging total cost allowances for companies upfront, but will allow companies to retain a portion of their cost savings. This will incentivise companies to **innovate** to achieve cost efficiencies.

We will set efficient cost allowances for retail services. We will use evidence on the provision of efficient retail services in other sectors, to deliver improvements in **customer service**.

Securing cost efficiency for customers

In our 2019 price review (PR19), we expect a **step change in efficiency** for the sector. To achieve that, there will be several changes to the approach we used at PR14.

We will replace the menu approach to cost sharing with a **new, simpler cost sharing mechanism** to incentivise companies to submit and deliver efficient business plans.

We will set cost allowances for water companies based on **projected efficiency** for the period 2020-2025. Our projected efficiency will be based on **benchmarking** of cost performance among companies from within, and, if appropriate, **outside of the industry** as well.

We will develop **new econometric models**. We will develop aggregate and granular cost models to reveal information on the cost of different services and provide wider support for our view of efficiency. We will use **forecast data** where appropriate, such as to identify future efficiency trends and in the case of **enhancement** activities where there is little historical evidence to establish comparative efficiency.

We will fund companies to deliver **environmental requirements** efficiently. Where such requirements are yet to be confirmed, we will require companies to propose an adjustment mechanism to protect customers against paying for work that will not be delivered.

There will be a **high evidential bar for accepting cost adjustment claims** made by companies. We will make the **process more symmetrical**, that is ensure that adjustments do not only increase cost allowances but also reduce them where appropriate.

We will have a **transition programme**, which allows companies to use PR19 expenditure allowances in 2019-20 where appropriate, in the water resources and network plus controls (water and wastewater).

We intend to use econometric models to set efficient cost allowances for the residential retail controls. The retail controls will not be indexed to a measure of inflation.

Applicability to England and Wales



Our PR19 final methodology for **securing cost efficiency applies to both** companies whose areas are **wholly or mainly in England** and companies whose areas are wholly or mainly in Wales.

Our PR19 methodology for **business retail** applies only to companies whose areas are **wholly or mainly in Wales**, and those water companies whose areas are **wholly or mainly in England who have not exited the business retail market** by the time we set price controls. More information on the scope of the business retail controls can be found in chapter 8 (retail controls).

Responses to our draft methodology proposals

Although there was overall support for our high level approach of using a mix of aggregate and granular **benchmarking models**, some respondents raised concerns about the use of frontier benchmarking. Most respondents supported our proposal to remove menu regulation and introduce a simpler **cost sharing mechanism** although some concerns were raised about the potential for the proposed mechanism to provide perverse incentives to submit low cost business plans.

There was some disagreement with our proposal to consider the quality of **cost adjustment claims** in our initial assessment of business plans (IAP) and particularly so if the cost models are not to be known in advance of the claims being made. Most respondents considered that models should be provided in good time. Several companies also noted that downward adjustments needed to be implemented accurately and another said that they should be able to challenge any such adjustment.

Respondents supported our proposed approach to move to an **efficient retail benchmark** using an econometric approach, but generally disagreed with our proposal **not to index the retail controls** to inflation. We also received mixed views on the use of evidence (for retail efficiency) from other sectors.

Our consideration of respondents' views

We expect companies to catch up with an efficient level of performance so that customers do not pay for inefficiency. We will consider the appropriate level of challenge when we set our PR19 determinations. We have adjusted the calibration of the cost sharing mechanism to provide a stronger incentive, to better protect customers and to minimise scope for any perverse incentive.

We consider it to be very important to make the cost adjustment process more symmetrical. We will consider how companies use the adjustment process and the quality of evidence in our IAP categorisation.

We consider that not automatically indexing retail controls to inflation provides better incentives for retailers to manage input prices and a more appropriate allocation of risk between customers and companies. We will consider whether any allowance for input inflation needs to be made as part of totex.

9.1 Introduction

This chapter sets out our final methodology for PR19 with respect to our approach to cost assessment and securing cost efficiency. This PR19 final methodology has been determined following full consideration of the views expressed by respondents to our [draft methodology proposals](#), published in July of this year.

Cost assessment is the setting of an efficient baseline for totex (that is, total expenditure of companies including both capital and operational expenditure) for each company for the price control period. In line with our new regulatory framework, for PR19 we will set cost baselines for six different controls:

- water resources controls;
- network plus controls in water;
- network plus controls in wastewater;
- bioresources controls;
- residential retail controls; and
- business retail controls for companies whose areas are wholly or mainly in Wales³⁹.

Our cost baselines feed into the calculation of our allowed revenue and regulatory capital value (RCV) additions. These play a key role in determining current and future bills.

The remainder of this chapter is structured as follows:

- expectations for companies' business plans (section 9.2);
- a new cost sharing incentive to submit efficient business plans (section 9.3);
- setting efficient cost baselines for water companies (section 9.4);
- our approach to retail controls (section 9.5);
- a transition expenditure programme for 2019-20 (section 9.6); and
- the initial assessment of business plans (IAP) – securing cost efficiency (section 9.7).

³⁹ A small number of companies whose areas are wholly or mainly in England for whom we will set full price controls at PR19 have not yet exited the business retail market. We have decided to keep a price control in place for these water companies. Chapter 8 (targeted controls, markets and innovation: retail controls) contains further information on the form of the retail controls at PR19.

[Appendix 11 \(securing cost efficiency\)](#) sets out the reasons for our policy and the detailed explanation of our methodology.

Section 8 of [appendix 15](#) outlines respondents' views to the seven questions we posed on securing cost efficiency in our draft methodology proposals. In appendix 15, we provide (or reference) our response to the issues raised by respondents.

9.2 Expectations for companies' business plans

We expect business plans to be based on efficient costs. Customers are dependent on their water supplier to take firm action to drive efficiency into their businesses. It is the responsibility of water companies to put together efficient business plans that deliver value for money for their customers. Companies should challenge their own business plans to ensure customers are not paying for inefficient levels of performance, inefficient delivery of work, or an inefficient level of risk.

Companies' Boards should provide assurance that the expenditure forecasts included in their business plans are robust and efficient.

A step change in efficiency

Businesses across the UK are facing cost pressures from a changing economy and are responding to these pressures by improving efficiency. We expect monopoly water companies to play their role too.

In PR19, we expect company business plans to show a step change in efficiency, relative to past periods.

Our price control framework is designed to reward and encourage efficiency and innovation. At PR14, we introduced a totex and outcomes framework. The framework has given companies the flexibility to decide how best to deliver their services, and to come up with the most cost-efficient and innovative solutions. Changes in technology, innovation, the use of markets and business process redesign to focus on customers all offer significant scope to reduce costs.

In PR19, we expect that water companies, as well as the supply chain, will have better embedded the totex and outcomes frameworks in their business planning process. We have seen significant efficiency gains among regulated energy transmission and distribution companies and early evidence of similar outcomes in the water sector during 2015/16 and 2016/17 from moving to a totex and outcomes framework.

We expect companies to identify significant scope to improve efficiency in the delivery of their services, and set out their proposed efficiency gains relative to 2015-20 in their business plan. Companies should not assume that rolling over base costs from the previous periods is a sound basis for business planning. We also expect companies to explain how their efficiency gains compare to broader evidence of efficiency gains from best practice in the wider economy. Where practicable, we expect companies to benchmark their performance, not only against their peers in the water sector, but also against performance in other sectors.

9.3 A new cost sharing incentive to submit efficient business plans

Cost sharing rates are the proportion of cost savings that investors get to keep, or the proportion of any cost overrun that investors will have to bear. Cost sharing ensures that customers benefit when companies outperform their cost allowance, while they are protected when companies overrun their allowance.

In PR19 we will not use a menu approach to incentivise companies to submit accurate cost forecasts. Instead, we will introduce a new mechanism, which is simpler and more easily understood. This mechanism will provide a stronger incentive to companies to submit efficient business plans that deliver value for money for customers. The new mechanism uses cost sharing rates to incentivise efficient business plans – efficient plans will get more favourable cost sharing rates than inefficient plans.

9.3.1 How the mechanism works

Each company will have one cost sharing rate for outperformance, and another rate for underperformance. The rates will be determined by the ratio of a company's business plan totex to our view of efficient totex ('the totex ratio').

Companies with efficient business plans will have a lower totex ratio and will be able to retain a higher proportion of their cost outperformance, relative to companies with inefficient business plans. Likewise, companies with efficient business plans with a low totex ratio will bear a smaller proportion of any cost overrun than companies with inefficient business plans and a higher totex ratio.

9.3.2 Calibration of the cost sharing mechanism

We have adjusted our proposed cost sharing rates that we presented for illustration in our draft methodology proposals to better incentivise companies, better protect customers and mitigate perceived risks around gaming.

Relative to the scheme that we illustrated in our draft methodology proposals, the new scheme for PR19 will provide a stronger incentive for companies to submit efficient business plans and to outperform their cost allowance. This is because efficient business plans will be able to retain a larger proportion of any outperformance on costs, while inefficient business plans will retain a lower proportion of outperformance relative to the scheme we presented in July.

We also made changes to ensure the scheme better protects customers against inefficient business planning and against perceived risks around gaming. We did that by setting the underperformance sharing rate flat at 50% for business plans that are more ambitious than our view of efficient totex (namely, with a totex ratio of 100 or lower). Under our approach to setting cost baselines, such companies are likely to receive a higher totex allowance than what they submitted in their business plan. We would expect them to outperform our allowance. Setting the cost sharing rate at 50% ensures that customers do not pay more than half of any cost overrun incurred by such company. The flat schedule also substantially reduces any perception of perverse incentive to submit low cost plans, irrespective of actual company forecast costs.

The new cost sharing scheme is shown in figure 9.1. When a company submits its business plan, its totex ratio will be determined by the ratio of its totex forecast to our view of efficient totex. This will, in turn, determine its cost sharing rates. The figure shows that cost sharing rates are more favourable at lower ratios, which will incentivise companies to submit business plans based on efficient cost forecasts.

Figure 9.1 Cost sharing mechanism for PR19

	More efficient business plans ←						
Totex ratio ¹	70	80	90	100	110	120	130
Cost sharing rate for outperformance ²	65%	65%	60%	50%	40%	35%	35%
Cost sharing rate for underperformance ³	50%	50%	50%	50%	60%	65%	65%
¹ Ratio of company's view to our view of totex (%) ² Percentage of outperformance company gets to keep. The remainder is passed on to customers through lower bills. ³ Percentage of cost overrun company has to bear. The remainder is passed on to consumers through higher bills.							

The precise calibration is described in [appendix 11 \(securing cost efficiency\)](#). We have also published an [excel model to demonstrate the cost sharing scheme](#), alongside our PR19 final methodology. We intend to use this calibration at PR19, although we will review this calibration as part of our IAP, and if appropriate, make adjustments to the calibration.

9.3.3 Application of the cost sharing mechanism across PR19 controls

The cost sharing mechanism will apply for total revenue controls only, namely for water resources, water network plus and wastewater network plus. We will not apply cost sharing in average revenue controls, namely in the retail and bioresources controls. In the average revenue controls, any deviation from our allowed expenditure will be incurred fully by the company.

For the water resources and water network plus controls, we will set the same cost sharing rates. That is, the same outperformance sharing rate across the controls, and the same underperformance sharing rate. The sharing rates will be determined on the basis of the totex ratio, where totex is the combined totex of the water resources and water network plus controls.

9.3.4 Cost sharing rates for significant scrutiny plans

The cost sharing scheme above will not apply for companies categorised as 'significant scrutiny' in the IAP.

For companies whose plans are assessed to need significant scrutiny, we have set a cost sharing rate of 75% for underperformance and 25% for outperformance – as outlined in chapter 10 (aligning risk and return). This means that significant scrutiny companies will keep only 25% of their cost outperformance but bear 75% of cost underperformance. This will incentivise investors to hold companies to account, and so strongly incentivise companies to deliver high quality business plans. It will also protect customers of companies whose business plan is of poor quality, and does not give us confidence as a basis for setting price controls.

9.3.5 Cash flow

A company's cost allowance will be equal to our view of efficient totex for the company. Any reconciliation between actual cost and the allowed costs will be made at the end of the 5-year period of PR19 and will impact PR24. To minimise the anticipated reconciliations, we will set our determination (for example, revenue allowances and RCV additions) to reflect the position that the company's outturn totex in PR19 is the same as its business plan totex. We illustrate this in the box below.

Box 9.1 An example of our cost sharing mechanism for total revenue controls

The example is based on the cost sharing scheme in figure 9.1.

Determining cost sharing rates

A company submits a business plan for the period 2020-25. Its totex forecasts are £110 million for the wastewater network plus service. Our independent view of efficient totex in the wastewater network plus service is £100 million.

The totex ratio in this example is 110, and the cost sharing rates are 40% for outperformance and 60% for underperformance (read from figure 9.1).

Cash flow

The company's allowed costs are equal to our view of efficient totex, namely, £100 million. The allowed cost serves as baselines for the cost performance incentive.

However, our PR19 determinations (in terms of revenue cap and RCV additions) will reflect an allowed totex of £104 million. This amount factors in a reconciliation of £4 million to the company, which is the reconciliation that would result if the

company's actual expenditure turns out to be as it had forecasted in its business plan. It is calculated as $\text{£}104\text{m} = \text{£}100\text{m} + 40\% \times (\text{£}110\text{m} - \text{£}100\text{m})$.

Determining the reconciliation based on outturn performance

If the company's actual expenditure turns out to be £120 million – an underperformance of £20 million against our independent view of totex – its investors will bear £12 million of this cost overrun ($60\% \times \text{£}20\text{ million}$). The remainder, £8 million, will be recovered from customers.

In practice, the company has already recovered £4 million from customers, as our determination reflected outturn costs of £110 million by the company.

The remaining reconciliation will allow the company to recover additional £4 million from customers.

9.4 Setting efficient cost baselines for water companies

The main components of our approach includes the following.

- Cost assessment, where we use comparative assessment to form a view of comparative efficiency in the sector. This includes:
 - econometric models for cost benchmarking – these models will cover the majority of companies' costs (section 9.4.1); and
 - a separate assessment of cost items that are not covered by the main econometric models, such as components of enhancement expenditure, business rates and pension deficit recovery payments (section 9.4.2).
- An efficiency adjustment, where we set efficient cost baselines for companies. The efficiency challenge is based on our comparative assessment in the sector, as well as relevant information from other sectors and the wider economy (section 9.4.3).
- an adjustment process, where we would consider further adjustments to our baselines, based on company representations and our own analysis (section 9.4.4).

Our cost allowance for any given company will not be directly based on its own historical cost performance. There will be no extrapolation or roll forward of each company's historical expenditure to generate its baseline. This ensures that

companies do not have perverse incentives to underperform towards the end of the control period in order to influence their starting position in the next control. Similarly, our cost allowance for any given company will not be directly based on its own cost forecast for PR19, so that companies do not have a perverse incentive to submit high forecasts in their business plans.

An exception to the above is where a company forecasts a significant cost reduction, or a cessation, of a specific cost activity, which is not due to improved efficiency. For example, a company may tell us in its business plan that it has finished its enhancement programme to comply with the Security and Emergency Measurers Direction (SEMD) and will not incur expenditure in this area in PR19. If our cost baselines include expenditure against this activity, we will adjust our cost allowance for the company as appropriate. We will not make a company specific adjustment except where it is material or where the activity is no longer relevant.

9.4.1 Econometric models for benchmarking analysis

We will develop econometric models to compare costs across companies and identify those companies that are relatively efficient. This will inform our cost baselines for the sector. The econometric models will cover base costs, which is operating expenditure (opex) and maintenance capital expenditure (capex). Where appropriate, the models will also include elements of enhancement expenditure.

Our econometric models will include ‘top down’ models that compare aggregate wholesale costs across companies, similar to those used in PR14. We will also develop more granular models. The granular models will benchmark expenditure on individual services, such as: treatment, distribution, water resources and bioresources. We will use a set of robust and credible cost models to inform our cost baselines.

We will develop our models initially using historical (outturn) data. When we receive company business plans, and with their information on forecast expenditure and level of activity, we will benchmark this data as well to help identify forward trends and future efficiency gains.

Sharing our cost models with stakeholders

We will consider whether it would be helpful to publish more details on our cost models in early 2018, once we have developed an initial set of models⁴⁰. We do not consider that publication of our cost models is an essential input to company business plans – companies should focus on developing efficient business plans that deliver for their customers. Companies' business plans should not be driven by regulatory models of cost assessment.

9.4.2 Our approach to enhancement expenditure

Enhancement expenditure refers to expenditure for the purpose of enhancing the capacity or quality of service beyond current levels. The expenditure may be driven by a number of factors, including population growth, new statutory obligations and strategic prioritisation by company Boards (which should be in consultation with their customers).

Enhancement expenditure can be quite company-specific, irregular and difficult to predict.

In PR19, we will develop and use a number of approaches to deal with different types of enhancement expenditure. Our approach will depend on the type of enhancement activity, how well its costs are distinguished from base costs' to what extent it interacts with other activities, its materiality and the amount of data that we have to assess the cost through benchmarking analysis.

We consider that it may be appropriate to include certain activities in the scope of our econometric models, together with base expenditure. This may be the case with enhancement expenditure to address growth, given that the driver is common and persistent for all companies. It may also be appropriate for activities where the boundary between base costs and enhancement costs is ambiguous (and therefore separating them out may cause distortion).

For enhancement activities that are excluded from the scope of our econometric models, we will develop a separate assessment for each activity.

⁴⁰ The initial set of models may be changed and improved following additional analysis, feedback from stakeholders and receipt of annual performance reports in summer 2018.

Where we develop a separate efficiency assessment of enhancement costs, we will still use benchmarking analysis where we have sufficient data. However, the analysis will be based on cost comparison of each enhancement activity. This means we will be able to consider more specific, low level factors that affect the enhancement costs in our assessment. Given that, typically, there is a scarcity of data related to enhancement activities, we will make use of forecast data in our benchmarking analysis, as appropriate. Our use of forecast data will be particularly relevant where there is little or no historical information.

Where there is insufficient data for robust benchmarking analysis, we will use any other available information, including company business plans and evidence of market testing, to justify expenditure. Our approach will be proportionate. For material areas of enhancement expenditure, we will look to complement our analysis with an 'expert review' and any additional relevant information that may be available to us.

9.4.3 Our approach to unconfirmed requirements in environmental programmes drawn up by the EA and NRW

A large portion of enhancement expenditure is driven by environmental requirements. These requirements will be set out in the final release of the 'water industry national environment programme' (WINEP) in England, and the 'national environment programme' (NEP) in Wales, due to be issued in March 2018. However, some requirements are not expected to be confirmed until December 2021 at the earliest. This means that these requirements will still be uncertain when companies submit their business plans to us in September 2018, and when we make our final determinations in December 2019.

In PR14, we made an efficient cost allowance to companies, based on the full scope of the requirements that were anticipated to be confirmed. In some cases, unconfirmed requirements turned out not to be required by the environmental regulator later on. This highlights the risk that customers may pay for enhancement schemes that companies will not be required to deliver.

In PR19, we will adapt our approach to funding unconfirmed environmental requirements to better protect customers against the uncertainty related to unconfirmed environmental requirements.

In PR19 we will fund the anticipated programme, as long as companies propose an appropriate cost adjustment mechanism to account for a potential discrepancy between the scale of the assumed and confirmed programmes. Companies will be

required to link expenditure for unconfirmed requirements to an outcome and a unit cost. We will use the unit cost to make an adjustment at the end of the control period, based on the volume of work that was eventually confirmed as required and delivered by the company. Proposals for unconfirmed schemes without this safeguard would not attract funding at PR19, unless relatively trivial (for example, the cost of some investigations).

9.4.4 Setting cost baselines to deliver a step change in efficiency

In PR19, we will set efficient cost baselines for companies based on a forward-looking view of efficiency.

Our view of efficiency will be informed by our comparative assessment. We will use historical and forward-looking cost performance to identify the most efficient companies in the sector, which will set the benchmark for the rest of the companies.

But it is important not to look only at cost performance within the sector. We will look at cost performance in other sectors as well. For example, we will look at other sectors that have adopted the totex and outcomes frameworks for evidence of the efficiencies and innovation they have delivered. This will further inform our view of efficiency, so that our baselines do not perpetuate inefficiencies within the sector. We will also incorporate forecast productivity gains in the wider economy in setting our efficient baselines.

This is a change from PR14 where we used only historical information within the sector to set cost baselines. At PR19, we are expanding the set of evidence we will use to inform our efficient cost baselines.

By using all available information to set our cost baselines, we will ensure that our baselines are stretching, so that customers do not pay for inefficiency. At PR14, we set the efficiency benchmark at the 'upper quartile' level of historical totex efficiency⁴¹. In PR19, we will look to strengthen the efficiency benchmark and use forward-looking efficiency projections.

We will determine the appropriate level of efficiency challenge for the five years of 2020-2025 when we set draft and final determinations. We will take into account the

⁴¹ That is, we set an efficiency challenge based on the historical performance of a (notional) company that was more efficient than 75% of its peers, but less efficient than 25% of its peers.

evidence we discussed above, as well as the quality of our cost models efficiency forecasts.

We intend to set efficient cost baselines from the start of the price control period with no gradual catch-up (glide path) over each year of the price control. Customers should not pay for inefficient performance. If a company is not efficient from the start of the period, its shareholders will have to bear at least 50% of this inefficiency. We recognise that there may be circumstances, for example where we have introduced new resource controls, where a gradual catch up to efficient levels of performance may be appropriate for one or more companies. This is because the efficient baseline, and companies' relative inefficiency, have not been visible at previous controls. We will consider this issue further as part of setting draft determinations.

We note that our approach means that most efficient or 'frontier' companies, with very efficient cost forecasts, may receive a cost allowance which is higher than what is in their business plan. This approach provides a strong incentive for companies to seek efficiencies and submit stretching cost forecasts.

In PR14, we intervened to 'cap' the difference between company forecasts of costs and our cost baselines - where company forecasts were significantly below our baseline. We considered that this intervention was appropriate to protect customers. We also acknowledged that such an approach could have the potential to distort the incentives on preparing stretching business plan forecasts at future price control reviews.

We do not intend to apply such a 'cap' in PR19. We consider that our approach to setting efficient baselines, using historical, forecast and out-of-sector evidence on efficiency, will provide a robust result and not require the use of capping. That said, where appropriate, we will intervene in a suitable way to protect the interest of customers, and it would be inappropriate at this point to rule out the use of capping. We will consider this issue further when we come to set draft determinations.

9.4.5 Adjustments to our modelled cost baselines

Our basic cost assessment approach relies on benchmarking models to set an efficient cost for each company. However, statistical models are not perfect and cannot take into account all relevant factors that affect costs. There may be instances where an adjustment is required to correct these imperfections.

As in PR14, we will allow companies to raise cost adjustment claims for unique or atypical material costs that they consider are not reflected in our cost baselines.

Symmetrical process

We will consider where our models may have understated or overstated expenditure requirements, and will make an adjustment accordingly. For this process, we will only make an adjustment if it passes the same materiality threshold that we apply to company claims.

We will have a process of symmetrical adjustments, which would apply to certain types of cost adjustment claims, namely for claims whose costs are already reflected in the baselines. We will offset accepted claims with a reduction in modelled allowances. The negative cost adjustment to affected companies will be determined on a case-by-case basis.

Materiality thresholds

We will apply materiality thresholds for cost adjustment claims. We will only consider claims that are above the materiality threshold.

We will apply a separate threshold for each of the PR19 controls. Table 9.1 shows the thresholds we will apply, at each control, for cost claims in PR19.

Table 9.1 Materiality thresholds for cost adjustment claims in PR19

Control	Materiality threshold*
Water network plus	1%
Wastewater network plus	1%
Water resources	6%
Bioresources	6%
Residential retail	4%
Business retail	6%
* As a percentage of business plan (5-year) totex in the respective control.	

The thresholds above, which we will implement at PR19, are higher than those we used at PR14. At PR14 we used thresholds of 0.5% for the wholesale water and wholesale wastewater controls, 2.25% for the residential retail controls and 5% for the business retail controls.

We have increased the threshold levels based on examination of PR14 cost claims. At PR14, we rejected over 70% of wholesale water and wastewater claims below 1% materiality, and the total value of those we accepted was quite small. This was not the case when we looked at claims that were slightly more material, for example, claims between 1-2% materiality, where the rejection rate was about 50%. We therefore decided to increase the threshold level at the network plus controls to 1% (which is equivalent to about 0.9% at the wholesale level).

The higher thresholds in the retail and resources controls reflects their smaller overall value out of the appointed company business. The 4% threshold in residential retail keeps the same threshold ratio as we had in PR14 between wholesale and residential retail. The water resources, bioresources and business retail controls are smaller yet. The 6% thresholds in these controls reflects this, although on average it amounts to a lower proportion of the appointed business as the other thresholds.

We consider that the higher thresholds will ensure customers are better protected from an adjustment process which is largely one-sided. The higher thresholds will ensure a more proportionate process that will allow us to focus attention on important adjustments to modelled costs.

Where a company raises a cost claim, we expect it to be contained within a single control. We will calculate the materiality of the claim as the net value of the claim (that is, the value of the full claim less any amount that we consider is already included in the modelled cost baselines) relative to the company view of totex in that control for the period of AMP7.

Interaction with the IAP

We consider that in many cases, companies can and should mitigate and avoid the need for cost adjustment claims. We expect companies to use the adjustment process responsibly, and raise cost adjustment claims only where there is convincing evidence that an adjustment is required and take an 'in the round' view. Companies should take a balanced approach and recognise that, just as there might be costs that are underestimated by our models, there may also be costs that are overestimated by our models. Likewise, just as there are operating circumstances that increase costs in a specific region or for a specific company, there are likely to be other circumstances that reduce costs in the same region. Companies that recognise this will be able to take account of it in their business plan submission and refrain from submitting some cost adjustment claims they would otherwise have made.

We will take account of cost adjustment claims in assessing business plan totex efficiency in the initial assessment stage. We will consider the quality of claims and a company's approach to the process. Other things being equal, a company that raises cost adjustment claims only where necessary, and where the claims are well evidenced and efficient, is likely to score higher in the cost efficiency test than a company that uses the process less carefully, and whose claims are unwarranted and of low quality.

We consider that, by their unique nature, a lot of cost claims can be anticipated and will not be dependent on the specific form or range of our models. But we recognise that there is some interaction between the cost adjustment process and companies' visibility of our cost models. If we provide information on our cost models ahead of cost claims submission, we expect companies not to submit cost claims that are covered by our models. If companies do not have early visibility of our cost models, we will take this into consideration when assessing companies' approaches to the process. In such cases, we will also expect companies to explain to us how their claim is dependent on model specification.

Exceptional and fast-track companies will benefit from early certainty on the adjustment process. Namely, at their early draft determinations they will have certainty on the cost adjustment claims that we accepted, and the size of the adjustment made. There is more information in chapter 14 on the initial assessment of business plans.

Early submission

We invite companies to submit information on their cost adjustment claims by 3 May 2018. Receiving early information on expected cost adjustment claims will assist the review process. In particular, it will provide valuable additional time to take into account companies' cost adjustment claims in the initial assessment of business plans, and provide early certainty on our decision on exceptional and fast-track companies. Early submission will give us the opportunity to ask the companies for further information or clarification, where appropriate.

Companies are invited to submit any information they have, at that point, to support their claims. We do not expect companies to provide assurance with this early information and it will not impact companies' categorisation in the initial assessment of plans. Companies should submit a final and assured version of their cost adjustment claims with their business plan.

9.5 Our approach to retail controls

PR14 was the first time that we set a separate price control for retail services. There is early evidence of good outcomes from the move to separate retail controls. Companies are more focused on efficiency in this service. Companies who were successful at adapting to the new framework will shift the efficiency frontier forward on costs. This, in turn, will drive our view of the efficient level of retail costs for PR19.

9.5.1 Our approach to residential retail

Our approach to residential retail in PR19 is an evolution of the one we had in PR14. Now that the new arrangements are better understood, data has improved and high cost companies have had the time to become more efficient, we will move to an efficient cost to serve, based on efficient companies' costs rather than average costs. The approach to retail will be similar to our approach in wholesale controls, with a strong focus on forward-looking efficiency in our cost baselines.

We intend to use an econometric modelling approach to benchmark companies' costs and set efficient totex baselines. This is a move away from the average cost to serve (ACTS)⁴² approach of PR14. We will use cost benchmarking to identify an efficient, rather than average, level of total retail costs, taking into account a company's operating environment.

Our benchmarking analysis will set efficient costs for all companies, whether they are above or below our baseline, providing a strong incentive for companies to submit efficient costs. We will not allow a gradual catch-up (glide path) to the efficiency frontier. By 2020, companies will have had five years to catch up to the efficient level of residential retail costs.

Companies will be able to make a cost adjustment claim where they consider that our retail baseline fails to capture a specific, material cost in their totex projection. See section 9.4.5 for further detail on our adjustment process.

⁴² The ACTS approach consisted of unit-cost benchmarking (average retail cost per customer in the year 2013-14) supplemented with industry-wide and company-specific off-model adjustments. See appendix 11 (securing cost efficiency) for further detail of our PR14 approach.

Use of wider evidence to inform our cost baselines

We will look for evidence on efficiency in the provision of retail services in other sectors. This will inform our view of efficient retail costs for water companies.

We commissioned PwC to compare water companies' cost performance in bad debt and customer services to other relevant sectors⁴³. The report shows that water companies' cost performance lags behind the other sectors, and suggests that this gap cannot be explained entirely by the different legal frameworks within which they operate. The report suggests what water companies can do to address this and identifies specific areas where water companies can improve.

Companies should demonstrate that their revenue recovery and management of bad debt, are in line with best practice. Companies should outline how their proposed approach to debt management will enable them to become more efficient in the recovery of revenue and deliver improvements for customers.

We will also look for evidence of value for money and innovation in the provision of customer services such as billing and complaint handling.

9.5.2 Our approach to business retail

Applicability to England and Wales

Our PR19 final methodology for **business retail** applies only to companies whose areas are **wholly or mainly in Wales**, and those water companies whose areas are **wholly or mainly in England who have not exited** the business retail market by the time we set price controls⁴⁴.



⁴³ Retail Services Efficiency, PriceWaterhouseCoopers, September 2017

<https://www.ofwat.gov.uk/regulated-companies/vulnerability/debt-management-and-other-retail-costs-research-and-recommendations/>

⁴⁴ As at December 2017, a small number of water companies in England for whom we intend to set price controls have not exited the retail market. More information on the scope of the business retail controls can be found in chapter 8 (targeted controls, markets and innovation: retail controls).

We will assess retail costs for companies whose areas are wholly or mainly in Wales in respect of wastewater business retail customers and water business retail customers using less than 50 megalitres a year⁴⁵.

We expect companies whose areas are wholly or mainly in Wales to provide robust evidence to justify the efficiency of their business retail cost forecasts. We will examine the evidence in companies' business plans. We will challenge it using evidence on historical levels of costs and any other relevant evidence, such as from the English business retail market and the residential retail services.

Due to the small number of close comparators, we do not intend to develop econometric benchmarking models in this area.

Companies whose areas are wholly or mainly in England operate in a competitive environment. For those companies that have not exited the business retail market, we would set a revenue cap, based on previously allowed levels of costs (and margins)⁴⁶. This would provide a safeguard to the level of charges that customers can be charged for retail services.

9.5.3 Our approach to retail input price pressure

As at PR14 we will not index the retail controls⁴⁷ to a measure of general inflation at PR19. We remain of the view that this approach continues to provide appropriate incentives for companies to manage retail input costs.

In retail controls the relevant inflation risk is the risk that input prices increase in the short term. There is no RCV in retail controls, so indexation is only relevant to allowed revenue and is not needed to protect the long-term value of the RCV against long-term inflation risk. We remain of the view that inflation risk for water retailers, which mainly consists of labour costs, is controllable by companies.

⁴⁵ Business customers of companies whose areas are wholly or mainly in Wales who use at least 50 megalitres of water a year, can switch their water supplier. We will set a gross margin cap to protect these customers. Further detail can be found in chapter 8 (targeted controls, markets and innovation: retail controls).

⁴⁶ We will set a gross margin cap to protect business customers of companies whose areas are wholly or mainly in England who use at least 5 megalitres per year.

⁴⁷ This applies to residential and business retail controls.

If robust evidence demonstrates that input price pressures present a material cost to companies at PR19, we will assess this as part of our totex allowance, not through indexation. See [appendix 11 \(securing cost efficiency\)](#) for further information.

9.6 A transition expenditure programme for 2019-20

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).

The purpose of the transition programme is to make more efficient use of resources and minimise whole life costs, where it is efficient to bring forward an investment and to enable statutory deadlines early in the next regulatory period to be met. It may allow companies to respond efficiently to new information related to the next price control period. The programme can also help to smooth investment in the sector and address the issue of investment cyclicalities around price reviews.

In PR19, we will allow a transition programme in the network plus controls. We will also allow the transition programme in the water resources controls, but in exceptional circumstance only. We will not allow any transition expenditure in the bioresources controls (except for any efficient investment that South West Water incurs for schemes for the Isles of Scilly if it becomes the water and sewerage undertaker for all or part of the Isles) or in the retail controls.

Where companies propose transition expenditure, we expect them to make the case for why it is efficient to bring the investment forward, and why it was not part of its outcomes and long-term planning from PR14 t.

9.7 Initial assessment of business plans – securing cost efficiency

Based on our proposals for cost assessment, we will test cost efficiencies across the different price controls (wholesale and retail), and whether a company raises well evidenced and appropriate efficient cost adjustment claims, as part of our initial assessment of business plans.

We will test cost efficiency with reference to the following questions.

Initial assessment test on securing cost efficiency

1. How well evidenced, efficient and challenging are the company's forecasts of wholesale water expenditure, including water resources costs?
2. How well evidenced, efficient and challenging are the company's forecasts of wholesale wastewater expenditure, including bioresources costs?
3. How well evidenced, efficient and challenging are the company's forecasts of retail expenditure, including bad debt costs?
4. To what extent are cost adjustment claims used only where prudent and appropriate, and where they are used, are costs adjustments well evidenced, efficient and challenging?

In carrying out these tests, we will take into account evidence of innovation, markets and a step change improvement in efficiency, the quality of evidence provided for efficient and challenging cost forecasts for each price control, the quality of evidence to support any cost adjustment claim and our own view of efficient costs for each company for the period 2020-2025.

10. Aligning risk and return

Key themes of PR19

Our approach to aligning risk and return, now and in the long term, supports the key themes of PR19.

Our PR19 methodology will incentivise all companies to improve their performance, and the best companies to deliver frontier-shifting performance on **affordable bills**, **resilience** and **customer service**, through the design of an incentive package that aligns investors' and companies' interests with those of customers.

We will promote long-term **resilience** by ensuring efficient companies can continue to finance their functions and invest in the services they provide, by earning a reasonable return that reflects the risks they face.

Our PR19 methodology will promote **innovation** by providing an incentive for companies that deliver exceptional quality business plans, and underperformance penalties for companies that fall short of customers' expectations.

Aligning risk and return

We will **set the cost of capital at the appointee level** on the basis of a notional capital structure.

Current evidence indicates that **both the cost of debt and equity are lower than in 2014**. Our early view on the appointee cost of capital is 3.4% (CPIH real, 2.0% long-term inflation), equivalent to 2.4% with a 100 basis point wedge to RPI.

To the extent appropriate, we will **set the cost of equity** for 2020-2025 taking into account evidence from historical data and more recent market and forward-looking evidence.

We will **index the cost of new debt**. Companies can outperform the index, but scope for outperformance resulting from market-wide falls will be limited and companies will be protected should the cost of debt rise. We will set a **fixed cost of embedded debt**.

There will be a **high bar for us to accept** any proposals for **risk pass through mechanisms** from companies to customers, or for **company specific adjustments** to the cost of capital.

Companies with **exceptional business plans** will get a 20 basis point (bp) to 35bp RoRE addition for the whole review period; **fast-track business plans** will receive a 10bp RoRE addition.

We will **increase the proportion of revenue at risk from service performance** through ODIs. We will **sharpen cost sharing incentives** to reward the most efficient; inefficient companies will bear a greater share of underperformance. This will encourage companies to focus on delivery for customers and the environment.

Price controls will transition to CPIH, so that bills better reflect the inflation rate faced by customers. From 1 April 2020, we will index 50% of the RCV to RPI; the rest, including new RCV, to CPIH.

There will be a **mechanism to pass through changes in the headline tax rates** to customers.

Applicability to England and Wales



Our PR19 final methodology for aligning risk and return **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales. A consistent approach to risk and return is appropriate for financing and incentivising a range of ownership structures.

Our approach to setting a **retail margin** reflects the different circumstances in England and Wales. Eligible business customers of companies whose areas are wholly or mainly in England are able to choose their supplier; in most cases, appointed companies have exited the market and so they will not have a business retail operation that could be subject to a price control. Where appointees have not exited the market, we will set a price control. The retail exit code protects customers where there has been retail exit. We will review the code outside the PR19 process. We will set retail controls for business customers of companies whose areas are wholly or mainly in Wales.

Responses to our draft methodology proposals

Companies and investors raised concerns that the risk and return package **asymmetrically skewed** returns to below the allowed cost of equity for most companies.

Companies and investors raised concerns that our **cost of equity** proposals placed too much weight on recent market data as opposed to long-term historical equity returns. Respondents that raised concerns considered this increased subjectivity and was inconsistent with past regulatory decisions. Some companies and investors considered our proposal to apply a high bar for **company-specific adjustments** to the cost of capital to be inconsistent with our financing functions duty.

There was general support for our proposals to transition to **CPIH**, to include a **tax reconciliation adjustment**, and for **managing risk and uncertainty**, although some respondents raised some issues.

Our consideration of respondents' views

We have revisited the **risk and return** package; revising the financial incentives for the initial assessment of business plans and totex cost sharing rates. The package will give efficient companies balanced prospects of receiving the allowed returns. There will be scope for outperformance where companies deliver on what matters to customers.

We provide an early view on the **cost of capital** for companies to use when preparing business plans. Our **cost of equity** draws on a range of evidence, including historical data and forward forecasts. We retain our proposed approach in other areas, including **company-specific adjustments**, where the burden of proof must remain with the companies.

10.1 Introduction

Our aim is to align the interests of companies and investors with those of customers, by setting the appropriate balance of risk and return. If we get this right, then by responding to our incentives in the way that is best for them, companies will also deliver what is best for customers.

This chapter describes how we have set the balance of risk and return across the price review, and explains our approach to key issues such as the cost of capital, inflation and tax. The remainder of this chapter is structured as follows:

- aligning risk and return to drive company performance (section 10.2);
- overall risk and return package (section 10.3);
- managing risk and uncertainty (section 10.4);
- our overall approach to the cost of capital (section 10.5);
- our approach to the cost of equity (section 10.6);
- our approach to the cost of debt (section 10.7);
- allocating the cost of capital across price controls (section 10.8);
- our approach to inflation (section 10.9);
- our approach to corporation tax (section 10.10); and
- initial assessment of business plans – aligning risk and return (section 10.11).

[Appendix 12 \(aligning risk and return\)](#) provides further detail to support our policy and further explanation of our methodology. The appendix also sets out the assessment that underpins our view of the early view of the overall cost of capital.

Section 9 of [appendix 15](#) outlines respondents' views on the five questions we posed about risk and return in our draft methodology proposals. We also address other issues that were raised in consultation responses on the overall balance of incentives and issues related to company specific adjustments.

10.2 Aligning risk and return to drive company performance

This section sets out how we use the balance of risk and return to align investor and management interest with what is best for customers.

Our aim is to set effective price controls that drive companies to deliver the outcomes and levels of service their customers want. We expect companies:

- to deliver for customers;

- to deliver all their legal obligations, including those as statutory water companies and for drinking water quality and the environment;
- to provide services that are resilient now and in the long term; and
- to do all this at a cost that is efficient and provides the best value for money over the long term.

10.2.1 Aligning risk and return for efficient companies

Our aim is for price determinations to be stretching, to encourage companies to deliver new levels of efficiency, by seeking new and better ways of delivering services at the most efficient cost. We expect customers to see levels of service that improve over time.

Investors in a company that is efficient on both service and costs should have a reasonable prospect of earning their allowed returns. We have set the proposed package of returns consistent with this view. We do not set the package of returns so that returns are skewed upwards by allowing an efficient company to expect to earn a premium over the allowed return for just delivering an efficient plan. Nor do we set the package of returns so that returns are skewed downwards for efficient companies. Companies that outperform efficient levels of cost and service should have a reasonable prospect of earning outperformance returns; investors in companies that underperform should have a reasonable prospect of earning less than the allowed return, as it is shareholders rather than customers that should bear the risk of underperformance.

We expect the efficiency challenge on companies to be stretching – we expect the efficient company in 2020-2025 to be more efficient than an efficient company today. This means that a company whose performance is average today (in terms of cost or service) can expect to be underperforming in 2020-2025 if its current level of performance continues.

Our determinations will reflect our expectation that investor returns should fairly reflect the levels of service and cost efficiency delivered. Where business plans are not sufficiently stretching, we will intervene to make sure the balance of risk and return includes a sufficient level of stretch.

To align the interests of management and shareholders with those of customers, we consider incentives for cost and service performance should:

- incentivise the best performing companies to stretch the benchmarks on efficiency and service performance;

- adequately reward companies that take on greater commercial risk, or that provide a particularly ambitious or innovative business plan; and
- include appropriate penalties for companies that deliver poor business plans or poor performance.

We have assessed the relative strength of different incentives to ensure they work together as a package to drive the right behaviour.

We set out our early view of the cost of capital in this PR19 methodology. Our allowance for the cost of capital will provide reasonable base returns that reflect the level of risk that is inherent in the sector. Our cost of capital will be set for a company with our notional capital structure and reflect evidence of expected market returns for 2020-2025.

Historically, outperformance on financing costs was a key driver of company returns. Our methodology links revenues more closely to service delivery and cost performance. We have also reduced the scope for financing gains by indexing the cost of new debt and introducing a reconciliation mechanism for changes in headline tax rates. This encourages companies and their investors to focus more on what matters for customers.

Companies can make a case in their business plans for risk mitigation mechanisms or company-specific cost of capital adjustments. Where they do so, the case must be robustly justified, and supported with compelling evidence such that the proposals balance the interests of customers with those of the company and its investors. This is necessary to mitigate the risk that companies and their shareholders face by passing these risks on to customers. We discuss these issues in sections 10.4.3 and 10.7.3.

This chapter focuses on the overall balance of risk and return, which is relevant to most chapters of this methodology. Reputational incentives are covered in chapter 4 (delivering outcomes for customers) and chapter 14 (the initial assessment of business plans: securing high quality, ambition and innovation). Procedural incentives are also covered in chapter 14.

10.2.2 Applicability of risk and return in England and Wales

Applicability to England and Wales

Our approach to aligning investor and management interest with customers in the PR19 final methodology **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales.



Companies in England and Wales have a variety of ownership structures. Of the 15 water companies whose areas are wholly or mainly in England, three are listed on the London Stock Exchange; others are privately owned. Of the two companies whose areas are wholly or mainly in Wales, one is owned by a listed company and one, Dŵr Cymru, is owned by a not-for-dividend company limited by guarantee – this means any financial surpluses are retained for the benefit of its customers.

We consider the combination of reputational, procedural and financial incentives we use to be appropriate to all current ownership structures and models.

Reputational and procedural incentives should be equally effective under any ownership structure, because these primarily affect management – rather than the owners.

Financial incentives should motivate company performance, whether companies are privately owned or listed. These incentives drive investor returns; investors in turn put pressure on management teams to deliver against the incentives. Financial incentives also provide a useful indication of management performance, which can be factored into remuneration and which is also taken into account by private bond holders and in the company's credit rating.

We consider that financial incentives protect customers regardless of ownership structure – customers are protected from stagnating levels of performance where benchmarks are driven by the performance of the best. They can also work in the context of Dŵr Cymru, as ODI and totex outperformance will allow surplus to be allocated to benefit customers, which can provide further reputational benefits to the company.

It is for companies to determine what they do with outperformance payments – whether they reinvest, reduce bills or pay out dividends. In any scenario, companies still need to act in such a way to best ensure they have adequate access to financial resources and facilities to deliver for customers in the long term. We would also

expect companies to consider how their decisions on outperformance payments affect the perceived legitimacy of the sector.

10.2.3 Overall balance of risk and return

Table 10.1 summarises the financial incentives that will apply in 2020-2025. In the table, we express the strength of incentives by reference to return on regulatory equity (RoRE) calculated as the incentive strength divided by regulatory equity at the notional level of gearing. The details of these incentives are covered in the chapters and appendices on securing cost efficiency, delivering outcomes and the initial assessment of business plans.

Table 10.1 Summary of strength of key financial incentives, in return on regulated equity (RoRE) terms

Incentive	Summary of our decision	Change from PR14 methodology
ODIs	<p>We set an expectation that companies' ODI proposals will drive an expected range of ODI out/underperformance of ± 1-3% of RoRE. This range is not capped, but we expect companies to propose approaches to protect customers in case their ODI payments turn out to be much higher than their expected RoRE range. This range includes enhanced outperformance and underperformance payments for common performance commitments, excluding C-MeX and D-MeX.</p> <p>We are challenging companies to achieve the forecast upper quartile for each year of the price control period for their performance commitments⁴⁸. This will require stretching performance commitments from all companies, and will be more challenging than at PR14.</p> <p>Companies will only earn outperformance payments for delivering beyond stretching service levels, and will incur underperformance penalties for service below committed levels. A company whose future performance remains at the current average should expect to incur underperformance penalties on its ODI package. On balance, a company that delivers levels of performance consistent with our</p>	<p>We expect all companies to adopt an increased number of financial and in-period ODIs.</p> <p>We have increased the expected range of ODI out/underperformance to ± 1% to ± 3% of RoRE (from PR14 level of ± 1% to ± 2%). This will not be capped but we expect companies to propose approaches to protect customers if their ODI payments turn out to be much higher than their expected RoRE range.</p> <p>Companies' commitments will require a greater level of stretch than at PR14.</p> <p>This is consistent with increasing revenue at risk from operational</p>

⁴⁸ This is a change from our proposal in the draft methodology to benchmark the level of performance for every year at the forecast upper quartile for 2024-25.

Incentive	Summary of our decision	Change from PR14 methodology
	<p>benchmarks in 2020-2025 would receive neither outperformance payments nor underperformance penalties on ODIs.</p> <p>Our ODI approach is discussed in chapter 4.</p>	<p>performance. Higher returns for high performing companies and lower returns for poor performers.</p>
Totex	<p>Our benchmarks will take account of historical and forecast cost performance of the most efficient companies in the sector. We will also take into account forward-looking efficiency trends and, where appropriate, information from other sectors to inform our efficiency challenge.</p> <p>We will use asymmetrical cost sharing rates as set out in chapter 9⁴⁹. We estimate a reasonable upper and lower RoRE range for totex would be around $\pm 2\%$, as in the consultation, based on 10% cost out/underperformance against our benchmark, and around -2% to $+1\%$ for significant scrutiny companies.</p> <p>We expect a step change in the efficiency of the sector. A company whose future performance remains at the current average should expect to incur underperformance penalties on its totex performance. On balance, an efficient company would be in neither reward nor penalty on totex.</p> <p>Our cost sharing approach is discussed in chapter 4.</p>	<p>We have retained a similar range to PR14, but we would expect more dispersion across the range – with higher returns for companies who submit and deliver stretching plans, lower returns for companies in the middle of the pack and lower returns for poor performers.</p>
Customer and developer services measures of experience (C-MeX and D-MeX)	<p>We are replacing the existing service incentive mechanism (SIM) with the customer measure of experience (C-MeX) and we are creating a new incentive mechanism, the developer services measure of experience (D-MeX). C-MeX and D-MeX are both financial and reputational incentives to improve the satisfaction of companies' residential and new connections customers, respectively.</p> <p>The range of possible financial incentives for C-MeX is symmetrical at $\pm 12\%$ of residential retail revenue over five years. Performance payments of up to 6% of residential retail revenues will be available for high performing companies, while performance payments of +6 to +12% will only be available to the best three companies that perform at or above a cross sector benchmark, and demonstrate satisfactory complaints performance.</p>	<p>We have retained a similar penalty range for C-MeX as for the service incentive mechanism (SIM) it replaces. The move from asymmetrical to symmetrical high performance payment / poor performance penalty for C-MeX reflects the move to benchmarking with other sectors and increases the scope for higher returns relative to PR14.</p> <p>D-MeX is a new incentive for PR19 with higher poor performance</p>

⁴⁹ We have amended the sharing rates we set out in our draft methodology proposals to better incentivise efficient and accurate cost forecasts.

Incentive	Summary of our decision	Change from PR14 methodology
	<p>The range for D-MeX is +2.5% to -5% of developer services revenue over five years.</p> <p>The overall impact of C-MeX and D-MeX combined is around $\pm 0.5\%$ RoRE.</p> <p>C-MeX and D-MeX are discussed further in chapter 4 (delivering outcomes for customers).</p>	<p>penalties than high performance payments.</p>
Initial assessment of business plans	<p>Companies with exceptional business plans will receive an amount equivalent to a 20 basis points (bp) to 35bp addition to the return on regulated equity (RoRE) over the whole price review period, based on the notional gearing of 60%. Companies with fast-track business plans will receive an amount equivalent to a 10bp addition to the RoRE over the whole price review period, based on notional gearing of 60%.</p> <p>For both categories, it will be up to companies to decide whether to take the incentive payment as additional revenue or as an uplift to the RCV. In either case, companies will need to decide how to split this reward between the water network plus, water resources and, where relevant, wastewater network plus price controls. To avoid distorting competition in the bioresources market, we will not allocate any of the incentive payment to bioresources RCV or revenue.⁵⁰</p> <p>For companies whose plans are assessed to need significant scrutiny, we have set a cost sharing rate of 75% for underperformance and 25% for outperformance. This means that significant scrutiny companies will keep only 25% of their cost outperformance but bear 75% of cost underperformance.</p> <p>We discuss issues associated with the initial assessment of business plans further in chapter 14 and the cost sharing rates further in chapter 9 (securing cost efficiency).</p>	<p>Incentive payments for fast-track as well as exceptional business plans, but the bar for exceptional is higher as it includes ambition and innovation.</p>

⁵⁰ Our draft methodology proposed 20bp RoRE addition for exceptional and no reward for fast-track. There was no proposal for 'early certainty' protection. We have made these changes in response to respondents' views that the rewards we proposed in our draft methodology proposals may be insufficient to incentivise companies. We recognise that the exceptional category is a step change in expectations from PR14 (where enhanced companies received a 20bp RoRE addition, and 'do-no-harm' protection), and that the fast-track category sets a high bar where companies may only just fall short of the ambition and innovation expected from an exceptional business plan.

Incentive	Summary of our decision	Change from PR14 methodology
Financing	<p>We will take evidence from historical data and more recent market and forward-looking evidence into account when setting the cost of equity.</p> <p>Indexation of the cost of new debt means there will be less scope for outperformance or underperformance on financing costs.</p> <p>A benefit and cost test will assess whether to give company-specific adjustments to the cost of debt. There will be no company-specific adjustments for the cost of equity.</p> <p>Companies can request to include notified items in their price controls, but there will be a high bar; there is no assumption that items allowed in the last price review will be allowed in the next.</p> <p>We discuss these issues further in this chapter.</p>	<p>Reduced allowances for cost of equity and debt, reflecting market conditions.</p> <p>Reduced scope for both under- and outperformance as the allowance for the cost of new debt is indexed.</p>

10.3 Overall risk and return package

Our proposals for this overall risk and return package are shown in figure 10.1, a stylised return on regulated equity (RoRE) chart for the 2020-2025 period.

RoRE allows us to compare the impact of different incentives on the overall equity return under the notional financial structure. The RoRE impact is calculated as the value of the incentive impact over the price review period, expressed as a proportion of the regulated equity⁵¹. The ‘regulated equity’ is the portion of the regulatory capital value (RCV) assumed to be funded by equity under our notional capital structure⁵².

In figure 10.1, we show the RoRE impact as deviations from the early view of the cost of equity. We show the plausible range of company returns based on an assessment underpinned by:

- sector RCV and totex data from PR14; and
- notional gearing of 60%.

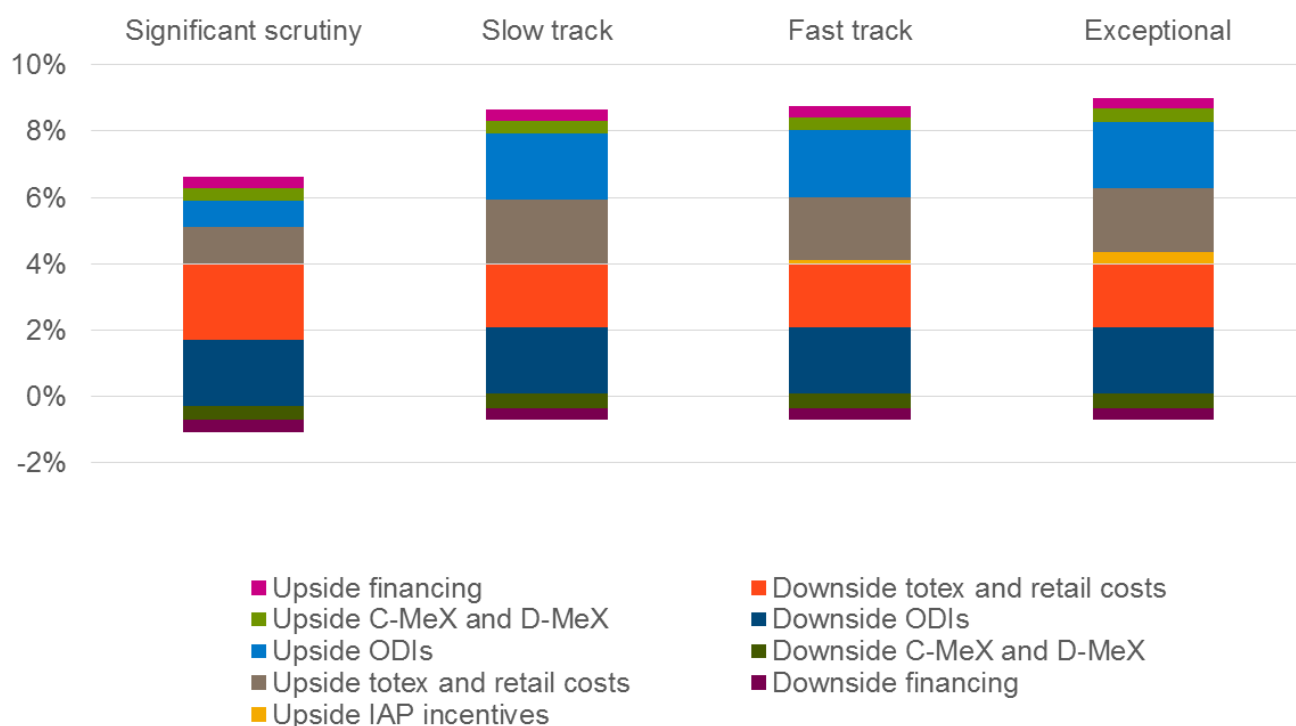
The chart is illustrative, based on a company with the notional capital structure. The chart shows significant scrutiny companies’ reduced potential to earn

⁵¹ Figure 10.1 uses RoRE calculated as the incentive impact divided by regulated equity.

⁵² Regulated equity = RCV x (1 – notional gearing)

outperformance payments and increased potential downsides compared to the other categories of business plan.

Figure 10.1 Illustrative percentage of RoRE chart



Notes: The chart is based around our initial view of a 4% return on regulated equity. Totex and retail costs include the upside/downside for water network plus, wastewater network plus, water resources, bioresources and residential retail price controls. Business retail costs are excluded from this analysis as their impact is small (business retail accounts for about 2% of the total value chain), and not all companies include business retail.

For ODIs, we have used a stylised, illustrative RoRE example of $\pm 2\%$ – the midpoint of the indicative range. It is unlikely that companies will achieve upper quartile performance across all ODIs for the full duration of the price control and so achieve the full 3% upside stated in our guidance.

Figure 10.1 also assumes we may limit the ODI outperformance payments from bespoke outcomes for a company under significant scrutiny, as we will have limited assurance of the stretching nature of their targets for bespoke outcomes.

Totex performance is based on the impact of 10%⁵³ over or underspend over the price control period for each of the price controls. Consistent with the policy set out in chapter 9 (securing cost efficiency), we assume companies bear 100% of the impact of out- or under-performance for the retail controls and bioresources controls. For the network plus and water resources price controls, the costs of out- and under-performance are shared between companies and customers based on the cost sharing rates referenced in chapter 9. For the purposes of this chart, we assume that companies correctly predict their outturn totex to determine the cost sharing rates. The difference in cost sharing rates is the primary driver of the difference between the RoRE of those companies in the significant scrutiny category and those in the other categories in our initial assessment of business plans.

The difference between slow-track, fast-track and exceptional companies in figure 10.1 is driven by the additional incentives for high-quality plans (for fast-track), and for high-quality, ambitious and innovative plans (for exceptional). It should be noted that fast-track and exceptional companies are likely to achieve higher RoRE through outturn performance on totex and ODIs, though this is not reflected in the chart.

Figure 10.1 shows that while the potential to earn higher returns for high performance has increased since PR14, the downside for poor performance has increased too, reflecting a sharpening of the incentives.

10.4 Managing risk and uncertainty

All businesses have to deal with risk and uncertainty when operating and planning their activities. They all have to take steps to understand, manage and mitigate the potential impacts of risk and uncertainty on their operations and profitability.

Water and wastewater companies are no different, although they have significant protection from risks compared to companies operating in a wholly competitive environment. These protections include:

- appointments that confer monopolies for specified geographic areas, reducing the risk of loss of market share;
- revenue controls, which means that companies do not face demand risk as they can recover any shortfall in demand from other customers;

⁵³ We use +/- 10% as this represents the range of totex out- and under-performance in 2010-15 against our PR09 price determination.

- a commitment to remunerate efficient investment in the RCV as at 31 March 2020;
- price limit reopeners defined in licences, which protect companies from material changes in circumstances;
- inflation indexation for all wholesale revenues, which protects against general inflation risk;
- totex cost sharing, which provides certainty around the proportion of cost overruns that companies will bear and the proportion of cost savings companies will get to keep;
- special cost factors, which allow companies to make claims for company-specific costs that may otherwise adversely affect the company;
- outcome delivery incentives, which provide certainty around the impact on the company of achieving different levels of performance (an impact that would be unknown in a competitive market);
- reconciliation adjustments for revenue, the cost of new debt and tax, which reduce the impact on the company of these differing from forecasts; and
- the financial ringfence, which protects regulated companies from adverse financial effects which may impact on the rest of their group.

10.4.1 Risk assessment and risk management

We expect companies to demonstrate a clear understanding of risk and to provide clear evidence of the risk management measures they have in place. As for the PR14 price control, to facilitate comparability, companies will be required to use RoRE analysis to assess the impact of upside and downside risk on the delivery of their business plans. We will assess this analysis in our initial assessment of business plans, as part of our assessment of risk and return.

We also expect business plans to contain statements by companies' Boards explaining how they have identified risks associated with delivering the plan, and confirming that the plan will deliver operational, financial and corporate resilience over the next control period. We will assess the resilience statements made by companies' Boards in the initial assessment of business plans, as part of our assessment of assurance and governance arrangements, which are discussed in chapter 13 (securing confidence and assurance).

10.4.2 Risk analysis

We have prescribed a set of scenarios that companies should use to underpin their RoRE analysis. These focus on movements in revenue, totex, ODIs and the cost of new debt.

Our approach to RoRE scenario modelling is described in more detail in appendix 12 (aligning risk and return). The detail of the prescribed scenarios is set out in 'final guidance for business plan tables' for table 'App 26'.

It is important to note that we consider these scenarios alone may not be sufficient for companies to demonstrate an appropriate understanding and assessment of risk. Each company should consider whether its business plan should include consideration of additional RoRE scenarios relevant to its own circumstances.

We are prescribing a smaller set of scenarios than was required at the PR14 price review. Companies should explain the assumptions underpinning their RoRE analysis (both upside and downside) and use the functionality in the financial model to provide the upside and downside scenarios based on high and low probability events occurring.

We expect companies to explain how their RoRE analysis takes into account the steps management would take in practice to mitigate the impact of downside risks. We also expect companies to show that their approaches to risk management align the interests of investors and managers with the interests of customers.

The RoRE analysis will be an important component of our initial assessment of business plans, but we expect companies to consider for themselves what additional evidence they should provide to demonstrate that their plans are underpinned by robust approaches to risk management.

10.4.3 Uncertainty mechanisms

Companies' licences allow price limits to be reopened in certain limited circumstances where a materiality threshold has been exceeded. There are two types of interim determination: (i) where there are circumstances having a substantial effect on the appointed business (a substantial effect interim determination); and (ii) in relation to relevant changes of circumstance and any 'notified items' (a standard interim determination).

A ‘notified item’ is an item we specify as such. It is an item which was not allowed (either in full or not at all) at the price determination. It can be considered under a standard interim determination. It is possible for a notified item to form part of an efficient and effective package of risk and return – for example, where the costs for an item are uncertain at the time of the final determination and so have not been allowed for in full.

Uncertainty mechanisms shift the balance of risk to customers. Therefore, given the scope of risk mitigation measures stated in section 10.4, we will set a high evidential bar for notified items.

Our final determinations will only include a notified item, or a bespoke uncertainty mechanism, where robust and compelling evidence has been presented for that item. Companies should set out the management actions they have taken and will take to manage the uncertainty, as well as the range of approaches considered when preparing their business plans, and the impacts of those approaches. A request for an uncertainty mechanism should be underpinned by RoRE analysis and supported by the company’s risk analysis to demonstrate that a notified item or other mechanism is appropriate for dealing with the risk or uncertainty.

There is no presumption that the notified items allowed at the PR14 price control (business rates for water wholesale and the specific items related to the Thames Tideway Scheme, excluding land related items) will be repeated for the 2020-25 period.

10.5 Our overall approach to the cost of capital

The cost of capital is an important component of overall allowed revenue and the customer bill. It is necessary to provide debt and equity investors with a return that is commensurate with the level of risk that underpins their investment.

If the cost of capital is set too high, bills may be higher than customers may reasonably expect, company profits may be seen as excessive and the legitimacy of the regulatory regime may be called into question. If the cost of capital is set too low, companies’ ability to raise the finance necessary to deliver services that customers expect might be put at risk.

In our framework paper for PR19⁵⁴, we confirmed we would provide a preliminary view of the cost of capital for PR19 in our methodology to facilitate development of business plans. We state our view of the key components of the appointee cost of capital in table 10.2. We will revisit the cost of capital for draft and final determinations in 2019.

We state our cost of capital in nominal and real (consumer price index, or CPIH) terms, assuming long-term CPIH inflation of 2%. As we are transitioning the RCV to CPIH indexation, we also state the cost of capital for the part of the RCV that remains indexed to the retail price index (RPI). The RPI-real cost of capital is based on a long-term difference between RPI and CPIH of 100 basis points (bps).

We state in table 10.2 the cost of capital for the appointee and disaggregated for wholesale activities following the deduction for the residential retail net margin. Our view is preliminary and will be updated for the draft and final determinations in 2019, to take new evidence into account.

Table 10.2 Our early view of the cost of capital

Component	Nominal	Real (CPIH 2%)	Real (RPI 3%)	Range (real RPI)
Cost of equity	7.13%	5.03%	4.01%	3.41% to 4.69%
Cost of debt	4.36%	2.32%	1.33%	1.07% to 1.55%
Gearing	60%	60%	60%	60%
Appointee cost of capital	5.47%	3.40%	2.40%	2.01% to 2.81%
Retail margin deduction	0.10%	0.10%	0.10%	0.10%
Wholesale cost of capital	5.37%	3.30%	2.30%	1.91% to 2.71%

This cost of capital represents a material reduction since PR14, driven by lower expectations of the market cost of debt and equity. Our early view for the appointee cost of capital is 2.40% (real, based on an RPI wedge of 100bps over CPIH; our PR14 cost of capital of 3.74% was underpinned by a long term RPI inflation assumption of 2.8%). The table above states a range for the cost of capital based on the upper and lower bound estimates for each component. Having considering the

⁵⁴ Ofwat, 2016 [Water 2020: our regulatory approach for water and wastewater services in England and Wales](#)

range of evidence available to us, we consider a more tightly-bounded plausible range for the Appointee WACC is 2.2% to 2.6%.

Our early view of the cost of capital and its components, has been informed by analysis we have carried out and analysis by consultants [PwC](#) and [Europe Economics](#)^{55,56}. We explain in more detail the evidence we have taken into account in appendix 12 (aligning risk and return), including how we have taken account of the responses to the views we set out on the cost of equity in our draft methodology proposals.

We set the cost of capital by reference to a notional capital structure. This is consistent with the approach we have adopted in previous price reviews and was supported by respondents to our cost of debt consultation⁵⁷. It incentivises companies to secure efficient costs of finance and protects customers from the risk of companies' financing decisions. It means we set allowances for all companies at an appropriate level for an efficient company.

Our gearing assumption is lower than at PR14. This is consistent, for example, with gearing trends observed in wider markets and is consistent with our approach to increase revenue at risk from service and efficiency performance. We explain our assumption in further detail in appendix 12.

10.6 Our approach to the cost of equity

The cost of equity represents the level of return equity investors should reasonably expect for their investment. Our cost of equity will cover the equity costs of a notional company.

The overall cost of equity is not directly observable in the financial markets. We therefore draw on a range of evidence and methodological approaches to judge the overall cost of equity and its components. We use the capital asset pricing model (CAPM) to calculate the cost of equity.

⁵⁵ PwC, '[Updated analysis on the cost of equity for PR19](#)', December

⁵⁶ 2017 Europe Economics, '[PR19 — Initial Assessment of the Cost of Capital](#)', December 2017

⁵⁷ Ofwat, '[Consultation on the approach to the cost of debt for PR19](#)', September 2016

The components of our early view of the cost of equity are summarised in table 10.3. The assumptions underpinning our early view are set out in further detail in appendix 12 (aligning risk and return).

Table 10.3 Our early view of the cost of equity

Component	Real CPIH (long-term CPIH 2%)	Real RPI (long-term RPI 3%)	PR14 comparison (long-term RPI 2.8%)	Commentary
Total market return (TMR)	6.47%	5.44%	6.75%	Our early view is underpinned by 8.6% nominal TMR
Risk free rate (RFR)	0.10%	-0.88%	1.25%	We assume a negative risk free rate in real (RPI) terms. This is low by historical standards, but consistent with market expectations for gilt yields in 2020-2025
Equity risk premium (ERP)	6.37%	6.31%	5.50%	Calculated as the difference between the TMR and RFR. Currently, we assess the ERP is high by historical standards, reflecting a low RFR
Unlevered beta (no debt beta)	0.32	0.32	0.30	Europe Economics calculates the asset beta based on two years of daily data for Severn Trent and United Utilities. Our early view draws on two year trailing beta.
Debt beta	0.10	0.10	0	Europe Economics advises the use of a debt beta where there is divergence between the gearing underpinning the observed asset beta (calculated on an enterprise value basis) and the notional gearing
Asset beta (including debt beta)	0.37	0.37	0.30	Calculated as the unlevered beta adjusted for the debt beta.
Equity beta	0.77	0.77	0.80	Calculated based on the asset beta, debt beta and gearing
Cost of equity	5.03%	4.01%	5.65%	Calculated = RFR + Equity beta x ERP

In July, we referenced PwC's estimate of the cost of equity in the current market context which was in the range 3.8% to 4.5% (on an RPI real basis), compared with 5.65% at PR14. The range was calculated using a long term RPI of 2.8%. The cost of equity in our early view is 4.0%. This is based on a higher long term view of RPI (3.0%) and therefore our view on the cost of equity is slightly higher than the

midpoint of the July range in nominal terms. It also takes account of our updated view on risk free rate and beta.

Our consultation set out evidence that total market equity returns vary over time. We said that the extended period of ultra-low interest rates, which is expected to persist through 2020-2025⁵⁸, and the extended period for which the real risk free rate has been negative⁵⁹ have led us to consider carefully our approach to setting the cost of equity for PR19.

When setting previous allowances for the cost of equity, UK economic regulators have tended to take both long-run averages of historical returns⁶⁰ and forward-looking evidence into account, with more weight being placed on the former. Focusing on long-term averages may result in customers or investors being disadvantaged if the required equity return for the price review period diverges from an allowance set using a long-term average. We set out evidence in appendix 12 (aligning risk and return) which supports the view that required returns are lower – and that investors and finance professionals expect returns over the next few years to be below their historical averages. On this basis, placing too much weight on long-term historical averages of returns approaches is likely to overstate the actual return on equity investors require for 2020-2025.

Several respondents to our draft methodology proposals were concerned that placing more weight on forward-looking evidence and less weight on observed long-term averages increases the extent of regulatory judgement in setting the cost of equity. However, we note that whether or not weight is placed on forward-looking evidence, regulatory judgement is required as to what estimate of returns is likely to best reflect expected returns for the next price review period. As we consider that placing excess weight on historical long-run returns is likely to be a poor basis for estimating returns for the 2020-2025 period, then we do not consider such an approach would be consistent with our duties or with taking appropriate account of the range of evidence.

Our approach of taking account of market conditions and expected returns for the next price review period is consistent with our regulatory approach in previous price

⁵⁸ For example, the Office for Budget Responsibility's forecast in November 2017 that the Bank of England's base rate would be 1.2% by Q3 2022, compared with the 1975-2007 average of 8.7%.

⁵⁹ UK ten-year index-linked gilt yields have, for example, been negative since before 2012 and are expected to remain low by historical standards throughout 2020-25.

⁶⁰ Such as the [Dimson, Marsh and Staunton dataset](#) published annually by Credit Suisse and the Barclays Gilt Equity study.

reviews. For example, the allowed cost of equity in the 2009 price review implied a total market return (TMR) that was higher than the long-term historical average. This was in response to evidence of higher real returns required during the global financial crisis.

The details supporting our early view on the cost of equity are set out in appendix 12 (aligning risk and return).

10.7 Our approach to the cost of debt

The cost of debt should be sufficient for the notionally geared company to cover its efficient debt interest costs. Our approach will take separate approaches to assess the debt that will remain in the notional balance sheet for the period of the price control (embedded debt) and for debt that we assess to be new or that must be refinanced in the notional balance sheet in 2020-2025 (new debt).

We will set a fixed allowance for embedded debt. Our approach supports the importance of long-term finance for this sector. It ensures companies are remunerated for the efficient cost of embedded debt for the duration of the price control and provides some stability to cashflows compared with an approach that relies only short-term market data.

We will index the cost of new debt by reference to a market benchmark, with an end of period reconciliation adjustment. We consider this is the approach that best satisfies all of our duties. It protects customers as it removes the risk premium relating to the forecast error that would otherwise be included in our estimate of a fixed cost of new debt, but also provides protection to companies where there is an increase in the market cost of debt.

Our approach to the cost of debt follows extensive consultation, including a [consultation published in September 2016](#)⁶¹, two separate cost of debt workshops⁶² and a further consultation on the mechanics of the cost of new debt mechanism in our PR19 methodology.

⁶¹ The responses we received to that consultation are available [on our website](#).

⁶² Details of our workshops are available [on our website](#).

The components of our early cost of debt are summarised in table 10.4. The assumptions underpinning our early view are set out in further detail in appendix 12(aligning risk and return).

Table 10.4 Our early view of the cost of debt

Component	Real CPIH (long-term CPIH 2%)	Real RPI (long-term RPI 3%)	PR14 comparison (long-term RPI 2.8%)	Commentary
Cost of embedded debt	2.58%	1.59%	2.65%	Our early view draws on our assessment of the debt embedded in company balance sheets and benchmark indices. We assume debt falling due for repayment by 31 March 2020 is refinanced at market rates.
Cost of new debt	1.37%	0.38%	2.00%	We will set an initial fixed allowance using a benchmark index, uplifted for forecast increases in market-wide borrowing costs over 2020-2025. This allowance will be adjusted at the end of the period for variance against the actual movements of the index.
Ratio of new to embedded debt	70:30	70:30	75:25	Our early view is based on an assessment by Europe Economics which takes account of sector debt that is due to be refinanced (i) before 2020, (ii) in 2020-2025 and (iii) an assessment of nominal RCV growth based on growth in 2015-2020. We will update this analysis following receipt of business plans
Uplift for issuance and liquidity costs	0.10%	0.10%	0.10%	We include an uplift of 10bps to cover issuance and liquidity costs
Cost of debt	2.32%	1.33%	2.59%	Calculated as the weighted average of the cost of new and embedded debt using the assumed proportions of each as weights.

10.7.1 Embedded debt

Our assessment of the cost of embedded debt draws on relevant benchmark data (for example, indices of bonds for companies with similar credit ratings) and debt instruments issued by companies.

We place the greatest weight on evidence of the cost of debt achieved by companies in the sector and find evidence that companies in this sector typically outperform market benchmark data⁶³. Our early view is based on the median cost of debt achieved by the ten water and wastewater companies and seven water only companies, but assuming debt falling due for repayment by 31 March 2020 is refinanced on the basis of mid-2017 yields on debt from a benchmark index. We consider our approach best satisfies all of our duties, including our duties to customers and to promote economy and efficiency.

The actual cost of embedded debt varies significantly between companies, and we expect that this will drive a range of under and outperformance relative to our allowance over the period 2020-2025. This range of performance is driven by the financing arrangements of each company and the timing and tenor of debt issuance. This is consistent with our long-held policy that companies and investors should bear the risk associated with their financing arrangements, not customers.

10.7.2 New debt

Our approach requires us to set an initial fixed cost of new debt for the purposes of price setting. In our early view of the cost of capital, we have set this with reference to a benchmark index of borrowing costs, taking into account market-implied increases in borrowing costs between now and 2025. At the end of the 2020-2025 control period we will calculate the difference between company revenues based on the initial fixed allowance and company revenues if they had tracked the benchmark index. The reconciliation adjustment will be reflected in future revenues.

The cost of debt mechanism will be based on changes in our chosen benchmark index. Our benchmark uses the iBoxx indices⁶⁴ for non-financial companies with a

⁶³ This is consistent with the findings of the report jointly commissioned with the CAA from CEPA, 2016 [Alternative approaches to setting the cost of debt for PR19 and H7](#)

⁶⁴ The iBoxx indices are published by [Markit](#). The iBoxx bond indices are used to measure the value of different sections of the bond market, subdivided by credit rating. The non-financial index tracks the

tenor of ten or more years, which is reflective of the average debt maturity profile of the sector. We use a 50:50 mix of A and BBB rated indices which we consider reflects the appropriate credit profile for the notionally financed company. This is consistent with the view companies must maintain headroom against the floor for the investment grade. We apply a downward adjustment of 15bps to reflect evidence that companies typically outperform the market benchmark. In addition, we allow an adjustment of 10bps for issuance and liquidity costs.

For the purpose of the reconciliation adjustment, we must make an inflation adjustment to the benchmark index, which is reported in nominal terms. Our provisional cost of capital is underpinned by a long-term CPIH assumption of 2%. We consider that this long-term estimate best matches the inflation costs priced into nominal debt, and is more appropriate than a short-term view. We will apply this adjustment to the benchmark index in our reconciliation, because it is the CPIH-linked portion of the RCV that is most relevant for the cost of new debt.

We explain our approach in more detail in appendix 12 (aligning risk and return) and we have published an updated [cost of debt reconciliation model](#) alongside this document.

10.7.3 Company-specific adjustments

At previous price controls, we have allowed for company-specific adjustments to the cost of capital. For example, at the 2014 price review we allowed higher cost of debt allowances for two water only companies, based on both cost and benefits tests. Our assessment looked at the increased cost to customers associated with a company-specific adjustment and tested whether the benefits accruing to customers outweighed those costs.

Where companies make a case that their cost of capital is higher than our estimate, they will need to provide compelling evidence to justify that the uplift is appropriate, particularly given our duty to customers. We discuss in more detail the reasons why we do not consider there to be compelling evidence that company size should be a factor in setting the cost of equity in appendix 12.

bond prices of a portfolio of bonds issued by investment grade, non-financial securities. We set out further detail in appendix 12 (aligning risk and return).

In general, small companies do not necessarily face higher debt financing costs, particularly given the development of private placement markets for corporate bonds. The likely main determinants of pricing differences are the timing and tenor of debt issuance, neither of which relates specifically to company size.

Nevertheless, there is some evidence that some of the smaller water only companies have historically had more limited options available to them for raising efficient debt. This may suggest it is reasonable to allow a higher cost of debt for such companies. However, given our statutory duties taken together, we remain of the view that we should only consider this reasonable where there is compelling evidence that customers will benefit and support the proposal. We provide more details supporting our rationale in appendix 12.

Company-specific adjustments

If any small water only company considers that its customers should incur the costs of a company-specific cost of capital adjustment, we must be satisfied that an adjustment is necessary and appropriate in light also of our duty to customers. We will apply a three-stage approach, which asks the following.

- Is there compelling evidence of customer support for the proposed adjustment?
- Is there compelling evidence that there are benefits that adequately compensate customers for the increased cost?
- Is there compelling evidence that the level of the requested adjustment is appropriate?

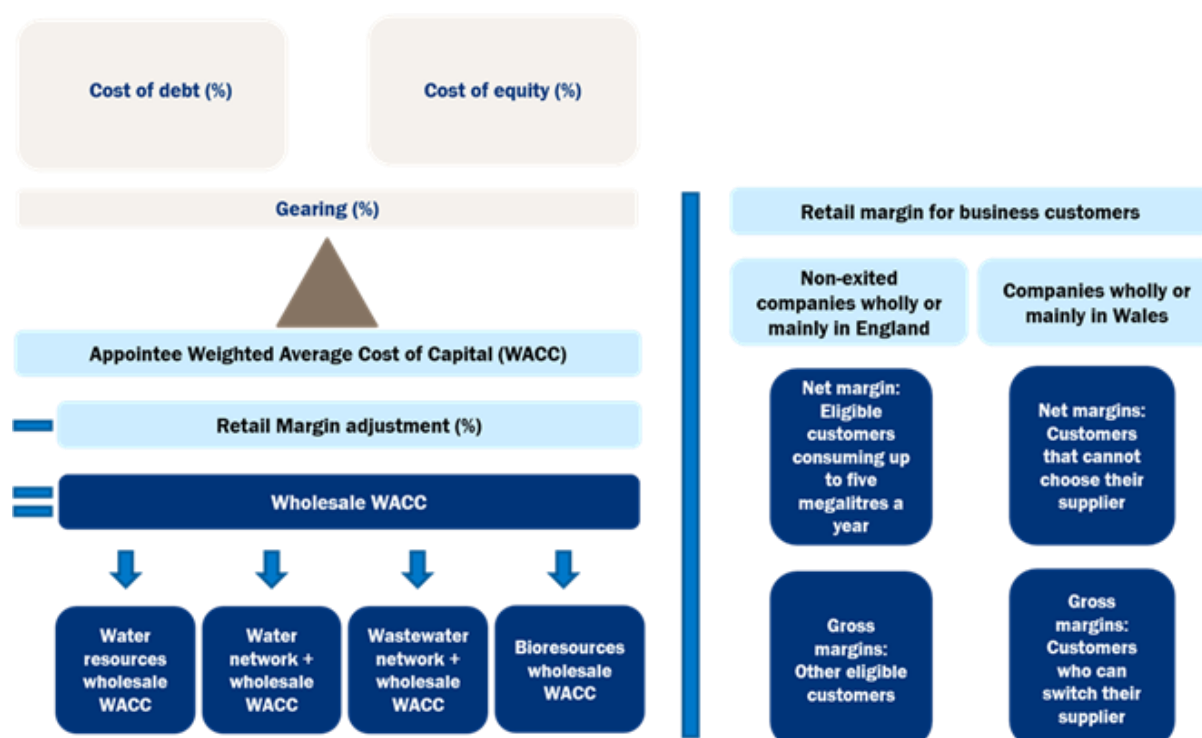
In assessing the evidence of customer support we would expect to see, as part of that evidence, assurance from the customer challenge group that the quality and nature of the customer research is appropriate and appropriately robust to support the conclusion that an adjustment is necessary.

Where requests for company-specific adjustments are made, we expect to see compelling evidence that there are benefits that adequately compensate customers for the increased cost. We explain the evidence we will consider in appendix 12. Information companies submit on company-specific adjustments will be assessed as part of our initial assessment of business plans.

10.8 Allocating the cost of capital across price controls

For setting price determinations, we must disaggregate the appointee cost of capital to remunerate the returns for the different price controls. Our approach is illustrated in figure 10.2. The retail control is remunerated based on a margin over retail costs because, unlike the wholesale price controls, it is not capital intensive.

Figure 10.2 Disaggregating the cost of capital to the price controls and net margin approach for retail activities



Note: In section 10.8.2 we state our early view that the pre-tax retail margin is 1%. To avoid double counting returns, we must translate this net margin to a cost of capital (WACC) impact and subtract it from the appointee WACC to derive a wholesale WACC. Projecting PR14 revenue and RCV growth forwards, we estimate the appropriate retail margin adjustment is 0.1%. This estimate is subject to revision based on information received prior to our draft and final determinations.

10.8.1 Wholesale cost of capital

The wholesale cost of capital applies to the wholesale price controls. We derive it by deducting the regulated profit margin for providing retail services from the overall appointee cost of capital.

In theory, the wholesale cost of capital could be different for each of the wholesale price controls if systematic risk is different. We discussed the relative level of

systematic risk across different wholesale controls in May 2016. In summary we found there to be no increase in systematic risk across the network plus price controls from separating the price controls.

For water resources, the RCV allocated at 31 March 2020 will receive the same type and degree of regulatory protection as it would have received under the wholesale revenue controls. For significant new investment that is incurred post 2020, we expect companies to develop risk sharing arrangements. Some aspects of market wide demand risk could impact on the cost of capital, for example, if related to changes in the wider economic cycle. We would expect very compelling evidence if companies proposed a cost of capital increment for new water resource investment in 2020-2025 and to demonstrate how it is aligned with the proposed risk sharing arrangement.

The 2020-2025 period will be a transitional phase for the bioresources control, driving the sector towards greater use of markets. The bioresources control will be subject to some volume risk, but exposure will be limited and companies will retain direct control over the treatment of bioresources. Our modified average revenue approach provides mechanistic protection to fixed costs such that there is no stranding risk for efficient investment. Our refined approach to the average revenue control acts to align the incremental revenues allowed for changes in volume with the costs of providing bioresources services. While there is more exposure to volume risk for the bioresources control than the network plus price controls, we consider the impact on the cost of capital to be minimal for 2020-2025 because of the revisions we have made to the form of control.

For 2020-2025, our view is that the cost of capital, and its components, will be consistent across the wholesale price controls.

10.8.2 Retail margins

We will set average revenue controls, as described in chapter 8 (targeted controls, markets and innovation: retail controls). Where we use net margins, these will be set to cover retail earnings before interest and tax.

We set out our early view on retail margins below. We will review these margins in light of further evidence, before making our draft and final determinations. For example, we will cross check the margins with water companies' working capital requirements, after we receive the business plan data. For contestable business retail activities, we will consider any appropriate alignment with our review of the retail exit code, such as the structure of charges.

Non-contestable retail activities

For our early view, we use a pre-tax retail margin of 1% for residential retail activities and business retail activities in Wales for customers using up to 50 megalitres of water a year and wastewater customers. Our assessment takes account of the relevant comparator benchmarks that are set out in the Europe Economics report which draws on market evidence and other regulatory decisions.

Contestable retail activities

At PR16, we allowed water companies to allocate their net margin across their tariffs, while requiring that their overall net margin was no higher than 2.5%. We retained a net margin approach for eligible business customers of companies whose areas are wholly or mainly in England supplied with up to 5 megalitres of water a year. For other business customers, we used a gross margin approach.

We only undertook PR16 recently and consider that the overall net margin of 2.5% that was applied at PR16 continues to be appropriate. It is also within the range of business margins assessed by Europe Economics. Given this, we consider that the margins set for contestable activities at PR16 remain appropriate. That is, for PR19 we currently consider that where applicable:

- a) the net margins which water companies used to set their default tariffs remain appropriate; and
- b) the allowed gross margins and the supplementary cap⁶⁵ remain appropriate.

10.9 Our approach to inflation

Inflation is the rate at which the general level of prices for goods and services is rising.

Companies cannot control general inflation. They can control their costs and are exposed to this risk through price controls. If companies were exposed to general inflation risk, customers would pay a premium for the risk exposure. Indexing our price controls to a measure of inflation is, therefore, a core part of our regulatory

⁶⁵ This is the additional limit on price increases for companies' tariffs that are below the level implied by the gross margin cap. It stops price increases of more than 1% in the final bill for any customer type in any year.

approach. It promotes efficiency by making sure risks are allocated to the party best able to manage them.

Consistent with the position set out in [May 2016](#), and the agreed licence modifications made in April 2017, we will move away from indexing price controls using the retail price index (RPI) and toward an inflation measurement that better reflects the overall inflation rate faced by customers.

Our [draft methodology proposals](#) set out our preference to move to the consumer price index including housing costs (CPIH), rather than the consumer price index (CPI), subject to the redesignation of CPIH as a national statistic. Our preference took into account the greater legitimacy of CPIH – that is, it better reflects the inflation rate that customers face. It is also the primary focus of the Office of National Statistics, as the most comprehensive measure of inflation. Subsequent to our consultation, the National Statistician redesignated CPIH as a national statistic on 31 July 2017. It is for these reasons that we have determined that the Relevant Index (the term used in licence conditions) will be CPIH from 1 April 2020.

From 1 April 2020, we will transition the indexation of the RCV to CPIH. We will index 50% of the RCV at 1 April 2020 to RPI and the rest, including all new RCV added after 1 April 2020, to CPIH.

The RCV that is linked to CPIH will be underpinned by a CPIH-based cost of capital. The long-term view of inflation that underpins this cost of capital is 2%. We have estimated a difference⁶⁶ of 100bps over our view of long-term CPIH inflation for the portion of the RCV that remains linked to RPI. This will be subject to a reconciliation adjustment at PR24 for the actual outturn wedge.

We explain our approach in more detail in appendix 12 (aligning risk and return). We have published the reconciliation model for the [inflation wedge reconciliation adjustment](#) alongside this document.

⁶⁶ CPIH and RPI are underpinned by different calculation techniques. RPI is upwardly biased and is typically higher than CPIH. As our price determinations are set by reference to CPIH, we take a view on the long-term measure of CPIH inflation to underpin our cost of capital assumption. The ‘wedge’ is our view on the difference between CPIH and RPI that may apply throughout the period of the price control.

10.10 Our approach to corporation tax

As part of setting price controls, we calculate a separate tax allowance to make sure the revenue that companies receive covers the corporation tax that companies will need to pay.

To calculate each company's tax allowance, we will use an approach based on the projected taxable profits of the appointed business. The calculation will use allowed revenue and available tax deductions based on expected expenditure. It will apply current corporation tax rates and associated reliefs and allowances, as set out in UK tax legislation.

In our draft methodology proposals we proposed to introduce a reconciliation mechanism to account for changes in the corporation tax rate and writing down allowances under the capital allowance regime. Respondents broadly agreed with the proposed mechanism which we explain in further detail in appendix 12 (aligning risk and return). In calculating the reconciliation adjustments for corporation tax, we will take into account the impact on the tax charge arising from changes to the cost of debt, derived from the cost of new debt index mechanism.

Consistent with our approach at previous price reviews, we will calculate the interest cost for the tax allowances on the basis of the gearing that underpins the notional financial structure, or a company's actual gearing, whichever is higher.

This will make sure that customers, rather than investors, benefit from the higher tax shield from interest payments as interest payments can be offset against companies' tax liabilities. Where a company increases gearing as a result of financial restructuring, we will claw back the tax benefits for customers at the next price review. This removes the incentive for companies to increase gearing simply to benefit from a lower tax bill.

We set out in more detail information about the basis on which we will calculate tax allowances in appendix 12.

10.11 Initial assessment of business plans – aligning risk and return

We will test the alignment of risk and return in our initial assessment of business plans as follows.

Initial assessment test on aligning risk and return

1. Has the company based the separate costs of capital that underpin each of its wholesale price controls, and the net margin(s) that underpins its retail price control(s), on those we state in our early view? If not, to what extent has the company robustly justified, in terms of benefits for customers, its proposed costs of capital and retail margin(s) within the context of expected market conditions for 2020-2025?
2. To what extent has the company demonstrated a clear understanding and assessment of the potential risks in its RoRE assessment, including the effect of the risk management measures it will have in place, across each of the price controls?

Where business plans are underpinned by **costs of capital or retail net margin(s)** that are different to our early view, we expect to see clear and compelling evidence to justify why it should be different within the context of expected market conditions for 2020-2025. We expect **company-specific adjustments** to be underpinned by clear and compelling evidence to demonstrate why it is reasonable for customers to incur the associated cost, taking account of the approach we set out in section 10.7.3.

In assessing the extent to which a company has demonstrated the required understanding on **risk management**, we will take into account evidence provided by the company in its **RoRE assessment** including that it has:

- a clear understanding of the risks that could affect the delivery of its plan;
- appropriate management practices in place to manage the impacts of risks, should they arise;
- carried out a clear and robust RoRE scenario analysis and clear and compelling commentary on the scenario analysis; and
- provided a clear and compelling case for any requested uncertainty mechanisms such that they appropriately align the interests of customers and investors, as set out in section 10.4.3.

11. Aligning risk and return: financeability

Key themes of PR19

Our approach to financeability supports the key themes of PR19.

We will promote long-term financial **resilience** by requiring companies to provide board assurance on their actual and notional financeability. We will set price controls to enable efficient companies, with a notional capital structure, to finance the proper carrying out of their functions. This includes investing in the services they provide by securing a reasonable return on their capital that reflects the risks they face.

We will assess whether company plans appropriately balance the recovery of costs between current and future customers and will intervene where necessary. This will help deliver **affordable** bills now and in the long term. We expect companies to explain the drivers of bill profiles and to demonstrate how they expect bill profiles to evolve beyond 2025.

Financeability

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

Each company will need to **submit a plan that is financeable** – with Board assurance that it is financeable on both the notional and actual capital structure.

- We will assess financeability at **appointee level** by reference to the **notional structure** that underpins the cost of capital.
- We will use a suite of **financial metrics**, based on those used in the financial markets and by credit rating agencies.
- We will also consider financeability at the control level. If individual controls are not financeable on a standalone basis, we will consider how to address this to ensure an appropriate balance between the customers affected by each control.
- Companies have a number of options to address **financeability constraints** that arise under the notional financial structure. We will look for evidence of customer support where companies take steps to address such financeability constraints.
- Companies and their shareholders should bear the risk of their **capital structure and financing**, not customers.

Companies can balance the recovery of costs between different generations of customers using **financial levers**, such as pay-as-you-go (PAYG) and regulatory capital value (RCV) run-off rates.

Companies should explain the assumptions underpinning their financial levers, explaining clearly any proposed departure from natural rates, demonstrate how they have taken into account customer views and the work they have done to assess the likely path of bills beyond 2025. We will test this evidence in our **initial assessment of business plans**, including how proposed 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.

Applicability to England and Wales



Our financeability approach **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales. This is because companies in England and Wales obtain finance in the same capital markets and customers in both England and Wales benefit from efficient financing both now and in the long term.

Consistent with our statutory duty, we will carry out the **financeability assessment at the level of the appointee**. For companies whose areas are wholly or mainly in England, this assessment will encompass the efficient costs included within the wholesale and residential retail price controls. For companies whose areas are wholly or mainly in Wales, we will also include the business retail price control for business customers who are not able to choose their supplier.

Responses to our draft methodology proposals

Most respondents agreed with our proposed approach to assessing financeability. However, there were some disagreements and requests for clarification in certain areas, which included:

- whether individual controls need to be financeable;
- the need to assess financeability over both the next period and the longer term;
- the definition of the notional capital structure;
- the basis on which we should reflect the impact of incentives when assessing financeability;
- our intention to require company Boards to provide assurance that company plans are financeable on a notional basis;
- the use of PAYG and RCV run off levers to address financeability;
- the basis of the calculation of the financial metrics, which we use in our assessment of financeability;
- the setting of targets for specific metrics;
- the use of average metrics over the price control; and
- the impact of direct procurement for customers (DPC) contracts on financeability.

Our consideration of respondents' views

We have considered the responses that we received to the consultation and have provided some additional clarification in a number of areas. This includes: how we treat reconciliation adjustments relating to incentive mechanisms from previous control periods when considering financeability and the use of average metrics over the price control period. We have also set out our approach to addressing the impact of direct procurement for customer (DPC) contracts on our assessment of financeability.

We have not made any other changes to the approach to assessing financeability set out in the consultation documents, as a result of those responses.

11.1 Introduction

This chapter sets out our final methodology for PR19 with respect to assessing financeability. This PR19 final methodology has been determined following the full consideration of views expressed by respondents to our [draft methodology proposals](#), published in July of this year.

When setting price controls, we act in the way we consider best meets our statutory duties under the Water Industry Act 1991. We have primary duties which include duties to further the consumer objective to protect the interests of consumers and to secure that companies are able (in particular, by securing reasonable returns on their capital) to finance the proper carrying out of their functions, and the secondary duty to promote economy and efficiency on the part of companies. Consistent with our long-held policies regarding our approach to regulation and setting price limits, we interpret the financing functions duty as applying to the ring fenced regulated activities of the appointee, such that an efficient company can:

- earn a return at least equal to the cost of capital we have allowed for; and
- raise finance on reasonable terms.

Our approach will assess whether allowed revenues, relative to allowed costs (including the cost of debt embedded within the cost of capital), are sufficient for an efficient company to finance its investment and so deliver its activities, on reasonable terms, while protecting the interests of customers now and in the long term.

The financeability assessment also acts as a final check that, when all the individual components of the companies' business plans (including totex, cost of capital, PAYG and RCV run-off levers) are taken together, an efficient company can generate cash flows sufficient to meet its financing needs.

The remainder of this chapter is structured as follows:

- approach to assessing financeability (section 11.2);
- cost recovery for wholesale price controls (section 11.3);
- proposed financial metrics (section 11.4);
- addressing financeability concerns (section 11.5);
- providing evidence of the impact of company proposals on bills (section 11.6);
- and
- initial assessment of business plans – financeability (section 11.7).

Section 10 of [appendix 15](#) outlines respondents' views to the two questions we posed on **financeability** in our draft methodology proposals. In appendix 15, we

provide our response to the issues raised by respondents and the reasons for our clarifications of our approach in three areas.

11.2 Approach to assessing financeability

We expect each company to provide **Board assurance** that its plan is financeable on both its **actual capital structure** and on the **notional capital structure**, as set out below. This assurance should take account of our early view on the cost of capital for PR19.

It is for each company to determine how best to provide such statements, but we expect the Board statements to set out clearly the steps taken to provide the required assurance. Companies will need to explain the credit rating that they have targeted and the associated level of financial ratios which are required. If companies need to take action to address issues of actual financeability, then we would expect them to set out how they have addressed these issues and provide compelling evidence of their financeability at the time they submit their business plan. This should include the suite of financial metrics we set out in section 11.4 (and any other metrics the company considers relevant).

We will assess financeability by reference to a **notional company** with a notional capital structure and which has an efficient level of expenditure including financing costs. We set out our initial view of the notional capital structure, which is consistent with the capital structure embedded within the weighted average cost of capital (WACC) in chapter 10 (aligning risk and return) and appendix 12 (aligning risk and return).

Consistent with our statutory duties, we will carry out the financeability assessment at the **level of the appointee**. For companies whose areas are wholly or mainly in England, this assessment will encompass the efficient costs included within the wholesale and residential retail price controls. For companies whose areas are wholly or mainly in Wales we will also include the business retail price control for those business customers who cannot choose their supplier.

Where companies whose areas are wholly or mainly in England have not exited the business retail market, then we will also include the business retail control within the assessment of financeability, as this remains an appointed activity.

We will use the aggregated revenues, costs and cash flows across each of the price controls and we will look for each company's projected financial ratios to be at levels which allow it to finance its functions.

We will assess financeability using a suite of financial metrics, discussed further in section 11.4. These metrics are drawn from those commonly used in the financial markets, including those used by the credit rating agencies.

We will also undertake headroom checks to see whether the activities covered by each of the individual controls (including retail controls) appear financeable in their own right.

While we consider that each of the wholesale controls should be able to support financial ratios at a level equivalent to an investment grade credit rating, we would not necessarily expect each control to have the same level of financial headroom.

For the retail controls, which are less capital intensive, we will carry out a headroom check to make sure each control can generate sufficient cash flows to service its working capital needs.

Our price determinations include a number of incentive and risk mitigation mechanisms that are designed to align the interests of companies with those of customers.

To maintain the incentives on management, we will make reconciliation adjustments relating to incentive mechanisms from previous control periods after carrying out our assessment of notional financeability. This ensures that customers do not pay more to address financeability constraints arising either from poor performance, or as a result of an adjustment being made to allowed revenue as a result of the company's performance against its totex allowances in the previous period. Similarly, it ensures that the value of outperformance payments for performance against regulatory incentive mechanisms is not eroded as a result of adjustments made following the financeability assessment.

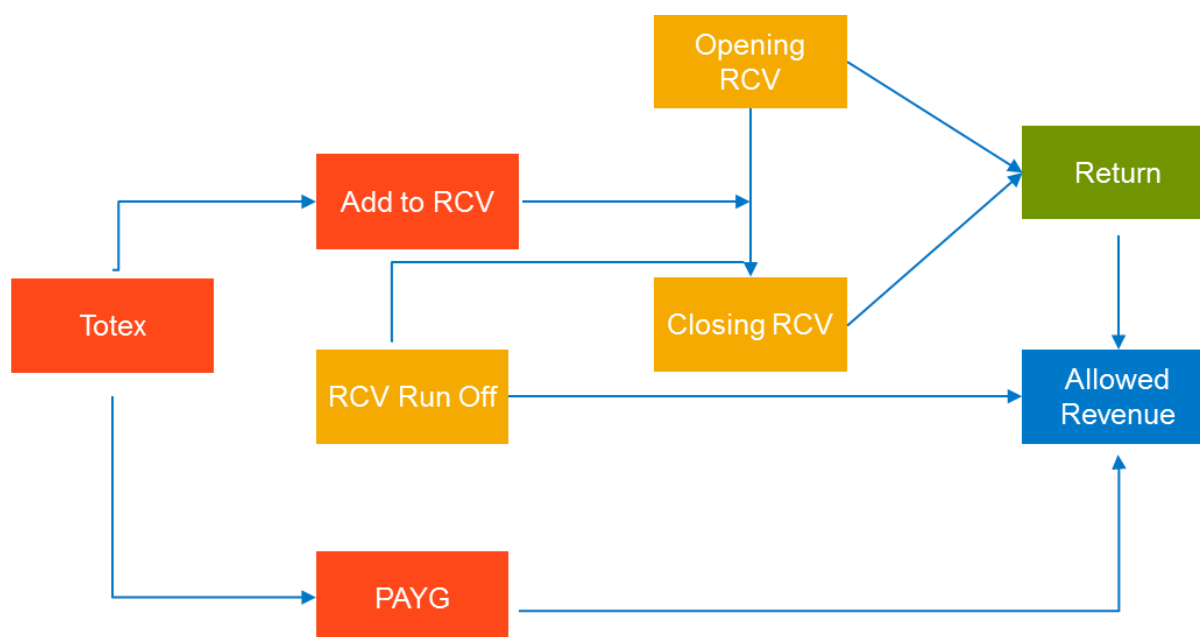
For the **bioresources control**, we will calculate allowed revenues on a building block basis. These allowed revenues form the basis of the financeability assessment. For the purposes of the average bioresources revenue control, these revenues are used to derive a single price per tonne of dry solids for the duration of the price control. The financial model calculates this on a NPV neutral basis, taking account of forecast volumes. We note this may lead to a different, post-financeability year by year revenue profile. The NPV adjustment will ensure revenues allowed over the five years are consistent with those used in the financeability assessment. We note this approach is consistent with the way in which revenue re-profiling adjustments have been made to smooth customer bills in previous price reviews.

11.3 Cost recovery for wholesale price controls

Companies will need to consider the balance of costs recovered from customers in the short and the long term. Costs are recovered through allowed revenue, in one of two ways. Expenditure allowed for within price limits (totex) can be recovered in the year it is incurred through pay-as-you-go (PAYG) or, it can be added to the RCV and recovered over a longer period through RCV run-off (depreciation of the RCV), as shown in figure 11.1.

Each company's choice of PAYG and RCV run-off rates should reflect their own expenditure and investment plans within each control. Therefore, we would not necessarily expect the rates to be the same in each year or to be the same for each control.

Companies should also take into account customers' views on the profile of bills over time, which will enable companies to understand their implicit views on the impact of their PAYG and RCV run-off choices on bills, both in the short and long term. We acknowledge feedback from respondents to the consultation, in that we do not expect companies to directly ask their customers about their PAYG and RCV run-off rates. We require companies to explain to us clearly and evidence their choice of PAYG and RCV run-off rates. We will consider the evidence of customer support for company choices when we make our assessment of company plans. This is in line with our duty to customers. In their response to the methodology consultation, CC Water confirmed that they consider that "companies' evidence of customers' short-term and long-term acceptability should be a strong factor in the analysis Ofwat will undertake in assessing financeability".

Figure 11.1 Regulatory building blocks and cost recovery

PAYG represents totex expensed in the year

Totex not expensed is added to the RCV

Each control has a separate RCV

The return on RCV compensates for the investment that is in the RCV

RCV run-off represents the amortisation of RCV; in broad terms, an equivalent reinvestment is required to maintain assets in steady state

For the water network plus and wastewater network plus controls, any totex not recovered through PAYG in the year will be added to the RCV.

For the new water resources and bioresources controls, we will distinguish between the 'post 2020 RCV' and the RCV in place as of 31 March 2020 ('pre 2020 RCV'). Different RCV run-off rates may therefore apply to pre 2020 RCV and post 2020 RCV.

Companies can use PAYG and RCV run-off rates to allow them to balance the recovery of costs between different generations of customers on a net present value (NPV)-neutral basis. Companies will need to explain how they have set rates and provide evidence of customer support for the impact of their choices.

Our financeability assessment will focus on 2020-25, but we will also take into account the impact of companies' choices to ensure that companies are not running down the RCV too quickly, which could result in financeability issues in future years.

Companies receive part of their return in cash through revenue in the price control period and part of their return as an inflationary uplift to RCV which can be recovered in future periods. This means that real returns are paid by customers in-period, while the nominal (inflation) element will be reflected in future price controls.

In recent periods as the real cost of capital has fallen, companies have received a smaller portion of their returns through in-period revenues and a larger proportion of their returns have through inflation of the RCV. Increasing the proportion of the return that is added to the RCV through inflationary returns reduces the proportion of the return that is remunerated in-period. This means lower cash flows and weaker financeability metrics. As financeability constraints are driven by the cash flow effect of a real return on an inflating capital value, it may be reasonable for companies to make some use of the financial levers (PAYG or RCV run-off) to address issues around notional financeability. We discuss this issue further in appendix 12 (aligning risk and return).

If companies use PAYG and RCV run-off levers to bring revenue forward to address notional financeability, then this will improve cash flows in the short term. However, it will also impact on the affordability of bills and on the balance of cost recovery between control periods. Companies will need to consider how their proposed balance of cost recovery impacts on affordability and the balance across current and future customers and provide evidence that this is aligned with customer preferences and priorities. Companies will also need to consider the impact of bringing cash forward on their RCV and provide evidence that their approach will not create financeability issues in future periods.

The switch to indexing the price control to CPIH (from RPI) will result in cash flows being brought forward all other things being equal, which will increase customer bills in 2020-2025 and reduce them in future periods. However, we do not consider that the switch to CPIH necessarily implies a change in profile of cashflows over price review periods. Where companies adopt a bill profile that takes account of the CPIH transition, we expect them to demonstrate how this differs from a bill profile on a RPI basis and provide compelling evidence that this is consistent with customer preferences.

We will test company proposals to ensure companies only make use of financial levers where this is consistent with customer preference and priorities. It is for companies to propose solutions to notional financeability constraints in their

business plans. We may accept the use of financial levers to address the effect described above.

When companies are engaging with customers on affordability and acceptability of future bill levels, they need to clearly set out the assumptions that support those bill levels, including an assessment of the level of bills into the following regulatory period. While our financial model allows companies to model bill profiles to 2030, we are not mandating the requirement for companies to use the financial model to demonstrate the expected bill profile beyond 2025, but we do expect companies to set out the work they have done to assess the path of customer bills to 2030. Section 11.6 below sets out the information companies should provide in support of future bill levels.

In the box below, we outline our approach to assessing companies' proposals around the use of financial levers as part of our initial assessment of business plans.

Approach to assessing companies' proposals around the use of financial levers

We propose a staged approach to assessing companies' use of financial levers, which we will test as part of the initial assessment of business plans.

1. We expect companies to set out and supply evidence supporting the rates that they have proposed for PAYG and RCV run-off, for each of the wholesale price controls. This will allow us to assess companies' choice of PAYG/RCV run-off rates by reference to the economic substance of proposed totex. For example, the total amount of revenue recovered through PAYG and RCV run-off could reflect the proportion of totex expensed in the year, plus an amount reflecting the economic value of capitalised expenditure expensed to the profit and loss account.

Companies will be expected to clearly explain their choice of PAYG and RCV run-off rates, in relation to the rates indicated by the costs being expensed.

In carrying out our assessment, we will look at the impact of the proposed PAYG and RCV run-off rates on allowed revenue, relative to the levels of both historical and forecast operational and capital expenditure, and RCV depreciation. Looking at both historical and forecast rates allows us to assess how the proposals reflect current expenditure plans. It also allows us to take into account the impact of any historical capital expenditure (capex) bias on the chosen rates.

We do not expect the different regulatory protections around pre- and post-2020 investment to drive companies' proposals around cost recovery rates. We expect companies to provide robust evidence to support their proposed cost recovery

rates for pre- and post-2020 expenditure, especially for the water resources and bioresources controls.

2. We will transition to CPIH as our primary inflation rate from 2020. Companies can, if consistent with customer preferences, transition to a CPIH profile of cashflows. Where companies adopt a bill profile that takes account of the CPIH transition, we expect them to demonstrate how this differs from a bill profile on a RPI basis and set out evidence that this is consistent with customer preferences. For PR19, we consider it remains reasonable for us to assume that a proportion of the RCV on the notional balance sheet remains financed by RPI-linked debt and that we take account of the associated cash flow benefit when assessing financial metrics, particularly adjusted interest cover. Further information about our proposed notional structure is included in appendix 12.

3. If companies consider it appropriate to adjust their PAYG or RCV run-off rates further for other reasons (for example, to address financeability for the notional financial structure or to smooth customer bills), we will look for evidence that this has been fully explained within business plans, with **evidence of customer preferences**.

4. Companies will also need to provide evidence that the company has taken account of **affordability** and the impact on customers (both **in the 2020-25 regulatory period and in the future**), and how they have ensured no undue bill volatility in the **profile of bills**. This means we expect companies to demonstrate how they have assessed bill levels into the following regulatory period (2025-30) as discussed in section 11.6.

5. We will intervene, where necessary, if the balance of evidence suggests that a company's overall PAYG or RCV run-off proposals are not appropriate or have been made to solve financeability constraints driven by a company's actual financial structure.

11.4 Proposed financial metrics

The financial metrics we will use to assess financeability are incorporated in the PR19 financial model. They comprise debt ratios, equity ratios and other return metrics, as set out in table 11.1.

These metrics draw on common approaches used in the financial markets and reflect metrics used by the credit rating agencies.

Each credit rating agency adopts a slightly different approach, including making company specific adjustments for individual items which reflect the specific circumstance of each company's capital structure, operations or financing. Some of these adjustments reflect company specific issues that are shareholder matters (furthermore one company is not rated). We do not therefore follow the precise approach of any credit rating agency.

We expect companies to provide commentary explaining how their plans are financeable on the basis of these metrics and any others they consider relevant.

In our assessment, we will consider the average of each metric over the price control and we will look at trends over the price control period, rather than focusing on individual metrics in a single year. We will exercise our judgement in looking at the suite of financial metrics as part of our assessment of financeability and will look at the entire suite of metrics over the entire control period, rather than focusing on a single metric or a single reporting period.

We would not consider that a poor cashflow metric in a single year necessarily raises financeability issues, however, we may have concerns if there were poor metrics in multiple years or if there was a significant decline in cash flow metrics across the period.

Table 11.1 shows the primary financial ratios we will use in our assessment

Table 11.1 Financial metrics

Key financial metrics	Basis of calculation	What does the metric calculate?
Gearing	$\frac{\text{Net Debt}}{\text{RCV}}$	Gearing measures a company's capital structure and level of indebtedness. It is critical to the assessment of financeability.
Interest cover	$\frac{\text{FFO(pre interest)}}{\text{Cash interest}}$	Interest cover measures a company's ability to meet interest payments from operational cash flows. As the industry tends to be reliant on borrowing, this is considered to be a key financial metric by ratings agencies. In our modelling, we will assume that a proportion of the debt is index-linked and indexed by RPI. The indexation of this debt is not included in cash interest.
Adjusted cash interest cover ratio (ACICR)	$\frac{\text{FFO(pre interest)} - \text{RCV run off}}{\text{Cash interest}}$	ACICR measures a company's ability to meet its interest payments after meeting costs that have been expensed and RCV run off.

Key financial metrics	Basis of calculation	What does the metric calculate?
		ACICR is a more conservative measure than interest cover. It provides an indication of interest coverage assuming companies cannot reduce the RCV-run off. Cash interest is calculated as set out above.
Funds from operations (FFO)/Net debt	$\frac{\text{FFO (post interest)}}{\text{Net Debt}}$	FFO/Net debt measures companies' debt burden relative to their operational income.
Dividend cover	$\frac{\text{Profit after tax}}{\text{Dividends declared}}$	Dividend cover measures a company's ability to pay dividends. Dividend payment policies should reflect the circumstances of each company.
Retained cash flow (RCF)/Net debt	$\frac{\text{FFO (post interest)-dividends paid}}{\text{Net Debt}}$	RCF/Net debt measures a company's debt burden relative to their operational income, after paying dividends.
Return on capital employed (RoCE)	$\frac{\text{EBIT-tax}}{\text{RCV}}$	RoCE lets us assess overall returns against the weighted average cost of capital (WACC). It presents the returns made by the providers of both debt and equity finance. It is considered to be a useful measure due to the capital intensive nature of the industry.
RoRE	$\frac{\text{EBIT-tax}-(\text{cost of debt} \times \text{net debt})}{\text{equity component of the RCV}}$ Net debt and the equity component of the RCV are calculated by reference to the notional capital structure.	RoRE is the return due to shareholders/equity assumed in the notional capital structure. It allows us to assess the returns earned by equity providers against the assumed cost of equity.
<p>Net debt represents borrowings less cash and excludes any pensions deficit liabilities.</p> <p>FFO is cash flow from operational activities and excludes movements in working capital.</p> <p>Cash interest excludes the indexation of index-linked debt.</p>		

We are not publishing target levels for these metrics. Companies are responsible for submitting a plan that is financeable. They should provide us with evidence about the credit rating targeted in their plan and the level of each ratio they consider appropriate.

We consider this is important to make sure companies can demonstrate full ownership of their plans. If we were to set targets for the metrics, this would limit Board ownership of company business plans.

We expect companies to provide a set of financial ratios for the appointed business, under both the notional capital structure and their actual capital structure. These should be in line with the definitions set out above and in our financial model.

Companies may also wish to provide additional evidence, including alternative financial ratios, to support their position. Within the financial model we have included the functionality to provide alternative calculations of both the ACICR and FFO/Net debt metrics, which reflect slightly different methodologies used by some individual credit rating agencies. We do not consider these alternative calculations to be the most appropriate indicators on which to base our assessment. However, some companies have indicated that it would be helpful for us to include them in our model to support their own analysis.

Companies may also wish to submit alternative metrics to support their assessment of the financeability of their plans.

11.5 Addressing financeability concerns

Where a company proposes an approach to address a financeability constraint that arises under the notional financial structure, we expect its business plan to show that:

- the underlying cause of the constraint has been identified;
- all appropriate factors have been taken into account when deciding how best to mitigate the constraint; and
- the approach to addressing the constraint is appropriate, taking account of the effects on customers' bills.

If individual controls are not financeable on a standalone basis, we will consider how we need to address this to ensure an appropriate balance between the customers affected by each control.

We discuss how companies should address concerns on financeability relating to their actual financing structure or cost inefficiency below.

There is a range of options and market mechanisms available to companies to address financeability constraints where they arise from the notional financial structure, as shown in table 11.2.

Table 11.2 Options for addressing financeability

Option	Usage	Comments
Use of PAYG/RCV run-off levers	The PAYG and RCV run-off financial levers can be used to move revenue between	This approach is NPV-neutral in the long term, but alters the balance of bills between current and future customers. Where companies use this approach, we

Option	Usage	Comments
	control periods on an NPV-neutral basis.	will expect to see evidence of customer support for the proposals, to be satisfied that the use of the financial levers does not cause the RCV to be unduly depleted and that the approach provides an appropriate balance between current and future customers.
Restriction of dividends	The use of dividend restrictions may be justified where the company has a large investment programme and the company is seeking to mitigate the effects on credit ratios.	Short-term restriction of dividends improves cash reserves and reduces net debt, which may mitigate impacts on some of the financial metrics (gearing, for example). This approach recognises the consumer interest, but restricting dividends does not directly affect interest cover metrics, so provides only limited benefits in that respect, aside from impact on gearing.
Equity injection	An equity injection may be appropriate where a company has a particularly large investment programme relative to its RCV and needs to maintain notional gearing.	This approach is likely to be particularly relevant where there is significant RCV growth.

If there is an impact on company financeability as a result of bringing additional debt onto the company balance sheet via direct procurement for customers (DPC) contracts, then we expect companies to consider this issue in their business plans and to set out their proposals for addressing the financeability constraints. It is for companies to satisfy themselves that they apply the correct accounting and tax treatment.

We do not anticipate there being significant impacts on the overall financeability of the company from DPC contracts. As set out in appendix 9 (direct procurement for customers) that revenue will flow from the customer to the Competitively Appointed Provider (CAP) via the appointee on acceptance of the asset. Appointees remain responsible for making sure their statutory and licence obligations as water and/or sewerage undertakers are fulfilled. In general, the risk profile for the appointee should be no worse than if they were delivering the DPC project themselves, and the appointee should look to pass on the risks that CAPs can better bear, so that the overall risk, or cost of mitigation, would be reduced.

Our approach to addressing financeability constraints arising in the context of the business retail control for companies, whose areas are wholly or mainly in England and which have chosen not to exit the market, may be different to the approach we would consider for addressing financeability concerns arising in other controls which

are non-contestable. For example, we may consider accepting a lower level of headroom within that control than we would expect to see within the other controls.

If a company expects a financeability issue to arise based on its actual company structure or due to inefficient costs or reconciliation adjustments, it will need to give separate consideration to how it will address the issue and provide the necessary assurances about its approach. This assurance should take account of our early view on the cost of capital for PR19. Companies should provide details of the steps they have already taken to address the issue at the time they submit their business plans and details of the actions that are still in progress, including when they are expected to be complete.

The options available to companies in such circumstances may be different than for addressing a financeability concern under the notional capital structure. Companies and their shareholders bear the risks associated with their actual capital structure. Customers should not bear the cost of resolving an issue arising from inefficient or risky choices made by companies. Where excessive levels of gearing or expensive debt are causing financing issues under the actual company structure, then we would expect companies to consider injecting equity as an appropriate means to address these financing issues.

11.6 Providing evidence of the impact of company proposals on customer bills

Companies need to provide us with evidence that they have considered the impact of their proposals on customers both now and in the longer term and they should provide evidence of customer support.

In doing this, we expect them to provide us, and where appropriate customers, with calculations which show how they have reached their conclusions in relation to expected bill levels and the relevant projected bills for 2018-19 and 2019-20.

Companies can use the Ofwat financial model to undertake these calculations or can provide the calculation of proposed bills in another way – for example, an alternative spreadsheet.

The calculations should set out the companies' assumptions which feed the key inputs into the calculation of bills which should include:

- forecast totex levels,
- PAYG and RCV run off rates,

- cost of capital,
- customer numbers, or
- anticipated retail margins

Companies should also clearly set out any other assumptions or adjustments that they have made to support their calculations.

Companies should provide sufficient details to enable Ofwat to understand how they have established the level of bills that they are proposing.

11.7 Initial assessment of business plans – financeability

We will test financeability in our initial assessment of business plans as follows.

Initial assessment test on aligning risk and return: financeability

1. Has the Board provided a clear statement that its plan is financeable on both an actual and a notional basis? Is the statement appropriate and how robust is the supporting evidence?
2. How appropriate are the company's PAYG and RCV run-off rates? How well evidenced are they, including that they are consistent with customers' expectations, both now and in the longer-term?

Our financeability assessment will focus on whether the plan is financeable on the notional capital structure. Companies also need to provide assurance that the company is financeable under the actual capital structure and set out any actions that they have taken to deal with financeability constraints.

When assessing whether the plan is financeable on both a notional and an actual basis, we will take into account:

- the statements made by each company's Board, as to why they consider the plan to be financeable for the notional capital structure and for the actual capital structure;
- the evidence provided on the financeability of the notional structure and the actual structure and details of the steps taken to address financeability issues at the time of the submission of business plans;

- the level of credit rating that the company has targeted for the notional company and the reasons why the company considers that level appropriate; and
- the company's financial metrics and other evidence provided to support the selected credit rating.

When assessing a company's choice of PAYG and RCV run-off rates, we will take into account:

- the evidence the company gives to support its choices, including the extent to which it has proposed specific adjustments to address the underlying economic substance of the control (for example, to reflect the transition from RPI to CPIH, or for other reasons);
- the impact of the chosen rates on customers' bills, both now and in the future, and evidence that customers support the rates the company has selected; and
- the level of revenue the company is seeking in each year through its PAYG and RCV run-off rates relative to its forecast levels of expenditure, including considering the cash flow metrics arising from the company's proposals.

12. Accounting for past delivery

Key themes of PR19

Our approach to accounting for past delivery supports the key themes of PR19.

Robust analysis of past delivery following the PR14 reconciliation rulebook methodology, coupled with the flexibility to smooth revenue adjustments, will support **affordability**.

Reconciling past performance keeps companies accountable for their performance, which will support **customer service**.

Taking past performance in the round into account, when assessing the achievability of business plans, will support delivery of **resilience** in 2020-25.

Accounting for past delivery

We will take performance in the period from 2015 to 2020 into account in two ways at PR19:

- we will apply **reconciliation adjustments** to revenues and the regulatory capital value (RCV) for the 2020 to 2025 period to take account of the incentive mechanisms we set at PR14, and reflect performance in the final year of the 2010 to 2015 period; and
- company performance in the 2015 to 2020 period will be taken into account in our **initial assessment of business plans**, as this will influence the confidence we have in company business plans and the future delivery of services to customers.

Reconciliation adjustments at PR19

- Companies' relative performance against the service incentive mechanism (SIM) in the period 2015-16 to 2018-19 will determine financial high performance payments and poor performance penalties of between -12% and +6% of residential retail revenues;
- Wholesale RCV adjustments will be applied to water resources and water network plus controls proportionately, and in full to the wastewater network plus control;
- Wholesale revenue adjustments will be applied to network plus controls, except where an outcome delivery incentive is clearly linked to water resources or bioresources; and
- Revenue adjustments can be flexibly applied either in the first year, or spread over a number of years.

Initial assessment of business plans

Our initial assessment of business plans will include two test areas:

- how well the company gave evidence for its proposed reconciliations for the 2015-20 period; and
- how well has the company performed, and is forecast to perform, over the 2015-20 period and, taking into account this overall performance, how well has it put measures in place to ensure it maintains confidence it can successfully deliver its business plan.

Applicability to England and Wales

Our final methodology for accounting for past delivery **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales.



Responses to our draft methodology proposals

We received 17 responses to our proposals on accounting for past delivery. There was general support for all our proposals for reconciling performance. The majority of respondents agreed with the proposal not to reflect 2019-20 performance in the SIM financial incentive; only two disagreed. There was support for our proposals to run a customer measure of experience (C-MeX) in 2019-20, and to use it to proxy the SIM for that year for companies with reputational incentives on SIM in 2019-20.

No substantive new issues were raised, however, some respondents raised some detailed points. These included: seeking further information on how we will calculate the SIM high performance payments and poor performance penalties; having the ability to smooth RCV adjustments over the period; and practical considerations on publishing the PR14 reconciliation information with the 2018 annual performance report.

There was general support for taking into account past performance when undertaking our initial assessment of business plans. There were some mixed views on how past performance is taken into account: particularly on whether it should reflect the level of stretch in previous business plans, or differentiate between companies with and without 'enhanced' status at PR14.

Our consideration of respondents' views

We have made one minor procedural change to our draft methodology proposals: we will now allow, on request, up to two weeks after publication of the annual performance report for companies to publish their proposed reconciliations under the PR14 reconciliation rulebook. We have clarified how past performance is taken into account in the IAP and revised the wording of the second IAP test question. In addition we consider that we need to reflect the level of stretch in previous business plans, but not to differentiate between companies with and without 'enhanced' status at PR14, in the initial assessment of plans.

For the reconciliations, we consider that financial incentives for SIM will not be required for 2019-20. Whilst we are not proposing to set out further details of the SIM high performance payments and poor performance penalties calculations now, we ask companies to provide an estimate of their SIM high performance payment or poor performance penalty in their financial model (this may be zero). Furthermore, we continue to think that making RCV adjustments in March 2020 as 'midnight adjustments' avoids complexity and ensures consistency with the PR14 reconciliation rulebook methodology.

12.1 Introduction

This chapter sets out our final methodology for PR19 with respect to accounting for past delivery. This PR19 final methodology has given full consideration to the views expressed by respondents to our [draft methodology proposals](#) published in July of this year.

It is important to account for past delivery for three reasons:

- it will affect customers during the 2015-20 period, through the outcomes that companies deliver and the investments that companies make;
- it will be a guide to how well the company may be able to deliver for customers over the 2020-25 period; and
- it will affect revenue and RCV adjustments for the 2020-25 period through the incentive mechanisms set at PR14.

The remainder of this chapter is structured as follows:

- reconciliation for 2015-20 and 2010-15 performance (section 12.2);
- applying reconciliation adjustments in 2020-25 price controls (section 12.3);
- including reconciliations in business plans (section 12.4); and
- initial assessment of business plans – accounting for past delivery (section 12.5).

Section 11 of [appendix 15](#) outlines respondents' views to the two questions we posed on accounting for past delivery in our draft methodology proposals. In appendix 15, we provide our response to the issues raised by respondents.

12.2 Reconciliation for 2015-20 and 2010-15 performance

In PR14, we set mechanisms to incentivise companies to do the right thing for their customers. Company performance in 2015-20 will have a direct and real impact on customers during the 2015-20 period. Part of this will be demonstrated through outcomes and performance metrics. More than half (60%) of the PR14 performance commitments had direct financial outcome delivery incentives (ODIs) attached to them. The remainder were reputational incentives. Companies also committed to timely and efficient investments, customer engagement and sharing gains with customers. Reconciling performance is a regulatory tool for making companies accountable for their performance against their PR14 final determination. The reconciliation puts into effect the consequences companies knew they would face as a result of the incentives introduced at PR14. For this reason, the PR14 reconciliation needs performance to be robustly analysed.

Part of PR19 will be the calculation of adjustments to take account of past performance and incentives. This is important given the potential effects of adjustments arising from the PR14 mechanisms covering the 2015-20 period. The PR14 reconciliation rulebook and models for each of the 2015-20 incentive mechanisms are on [our website](#).

The PR14 reconciliation rulebook explains how we will take into account performance over 2015-20, along with factors not reconciled from PR09, at PR19.

The rulebook describes the approach to the reconciliation of the following mechanisms.

- **Outcome delivery incentives** – outperformance payments for companies that exceed their stretching performance commitment levels, and underperformance penalties for customers if performance is below their performance commitment levels. We published an [Information Notice](#) about the limited circumstances in which companies can change their outcomes.
- **Wholesale total expenditure (totex) sharing** – where a company over or under-performed on its totex allowance, the over- or underspend is shared with customers.
- **Wholesale revenue forecasting incentive mechanism (WRFIM)** – financial incentives for companies to make accurate forecasts for wholesale revenue, ensuring under and over-recovery is reconciled.
- **Water trading incentive** – incentive payments for new water trades that start in the 2015-20 period.
- **Residential retail** – the total revenue allowance is adjusted for actual customer numbers.
- **2010-15 reconciliation** – further adjustments for performance against the PR09 incentive mechanisms, to reflect the update for actual 2014-15 performance.
- **Land disposals** – adjusting the RCV to share any proceeds from disposals of interest in land equally with customers.

For each of these, the rulebook sets out how we treat, inflation, tax, the time value of money and mechanism specific issues.

PR09 also included incentives to encourage companies to improve and deliver their services more efficiently. Many of these mechanisms needed data for the last year of the price control period, 2014-15, to assess the final benefit for customers or for companies. When PR14 was completed, the 2014-15 financial year had not yet finished, so companies made a forecast, which we considered and adjusted for inclusion in the PR14 final determination. We have updated our PR09 reconciliation

analysis using the complete information and final audited spend and performance for the whole 2010-15 period. We will publish our conclusions on the [2010-15 reconciliation](#) further adjustments in due course. These further adjustments will be implemented as part of PR19.

In PR19 we will also implement the adjustment to ensure consistency in how we apply inflation indices for the PR09 capital expenditure incentive scheme. The need to do this was flagged in the PR14 final determinations. We consulted on this adjustment in the PR14 reconciliation rulebook consultation in [March 2015](#), and concluded in [February 2016](#). This will lead to a one-off change to the RCV for all companies at PR19. At an industry level, this will equate to around 2% of the RCV, but the exact adjustment for each company varies according to its actual capital expenditure. We published the adjustments in [October 2016](#).

Reconciliation of the service incentive mechanism (SIM) performance

The PR14 reconciliation rulebook does not cover how the SIM will be reconciled for PR19.

The years SIM will cover:

- We will use the SIM results from the four years 2015-16 to 2018-19 to calculate the financial high performance payments and poor performance penalties for companies, based on their performance over those four years.
- We will not use the SIM results from 2019-20 for high performance payments and poor performance penalties, as performance for that year will not be known at the time we make the final determinations for PR19.

SIM will not operate in 2019-20. Instead we will run C-MeX that year. Some companies have reputational incentives for SIM in 2019-20. We will use the contact survey part of C-MeX to proxy the qualitative part of SIM, and complaints data for the quantitative part of SIM. This will enable companies and their stakeholders to assess whether they had met their reputational incentives for SIM in 2019-20.

Setting high performance payments and poor performance penalties: We confirm that the revenue adjustments for SIM at PR19 will be in the range of -12% (penalty) to +6% (payment) of residential retail revenues for SIM.

At PR14 we set SIM payments for 2010-11 to 2013-14 performance based on companies' relative performance to the mean score of all companies. We used standard deviations from the mean to determine how each company performed relative to others. There are alternative ways of calculating SIM payments for 2015-

16 to 2018-19 performance, for example, taking a point other than the mean as the point at which no high performance payments or poor performance penalties apply, or, using absolute rather than relative scores.

We confirm that each company's high performance payments and poor performance penalties will depend on its performance and those of all the other companies, that is, SIM will remain as a relative incentive mechanism. We will provide details of our approach to applying the relative incentive after considering the distribution of companies' performance. This is to ensure we apply appropriate high performance payments and poor performance penalties.

12.3 Applying reconciliation adjustments in 2020-25 price controls

When making adjustments to price controls for 2020-25, we need to apply each adjustment in the appropriate control, and consider over what period each should be applied.

The PR14 reconciliation produces adjustments for the five PR14 price controls (business retail, residential retail, wholesale water, wholesale wastewater and Thames Tideway). At PR19, we have split the wholesale water control into water resources and wholesale water plus, and the wholesale wastewater control into bioresources and wholesale wastewater plus.

For water, we will apply the RCV adjustments before splitting the RCV between water network plus and water resource controls. This is because we are using an unfocused (proportional) approach to allocate the RCV between controls.

For wastewater RCV adjustments, we will apply them wholly to the wastewater network plus control. To facilitate bioresources markets, the bioresources RCV will be based on the economic value of bioresources assets. We will not, therefore, apply the reconciliation adjustments to the bioresources RCV, as this could distort the economic value of the assets. Adjustments will be applied as midnight adjustments on 1 April 2020.

For water and wastewater wholesale, the revenue reconciliation adjustments are produced from the totex menu, outcome delivery incentives, water trading incentive, wholesale revenue forecasting incentive and the 2010-15 reconciliation. It would be time consuming and complex to allocate these adjustments across the water resources, bioresources and network plus controls. This additional complexity would appear to offer little benefit to the operation of the separate binding controls. We will,

therefore, apply all the revenue adjustments from the reconciliation of the wholesale incentives to the water and wastewater network plus controls, except where it is clear that a specific outcome delivery incentive is wholly attributable to water resources or bioresources. We expect companies to provide clear reasoning where they consider that revenue adjustments (not RCV) should apply to the water resources and bioresources controls. The one exception to this is water trading incentives, where companies will need to allocate the incentive payments from new water trades in the 2015-20 period between the water resources and network plus water revenue controls. We expect companies to set out their approach for allocating incentive payments, which we will review.

For the reconciliation of the residential (household) retail revenues, we will apply the adjustment to the residential retail control.

In PR14, revenue adjustments could be flexibly applied either in the first year, or, spread over a number of years in the new price control period preserving the net present value of the outperformance payment or underperformance penalty due when spreading the adjustment over the period. We will retain this flexibility in PR19 and, as at PR14, it will be a matter for a company to decide as it prepares its business plan and considers affordability and bill volatility.

As we did at PR14, we will apply the revenue adjustments to the controls after financeability has been assessed. This is to make sure the outperformance payments or underperformance penalties are not offset, wholly or partially, as a result of the financeability assessment.

Table 12.1 summarises the adjustments produced by each of the past performance incentive mechanisms and the price controls we will apply them to.

Table 12.1 Applying past delivery adjustments to price controls

Incentive mechanism	RCV adjustment	Revenue adjustment
2010-15 reconciliation (further adjustments)	Allocated to water resources and water network plus controls proportionally, and to wastewater network plus in full to avoid distorting the economic value of bioresources assets.	Network plus (water and wastewater)
Land sales	Allocated to water resources and water network plus proportionally, and to wastewater network plus in full to avoid distorting the economic value of bioresources assets (unless the land asset is wholly attributable to bioresources).	Not applicable

Incentive mechanism	RCV adjustment	Revenue adjustment
Water trading	Not applicable	Company proposed allocation across water resources and water network plus
Outcome delivery	Network plus (except where an ODI is wholly aligned to water resources).	Network plus (except where an ODI is wholly aligned to water resources, bioresources or retail)
Totex menu	Allocated to water resources and water network plus proportionally, and to wastewater network plus in full to avoid distorting the economic value of bioresources assets.	Network plus (water and wastewater)
Wholesale revenue forecasting	Not applicable	Network plus (water and wastewater)
Residential retail revenue	Not applicable	Residential retail
SIM	Not applicable	Residential retail

12.4 Including reconciliations in business plans

The business plan tables collate all inputs for each of the PR14 reconciliation models. We expect companies to publish their populated PR14 reconciliation models, along with explanations, by the annual performance reporting deadline of 15 July. Some respondents expressed views that as there is already a significant volume of work for companies to complete between the end of the financial year and the 15 July APR submission deadline then a later date for the reconciliation information would allow a more efficient allocation of resource. After considering the issue, we have made a minor change to, on request, extend the deadline by up to two weeks for publishing the proposed reconciliations under the PR14 reconciliation rulebook. This will still allow for an early start on the reconciliation assessment and a smooth process for the initial assessment of business plans. There is more detail on the arrangements for dealing with data availability in chapter 13 (securing confidence and assurance).

We will use two feeder models to take the outputs from the PR09 and PR14 reconciliations, and convert them for use in the financial model. These are the [revenue adjustments feeder model](#) and [RCV adjustments feeder model](#).

The first will profile the revenue adjustments in the 2020-25 price controls and direct the revenue adjustments to the right price control in the financial model. The second will direct the RCV adjustments from the reconciliations (including land sales, if any) into the right price controls when splitting the RCV across the wholesale controls.

Some of the PR14 reconciliation models published on [our website](#) calculate in 2012-13 prices and others in outturn (nominal) prices as set out in the PR14 reconciliation rulebook. The outputs from these models will be used in the PR19 financial model, which uses 2017-18 prices. We will convert the adjustments output from the reconciliation models to the correct price base for the financial model in the new feeder models mentioned above.

12.5 Initial assessment of business plans – accounting for past delivery

Company performance in 2015-20 will have an important impact on customers during the 2015-20 period and beyond. It is vital for companies to consider how they have learned from their performance, to ensure that they deliver for their customers in the future and maintain the trust and confidence of all their stakeholders. Some of this 2015-20 performance is directly affected by financial incentives, such as ODIs and totex cost sharing. Some performance is covered by reputational incentives, such as performance commitments, or, covered indirectly by the regulatory regime, such as the inclusion of complaint and customer contact data in the service incentive mechanism.

We want to take overall company past performance into account in assessing the achievability and deliverability of business plans. We expect companies to set out how they have delivered and forecast to deliver overall for customers in the 2015-20 period, including against our final determinations, their PR14 business plans and their statutory and licence obligations.

Given their overall performance in 2015-20, companies should set out their understanding of the drivers of their past performance, the lessons they have learnt from this performance and the additional measures that they have put in place to ensure they will deliver their 2020-25 business plans. These measures should ensure improvements where past performance has been below expectations, and to provide additional stretch where the company has outperformed expectations. We expect the level of evidence to be greater, the greater level of stretch included in companies business plans compared to past performance.

We will test accounting for past delivery in our initial assessment of business plans as follows:

Initial assessment test on accounting for past delivery

1. How well has the company given evidence for its proposed reconciliations for the 2015-20 period, and has it proposed adjustments by following the PR14 reconciliation rulebook methodology?
2. How well has the company performed, and is forecast to perform, over the 2015-20 period and, taking into account this overall performance, how well has it put measures in place to ensure that it maintains confidence that it can successfully deliver its PR19 business plan?

1. How well has the company given evidence for its proposed reconciliations for the 2015-20 period, and has it proposed adjustments by following the PR14 reconciliation rulebook methodology.

In this assessment, we would expect to see:

- forecast performance – the company's anticipated performance in the last two years of the 2015-20 period, where actual performance is not yet known, and how this fits with past performance published in its annual reports and forecasts in the business plan;
- robust analysis – how well the company has followed the PR14 reconciliation rulebook methodology to derive its proposed adjustments in the 2020-25 price controls; and
- customer engagement/support – evidence of customers' support, and the strength of that support, for its proposed adjustments to the 2020-25 price controls.

2. How well has the company performed, and is forecast to perform, over the 2015-20 period and, taking into account this overall performance, how well has it put measures in place to ensure that it maintains confidence that it can successfully deliver its PR19 business plan.

To maintain trust and confidence, it is important that companies not only have a great business plan but also that customers have confidence that the business plan will be delivered. This will come in part from how companies have learnt from their 2015-20 performance and put in appropriate measures to improve performance to ensure that they deliver for their customers in the future.

In this assessment, we will consider overall actual and forecast performance for the 2015-20 period, including performance against our PR14 final determinations, company PR14 business plans and statutory and licence obligations enforced by the EA/NRW, DWI and Ofwat, including:

- how well has the company performed and is forecast to perform in meeting its outcome and performance commitments;
- how well has the company performed and is forecast to perform in terms of its timely and efficient investment and operating efficiency;
- how the company has dealt with and given evidence of its performance on major incidents⁶⁷ and/or where statutory and licence obligations enforced by the EA/NRW, DWI and Ofwat have not been met;
- how well it has managed the customer relationship in major incidents, or when complaints are escalated;
- the company's understanding of the drivers of its past and forecast performance and the lessons that it has learnt from this;
- based on this understanding and performance, the measures the company has put in place to ensure it maintains confidence that it can successfully deliver its 2020-25 business plan; and
- the level of stretch included in the 2020-25 business plan compared to past performance and targets, and the level of evidence the company has provided for the change in performance.

When undertaking this assessment we expect to take account of the level of stretch included in previous targets, for example if the company was intending to extend the frontier for the sector, and the level of evidence provided by the company. Where a company has failed, or is forecast to fail, to deliver on its past promises we would expect to see strong and compelling evidence that performance is going to improve.

To run this test, we will, in part, draw on other test assessments which consider past performance. For example, our assessment of proposed performance commitments, discussed in see chapter 4 (delivering outcomes for customers), will look at a company's evidence that its commitments are credible in light of its past performance.

After considering the views expressed by respondents, we have clarified how past performance is taken into account in the initial assessment of plans in section 11 of appendix 15 (responses to our draft methodology) and revised the wording of this

⁶⁷ A major incident is a category 1 incident defined by EA/NRW or a major event defined by the DWI.

initial assessment test question and included additional explanation of the matters that we will take into account. In particular respondents raised concerns that past performance should not prevent a company being categorised as exceptional or fast-track. We agree and have amended the initial assessment test so that it is clear that it is considering overall actual and forecast performance in the 2015-20 period and how well the company has taken account of this performance and put appropriate measures into place to ensure it successfully delivers its business plan. We have amended the explanation of the test to reflect the change in wording and also to make it clear that we will expect stronger evidence, the greater the stretch included in the 2020-25 business plan, and that we will take previously particularly stretching targets into account. We have also made it clear that company performance goes beyond the delivery of business plans and includes compliance with statutory and licence obligations and dealing with major incidents.

13. Securing confidence and assurance

Key themes of PR19

Our approach to confidence and assurance supports the key themes of PR19.

Our proposals for PR19 aim to reveal more granular information, to allow us to set separate price controls and promote new markets. This will help to promote **affordability** by enabling us to challenge companies' business plans and costs more effectively.

By being able to effectively challenge companies' plans and compare performance across companies, companies will be held to account and incentivised to **innovate** and improve **customer service**.

Company Boards will be required to demonstrate how they have challenged and satisfied themselves that their plan will deliver operational, financial and corporate **resilience** over the next price control period and the long term.

Expectations for company business plans

We want companies' plans to be more focused and succinct, more accessible and easier to navigate than in PR14. Companies should publish the whole of their business plans and will need to provide very good reasons for any content to be withheld. We propose that:

- every company provides a guide to its plan that clearly signposts key information about its proposals and how this relates to our initial assessment of business plan tests;
- every company provides an executive summary of its plan; and
- a company's main business plan narrative should be supported by strong evidence and be no more than 200 pages long for a water only company and 300 pages for a water and wastewater company.

Expectations for the provision of supporting data

Companies need to submit a consistent, accurate and assured set of information in line with our data table requirements, using our new, secure data capture system and an Excel spreadsheet.

Assurance and governance arrangements

We expect company Boards to own and be accountable for their business plans. Each company's full Board should provide us with an assurance statement that explains, among other things, how it has challenged and satisfied itself that:

- all the elements add up to a plan that is high quality and deliverable;
- the overall strategy for data assurance and governance processes delivers high-quality data;
- the business plan will enable the company to meet its statutory and licence obligations, now and in the future;
- the business plan will deliver operational, financial and corporate resilience over the next control period and the long term;
- it will enable its customers' trust and confidence through high levels of transparency and engagement with customers on issues such as its corporate and financial structures; and
- it has provided ownership of the overall strategy and direction of the plan in the long term.

Applicability to England and Wales



Our final methodology for confidence and assurance **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales. We want to ensure that all companies are accountable to customers and society and that high-quality data is available to clearly explain their plans and allow meaningful comparisons across companies to drive excellence and innovation.

Responses to our draft methodology proposals

A number of respondents considered that our draft business plan and data requirements were clear and sufficiently specified. However, some respondents considered that the coverage and clarity of the requirements would be improved by, for example, having clearer definitions, increasing the linkages between tables, pre-populating more of the data, and establishing a post publication query and clarification process. We were also asked to look again at areas such as customer acceptability and vulnerability information, capturing enhancement expenditure for opex, ensuring consistency in reporting and the definitions of industry-wide data and whether the tax table needed to allow for other tax allowances.

There was broad support for our assurance proposals from all but one respondent, who raised concerns regarding the risk and proportionality of our assurance assessment. One respondent asked how assurance requirements could vary with the company monitoring framework (CMF) rating of a company given business plan submission would precede CMF assessment. Another respondent said that the 2018 CMF report should be published in January 2019 alongside the IAP.

Our consideration of respondents' views

Our business plan and data requirements are largely unchanged. We have revisited the data we need for customer acceptability and vulnerability, tax, water resources and PR14 reconciliation. In response to respondents' views on the usability of data requirements, we have increased the linkages between tables, improved the number and clarity of definitions and guidance and allocated item references. We have reconsidered our request for historical data in the business plan, previously sent to us in July 2017 and have constructed a tool to map inputs and outputs between tables and the financial model.

We can confirm that the outcome of the 2018 CMF assessment will be published alongside the IAP results in January 2019. We can also confirm that it is for companies to ensure that they have effectively assured their business plan, taking account of their CMF categorisation at the time of submission. We have also decided to introduce a new IAP test to require assurance from company Boards that their business plan will enable customers' trust and confidence through high levels of transparency and engagement with customers on issues such as its corporate and financial structures.

13.1 Introduction

This chapter sets out our PR19 final methodology for confidence and assurance. This final methodology has been determined following full consideration of views expressed by respondents to our [draft methodology proposals](#) published in July of this year.

We need high-quality business plans supported by a consistent, accurate and assured set of information across companies, so that we can assess whether plans deliver for customers and set price controls.

Our proposals for PR19 will reveal more granular information, to allow us to set separate price controls and promote new markets. This will help to address pressure on customers' bills and affordability by enabling us to challenge companies' business plans and costs more effectively.

This chapter is structured as follows:

- expectations for company business plans and narratives (section 13.2);
- expectations for the provision of supporting data (section 13.3);
- assurance and governance arrangements (section 13.4); and
- initial assessment of business plans – confidence and assurance (section 13.5).

Section 12 of [appendix 15](#) outlines respondents' views to the two questions we posed on confidence and assurance in our draft methodology proposals.

In appendix 15, we provide (or reference) our response to the main issues raised by respondents. In the [data table issues log](#), we provide our response to the individual issues raised on the tables.

13.2 Expectations for company business plans and narratives

In this section, we outline our expectations for:

- company narratives and supporting evidence;
- the form and format of business plans;
- customer challenge group reports; and
- transparency.

Further expectations about company business plans are set out in chapter 14 (the initial assessment of business plans: securing high quality, ambition and innovation) and appendix 13 (initial assessment of business plans).

13.2.1 Expectations for company narratives and supporting evidence

We expect companies to submit focused and succinct business plans. We therefore expect company business plans to incorporate a clear, concise and well-reasoned narrative with all necessary supporting evidence.

Companies' main business plan narratives should summarise the overall strategy for the plan, and how it delivers the four key themes of PR19 (customer service, resilience, affordability and innovation) and the UK or Welsh Government's strategic policy statement, as appropriate.

In PR14, main business plan narratives ranged from 250 pages to around 900 pages spread over a number of documents. We propose that companies limit their main business plan narratives to no more than 200 pages in a single document for a water only company and 300 pages for a water and wastewater company. This will allow us to obtain a succinct but sufficiently detailed overview and explanation of a company's plan.

To aid understanding, companies should provide an executive summary: a Board-level summary, no more than five pages long, of the main points of the company's business plan, how it meets our PR19 themes and expectations and the key drivers for the proposed price and outcomes trajectories.

We expect companies to provide to us all supporting evidence, analysis and models they have used in preparing their plans. We are not restricting the length of the business plan documentation. Companies can submit appendices in addition to their main narratives.

13.2.2 The form and format of business plans

We are not prescribing the form of the business plans but they must be:

- easy to navigate and make it easy to find information;
- capable of being hosted on our Sharepoint system;
- capable of being used by multiple teams; and
- based on content fixed at a point of submission to Ofwat.

We will need to be able to easily identify relevant supporting evidence and to quote and reference this evidence as required.

Specifically, the business plans will need to clearly signpost the areas of the plan where we can find evidence about how the company is meeting each of the tests for the initial assessment of business plans. Our assessments need to be repeatable to allow us to do appropriate quality assurance, so the ability to reference the evidence found is crucial. We have published a [pro forma](#) for this signposting exercise along with this final methodology.

We note that some companies have asked about the use of new digital formats for their business plan submissions (for example videos or web-based). We encourage companies to set out their business plans in formats that can be shared with their customers and stakeholders, using technology platforms which are most accessible to customers. However, we do not consider that a source of information that is hosted externally and subject to change would be an appropriate basis for assessing business plans. We want companies to submit information to us in consistent formats to facilitate evidence-based assessments and cross-company comparisons. For these reasons, we will not treat such formats as part of a company's formal submission.

We use standard Microsoft software. Therefore, companies' documents and files should be submitted in file formats that can be opened in Excel, Powerpoint and Word (as well as in a readable pdf format) and be capable of being used by multiple teams.

13.2.3 Expectations for customer challenge group reports

We expect each company's business plan to be accompanied by an independent report to Ofwat from the CCG. This report should provide the CCG's views on the overall quality of customer engagement and the degree to which the company has reflected the results of this engagement in its business plan. It is also important that CCGs highlight areas of challenge and disagreement, including how the company has responded to challenges and any areas of outstanding disagreement.

In '[Ofwat's customer engagement policy statement and expectations for PR19](#)', published in May 2016, we set out the questions CCG reports should address in their independent reports. Since we published the customer engagement policy statement, we have provided CCG chairs with a draft 'aide memoire' which provides CCGs with further clarity on the role of CCGs particularly relating to our PR19

methodology consultation. We will update and publish the final aide memoire in early 2018 following publication of our PR19 final methodology.

The independent reports from the CCGs will inform our assessment of companies' business plans. We will continue to work with the CCG chairs to support their role in independently challenging companies.

13.2.4 Expectations for transparency

To improve transparency, we want companies to make their business plans accessible to us, companies, customers, stakeholders and other regulators. We therefore expect them to publish the whole of their business plans at the same time as they submit their plans to us in September 2018.

If a company considers some information should not be published – because it is commercially sensitive information, for example – then the company will need to provide its stakeholders and us with strong, robust reasons that are specific to the information concerned.

Companies who choose to submit their plans early can publish their plans when they wish, but must do so no later than 3 September.

We will continue with our approach of publishing financial models and supporting feeder models, to promote transparency and understanding of our decision making.

13.3 Expectations for the provision of supporting data

The companies' business plan narratives will provide us, customers and other stakeholders with a detailed explanation of their proposals for the 2020-25 period.

To complete our initial assessment and set the different price controls, we need consistent, accurate and assured data. We also require companies to base their financial projections on the use of our published financial model.

We will collect this data using a suite of supporting [data tables](#) and our [financial model](#), which accompany this PR19 final methodology.

You can find more details on the data requirements in the supporting [guidance document](#). Here we also set out the changes and improvements we have made for the PR19 final methodology.

13.3.1 Early data submissions

By working with the industry since 2016, we identified a need to collect information in specific areas before companies submit their business plans in September 2018. Doing this enables us and companies to:

- improve the quality and consistency of data; and
- resolve any queries more quickly.

It also helps us to refine our methodologies and make an early start on key elements of the initial assessment of business plans.

Since our draft methodology proposals, companies have submitted information on 2016-17 costs and explanatory variables to inform our cost assessment work and debt information.

Companies have also provided their proposed allocations of historic regulatory capital value (RCV) for bioresources. We will give companies feedback on their asset valuations and proposed RCV allocations by the end of January 2018.

Apart from the early submission on cost adjustment claims, we expect the data and information contained within these early submissions to be subject to the same good assurance and governance processes companies use for their business plans. We may also consider this information within our 2018 company monitoring framework (CMF) assessments.

We summarise the rest of the planned submissions in table 13.1 below.

Table 13.1 Early submission summary

Data required	Purpose	By when	How	Reference
Companies' proposed allocations of historic RCV for water resources	To give companies feedback on their allocations (by the end of April 2018) before they submit their business plans	31 January 2018	Separate tables set out in excel file PR19 Jan 2018 tables – WR RCV allocation of our draft methodology consultation .	IN17/01 'Allocation of RCV to water resources and bioresources at 31 March 2020' , January 2017
Companies' performance commitment definitions	To give companies feedback ahead of business plans, reducing ambiguity and improving consistency	3 May 2018	Document similar to Appendix 4 of the PR14 final determination company-specific appendices.	'Water 2020: our regulatory approach for water and wastewater services in

Data required	Purpose	By when	How	Reference
			Spreadsheet similar to table App1 (performance commitments and outcome delivery incentives) of the PR19 business plan tables. We expect to provide the templates for companies to use for their 3 May submissions in early 2018.	England and Wales', May 2016
Information about companies' expected cost adjustment claims	To assist with the review process and allow us extra time to take into account claims ahead of the initial assessment of business plans, and provide early certainty on our decision to exceptional and fast track companies.	3 May 2018	Separate information submission. We have provided further details on the type of evidence we expect companies to submit in support of their cost adjustment claims in appendix 11	
PR14 reconciliation information	To help us understand and review the data with which companies have calculated adjustments for their performance during the 2015-20 period	15 July 2018 (extendable by two weeks on request)	With the 2018 annual performance report	Chapter 12 (accounting for past delivery), allows period to be extended from draft methodology to allow separate submission dates

13.3.2 Approach to small companies

We define a small company as one with an annual turnover of less than £10.2 million. This includes water companies we refer to as NAVs, as well as Cholderton and District Water. 'NAV' stands for new appointments and variations and is a process that involves one company replacing another as the water and/or

wastewater company for a specific geographic area⁶⁸. We also use the term NAVs to describe a sub-group of small entrant water companies⁶⁹.

The number of customers served by small companies is far smaller than by the larger companies. So we take a proportionate approach to price controls and reporting requirements.

We do not propose making any changes at this stage to the relative charge control in NAVs' licences, at least for residential customers⁷⁰. Each NAV's charges will continue to be capped and would be fixed relative to, and could not exceed, the equivalent charges of the previous incumbent company or companies. We do not require NAVs to submit business plans or supporting business plan data tables. In the coming months we will be giving further consideration to the roles of NAVs and the way we regulate the sector⁷¹.

However, this approach is no longer possible in relation to business customers of NAVs where an incumbent company has exited the business retail market, because the previous incumbent will not be setting end-user charges for such customers. We will consult separately on proposals for business customers and any necessary licence modifications.

For Cholderton and District Water, we have set a price control at each previous price review. As the company is very small, we have always used a much simpler price review process. For the 2015-20 period, it is subject to a simplified revenue control that covers all its activities; we have not set separate price controls for retail and wholesale activities.

Cholderton and District Water is likely to become a private water supplier (see our March 2017 [consultation](#)). Under these plans, we will no longer regulate the company, a new charitable trust will manage the company to safeguard customers' interests. Tariffs will be set by the trustees using neighbouring regulated company

⁶⁸ A new appointment is where a limited company is first appointed by us to provide water and/or wastewater services for a specific geographic area or areas.

⁶⁹ These small companies have the same legal duties and responsibilities as the ten large water and sewerage companies (WaSCs) and the seven largest water only companies (WoCs). We also have the same statutory duties when we carry out relevant functions – see, for example, chapter 1 (overall framework).

⁷⁰ We propose to continue with our existing approach for Albion Eco Limited. This company only has two large business customers, so prices are set by agreement.

⁷¹ See page 20 of [Study of new appointment and licences variations - summary of findings and next steps](#).

charges as a reference. For the case of Cholderton and District Water only, the CCG will work in conjunction with trustees in setting tariffs.

13.3.3 Data capture system

Our PR19 final methodology will improve some of the practical issues associated with a price review – namely:

- how companies will submit their business plan tables and documentation to us;
- how we store their information; and
- how we manage the query process.

We also consider there to be scope to improve the audit and validation of data in the business plan submission process. This became increasingly evident at PR14, when we were managing large volumes of data and large numbers of files received throughout the price review.

Given the increased volume of data needed for PR19, we are integrating a secure data capture system into our database that will:

- make it easier for companies to complete and transfer data submissions;
- improve data validation; and
- make more use of automation, reducing reliance on manual inputs.

The data capture system will replace the current method of submission for spreadsheet tables with an online portal. Companies will be able to complete the Excel spreadsheets at their offices and then upload these into our secure online database.

We plan to release a version of the portal in 2018 to allow submission of companies' annual performance reports for 2017-18. We then plan to release minor updates and improvements after the annual performance report submissions.

13.3.4 Future issues and clarification process

The consultation responses revealed a strong preference for us to operate an open and transparent query/clarification process in relation to the business plan data and financial model. This is because companies may identify further queries when starting to complete the final tables and when using the financial model.

Details of our queries process and plans for an external review of the financial model, are provided in chapter 15 (next steps).

13.4 Assurance and governance arrangements

Good assurance of business plans is vital if stakeholders, including Ofwat, are to have confidence in the information presented in them. We see assurance as having two key aspects.

First, a business plan can only be of high quality where the data and information presented in the plan has been subject to good assurance processes to ensure it is consistent and accurate.

Second, a company's full Board should provide assurance of the business plan. This would include ensuring that the business plan is of high quality in the round, and reflects the views of customers. We expect company Boards to own and be accountable for their business plans. It is for the companies and their Boards to determine (taking account of their categorisation under the company monitoring framework) how best to provide this assurance, including the role of external assurance.

The evidence companies provide in their business plans about how they have assured themselves that data is consistent and accurate, and the process their Boards have followed to challenge management to deliver a high-quality plan, will provide us with confidence in the plans. Our assessment of this evidence will form part of our initial assessment of business plans in relation to confidence and assurance.

13.4.1 Board assurance of the plans

We expect a company's full Board to take collective responsibility for assuring its business plan. We also expect it to put in place, and explain, the processes it feels it needs to be sure it is submitting a high-quality plan that can be delivered.

To provide confidence in its plan, a company's full Board needs to provide us with a statement, in its own words, of why it considers all the elements (including supporting data) add up to a business plan that is high quality and deliverable. The Board should provide evidence of where it has challenged company management and an explanation of the process it has used to arrive at the view that its plan is the

best it can be (including any external assurance, where appropriate), rather than simply asserting confidence in the plan.

This Board assurance statement should cover the specific areas set out below.

Table 13.2 Board assurance

Area	Board assurance requirements
Business planning	<p>How it has challenged and satisfied itself that:</p> <ul style="list-style-type: none"> all the elements add up to a business plan that is high quality and deliverable; the overall strategy for data assurance and governance processes delivers high-quality data; the business plan will enable the company to meet its statutory and licence obligations, now and in the future and take account of the UK and Welsh Government's strategic policy statements; its plan will deliver operational, financial and corporate resilience over the next control period and the long term through its governance and assurance processes, taking account of its track record of performance; and it will enable its customers' trust and confidence through high levels of transparency and engagement with customers on issues such as its corporate and financial structures. <p>How it has provided ownership of the overall strategy and direction of the plan in the long term.</p>
Customer engagement	<p>Assurance that the company's business plan has been informed by:</p> <ul style="list-style-type: none"> customer engagement; and feedback from the company's CCG about the quality of its customer engagement and how this has been incorporated into its plan.
Affordability	<p>Assurance that the company's business plan is affordable for all customers, including in the long term and including appropriate assistance for those struggling, or at risk of struggling, to pay.</p>
Outcomes	<p>Assurance that the business plan will deliver – and that the Board will monitor delivery of – its outcomes and performance commitments.</p> <p>Assurance that the company's proposed outcomes, performance commitments and outcome delivery incentives (ODIs) reflect customer preferences and are stretching.</p> <p>Assurance that the company's proposed approach to reporting on its performance commitments, ODIs and projections of outcomes is robust.</p>
Resilience	<p>Assurance that the company's business plan has been informed by:</p> <ul style="list-style-type: none"> a robust and systematic assessment of the resilience of the company's systems and services; customers' views about managing resilience; and a comprehensive and objective assessment of interventions to manage resilience in customers' long-term interests.
Cost assessment	<p>Assurance that the expenditure forecasts included in the company's business plan are robust and efficient.</p>

Area	Board assurance requirements
	Assurance that large investment proposals are robust and deliverable, that a proper assessment of options has taken place, and that the option proposed is the best one for customers.
Risk and return	Assurance that the Board has identified the risks associated with delivering the plan. Assurance that the risk mitigation and management plans the Board has in place are appropriate.
Financeability	Assurance that the company's business plan is financeable on both the notional and actual capital structure and that the plan protects customer interests in both the short and the long term. The statement should clearly set out the steps taken to provide this assurance.

13.4.2 Resilience

Companies' business plans should deliver long-term 'resilience in the round', that is operational, financial and corporate resilience over the next control period and the long term.

We will seek assurance that the business plan has been informed by a robust and systematic assessment of the resilience of the company's systems and services, customers' views about managing resilience, and a comprehensive and objective assessment of interventions to manage resilience in customers' long-term interests.

Companies need to demonstrate that they are financially resilient. If the basis on which they have made their assessment is not consistent with the basis they used when making the long-term viability assessment in their most recent annual performance report then they should clearly explain their change of approach.

13.4.3 Earning customers' trust

We want a blueprint for a new era of openness and transparency. Transparency increases the accountability of companies, not only to us as the regulator, but also to their customers and society more widely. Companies need a high level of transparency and engagement with their customers to earn their customers' trust and confidence. This extends to issues such as companies' corporate and financial structures so that customers can readily and clearly understand the nature and purpose of these arrangements and how they relate to the companies' long-term resilience. We have therefore decided to introduce a new test in our initial assessment of business plans to require assurance from company Boards that the company's business plan will enable customers' trust and confidence through high

levels of transparency and engagement with customers on issues such as the company's corporate and financial structures.

13.4.4 Meeting statutory and licence obligations

We expect companies to meet their statutory and licence obligations both now and in the future. We need to have confidence that companies have planned effectively to deliver everything they are required to do. Company Boards should provide assurance that their business plans will enable them to comply with their statutory and licence obligations. Companies have obligations as water and sewerage undertakers under the Water Industry Act 1991 and in their licences as undertakers.

The Environment Agency and Natural England's water industry strategic environmental requirements (WISER) document⁷² and Natural Resources Wales's 'PR19 expectations and obligations' paper⁷³ set out certain statutory obligations on water companies operating in England and Wales respectively. These documents describe the environmental, resilience and flood risk obligations that water companies must take into account when developing their business plans.

The Environment Agency, Natural England and Natural Resources Wales have also set out wider expectations for companies, as have the UK and Welsh Governments through their strategic policy statements. We expect companies to take these into account when developing their business plans and outcomes, and to implement them when they are in customers' interests and have customer support.

13.4.5 Track record for assurance

To help us decide how much confidence we can place in the assurance statements submitted with companies' business plans, we consider it appropriate to take account of performance under the company monitoring framework.

We expect companies to provide good assurance at all times. The initial assessment of business plans will focus on the quality of submissions associated with the business plan. Our assessment under the company monitoring framework (CMF) can take account of companies' assurance of any information they submit to us and

⁷² This is available on request from the Environment Agency or Natural England.

⁷³ This is available on request from Natural Resource Wales.

share with stakeholders. Considering both of these aspects together will give us, investors and other stakeholders information about companies' overall approaches to assurance.

A company that provides good assurance of all the information it submits, regardless of whether it relates directly to price review information, is demonstrating that it takes the quality of the information it submits and its governance processes seriously all the time – promoting greater trust and confidence. We will therefore take the 2018 CMF assessment into account as part of the initial assessment of business plans as this will represent the most recent review that was able to take account of how the company has handled any of its information. To aid clarity and avoid confusion about different processes, we will align the publication of the 2018 CMF assessment with the publication of the initial assessment of business plans in January 2019. This will not affect the period that the 2018 CMF assessment will cover but we will update our guidance to reflect the change of timing.

13.4.6 The quality of data submitted

We want to be confident that the data submitted to us is consistent, accurate, assured and in line with our information requirements.

We expect companies to complete a full set of data tables appropriate to them, in line with the guidance and line definitions for each table, supported by suitable commentaries that clearly explain their proposals.

If a company restates previously reported historic data in its business plan, we expect it to clearly highlight and explain this in its commentary. We also expect the company to explain:

- why it needs to be changed and why it only become aware of it now;
- its assurance of this data;
- the steps it has taken to make its customers and stakeholders aware of the changes; and
- the steps it has taken to make sure customers are appropriately recompensed.

There must be consistency between models and business plan tables. We expect companies to provide assurance that all figures entered into the financial model (or supporting feeder models) match the relevant figures entered into their business plan tables. We expect companies to make sure their reporting is consistent between tables.

We also expect submissions to be complete, accurate and final. Additional submissions after 3 September 2018 can affect stakeholders' confidence in company business plans. Companies submitting data later will need to explain clearly why this needs to happen and how it reflects on the assurance of their plans. We are likely to take this into account in our assessment of the quality of the assurance of the data provided in the business plan. Also, depending on the circumstances, it might not be possible to take the additional data into account.

Companies will be responsible for making sure their data is correctly entered into our new data capture system. They should provide specific assurance statements through this system. Alongside their tables, companies will also be able to submit auditor reports or free-form assurance statements.

13.5 Initial assessment of business plans – confidence and assurance

To assess our confidence in the assurance of a company's plan, we are including the following six tests in our initial assessment of business plans.

Initial assessment test on confidence and assurance

1. To what extent has the company's full Board provided comprehensive assurance to demonstrate that all the elements add up to a business plan that is high quality and deliverable, and that it has challenged management to ensure this is the case?
2. To what extent has the company's full Board been able to demonstrate that its governance and assurance processes will deliver operational, financial and corporate resilience over the next control period and the long term?
3. To what extent has the company's full Board provided assurance that the company's business plan will enable customers' trust and confidence through high levels of transparency and engagement with customers, on issues that matter to customers (which extends to their ability to understand both the company's corporate and financial structures and how they relate to its long-term resilience)?
4. To what extent has the company's full Board provided comprehensive assurance to demonstrate that the business plan will deliver – and that the Board will monitor delivery of – its outcomes (which should meet relevant statutory and

licence obligations and take account of the UK and Welsh Governments' strategic policy statements)?

5. To what extent does the company have a good track record of producing high-quality data, taking into account the company's data submission, assurance process and statement of high quality, and our 2018 assessment of the company under the company monitoring framework?

6. How consistent, accurate and assured are the company's PR19 business plan tables, including the allocation of costs between business units, information on corporation tax, and the assurance and commentary provided?

As we have done in our assessments under the company monitoring framework, we will consider the assurance provided in the round, taking into account the individual circumstances of companies and characteristics of the data being assured.

14. The initial assessment of business plans: securing high quality, ambition and innovation

Key themes of PR19

Our approach to the initial assessment of business plans supports the key themes of PR19.

The initial assessment of business plans includes several test areas focused on **customer service**, including engaging customers and delivering outcomes for customers.

The initial assessment of business plans includes a test area specifically focused on addressing **affordability** and vulnerability; and other areas of our assessment, such as securing cost efficiencies, will support the delivery of affordable bills. It also includes a test area specifically focused on securing long-term **resilience**.

The initial assessment of business plans incorporates a focus on **innovation** as a critical enabler of PR19 delivery.

The initial assessment of business plans

We want companies to produce **high-quality, ambitious and innovative** business plans, pushing forward the performance and efficiency of the sector for customers.

For our initial assessment of business plans, we will:

- assess company business plans against **nine key test areas** that reflect our PR19 themes and help ensure companies deliver for customers, the environment and wider society – they reflect the strategic policy statements of the UK and Welsh Governments;
- assess company business plans against **three key characteristics** (quality, ambition, and innovation);
- categorise company business plans into **four categories** (significant scrutiny, slow-track, fast-track, or exceptional) depending on the level of quality, ambition and innovation demonstrated;
- incentivise companies with a range of **financial, procedural and reputational incentives**;
- expect companies to get it right first time and put forward the best business plan for their customers at the point of submission by 3 September 2018; and
- publish the outcome of our assessment in late January 2019.

Companies with exceptional business plans will receive an amount equivalent to a 20 basis points (bp) to 35bp addition to the return on regulated equity (RoRE) over the whole price review period, based on the notional gearing of 60%. This recognises that truly stretching performance benefits all customers. Companies with exceptional business plans will receive an amount equivalent to a 10 bp addition to the RoRE.

Both exceptional and fast-track business plans will benefit from procedural incentives through an early determination with early certainty on specified components of costs and outcomes.

Business plans categorised as significant scrutiny will receive reduced cost sharing rates and potentially capped outcome delivery incentive outperformance payments.

Applicability to England and Wales



Our PR19 final methodology for the initial assessment of business plans **applies to both** companies whose areas are wholly or mainly in England and companies whose areas are wholly or mainly in Wales.

Our approach to the initial assessment of business plans is designed to deliver on our PR19 themes, and reflects the UK Government's and Welsh Government's strategic policy statements. We recognise that there are differences in: the statutory obligations, legal and policy frameworks, including on the extent of markets; the strategic policy statements of the UK Government and Welsh Government; and the social, economic and environmental characteristics across nations. We also recognise that within nations, there are differences between regions. We expect companies to submit plans which clearly evidence and account for differentiation; and we will take relevant differences into consideration when making our assessment of business plans.

Responses to our draft methodology proposals

There was **broad support** for our overall approach to the initial assessment of business plans.

Some respondents **disagreed with the balance of incentives** that we proposed for the initial assessment of business plans. Several argued that the financial incentives for the top two categories (exceptional and fast-track) were too weak. On the other hand, one respondent considered that there should be no upfront financial benefits to the top companies or that these should be contingent on the delivery of results for customers. Some companies also considered that we should include a 'do no harm' procedural incentive as otherwise the benefit of an early draft determination would be limited.

Several companies **requested more details** on our methodology for assessing plans. Some respondents suggested that it would be **challenging to assess companies' ability to innovate**. A number of other comments were provided; we cover the issues raised in [appendix 15](#).

Our consideration of respondents' views

We are retaining the proposed framework for assessing business plans. We are strengthening the incentives for the fast-track and exceptional categories in recognition of the additional effort and risk those companies will have taken in preparing their plans. We have set the bar high, and all customers will benefit from companies putting in place truly stretching plans. Exceptional and fast-track companies will receive an amount equivalent to, respectively, a 20-35 basis points (bp) and 10bp addition to the return on regulated equity (RoRE) over the whole price review period, based on the notional gearing of 60%. As a strengthened procedural benefit for exceptional and fast-track business plans, we will provide early certainty on specific components of the early draft determination related to outcomes and the cost allowance.

14.1 Introduction

This chapter sets out our final methodology for the initial assessment of business plans at PR19. This PR19 final methodology has been determined after fully considering the views expressed by respondents to our [draft methodology proposals](#), published in July of this year.

Companies need to be ambitious and innovative to push the frontier on what they provide for customers, the environment and wider society, and to meet the challenges facing the sector. They must take full ownership of these challenges and produce high quality, ambitious and innovative plans for PR19 to address them. This includes understanding and managing risks to service delivery effectively and efficiently on behalf of customers.

We want companies to develop truly stretching plans that that benefit all customers by pushing all companies to perform better at lower cost. The initial assessment of business plans, as part of the overall incentive package for PR19, helps to incentivise the submission of such plans. It allows companies which submit high quality, ambitious and innovative plans to benefit from this; thereby aligning the interests of companies and investors with those of customers.

It will enable us to focus our challenge and scrutiny of companies' business plans where it is most needed – and where we can deliver the greatest benefits for current and future customers, the environment and wider society.

This chapter is structured as follows:

- objectives and approach (section 14.2);
- test areas (section 14.3);
- characteristics (section 14.4);
- categories (section 14.5); and
- incentives (section 14.6).

We provide details of the proposed timeline for business plan submission and the initial assessment of business plans in chapter 15 (next steps).

[Appendix 13 \(initial assessment of business plans\)](#) sets out in more detail the reasons for our policy decisions. This appendix also sets out the background, including details of our proposals as they appeared in the draft methodology, the responses to our draft methodology proposals, our consideration of those responses and an explanation of any changes to the PR19 final methodology.

Section 13 of [appendix 15](#) details respondents' views on the six questions we posed about the initial assessment of business plans in our draft methodology proposals. We also provide (or reference) our response to the issues raised.

14.2 Objectives and approach

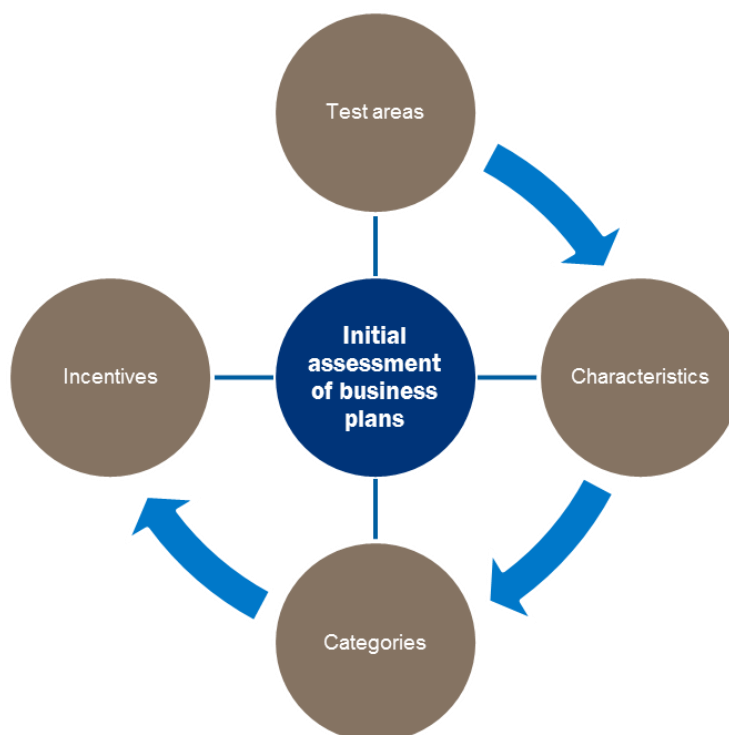
We want companies to produce **high-quality, ambitious and innovative** business plans that are well-evidenced and grounded in excellent customer engagement, are right the first time, push forward the performance of the sector as a whole and stretch the boundaries for delivery and efficiency.

The strongest incentives within the PR19 final methodology are associated with the delivery of business plans; for example through outcomes performance payments and penalties, and through cost sharing rates (discussed in chapters 4 and 9 respectively). The initial assessment of business plans works in conjunction with these delivery incentives, further encouraging companies to really stretch themselves and set ambitious targets for what they can deliver for their customers and the environment.

The initial assessment of business plans will help to achieve this by incentivising:

- all companies to produce well-evidenced plans that reflect their customers' preferences and priorities and are efficient, by offering:
 - procedural, reputational and financial benefits for companies whose plans do not require a level of material intervention to protect the interests of customers; and
 - procedural, reputational and financial disincentives to discourage companies from preparing low quality plans;
- the best companies to push the frontier for all companies, by offering the greatest procedural, reputational and financial benefits to companies with high quality, ambitious and innovative plans, recognising the additional effort and risk these entail.

There are four key elements to our initial assessment of business plans as set out in figure 14.1.

Figure 14.1 Key elements to our initial assessment of business plans

Our approach to the initial assessment of business plans is designed to deliver on our PR19 themes, and reflects the UK Government's and Welsh Government's strategic policy statements. We recognise that there are differences in: the statutory obligations, legal and policy frameworks, including on the extent of markets; the strategic policy statements of the UK Government and Welsh Government; and the social, economic and environmental characteristics across nations. We also recognise that, within nations, there are differences between regions. We expect companies to submit plans which clearly evidence and account for differentiation; and we will take relevant differences into consideration when making our assessment of company business plans. We provide some examples below.

- **Use of markets:** tests on the use of markets will be applied to the extent they are relevant to a company's business plan. We would not, for example, apply tests to a company whose areas are wholly or mainly in Wales in relation to the bilateral water resource market;
- **Retail costs:** in terms of assessing costs, as set out in chapter 9 (securing cost efficiency), we will assess retail costs for water companies whose areas are wholly or mainly in Wales in respect of wastewater business retail customers and water business retail customers using less than 50 megalitres a year. This will not apply to water companies whose areas are wholly or mainly in England which have exited the business retail market;

- **Alignment to different policy objectives:** we can, for example, consider bespoke performance commitments which are designed to meet specific objectives, such as those within the Welsh Government's strategic policy statement related to the sustainable use of natural resources.

14.3 Test areas

The initial assessment will cover all areas of a company's business plan, and we will use the following test areas:

- engaging customers;
- addressing affordability and vulnerability;
- delivering outcomes for customers;
- securing long-term resilience;
- targeted controls, markets and innovation;
- securing cost efficiency;
- aligning risk and return;
- accounting for past delivery; and
- securing confidence and assurance.

Setting out a framework of test areas gives a clear indication of our expectations and priorities for company business plans. This structured approach will also allow us to carry out the initial assessment of business plans effectively and efficiently.

In their response to our [draft methodology proposals](#), several respondents requested clarification on the relative positioning of the test areas in categorising business plans overall. When considering business plans across test areas and across companies, we will apply an 'in the round' approach to our assessment and categorisation decisions. We want companies to take full ownership of their business plans and do not want to drive a one-size-fits-all approach by setting out a relative position of individual test areas. This also allows us to apply our regulatory judgement in an objective, proportionate and consistent way. We set out further detail on this in [appendix 13 \(initial assessment of business plans\)](#).

In appendix 13, we provide further information on each of the test areas. This includes the main test questions and, at a high level, what we are looking for in plans which we consider to be high quality, ambitious and innovative. As we cannot foresee what companies will put forward in their plans, we will take account of the content of company business plans and any wider relevant factors where appropriate. We have not set out more detailed criteria in order to avoid a 'tick-box'

approach by companies and to help ensure that companies retain ownership of their business plans.

[Appendix 15](#) provides full details of stakeholders' views on the proposed test areas.

14.4 Characteristics

We want companies to demonstrate how their business plans meet three overarching characteristics:

- high quality;
- ambition; and
- innovation.

In a **high-quality** plan, the company's proposals will not only be efficient, resilient and affordable, but also include stretching performance commitments that really deliver for customers. We will have a high degree of confidence that the business plan will be delivered. A high-quality business plan will also provide a focused and persuasive vision of the future, with clear evidence appropriately used and with well set out, robust reasoning to support the company's proposals. We expect all companies to be able to produce a high quality and easy to navigate business plan.

We provide below an indication of what we might look for in terms of high quality; further detail is provided in table 2 of [appendix 13](#). This will inform our assessment of company business plans in terms of whether they are high quality. While our intention is to provide helpful and sufficient clarity for companies to work to produce a high quality plan, companies own their business plans and we reserve the right to consider other relevant factors if appropriate.

A high-quality business plan:

- is grounded in excellent customer engagement, with a wide range of evidence. It should include stretching outcomes and performance commitments that reflect what customers want, and their relative priorities, and clear line of sight from these through the plan. It should also include evidence of consideration of customer participation;
- is cost-efficient, including high quality assessment of different options for mitigating the risk to outcome delivery;
- is resilient in the round and over the long term
- is sustainable, while meeting current and future customers' water and wastewater needs;

- sets out the company's approach to identifying, managing and mitigating risks in the best interests of customers;
- is affordable for all current and future customers, with appropriate assistance provided where needed;
- sets out the company's approach to effectively and efficiently identifying and providing support for customers in circumstances which make them vulnerable;
- uses markets, including direct procurement for customers, where appropriate to drive efficiency, improve resilience and benefit customers;
- shows that the company can and will innovate for the benefit of customers and the environment
- is accompanied by a consistent, accurate and assured submission of business plan tables (including the allocation of costs between business units, PR14 reconciliation, assurance of the tables and any commentary on the tables);
- gives a high level of assurance – including assurance from the company's Board that: all the elements add up to a business plan that is high quality and deliverable; it has ownership of the overall strategy and direction of the plan in the long term; it will enable its customers' trust and confidence through high levels of transparency and engagement with customers on issues such as its corporate and financial structures; and the business plan will enable the company to meet its statutory and licence obligations and deliver operational, financial and corporate resilience over the next control period and the long term; and
- provides compelling evidence that the company understands the drivers of its past performance, the lessons learnt from this performance and the additional measures it has put in place to ensure it maintains confidence that it will successfully deliver its 2020-25 business plan.

An **ambitious** business plan pushes forward the efficiency and delivery frontier for the sector, setting a new standard for the future and benefitting all customers as a result. Ambition could mean significantly reducing cost and improving efficiency beyond the frontier for the sector, or significantly improving service for customers beyond the established frontier for the sector at efficient cost. Another example of ambition may be where a company's plan demonstrates a clear understanding of the risks facing service delivery, complemented with an exceptional approach for managing and mitigating those risks in a cost-efficient way.

We will test ambition on a relative basis across companies. A company will need to demonstrate that it is stretching itself beyond the industry norms in areas that are important to customers. It will also need to demonstrate that its plan is achievable in light of past performance.

Innovation is a key theme for PR19. It underpins the other three themes of customer service, affordability and long-term resilience, and we expect innovation to be embedded across company business plans at PR19.

At PR14 we created a framework that supports innovation through the total expenditure (totex) and outcome delivery incentive (ODI) mechanisms, providing companies with a step-change in their freedom to navigate a range of solutions to deliver better services for customers at efficient costs. Water companies have demonstrated pockets of good practice in terms of innovation, as we have seen in catchment management approaches to improving water quality in a practical, affordable and sustainable way. Nonetheless, more could be done by individual companies and by the sector as a whole.

At PR19 we incorporate innovation more explicitly into the regulatory framework, including through the initial assessment of business plans. We elaborate on our wider approach to innovation in our separate publication: '[driving innovation in water](#)'.

Meaningful innovation leads to new benefits for customers, companies and the environment. It contributes to resilience through better management of risks and opportunities. Innovation will be embedded in the culture, the processes and the people of the company. It will not be limited to the use of new technology or new services. It could involve, for example:

- new ways of encouraging customer participation in service design and provision;
- new and more collaborative ways of working with customers, communities, the supply chain and other stakeholders;
- redesign of business processes utilising technological development to deliver better outcomes at lower costs; and
- further development of markets and new catchment management approaches.

High levels of innovation would lead to a step change in the ways in which companies deliver their services. For a plan to be ambitious, it must be innovative – the two must go hand in hand. To expand the boundaries of efficiency and delivery in the sector, companies will need to work in more innovative ways. To be classed as exceptional, an ambitious business plan must therefore show how innovative approaches create opportunities to, for example, make costs more efficient; deliver stretching outcomes performance; or produce benefits in terms of greater resilience and the environment. We also recognise that innovation in the coming control period may also result in benefits in future control periods.

As one of our PR19 themes, innovation is embedded across test areas to help ensure that companies consider innovative solutions to deliver results. In table 2 of [appendix 13](#) we provide some potential features of an innovative and ambitious plan within different test areas.

We will also need to be confident that there is alignment between companies' plans for innovation and their capabilities to deliver on these. So as part of our initial assessment of business plans, we will also assess companies' capacity and readiness to innovate. We consider that this will manifest itself through a company's culture which will need to embed innovation throughout the business. An organisation's culture will affect norms, values and behaviours, and for innovation can be manifested through its systems, processes and people. We expect companies' innovation strategies to be built into various elements of their plans in a similar way to resilience. This will help reinforce the importance of innovation for all companies and make innovation an integral part of their business plans. We can also consider how well companies have developed and delivered innovations in the past, where they demonstrate that their proposals acknowledge and build on this experience (both where innovations have been successful and less successful). We will use the following question for our initial assessment test.

Initial assessment test on innovation ability and readiness

How well does the company's business plan demonstrate that it has the right culture for innovation which enables it, through its systems, processes and people, to deliver results for customers and the environment from innovation?

14.5 Categories

Companies' performance against the above characteristics will determine how the business plans are categorised. At PR19, we will use four categories, which will reflect the quality, ambition and innovation of the plan.

Exceptional status will be awarded to plans that are high quality with significant ambition and innovation for customers and that push the boundaries of the industry and set an example for others.

Our assessment of ambition and innovation will take both absolute and relative aspects into account. We do not think it is appropriate to predetermine what level or kind of ambition or innovation would be sufficient to be assigned to the exceptional category; this would reduce the incentive for companies to stretch themselves and

innovate. We have no fixed limits, but exceptional status will be achievable only by a small number of the most ambitious and innovative companies. We do not consider it necessary to give any companies exceptional status, if none is deemed to have submitted a plan sufficiently ambitious and innovative.

Fast track status will be given to plans that are high quality and where limited, minor or no intervention is required to protect customers' interests, but which are not ambitious or innovative enough to attain exceptional status. The threshold to be placed in the fast track category is high. It is an in the round assessment and we might make limited or minor interventions to the business plan.

Slow track status will be given to plans where a level of material intervention is required to protect the interests of customers. Companies may be required to resubmit parts of their business plans or to provide additional evidence.

Significant scrutiny status will be given to plans that fall well short of the required quality and where extensive material intervention is required to protect the interests of customers. Our assessment will take into account both the number of areas of concern and the extent of the concerns. This may include expecting companies to substantially rework these plans.

A plan under significant scrutiny is one which fails to give us confidence that it will deliver good outcomes for customers. The quality of data, customer engagement and assurance may be so poor that it does not provide sufficient basis for making a draft determination, without significant further work.

For example, a plan with weak evidence and justification for its performance commitments, including weak evidence of customer support, and with performance commitment levels well below stretching levels, would require significant scrutiny. Another example would be a plan which falls outside the cost thresholds for most or all price controls or well outside the cost threshold for at least one control, with no robust explanation and poorly evidenced special cost factor claims.

We expect companies to submit plans of such quality that we do not need to assign any to the significant scrutiny category at the end of our initial assessment of business plans. However, we will use this category if we see a plan that does not meet the quality necessary to achieve a higher category.

We know less about companies' businesses than they do. This asymmetry of information has an impact on our ability to assess their business plans. Therefore our starting assumption will be that all plans require significant scrutiny until shown

otherwise. It is up to companies to demonstrate that they should be in a higher category.

14.6 Incentives

We want companies to produce **high-quality, ambitious and innovative** business plans which push forward the performance of the sector as a whole and allow customers, the companies and their investors to share in the value created.

The financial incentives we are providing for actual delivery of business plans, for example for totex efficiency or outcome delivery, are significantly greater than those available for submitting a high quality plan. The initial assessment of business plans works as a complement to, and in conjunction with, these delivery incentives. It further encourages companies through clear **financial, procedural** and **reputational** incentives to submit really stretching plans, which will in turn enable us to challenge aspects of other companies' plans, benefitting all customers and the environment.

In their responses to our draft methodology proposals, a number of respondents asked us to consider the balance of the incentives for the initial assessment of business plans. Several argued that the financial incentives for the top two categories (exceptional and fast-track) were too weak. On the other hand, one respondent considered that there should be no upfront financial benefits to the top companies or that these should be contingent on the delivery of results for customers. Some companies also considered that we should include a 'do no harm'⁷⁴ procedural incentive as otherwise the benefit of an early draft determination would be limited.

Our PR19 final methodology has been determined after fully considering the views expressed. [Appendix 13 \(initial assessment of business plans\)](#) sets this out in further detail.

Companies whose business plans we categorise as **exceptional** will receive:

⁷⁴ At PR14, we applied a 'do no harm' principle to enhanced companies as a procedural incentive. We offered a range of commitments to ensure enhanced companies would not be any worse off for being categorised as enhanced and receiving an earlier draft determination.

- an amount equivalent to a 20 basis points (bp) to 35bp addition to the return on regulated equity (RoRE) over the whole price review period, based on the notional gearing of 60% – we will decide on the final percentage based on such factors as the level of ambition and innovation to the benefit of customers;
- procedural benefits from receiving an early draft determination in March or April 2019, reflecting the fact that they don't require a level of material intervention to protect customers' interests and helping to accelerate the delivery of company plans; and
- reputational rewards from being – and being seen as – exceptional compared to their peers, and from the communication opportunities this will offer.

Those companies whose plans we categorise as **fast track** will receive:

- an amount equivalent to a 10 basis points (bp) addition to the return on regulated equity (RoRE) over the whole price review period, based on the notional gearing of 60%;
- procedural benefits from receiving an early draft determination in March or April 2019, reflecting the fact that they don't require a level of material intervention to protect customers' interests and helping to accelerate the delivery of company plans; and
- reputational rewards from being – and being seen as – a fast-tracked company.

It will be up to companies to decide whether to take this incentive payment as additional revenue or as an uplift to the regulatory capital value (RCV). In either case, companies will need to decide how to split this reward between the water network plus, water resources and, where relevant, wastewater network plus controls. To avoid distorting competition in the bioresources market, we will not allocate any of this incentive payment to the bioresources RCV or revenue.

The procedural benefit of an early draft determination will be strengthened by the application of an **early certainty principle** to specified components of the draft determination related to outcomes and the cost allowance. Table 14.1 shows which components of the draft determination the early certainty principle will apply to.

Table 14.1 Specified components of the early certainty principle

	Costs	
1	Cost adjustment claims	We will not apply any change to our draft determination decision related to the company's own cost claims.
	Outcomes	
2	Bespoke performance commitment (PC) levels	We will not apply any changes to bespoke performance commitment levels
3	ODI outperformance or underperformance payment rates	We will not apply any changes to ODI outperformance and underperformance payment rates. However, to protect customers, the early certainty principle will not apply if a company's outperformance payment or underperformance penalty rate was the highest or lowest, respectively, of all the companies. This is to protect customers against a company which has proposed outlier ODI rates.
4	Financial ODIs	We will not make any changes to the number of financial ODIs.
5	ODI deadbands, caps and collars ⁷⁵	We will not make any changes to the design of ODIs in terms of deadbands, caps and collars.

We will retain the flexibility to make changes to the specified components of outcomes and costs, in exceptional circumstances, such as where there have been:

- errors (by us or the company), including any misreporting to Ofwat;
- changes to legal obligations; or
- new information about the actions required to meet current legal obligations.

We will retain this flexibility in order to maintain the integrity of the regulatory framework, but we will take a proportionate approach when deciding whether to make any changes if such exceptional circumstances arise.

Other components will remain subject to change between the draft determination and final determination as appropriate, including by reference to reconciliations

⁷⁵ Deadbands are a specified range of performance levels where the ODI payment or penalty is zero. Caps and collars are the limits on payments and penalties for an ODI, respectively. For more details, see appendix 2 (delivering outcomes for customers).

based on 2018-2019 actual data which we will receive between the early draft determination and final determination.

The early certainty principle also does not apply to the weighted average cost of capital (WACC) or to retail margins. This allows us to make sure these are set at the efficient level for all companies in the final determinations.

The early certainty principle will provide **symmetrical certainty**. This means that we will make neither upward nor downward adjustments to those components specified as covered by the early certainty principle (unless in those exceptional circumstances stated above). We consider that the certainty provided by the principle gives companies a real procedural benefit, and that this approach aligns the interests of the companies with those of their customers.

Companies will have the option to opt out of the early certainty principle if they have a preference for adjustments to the specified components to be applied after their draft determinations. Companies would need to indicate – at the time of submitting their business plan – that they want to exercise this opt-out.

This opt-out would cover all specified components. It will not be possible to opt out of some components of early certainty but not others. Because an opt-out would expose companies to all adjustments, upward as well as downward, we consider that this approach aligns the interests of the companies with those of their customers.

These financial, procedural and reputational incentives for exceptional and fast-track plans are intended to recognise and encourage the development of plans that will ultimately benefit all customers in the sector by pushing the boundaries of efficiency and delivery.

Companies whose plans we categorise as **slow track** require a level of intervention and may be required to resubmit parts of their business plans or to provide additional evidence. These companies will receive draft determinations in July 2019 and will therefore not benefit from an earlier draft determination. There are also reputational disincentives associated with this status.

Companies with business plans that fall in the **significant scrutiny** category may need to resubmit business plans to address the material concerns we have identified and be subject to increased ongoing regulatory scrutiny and assurance. They will receive their draft determinations in July 2019 and will not benefit from an earlier draft determination. We may put extra measures in place to protect customers from risks associated with poor business planning. These companies may also be subject to strengthened reporting requirements.

In addition to these procedural disincentives, companies in significant scrutiny will receive reduced cost sharing rates and potentially capped ODI outperformance payments. We will set a cost sharing rate of 75% for underperformance and 25% for outperformance – as outlined in chapter 9 (securing cost efficiency). This means that significant scrutiny companies will keep only 25% of their cost outperformance but bear 75% of cost underperformance. We will also consider capping, including down to zero, the ODI outperformance payments on bespoke performance commitments. This is because for bespoke performance commitments data quality will depend on information provided in the significant scrutiny company's business plan, in which we are likely to have identified significant issues. We will also consider capping the ODI outperformance payments for the common performance commitments for a company categorised as being under significant scrutiny. However, a cap is less likely to be appropriate for these ODIs, given our ability to test the degree of stretch in the performance commitment levels across companies' plans

There are also clear reputational disincentives associated with plans being assessed into the significant scrutiny category. Figure 14.2 summarises the incentives associated with the initial assessment of business plans categories.

Figure 14.2 Summary of incentives for the initial assessment of business plans

Reputational	Procedural incentives	Financial incentives
Exceptional		
Published performance relative to peers and public recognition	Early draft determination (March or April 2019) with early certainty principle applied to specified component of costs and outcomes. Companies can opt out of the early certainty principle.	An amount equivalent to a 20 basis points (bp) to 35bp addition to the return on regulated equity (RoRE) over the whole price review period, based on the notional gearing of 60%. Standard cost sharing rates.
Fast track		
Published performance relative to peers	Early draft determination (March or April 2019) with early certainty principle applied to specified component of costs and outcomes. Companies can opt out of the early certainty principle.	An amount equivalent to a 10 basis points (bps) addition to the return on regulated equity (RoRE) over the whole price review period, based on the notional gearing of 60%. Standard cost sharing rates.
Slow track		
Published performance relative to peers	Draft determination in July 2019. Business plans will require a level of material intervention to protect the interests of customers. These companies may be required to resubmit some of their business plans or to provide additional evidence.	Standard cost sharing rates.
Significant scrutiny		
Published performance relative to peers	Draft determination in July 2019. Business plans will require extensive material intervention to protect the interests of customers. These companies may need to substantially rework their plans. Companies whose plans fall into this category will require increased ongoing regulatory scrutiny and assurance. We may put extra measures in place to protect customers from risks associated with poor business planning. These companies may also be subject to strengthened reporting requirements.	Reduced cost sharing rates. Companies will share only 25% of cost outperformance and bear 75% of cost underperformance. Potential cap on ODI outperformance payments.

15. Next steps

15.1 Introduction

In this chapter, we outline the next steps in the PR19 process. The remainder of this chapter is structured as follows:

- future engagement with stakeholders (section 15.2);
- PR19 true up and incentive models (section 15.3);
- timeline for the submission and assessment of business plans (section 15.4); and
- key PR19 milestones (section 15.5).

15.2 Future engagement with stakeholders

In developing our PR19 final methodology, we have valued the extensive input and involvement from water companies and other stakeholders. Following publication of the PR19 final methodology, and leading up to the price review itself, the way in which we engage with stakeholders will need to change. This is because we need to ensure that all stakeholders have access to the same information, as companies finalise their business plans for submission in September 2018.

We will publish more details on our engagement approach for PR19 early in 2018. We intend to build on the approach we adopted at the last price review, where the transparency, openness and consistency it promoted was welcomed by water companies and other stakeholders.

We will run a queries process for specific questions about the methodology. Stakeholders should direct queries for clarification, corrections or further explanation in relation to our methodology to PR19@ofwat.gsi.gov.uk. If a query is raised that we think is relevant to other stakeholders then we will publish the query and our response on our website.

We do not want to make any further changes to the definitions and guidance beyond April 2018. If companies have any final queries, in particular related to any changes made to the updated financial model or data tables, these should be provided by the end of March 2018. There are also specific areas of policy that require further targeted engagement with stakeholders in 2018. For example, on customer engagement we intend to meet all 17 water companies between January and March 2018 to get a better understanding of their approaches to customer engagement for

PR19. We have invited the chairs of the customer challenge groups (CCGs) to these meetings.

Following publication of our draft methodology proposals in July 2017, we provided CCGs with a draft 'aide memoire' to give further clarity on their role in relation to our proposals. We will update the draft aide memoire to reflect the decisions set out in our PR19 final methodology and publish it in early 2018.

In relation to outcomes, we propose the following engagement in early 2018:

- hold a workshop on the abstraction incentive mechanism;
- hold working groups to develop the pilots for the customer measure of experience (C-MeX) and developer services measure of experience (D-MeX);
- meet with water companies collectively to discuss reconciling leakage performance commitments; and
- work with companies and other stakeholders to finalise consistent definitions for those of the 14 common performance commitments where the definition is not yet complete, including through a joint Ofwat-Water UK project on seven of them.

15.3 PR19 true up and incentive models

We intend to provide further details on the calculations of true up adjustments and incentive mechanisms for PR19. The following models are planned for publication in early 2018. We may publish further models in due course.

Figure 15.1 PR19 True up and incentive models to be published

Ref	Model description
1	Bioresources forecasting incentive
2	Bioresources modified revenue calculator
3	Bioresources in-period revenue correction
4	Revenue forecasting incentive (Network plus and water resources)
5	PR19 Water trading incentive
6	Developer services incentive

15.4 Timeline for the submission and assessment of business plans

Companies will be required to submit business plans by 3 September 2018. We want companies to get it right first time and put forward the best plan for their customers at the point of submission, thereby also increasing the efficiency of the price review process.

After we have received the business plans, we will carry out an initial review and submit clarification queries to companies. After this short period, we will limit the interaction between Ofwat and water companies about business plans until we have reached our decision about the initial assessment of business plans. This will allow us to meet the tight timelines of the process.

Other than on points of clarification, the business plans submitted will be considered to be the final version for the purposes of the initial assessment of plans and the associated categorisation only. Plans may require revisions or rework after this in order for us to set our draft determination, as described in section 14.5, for slow-track and significant scrutiny categories in particular.

We invite companies to present their business plans after submitting them. These presentations will offer an opportunity for the company to set out its business plan. We would expect at least one company Non-Executive Director to be present as well. Ofwat, including Ofwat Board members, would be represented at a senior level in every meeting.

In early 2018, we will publish a pro forma for companies to complete, which draws together high level information and key metrics from the business plan and which explains the drivers behind the business plan, the key benefits for customers and the impact on customer bills. This information will also be made available to all Ofwat Board members ahead of the company presentations.

Companies are also welcome to submit a single video (no more than 5 minutes long) when they submit their business plans, which could be used as part of the company's presentation (although the video should not substitute the presentation). Any slides presented on the day, and any videos submitted, will be made available to all Ofwat Board members. We will also publish these after all company presentations have been held.

We expect any presentations to take place shortly after the submission of business plans. The sessions would be limited to one hour: a presentation of no more than 15

minutes followed by up to 45 minutes for Ofwat to ask questions. We will write to companies in 2018 to finalise these details.

Company presentations and any videos submitted will not form part of the initial assessment of business plans process.

In late January 2019 we intend to announce the outcome of our assessment, including the category to which we have assigned each business plan.

Companies who submit high quality business plans (and are assessed as exceptional or fast-track) will receive the procedural benefit of an early draft determination in March/April 2019. We will announce, in January 2019, whether these companies' draft determinations will be published in March or in April 2019; this decision will depend on the number of exceptional and fast-track business plans.

Companies whose business plans are assessed as slow-track or significant scrutiny will receive their draft determinations in July 2019. In chapter 14 (the initial assessment of business plans: securing high quality, ambition and innovation), we outline the process we will use to assess companies' business plans.

15.5 Key PR19 milestones

In figure 15.2, below, we summarise the key milestones in the PR19 process over the two year period from now until the publication of our final determinations in December 2019.

Figure 15.2 PR19 milestones⁷⁶

2017	
13 December	Ofwat publishes PR19 final methodology.
2018	
January	Ofwat publishes feedback on company bioresources RCV allocation proposals.
31 January	Companies propose their own allocation of historical RCV for water resources.
January / February	Companies wholly or mainly in England publish their water resources information alongside their draft WRMP.
March	Ofwat releases pilot version of the data capture system. Ofwat publishes report on the external review of the financial model and a revised model (incorporating changes recommended by the review). Companies wholly or mainly in Wales publish their water resources information alongside their draft WRMP.
30 March	Final date for issues and clarifications on the updated business plan tables and financial model
April	Ofwat publishes feedback on company water resources RCV allocation proposals.
3 May	Companies submit: • definitions of their performance commitments; and • information on their expected cost adjustment claims. Publish further revised business plan tables and financial model (if required).
May	Ofwat releases updated version of the data capture system for use with the business plan tables.
by 15 July	Companies submit: • Annual performance report; • their populated PR14 reconciliation models; and • their bioresources market activity information (and publish their 2017-18 bioresources market information on their web-sites).
3 September	Companies submit business plans to Ofwat.
September / October	Companies present their business plans to Ofwat Executive / Board. We expect any presentations to take place between 24 September 2018 and 5 October 2018.
2019	
late January	Ofwat publishes: • initial assessment of business plans; and • 2018 company monitoring framework assessment.
March/April	Ofwat publishes early draft determinations (exceptional and fast track plans).
April	Companies submit revisions to business plans (significant scrutiny and slow track).
July	Ofwat publishes draft determinations (slow track and significant scrutiny).
December	Ofwat publishes final determinations.

⁷⁶ The in-period ODI timetable for Anglian Water, Severn Trent Water and South West Water in 2018 is: 15 September 2018 – companies submit in-period ODI claims; November 2018 – Ofwat consults on their in-period ODI draft determinations; and 14 December 2018 – Ofwat issues their in-period ODI final determinations.

We have commissioned an external review of the financial model. This will take place after publication of the version issued with our PR19 final methodology. In March 2018, we plan to share an updated financial model along with the recommendations from this external review.

We note that, as we outline in chapter 12 (accounting for past delivery), companies may request a two week extension to the deadline for the submission of PR14 reconciliations if they are unable to submit these by 15 July 2018.

There are more details about early company submissions in 2018 in section 13.3.1 of chapter 13 (securing confidence and assurance).

List of acronyms

Acronym	Text
ACTS	average cost to serve
AIM	abstraction incentive mechanism
APRs	annual performance reports
CAP	competitively appointed provider
capex	capital expenditure
CAPM	capital asset pricing model
CBA	cost benefit analysis
CCGs	customer challenge groups
CCWater	the Consumer Council for Water
CMA	Competition and Markets Authority
C-MeX	the customer measure of experience
CMF	company monitoring framework
CPI	consumer price index
CPIH	consumer prices index including housing costs
CSO	combined sewer overflow
D-MeX	the developer services measure of experience
DPC	direct procurement for customers
DWI	Drinking Water Inspectorate
EA	Environment Agency
EPA	Environmental Performance Assessment
FAST	The FAST(Flexible, Appropriate, Structured & Transparent) standard in financial modelling
LTVS	long-term financial viability statements
MOSL	market operator services limited
NAO	National Audit Office
NAVs	new appointments and variations
NEP	national environment programme
NPS	net promoter score
NPV	net present value
NRW	National Resources Wales
ODI	outcome delivery incentive
ONS	Office for National Statistics

Acronym	Text
opex	operational expenditure
PAYG	pay as you go
PC	Performance commitment
PoMs	programme of measures
PR09	the 2009 price review
PR14	the 2014 price review
PR16	the 2016 price review
PR19	the 2019 price review
PR24	the 2024 price review
RAG	regulatory accounting guideline
RBMPs	river basin management plans
RCV	regulatory capital value
RoRE	the return on regulated equity
RPI	retail price index
SDB	supply-demand balance
SELL	sustainable economic level of leakage
SIM	service incentive mechanism
SIPR	specified infrastructure projects regulations
SLOs	self-lay organisations
SMC	strategic management consultants
STW	sewage treatment works
SuDs	sustainable urban drainage
TDS	tonnes dry solids
TMR	total market return
totex	total expenditure
TTT	Thames Tideway Tunnel
WTW	wastewater treatment works
UKCSI	UK customer satisfaction index
UKSA	UK Statistics Authority
WACC	weighted average cost of capital
WaSCs	water and sewerage companies
WFD	Water Framework Directive
WINEP	water industry national environment programme
WoCs	water only companies

Acronym	Text
WRMPs	water resources management plans
WRZ	water resource zone
WTP	willingness to pay
WWRAG	Water and Wastewater Resilience Action Group

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.

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