PR19

Trust in water

Delivering Water 2020: Consulting on our methodology for the 2019 price review

July 2017

www.ofwat.gov.uk

Ofwat

About this document

This document consults on 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 the tests that we will use to 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.

The PR19 methodology is based on the policy set out in our Water 2020 regulatory framework decision document[1], which covers issues including:

- challenges facing the sector now and longer term; and
- how we see markets and economic regulation evolving to enable and encourage companies to address these challenges.

[1] Water 2020: Our regulatory approach for water and wastewater companies in England and Wales'

Contents

Responding to this consultation

We welcome your responses to this consultation. Please email them to water2020@ofwat.gsi.gov.uk or post them to:

PR19 draft methodology
Water 2020
Ofwat
Centre City Tower
7 Hill Street
Birmingham B5 4UA

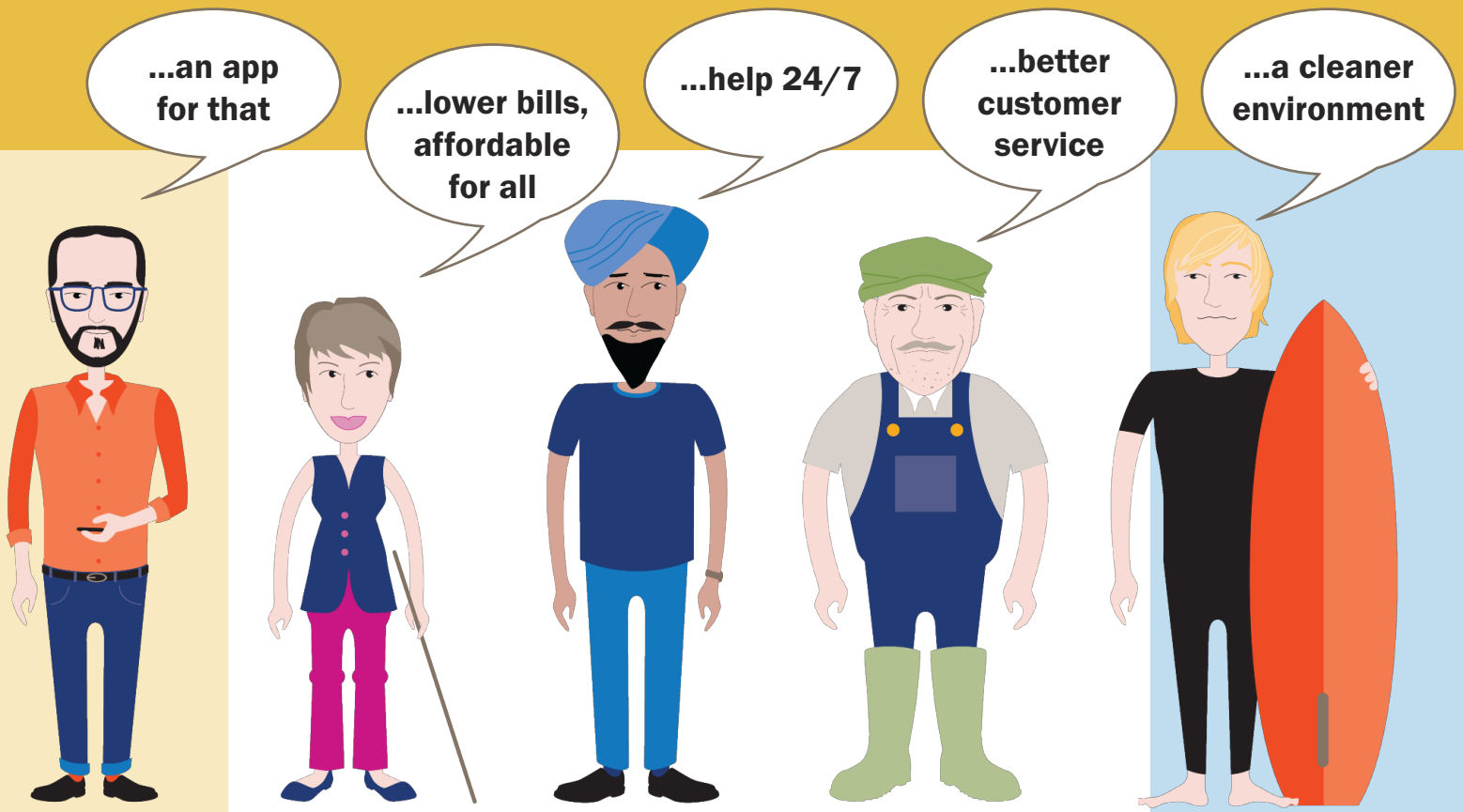
The closing date for the consultation is **30 August 2017**. We will publish responses to this consultation on our website at www.ofwat.gov.uk, unless you indicate that you would like your response to remain unpublished.

Information provided in response to this consultation, including personal information, may be published or disclosed in accordance with access to information legislation – primarily the Freedom of Information Act 2000 (FoIA), the Data Protection Act 1998 and the Environmental Information Regulations 2004.

If you would like the information that you have provided to be treated as confidential, please be aware that, under the FoIA, there is a statutory 'Code of Practice' with which public authorities must comply and which deals, among other things, with obligations of confidence. In view of this, it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that we can maintain confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on Ofwat.

At a minimum, we would expect to publish the name of all organisations that provide a written response, even where there are legitimate reasons that the contents of those written responses remain confidential.

I want...



Customers in England and Wales want high quality, sustainable and resilient water and wastewater services, at a price they can afford. Trust in water means providing these services today, together with the confidence that future bills will be affordable and resilient and that the environment will be protected.

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

Our role is to:

- set the framework and methodology;
- check and challenge the plans; and
- set out our decisions on the five-year price, service and incentive package for each company.

We are now consulting on our methodology for our next price review (PR19) and will make our final decisions in 2019.

The role of PR19

Ofwat's price review is an important tool for delivering trust in water. PR19 provides the framework for a **resilient long-term future for water,** providing **more of what matters to customers** at a **price they can afford and are willing to pay**.

We plan to deliver PR19 in a way that is:

- customer focused;
- long-term; and
- incentivises companies to innovate and be ambitious.

We will make greater use of markets where appropriate in PR19, together with proportionate and targeted regulation to ensure that companies deliver the things that matter most to their customers.

More benefits for customers in PR19

PR19 is focusing on four key themes to benefit customers:

The best customer service encourages customers to be active participants in water and wastewater services

Great customer service

- Water customers should receive the same high standards of service they are used to from other sectors.
- Customers' actions can have a direct impact on how water is used and managed. The best customer service encourages customers to be active participants in water and wastewater services.
- PR19 means more dialogue with customers, encouraging innovation and greater understanding of what customers want and need.
- We expect companies to really stretch and challenge themselves to deliver more for their customers.
- We will benchmark water companies' performance against the best in other sectors.

Resilience

- Resilience in PR19 means long-term financial, corporate and operational resilience.
- Water companies need to demonstrate resilience in all these areas.
- We will encourage companies to focus on the long term.
- Company Boards will need to provide assurance on their plans and services as well as compliance with statutory obligations.
- We will challenge companies to demonstrate they understand the risks to their resilience; to cost-effectively address these risks; and have customers' support for their proposals.
- To hold companies to account, we will require companies to have common outcome performance commitments on asset health, resilience and the outcomes that matter to customers.

Affordable bills

- PR19 means companies delivering bills that are affordable for all, now and in the future.
- We expect companies to find better ways to identify and support customers in circumstances that make them vulnerable and those who are struggling to pay.
- We expect companies to provide value for money bills and challenge themselves to push the efficiency frontier to provide scope for price reductions if this is what customers want.
- We want companies to do more to reduce bad debt, reducing the burden of those who won't pay on those who do.

Innovation

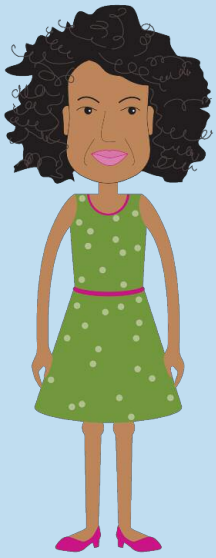
- Innovation can mean new technology and better services and benefits for customers and the environment.
- Innovation also can mean working smarter and delivering the services that customers want in new and better ways.
- We will enable and drive innovation in the sector through payment by results – rewarding performance that sets new standards for the sector.
- Where appropriate we will promote markets to encourage innovation through water trading, the bioresources market and greater third party involvement in large projects through direct procurement.

Delivering more in PR19

In PR19 water companies must deliver more of what matters for customers through effective engagement, lower costs and better performance.

- PR19 builds on our approach in PR14 and our Water 2020 framework. The changes we propose now will promote the right outcomes for customers and the environment and deliver a future in line with our vision for the sector.
- We expect companies to own the relationship with customers, and actively involve those customers in the development of their business.
- Through our outcomes and totex framework, we focus companies on what matters to customers and provide companies with the flexibility to innovate, be resilient and efficient.
- We expect companies to step up efficiency in PR19 and will challenge companies that fail to do so.
- We will pass on the benefit to customers from lower financing costs in setting the cost of capital, while ensuring that efficient companies will be remunerated appropriately so they can finance their programmes.
- Ambitious and innovative companies with high quality business plans that set new standards for the sector can expect higher financial returns as well as a fast tracked process and reputational benefits from being, and being seen as, the best.
- We expect all companies to deliver high quality business plans – we will intervene to protect customers where companies do not meet the high bar we expect.

Find out more @ofwat #pr19 #moreofwhatmatters



Water companies must deliver more of what matters for customers through effective engagement, lower costs and better performance

1 Overall framework

1.1 Purpose of the consultation documents

Appointed water and wastewater companies[2] in England and Wales are monopoly providers of water and wastewater services[3]. We therefore regulate the price and service package that these companies offer to ensure that customers are protected. Where we refer to companies in this consultation and associated documents, we mean the appointed water and wastewater companies and, in particular, the 17 largest companies for whom we are setting full price controls.[4]

The current price control period for appointed water companies in England and Wales ends on 31 March 2020. This document consults on our methodology for the next price review, PR19, which we will use to set price controls for the period beyond 2020.

We have also published the following separate documents. Together with this document, they form a comprehensive description of our PR19 draft methodology.

- An executive summary of the PR19 draft methodology.
- How the PR19 draft methodology delivers the UK Government and Welsh Government priorities.
- The appendices to our PR19 draft methodology, which describe how we have arrived at our proposals and further details of the proposals.
- The PR19 draft business plan data requirements 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 draft financial model and rulebook[5], which we intend to use to set price controls and test company financeability.

[2] By water and wastewater companies we mean companies holding appointments as water and/or sewerage undertakers under the Water Industry Act 1991.
[3] Following business retail market opening some services are subject to competition
[4] We are not referring to the water supply and/or sewerage licensees (retailers) operating in the business retail market.
[5] Model version PR19 05z has been published alongside this consultation

1.2 What our PR19 methodology needs to deliver

The 2014 price review (PR14) introduced a new regulatory framework focused on:

- companies owning the relationship with their customers;
- a totex and outcomes approach to focus on companies on what mattered most to their customers; and
- targeted regulation to protect customers where it matters most.

1.2.1 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 to address future challenges. These include the following.

- **Environmental challenges** – particularly water scarcity and environmental quality standards. Water resources, particularly in drier areas, are likely to become increasingly stretched as the population increases. This will be compounded by climate change and more variable weather, with more intense and less regular patterns of rain, which also heightens challenges for effective drainage.
- **Customer expectations** of the service and information they receive are growing, driven by ever greater improvements in competitive sectors.
- **Resilient systems and services** – to meet the environmental challenges and growing customer expectations, the sector will need to do more to anticipate trends and variability and if required cope with, and recover from, disruption, to maintain services for customers and protect the natural environment now and in the future.
- **Affordability of customer bills for all** and support for those in vulnerable circumstances. Despite real terms price reductions from PR14, affordability remains an issue for many customers. Our report on affordability and debt shows that for English companies[6], 23% of households spend more than 3%, while 11% of households spend more than 5% of their income on water. For Welsh companies[7], 32% of households spend more than 3% of their income on water,

[6] Residential customers of companies wholly or mainly in England
[7] Residential customers of companies wholly or mainly in Wales

while 15% spend in excess of 5%. There is also more that companies can do to identify and support vulnerable customers.

1.2.2 More of what matters in PR19

To address these challenges, in PR19 companies need to show ambition to deliver our four key themes.

- **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 an important for customers. There is now an increased focus on resilience following our new resilience duty in the Water Act 2014 and the emphasis on resilience in the UK Government draft strategic priorities and Welsh Government policies and draft objectives.

  Resilience in the round is about considering all aspects of resilience, that is financial resilience, resilience of corporate structures and operational and systems 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.

  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 communications and quick recovery. It also means long-term resilience to environmental pressures, demographic change, shifts in customer behaviour and the impacts of climate change.

- **Affordable bills** that 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 vulnerable customers and those struggling to pay. To deliver this, companies will need to deliver a step change in efficiency to give customers better services and bill reductions.

- **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, in water resources, bioresources, through direct procurement and more widely across the value chain;
  - Developing and implementing new ways of working including changing culture and focus of companies and the way work with their supply chain and wider stakeholders; and
  - building on best practice from the water sector and other sectors.

1.3 Our strategy and the legal framework for our PR19 draft methodology

Our PR19 draft methodology furthers our vision for trust and confidence in water and wastewater services. It reflects our statutory duties and the UK Government draft strategic priorities and Welsh Government policies and draft objectives and is line with regulatory best practice.

Our statutory duties[8] 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

[8] 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.

- 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 strategic policy statements[9] of the UK and Welsh Governments. The UK Government has developed a draft strategic policy statement[10]. Table 1.1 summarises the key priorities and objectives set out in the UK Government draft strategic policy statement. The table also sets out Welsh Government policies and draft objectives, based on those in the Water strategy for Wales. We have referred to these as the UK Government draft strategic priorities and Welsh Government policies and draft objectives throughout the rest of the document. You can find more detail on how the PR19 methodology is delivering these in Delivering UK Government priorities for the English water sector through our 2019 price review draft methodology and Delivering Welsh Government priorities for the Welsh water sector through our 2019 price review draft methodology

Table 1.1 UK Government draft strategic priorities and Welsh Government policies and draft objectives

UK Government	Welsh Government
Securing long-term resilience Protecting customers Making markets work	Water for nature, people and business and natural resource management Improving the way we plan and manage our water services Delivering excellent services to customers Protecting and improving drinking water quality 21st century sewerage and drainage systems Regulating for a resilient and innovative sector.

[9] By 'strategic policy statement' we mean 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.
[10] We focus on the draft strategic policy statements in this document because we expect both the UK and Welsh Governments to issue them in final form before we finalise our PR19 methodology or set new price controls. Until they do so, we must act in accordance with the previous statutory guidance to us from the UK or Welsh Government on social and environmental matters.

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 draft 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. These principles include company ownership of the customer relationship, which continues to be at the heart of our approach to PR19.

1.4 The regulatory framework set in Water2020

Over the past two years we have developed the regulatory framework for water and wastewater companies in England and Wales. This culminated in the publication of 'Water 2020: Our regulatory approach for water and wastewater companies in England and Wales'.

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.

Reflecting widespread support for the Water 2020 regulatory framework, licence changes were supported by all 17 water companies for whom we will set full price controls, successfully laying the foundation for PR19.

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 to understand 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 – for customers' bills and indexation of the regulatory capital value (RCV);
- promotes markets in water resources and bioresources (recognising the value of sludge 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 networks plus, and retail activities;
- an information platform so that data is made available on bioresources facilities to assist trading;
- 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; and
- a framework for monopoly companies to assess bids to provide new water resources;
- sets out a new access pricing framework to facilitate entry by companies that can provide new water resources in England; and
- encourages the greater use of markets in the financing, design and delivery of new water assets by third parties rather than incumbent water companies.

1.5 Our overall approach to PR19

Our PR19 draft 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 that we will use to assess company business plans (our initial assessment of 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.

1.6 Initial assessment of business plans

Our initial assessment of business plans will allow us to test the quality of the plan, the level of ambition and the extent to which it requires intervention from us to protect customers. The initial assessment builds on and goes beyond the risk based review approach used in PR14. In PR19, we want companies to show ambition and really stretch themselves to deliver a step change to give customers resilient services and better value for money.

We expect company Boards to own and be accountable for their business plans. Our **business plan expectations** include high-quality information that is robust, consistent, accurate and assured. A company's position on the company monitoring framework will be a factor in our assurance on company business plans.

We want **companies to produce high-quality, ambitious and innovative** business plans, pushing forward the performance of the sector as a whole. To facilitate this, we propose placing companies' business plans into four categories to reflect the quality, ambition and innovation of the plan.

1.6.1 How we will categorise business plans

Exceptional status will be awarded to plans that are high-quality with significant ambition and innovation for customers.

Fast track status will be given to plans that are high-quality and do not require material intervention to protect customer interests, but which are not ambitious and innovative enough to attain exceptional status.

Slow track status will be given to plans where material interventions are required in some areas to protect the interests of customers.

Significant scrutiny status will be given to plans which fall well short of the required quality and where major interventions are required to protect the interest of customers.

Box 1.2 Ambition and innovation in PR19 business plans

An ambitious business plan pushes forward the efficiency and/or delivery frontier for the sector, including resilience, setting a new standard for the future.

This step change in services while improving efficiency is likely to be made possible by innovation and efficient management of risk in the interest of customers.

Both innovation and ambition will, in part, depend on:

- understanding customers' needs much better, for example, by moving beyond customer engagement into customer participation; and
- companies changing how they operate to make better use of resources and networks – and ultimately deliver better services to customers.

Companies whose business plans we categorise as exceptional will receive:

- financial rewards;
- procedural rewards from receiving an early draft determination in March/April 2019; and
- reputational rewards from being – and being seen as – seen as exceptional compared to their peers.

We will not use this category if no plans are sufficiently high-quality, ambitious and innovative.

Those companies whose plans we categorise as fast-track will be recognised by Ofwat and will receive early draft determinations in March/April 2019

Companies whose plans we categorise as slow-track may be required to provide additional evidence or resubmit some of their business plan. These plans will receive draft determinations in July 2019.

Companies whose plans require significant scrutiny may be required to substantially rework these business plans to address the material concerns we have identified. These plans will receive reputational and procedural (dis)incentives, reduced cost sharing, and potentially capped outcome delivery incentive (ODI) rewards. 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.

1.6.2 Our initial assessment

The initial assessment will cover all areas of a company's business plan, and will focus on our PR19 themes and core regulatory building blocks:

- 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.

Box 1.3 What is a high-quality business plan?

A high-quality plan will mean that a company's proposals are efficient, resilient, affordable and include stretching performance commitments that really deliver for customers. It also means that the company provides 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 for the future with clear evidence appropriately used and with well set out and robust reasoning to support the company's proposals.

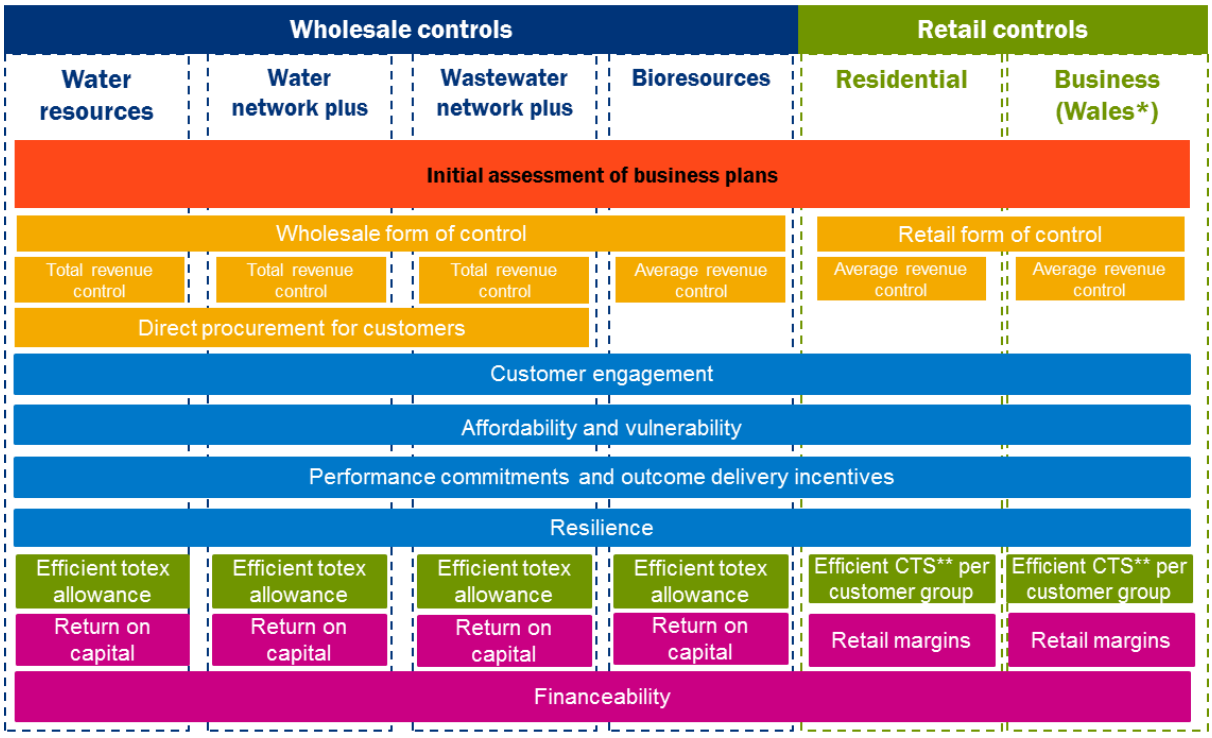
The initial assessment of business plans reflects the UK Government draft strategic priorities and Welsh Government policies and draft objectives. To increase the power of across sector comparisons, we propose to use the same categories and same test areas for companies whose areas are wholly or mainly in England or in Wales. However, where appropriate, we will reflect differences between England and Wales government priorities in the assessments against these tests.

Our proposals for the initial assessment of business plans are detailed in Chapter 14 and the associated appendix, published alongside this document (appendix 14).

1.7 Key proposals in our PR19 draft methodology

Our PR19 draft methodology is made up of a number of different strands, covering each of the key regulatory building blocks and themes of PR19.

Figure 1.1 Structure of our PR19 draft methodology



* We will continue to consider setting price controls for business retail activities of incumbent companies in England and Wales that are subject to competition
** Cost-to-serve

Figure 1.2 High-level view of our PR19 methodology key proposals

		Chapter #
Initial assessment of business plans: test areas	Initial assessment of business plans: key test areas, characteristics, categories and incentives	14
Targeted controls, markets and innovation	Four separate wholesale revenue controls Encouraging use of markets with clarity on post 2020 investments where markets apply 3 year retail controls	6, 7, 8
	Direct procurement for customers: focus through principles; tendering models	
Engaging customers	Enhanced customer engagement; customer participation; engaging customers on long-term issues including resilience	2
Addressing affordability and vulnerability	Affordability and vulnerability: affordability key areas, principles and sources of information, vulnerability tests	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
Securing cost efficiency	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	Sharper incentives; cost of debt indexation; tax pass-through mechanism; increased focus on assessment of risk CPIH as a legitimate measure of inflation	10, 11
	Financeability	
Accounting for past performance	2015-2020: reconciliation; confidence in business plans	12
Securing confidence and assurance	Business plan expectations: data and assurance	13

Our key proposals include:

Companies actively engaging with customers and stakeholders to form an in-depth understanding of customers' requirements in terms of services, outcomes and investment and the price that customers are willing to pay.

Affordable, value for money bills, both now and in the future. To deliver this companies will need good customer engagement on overall affordability both now and in the long term, and to develop effective measures to identify and help vulnerable customers and those who struggle to pay their bills. We expect all companies to include a clear strategy for supporting customers in vulnerable circumstances as part of their plans.

Innovation based on an understanding of customers. Developing new or improved processes and services means understanding what customers value most. Thinking about products and services from the customer's perspective could in itself prompt innovation.

Stretching outcomes that really matter to customers. Based on good customer engagement companies need to deliver more of what matters – such as reliable supplies and a sustainable environment. We expect companies' outcome performance commitments to be more stretching and powerful than before so that they deliver for customers and incentivise better customer service. To assist with this we are setting 14 common performance commitments on what really matters to customers such the quality and reliability of the water supply and wastewater service; customer service; the environment; and resilience and asset health.

Companies should go further than in PR14, involving customers in creating a vision of the future which they can play a part in.

Long-term resilience in the round includes corporate, operational and financial resilience and reflects our resilience principles. We expect company business plans to demonstrate that they:

- understand risks;
- have effectively considered how best to mitigate risks, including cost effectiveness; and
- have customers' support for their proposals.

Box 1.4 Ofwat's resilience planning principles

Considering resilience in the round for the long term

A naturally resilient water sector

Customer engagement

Broad consideration of intervention options

Delivering best value solutions for customers

Outcomes and customer-focused approach

Board assurance and sign-off

The form of wholesale and retail controls can incentivise efficiency, demand management and revenue recovery. It can facilitate the development markets. As part of our Water 2020 regulatory framework we decided to set separate price controls for water resource and bioresource markets, as well as water network plus (water treatment and raw and treated water distribution), wastewater network plus (wastewater collection and treatment), residential retail and, where appropriate, business retail. We will allocate the RCV across the wholesale controls. Water resources and network plus controls will continue to be based on total revenues, i.e. we limit the total revenues that can be collected by the company. Bioresources and retail controls will be based on average revenues to reflect the greater variation of costs with volumes.

Direct procurement for customers involves a water company competitively tendering the delivery, financing and potentially the operation of large scale projects. This can reduce costs and customers' bills by increasing competition for areas that would have been previously delivered by water companies, such as design, build, financing and operation. We expect companies to assess the suitability of direct procurement as part of their business plans.

Cost efficiency will be critical to the overall level and affordability of bills. We expect companies to be challenging themselves and identifying efficiency improvements as part of the development of their business plans. We will intervene to make sure costs are efficient by setting efficient cost baselines, adjusting these both upwards and downwards for special cost factors and expected improvements in efficiency in the period to 2025.

Companies should have an appropriate package of **risk and return**. The best outcomes are achieved where we align the interests of companies and investors with those of customers, so companies are incentivised to deliver the outcomes that matter to customers. We will set the allowed return based on the prevailing market evidence which points to a lower cost of capital at PR19. We set out early information on our approach to setting cost of equity in this consultation. We will publish an early view of the PR19 cost of capital alongside our final methodology in December. We will index new debt costs. We propose to move to using CPIH to index customer bills and transition towards CPIH indexation for the RCV.

Companies will need to be able to **finance their activities** to allow them to deliver services to customers now and in the future. Efficient companies will be able to demonstrate, and provide assurance about, the financeability of their business plans. Companies should not expect customers to bear the costs from a company's choice of financial structure or inefficient financing strategy. Companies have a range of options to address any financeability constraints relating to notional company

structure. If necessary, we will intervene to ensure that customer interests are protected and the balance between current and future customers is not unduly distorted.

Companies' **2015-20 performance** will directly affect customers during the period, through the outcomes and performance that companies deliver. In PR14, we set financial incentives for companies, such as outcome delivery incentives, to better align their interests with those of customers. We will reconcile many of these incentives at PR19. We will also take into account past performance when assessing business plans. Companies will need to demonstrate how they have taken past performance into account in their business plans, including how they responded to customers in any incidents, interruptions to service, or failures to meet performance commitments in the current period.

1.8 Next steps

The next steps are set out below. To support this we have a dedicated PR19 methodology stakeholder engagement programme including:

- a live-streamed briefing for investors at the London Stock Exchange on 12 July; and
- working-level webinars for water companies on specific topics within the PR19 draft methodology.

More broadly, and throughout the price review, we will continue our communication and engagement programme with water companies and other stakeholders through campaigns, announcements, events and meetings.

Figure 1.3 PR19 timeline

2017	
11 July	PR19 draft methodology consultation published
July-August	Continued engagement through consultation period
30 August	PR19 draft methodology consultation closes
Mid December	Final PR19 methodology published
2018	
3 September	Companies submit business plans to Ofwat
2019	
January	Initial assessment of business plans published
March/April	Draft determinations (exceptional and fast track plans)
April	Companies submit revisions to business plans (significant scrutiny and slow track)
July	Draft determinations (Slow track and significant scrutiny)
December	Final determinations published

1.9 Layout of this document and list of appendices

This consultation document is structured along the test areas we propose for the initial assessment of business plans (see Chapter 14).

Figure 1.2 depicts a high-level view of our PR19 methodology key proposals against the test areas and chapter numbers.

The following are the appendices to this consultation document. These are published as separate documents:

- Appendix 1 – Addressing affordability and vulnerability
- Appendix 2 – Delivering outcomes for customers
- Appendix 3 – Outcomes technical definitions
- Appendix 4 – Resilience: Task and Finish Group recommendations and draft resilience planning principles
- Appendix 5 – Water resources control
- Appendix 6 – Bioresources control
- Appendix 7 – Wholesale revenue incentives
- Appendix 8 – Water resources legacy RCV allocation: initial submission

2 Engaging customers

2.1 Summary

Customer engagement was one of PR14's key innovations and successes. Companies, working closely with their CCGs, delivered a step-change in the quality and quantity of customer engagement during PR14. On-going customer engagement is a central part of our regulatory model that we are retaining and building on for PR19. Stakeholders agree with our view that companies should be continually engaging with their customers and make further progress at PR19.

Our approach to customer engagement supports and interacts with the four key themes of PR19.

- Companies must engage with their customers on how they will address **affordability** and ensure they have taken account of customers' views in their proposals. We will test this in the initial assessment of business plans.
- 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. At the same time, it will be important for customers to be engaged in the innovative approaches needed to address the challenges facing the sector.
- Understanding customers is essential for companies if they are to improve and tailor their **customer service** in line with their customers' preferences.

Key messages

- Companies need to understand their customers and deliver the outcomes that matter to them over the long term. This includes all customers, including those in circumstances that make them vulnerable and those that are hard to reach.
- 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. This includes customer participation.
- Customer engagement will be central to our assessment of company business plans at PR19.
- 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.

Unlike other areas of this methodology consultation our approach to customer engagement has already been set out in our Customer Engagement Policy Statement and Expectations for PR19. We are reiterating our approach here because customer engagement is a central part of PR19.

Table 2.1 - PR19 approach and proposals for customer engagement

	Our approach and proposal
Customer engagement	**Approach:** 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 company business plans at PR19, as part of the initial assessment of business plans process. Customer engagement will provide essential evidence for company proposals in their business plans such as their performance commitments to customers and their proposals for special adjustments to their costs. We held an event and published our 'Tapped In' report on customer participation in March 2017. We expect companies to show they have taken its themes into account.
	Proposal: We propose to meet companies during 2018 to understand their approaches to customer engagement. This will help us to better understand company approaches to customer engagement during PR19.

2.2 Introduction

We set out our customer engagement expectations in our Customer Engagement Policy Statement and Expectations for PR19. 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.

This chapter sets out:

- the roles different organisations play (section 2.3);
- the principles of good customer engagement (section 2.4);
- the benefits of customer participation (section 2.5);
- the importance of engaging customers on longer-term issues (section 2.6);
- how customer engagement relates to the business retail market (section 2.7);
- our expectations around customer data (section 2.8);

- our expectations around communications (section 2.9);
- our approach to the initial assessment of business plans for customer engagement (section 2.10); and
- decisions on the regulatory framework for customer engagement (section 2.11).

2.3 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 as set out in the table below.

Table 2.2 – 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 the Business Plan Expectations chapter we recap the CCGs' assurance role that we set out in our Customer Engagement Policy Statement and Expectations for PR19. We will continue to work with the CCG chairs to ensure they are clear on what we expect their CCG reports to include.
Ofwat	We will inform, enable and incentivise good customer engagement and will: • facilitate more CCG collaboration; and • continue to provide information and clarity on our expectations (but not provide detailed or prescriptive guidance on how companies should engage with their customers).

2.4 Customer engagement principles

At PR14, we identified seven principles underlying good customer engagement. These principles apply equally to PR19.

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.

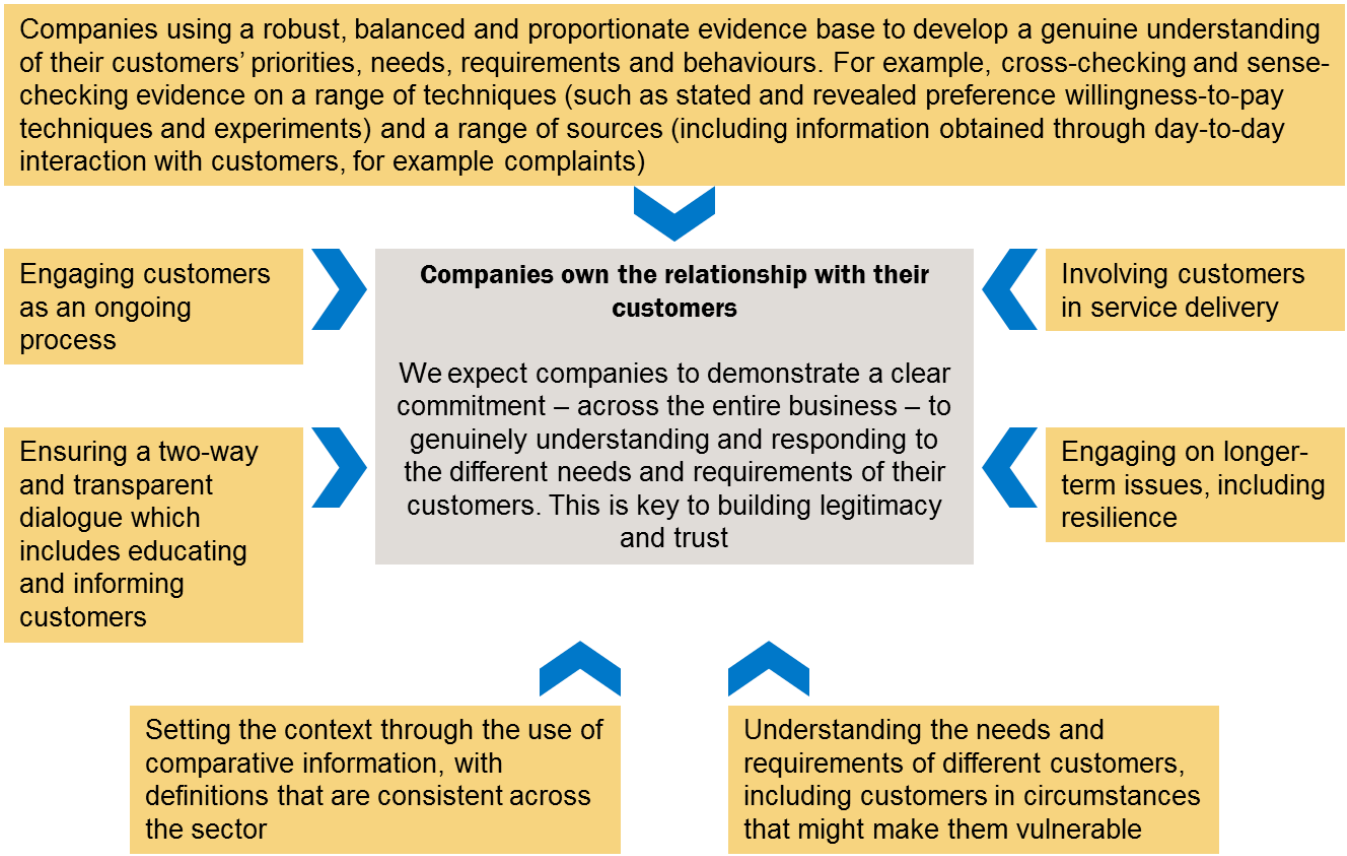
Principle 5 – Customers and their representatives must be able to challenge the companies throughout the process. The engagement process should ensure this challenge happens. If this is not done effectively, we must be able to challenge on customers' behalf. In doing so, we will fulfil our duty to protect 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. We provide more detail on each of the additional principles in the Customer engagement policy statement for PR19.

Figure 2.1 – Additional principles of good customer engagement



2.5 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.

The water and wastewater sector provides vital public services, which are often taken for granted. This is perhaps an indication of the success of the sector, but has also fed a misguided idea that customers are merely passive users of a service. Customers do not just passively consume water services, they are at the centre of the water chain. It is customers' behaviour that drives demand for clean water, which has an impact on the amount of water taken from the environment, treated and

transported to their taps. And it is customer's behaviour that drives demand for how much wastewater is taken away, treated and returned to the environment.

Companies need to move from seeing customers as recipients of services, to seeing them as active participants in the delivery of those services. Customers and communities have knowledge, skills and creativity that can lead to innovation and help solve problems.

Our Tapped In report suggested some practical ways for embracing customer participation and gave others, including customer and community groups, a better understanding of what was achievable. It also explained the potential benefits – 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 customer control of water in their home and of the service experience.

2.6 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 long-term affordability of bills. In Chapter 5 on Securing long-term resilience we set out our Resilience planning principles. Principle 2 on customer engagement states that: "Assessments 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 might influence approaches to resilience." Companies should also ensure their plans reflect the needs and requirements of future as well as current customers to avoid companies unduly deferring investment into the future and passing the bill onto future generations.

We acknowledge that longer-term issues can be complex and challenging to engage on because they can relate to potential events some distance in the future. However,

a number of stakeholders agree with our view that it is possible to effectively engage customers on longer-term issues. We expect companies to be creative in exploring ways in which customers can best be engaged on long-term issues and to consider the best ways to frame and interpret such engagement. Companies can consider the role they want customers to play when asking them to consider issues, decisions and plans, and explore if there is a meaningful way to engage younger audiences who will be future bill-payers.

2.7 Customer engagement and the business retail market

Following the introduction of choice for business end-customers in England, wholesalers are providing services to a range of retailers and not providing retail services to business end-customers. As we said in the Customer engagement policy statement, we want wholesalers 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 relation to business retailers, in the July 2015 Water 2020 consultation we said that business retailers might be well informed and better resourced than end customers and might have strong incentives and buying power 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.

2.8 Customer data

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

We published our report Unlocking the value in customer data: a report for water companies in England and Wales in June 2017.

At our launch event, and in the report, we explained that the better use of data can be used to drive better customer service and satisfaction, improve efficiency and encourage smarter network management. Good customer data can also be used by companies to help identify and support customers who are struggling to pay their bills, or find themselves in vulnerable circumstances. It could also enable reducing levels of bad debt through smart approaches to different customer groups.

We want to see the water sector pushing boundaries, putting customers first as it leads 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 sector is lagging behind other sectors in using the insight and intelligence from that data to enable them to do more for their customers.

There is still work to be done to increase customer confidence in the sharing and security of personal data, and companies will need to ensure they minimise risk and react quickly to any incidents. Our research shows that there are opportunities for greater empowerment of customers through better information about how their data will be used to drive better and more tailored services. We will follow up on the expectations in our customer data report in early 2018.

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

2.9 Communications

Good communication is a foundation of effective customer engagement. There is a big opportunity for companies to use all their communications 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 and encourage customers to save water and change what people put down sinks and loos. 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. Communications is a route to collaboration with others to create new social norms or a means of prompting specific water-related behaviours.

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

Figure 2.2 – Our expectations of how companies will communicate in PR19

Good communication is a foundation of effective customer engagement. In PR19, Ofwat will be looking for evidence of how companies have engaged with their customers, the channels and techniques used and evidence of customer participation and dialogue. In particular, we will be looking for evidence of:

Channels

- Use of two-way communication channels, enabling customers to participate in business planning and service delivery where appropriate
- Channels that reflect the diversity of the customer base
- Accessible language and presentation of engagement materials
- Making communications feel relevant for customers
- Final business plan available for customers in a clear, accessible, customer friendly version

Messaging

- Visibility of messaging shared with customers during the engagement – for example, inclusion of engagement materials
- Examples of how engagement with customers has taken place, including on the topics of resilience, affordability, customer service and innovation
- Explanation of the engagement journey and how the customer engagement process developed in response to customers' views

Audiences

- Appropriate customer segmentation and understanding of different customers, their needs and lifestyles
- Engagement with a wide range of customers, including hard to reach customers
- Dialogue with customers – not just one-way communication, but also listening to and involving customers as well as informing and educating them
- The customer voice in business plans
- How communication will be continued – engagement on an ongoing basis, not just for price reviews
- Engagement with community and other stakeholders (such as consumer groups, local media, environmental groups)
- Understanding of how customers were incentivised to get involved (if relevant)
- Setting the context for customers, for example, through using comparative information

Governance

- The approach to customer communication adopted across the business – from Board down
- The 'customer voice' being heard at Board
- Involvement in communications from across the business – for example customer service/contact centres, communications teams, regulatory teams

Evaluation

- How customer engagement and communication has been measured and evaluated
- How customer engagement influences your day-to-day operations and your business plan

2.10 Initial assessment of business plans

Customer engagement will be a central part of the initial assessment of business plans. Customer engagement also provides essential evidence for companies' proposals in their business plans such as their performance commitments to customers and their proposals for special adjustments to their costs.

We will test engaging customers in our initial assessment of business plans as follows:

Initial assessment tests on engaging customers

1. What is the quality of the company's customer engagement and participation and how well is it incorporated into the company's proposals?

In assessing how well the company has engaged with customers and how well it has fed into its plan, we will take into account how the company has addressed the seven principles and seven additional principles of good customer engagement, in particular those on involving customers in service delivery and engaging with customers on longer-term issues, including resilience.

We will also take customer engagement into account in our other initial assessment of business plans tests where this is appropriate – for example, in relation to company proposals on affordability.

We propose to meet all 17 water companies between January and March 2018 to get a better understanding of their approaches to customer engagement at PR19. This should allow us to carry out a more informed review of companies' approaches during the initial assessment of business plans. We will invite CCG chairs to these meetings.

2.11 Decisions on the regulatory framework for customer engagement

Table 2.2 summarises the decisions in the May 2016 Customer engagement policy statement and expectations for PR19.

Table 2.3 - Decision summary for customer engagement

	Confirmed decisions
Customer engagement	Customer engagement is an important feature of the price review that we are retaining and building on for PR19. Companies will continue to be responsible for engaging directly with their customers. Each company will have a CCG for PR19. CCGs must include a representative from the Consumer Council for Water (CCWater), the statutory consumer body for the water industry in England and Wales. CCGs will provide independent challenge to companies and independent assurance to us on the quality of a company's customer engagement, and the extent to which this is reflected in business plans. 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. We will test the quality of companies' customer engagement and the extent to which it is reflected in their business plans in the initial assessment of business plans. We will inform, enable and encourage good-quality customer engagement that puts customers at the heart of decision-making. In keeping with our statutory duties and strategy, we will step in if required.

There are no consultation questions on customer engagement as we are confirming existing policy for PR19.

3 Addressing affordability and vulnerability

3.1 Summary

This chapter discusses proposals for our approach to addressing affordability and vulnerability for PR19.

Affordability is a key theme of PR19. 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.

Our approach looks across all aspects of a company's business plan, and requires companies to provide evidence of how they will address affordability. Our price review assessments of costs, the cost of capital and outcomes will also promote affordability.

Our **approach to vulnerability** is to incentivise companies to ensure they provide sensitive, well-designed and flexible support and services for customers in circumstances that make them vulnerable. (This includes customers who are at risk of being in circumstances that make them vulnerable).

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

- Vulnerability can be transient, depending on people's circumstances. So, companies that provide great **customer service**, where they really know and understand their customers, often provide more effective support to customers who are in circumstance that make them vulnerable. Our proposals give companies incentives to provide customer service to match the best in other sectors. For example, we encourage companies to engage and work with customers to improve the range of payment and assistance options they offer.
- Companies have the opportunity to **innovate** in the ways of improving assistance for customers who are struggling, or at risk of struggling, to pay and/or in circumstances that make them vulnerable.
- Companies must not deliver affordability by compromising long-term resilience. Resilience can be improved by working smarter. And beyond this, our proposals enable and incentivise companies to become more efficient leading to more affordable bills, even where additional spending is needed to improve resilience.

Key messages

- Our assessment of the three aspects of affordability - **overall affordability; affordability in the long term;** and **affordability for those struggling or at risk of struggling to pay** - will encourage companies to think about all their customers by providing value for money for current and future customers as well as supporting those that struggle to pay.
- Using the five principles **customer engagement; customer support; effectiveness; efficiency;** and **accessibility** to assess the affordability of business plans should provide robust evidence on how companies' approaches will help deliver the affordability of bills.
- Our approach to **vulnerability** will be an explicit part of the price review for the first time in PR19. This builds on our 2016 'Vulnerability focus report', which aimed to stimulate interest in and inform the debate around vulnerability. Our report also provided examples of best practice in supporting customers who are in circumstances that make them vulnerable.
- Our proposed qualitative tests on **vulnerability** will ensure we are testing companies against the three key areas set out in the 2016 Vulnerability focus report. The **bespoke performance commitments** on addressing vulnerability will require all companies to engage with their customers and CCGs on their future commitments in relation to vulnerability.
- By asking companies to provide **data on common measures** customers and other stakeholders should be able to understand more fully the nature of affordability and vulnerability issues and the variations between companies. It should provide the sector with better information to identify ways of improving approaches to affordability and vulnerability in the future.

Table 3.1 - PR19 proposals for addressing affordability and vulnerability

	Our thinking and proposal
Affordability	We propose to assess three aspects of affordability: • **overall affordability – providing value for money** • **affordability in the long term** • **affordability for those struggling, or at risk of struggling to pay** We propose using these five principles, to assess the affordability of business plans: • **customer engagement;** • **customer support**; • **effectiveness;** • **efficiency; and** • **accessibility.**

	We propose that companies provide data to demonstrate the affordability of their plans. We will assess these when we make the initial assessment of business plans. Our other price review assessments of costs, the cost of capital and outcomes will contribute to achieving affordable bills. Reports from the Customer Challenge Groups (CCGs) will provide important evidence on companies' approaches to addressing affordability.
Vulnerability	We propose to use qualitative information to assess how companies' business plans support customers in circumstances that make them vulnerable. This is based on the challenges we set in our 2016 Vulnerability focus report. We will assess: • how well companies use good-quality available data to understand their customers and identify those in circumstances that make them vulnerable; • how well companies engage with other utilities and third party organisations to identify vulnerability and best support those who are in vulnerable circumstances; and • how targeted, efficient and effective companies' measures to address vulnerability are. Reports from the CCGs will provide an independent assessment to us on the quality of companies' planned support for customers who are in circumstances that make them vulnerable, and the quality of the engagement that supports their plan on vulnerability. We propose to require companies to include bespoke performance commitments for addressing vulnerability in their business plans after engagement with customers and challenge from their CCGs. We propose to require companies to develop common measures for addressing vulnerability, and to report on the data they gather.

3.2 Introduction

Affordability is the ability of a customer to pay their water bill. It is a key theme of PR19. Customers must feel confident they are receiving affordable, value for money services both now and in the long term. So, getting the best deal and service for customers is at the heart of what we do.

A customer's bill is one of their main points of communication with the company. Customer satisfaction with their service and their ability to pay bills underpins trust and confidence in water and wastewater services. Our aim is to see business plans that give customers what they want in an efficient way, subject to bills being affordable.

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

This chapter sets out our thinking and proposals on addressing affordability and vulnerability. It considers:

- why **affordability** is important for PR19 and the three areas of affordability (section 3.3);
- our proposal to use a principle-based approach to assess business plans for affordability (section 3.4);
- our proposals for assessing how companies address affordability (section 3.5);
- the initial assessment of business plans for affordability (section 3.6);
- consultation questions on affordability (section 3.7);
- **vulnerability** and why addressing it is it important for PR19 (section 3.8);
- our proposed approach to assessing how companies address vulnerability (section 3.9);
- the initial assessment of business plans for addressing vulnerability (section 3.10);
- decisions on the regulatory framework for addressing vulnerability for PR19 (section 3.11); and
- consultation questions for addressing vulnerability (section 3.12).

3.3 Why affordability is important for PR19

There is no bright line between an affordable bill and an unaffordable bill. It depends on household income, size of the water bill and a customer's individual circumstances.

Our report 'Affordability and debt 2014-15', published in December 2015, updated our understanding of affordability for customers of English and Welsh companies.

Using data from the Department for Work and Pension's annual 'Family Resources Survey' and our income-based indicator of affordability risk, we identified that:

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

Affordability remains a pressing issue. Inflation has started to exceed wage growth again, leading to real term cuts in water customers' incomes on average. The Resolution Foundation forecasts that lower-income earners will see significant reductions in real income in the next five years due to higher inflation, continued low

nominal pay growth, lower or no rises in employment and a reduction in working-age welfare payments.

In the 2016 report 'The poverty premium – when low-income households pay more for essential goods and services', Bristol University estimates that low-income households pay an average of £490 per household per year extra for essential services such as fuel and access to money (the poverty premium). This could have an impact on a household's disposable income for other services, such as water. CCWater has found, in its 'Delving into Water 2016' report, that 12% of customers consider their water bills are unaffordable.

There are opportunities to improve affordability of bills in PR19. The potential for a lower cost of capital and improved efficiency, reflecting the introduction of our totex and outcomes approaches at PR14, should create scope for lower bills. There is also scope for significant improvements to service resilience and quality.

We consider it vital for companies to engage with customers effectively about the opportunities for bill reductions, and for the potential impact on bills of enhancing services and resilience. Companies should avoid any unwarranted bias in their customer engagement. This means avoiding, for example, the use of current bill levels as a starting point or giving the idea that flat real bills are 'good enough'. In practice, customers pay nominal rather than real bills. We will take company evidence on customers' views on affordability into account when assessing companies' proposals. The CCGs have an important role in providing independent assurance to us on the quality of that engagement and the extent to which companies have taken it into account in their plans.

For PR19, we will test company business plans in the following three areas of affordability.

- **Overall affordability**
  We want to see companies demonstrating the overall affordability of their plans and providing clear evidence of value for money. Companies will need to understand how their proposals affect different customer segments, and take account of the potential bill impacts of ODIs, within the 2020-25 period. They will also need to consider the profile of their bills as well as their level, as movements in bills can affect affordability for customers. Our overall assessment of the affordability of business plans is supported by our securing cost efficiency, delivering outcomes for customers and aligning risk and return tests. These aim to ensure customers get the highest quality and most resilient services for a given bill level.

- **Long-term affordability**
  We want to see companies demonstrating that their bills provide value for money for customers beyond the end of the 2020-25 period. We, as well as customers and the CCGs, want to see companies being fair to future generations. Companies should make appropriate decisions on investment and costs to ensure they are not storing up problems for subsequent price control periods and future customers. Our long-term affordability test is supported by our 'financeability' test, which looks at the profile of companies' revenue over time to ensure efficient companies are financeable.
- **Affordability for customers who struggle to pay their bills, or are at risk of struggling to pay**
  Only 1% of all customers are on social tariffs, although 11% of customers of English companies spend more than 5% of their disposable income on water bills and 15% of customers of Welsh companies spend in excess of 5%. Companies need to offer a range of assistance options and be more proactive in getting those to customers who struggle, or are at risk of struggling, to pay their bills. They need to work with other organisations to help these customers.

3.4 Proposals for affordability principles

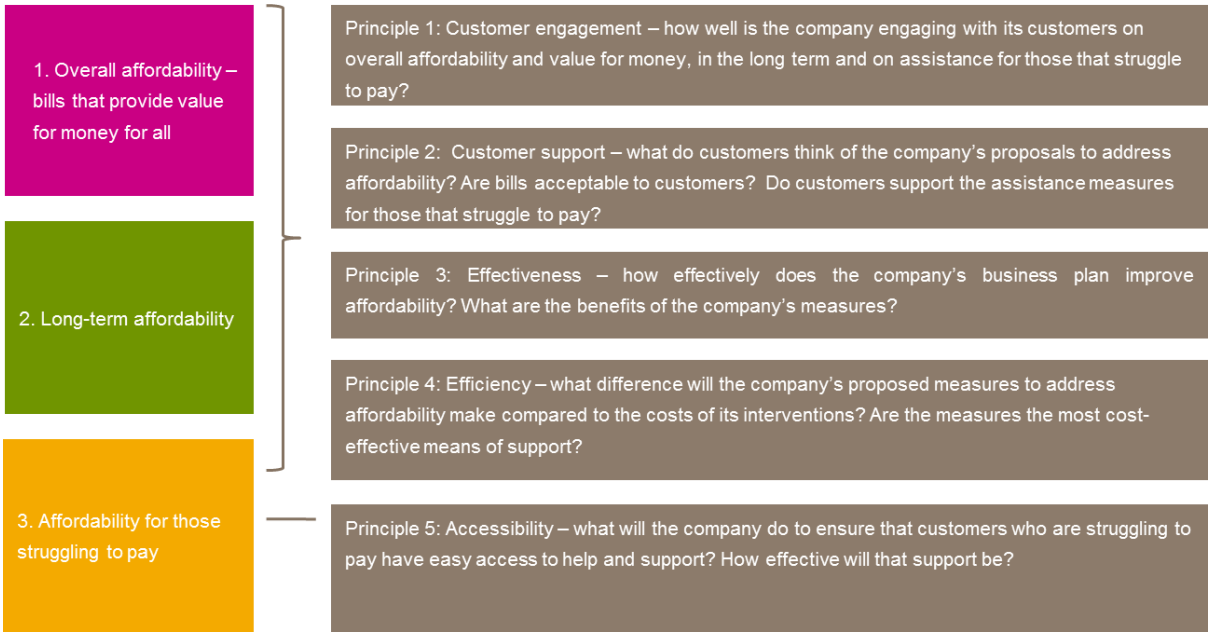
The affordability of bills is affected by several elements of PR19, such as how cost efficient a company's business plan is and how a company approaches risk and return. Our principle-based approach to affordability looks at all aspects of a company's business plan and requires companies to provide evidence of how they will perform against five principles for the three areas of affordability.

The five proposed principles are:

- **customer engagement** – the company should engage with its customers on its affordability proposals and whether its bills are value for money;
- **customer support** – the company should have its customers' support for its proposals to address affordability - acceptance that bills represent value for money and support for assistance measures for customers who struggle or who are at risk of struggling to pay;
- **effectiveness** – a company's proposed business plan should improve affordability for customers;
- **efficiency** – the company's proposed measures should make a difference in addressing affordability compared to the costs of interventions and be cost beneficial; and
- **accessibility** – the company needs to ensure that customers who are struggling to pay can easily get effective help and support.

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



Principles 1 to 4 apply to overall affordability (for the 2020-25 period) and to longer-term affordability (beyond 2025). Principles 1 to 5 apply to affordability for those struggling, or at risk of struggling, to pay.

By applying these five principles and asking companies to show in their business plans how well they perform against them, we will give companies an incentive to engage effectively with their customers and to show they have the support of customers for their proposed bills. Companies will also have to show that their approaches will be effective in improving affordability. They will have to show that their approaches are efficient – maximising the benefit to customers against the cost of implementing changes. We will also need to see clear evidence that companies' financial assistance schemes are accessible for those struggling, or at risk of struggling, to pay their bills. We want to see evidence of companies being proactive by identifying those who need help and making it as easy as possible for them to get it. And we want to see evidence on how companies are communicating to raise awareness of support for customers struggling or at risk of struggling to pay.

3.5 Proposals for assessing how well companies address affordability

Companies need to show how they address affordability and how they have used, captured, and shared the learning from innovative approaches. We propose to use

both qualitative and quantitative measures across the three areas of affordability and the five principles to assess companies' business plans.

In PR19, CCGs have a role in assuring how well companies engage with their customers – including on affordability – and how well this is reflected in business plans. We said in our 'Customer Engagement Policy Statement and Expectations for PR19' that we would ask CCGs to include in their reports assurance on:

- whether a company has effectively engaged with and understood the needs of different customers; and
- whether the company has effectively engaged with its customers on longer-term issues, including resilience, impacts on future bills and longer-term affordability.

Some companies already have affordability measures in their performance commitments that they could use as evidence to complement qualitative information on how they are addressing the affordability challenge. We expect to see these become more innovative. The table below illustrates the type of measures companies already use to assess affordability, other measures we consider could be useful and other evidence we will look at to assess affordability.

Table 3.2 - Our proposed approach on how affordability could be assessed

Principle to be applied	Sources of information for assessing affordability
1. Customer engagement How well the company is engaging with its customers and third party organisations on addressing affordability.	**Qualitative:** Company evidence, in the CCG report and other organisations on the company's customer engagement on affordability, long-term affordability and affordability for those struggling or at risk of struggling to pay. Of how well companies are engaging with their customers to understand the drivers of affordability issues; the extent of these issues among their customer base; how well they are engaging to understand customer support for assistance for those with affordability issues, and in designing the most effective range of assistance measures. **Quantitative:** Number of customers engaged with on affordability in the company business plan.
2. Customer support What are customers' views on the company's proposals for addressing affordability?	**Qualitative:** Company evidence including research, and from the CCG report and other organisations on customer support for the company's approach to the three aspects of affordability - on the level of bills and the assistance for those who struggle or are at risk of struggling to pay.

Principle to be applied	Sources of information for assessing affordability
	Quantitative: Percentage of customers finding bills acceptable (related to, but not the same as affordable). Percentage of customers who think their bill is affordable to them.
3. Effectiveness How well the company's proposed approach will improve affordability.	**Qualitative:** Company evidence and from the CCG report and other organisations, including how well the company understands the needs in its area for affordable bills and how its proposals address these needs. **Quantitative:** Benefits of applying affordability measures (for example, decrease in revenue outstanding). Average (mean) bill reduction from financial assistance measures.
4. Efficiency The difference the company's proposed approach will make compared with the costs of interventions.	**Qualitative:** Company evidence and the CCG report on the efficiency of the company's approach to addressing the three areas of affordability. **Quantitative:** Costs and benefits of applying affordability measures. Debt management costs as a per cent of the average bill.
5. Accessibility What the company will do to improve accessibility and how effective will it be. (Applies only to the third area of affordability: those struggling or at risk of struggling to pay their bills).	**Qualitative:** Company evidence, evidence from the CCG report and CCWater research, and from other sources such as those organisations specialising in debt. Evidence of support available for those at risk of struggling to pay their bills and how proactively companies deploy such support in advance of problems arising. **Quantitative:** Number of customers receiving financial assistance.

We consider the use of common measures of affordability would provide greater transparency and would allow us to make comparisons, taking into account differences between companies and the quality of the data. Companies could still provide their own data specific to their customers' affordability issues. We set out in the business plan tables the common measures of affordability we propose to collect.

In relation to assessing affordability, we invite views on:

- whether you agree with the way in which we propose to assess how companies address affordability as suggested in the table above;

- whether we have missed any sources of information that should be included; and
- whether we should require companies to submit data on common measures of affordability, e.g. percentage of customers receiving financial assistance, or allow companies complete flexibility in what evidence they provide.

3.6 Initial assessment of business plans – affordability

Based on our proposals, we will test affordability in our initial assessment of business plans as follows:

Initial assessment tests on addressing 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 of:

- 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.

3.7 Consultation questions on affordability

Q1. Do you agree with our proposal to use the five principles of: customer engagement; customer support; effectiveness; efficiency and accessibility, to assess how a company is addressing affordability in its business plan?

Q2. Do you agree with our proposal to use information and measures on affordability, including possible common measures, to assess how a company performs against the five principles in its business plan?

3.8 Vulnerability – what it is and why addressing it is important

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

Two important aspects of vulnerability that we, other regulators and other bodies have identified are:

- people can move in and out of positions of vulnerability over time; and
- a mixture of personal circumstances, characteristics and situations can trigger vulnerability.

From our engagement with stakeholders, we know that we should avoid setting hard distinctions between vulnerability and affordability, as they often overlap. For example, a customer in circumstances that make them vulnerable might also be struggling to afford their bill. Equally, a customer in circumstances that make them vulnerable may not be struggling to afford their bill, but may need tailored support. They may need access to information or services so that they can pay their bill, for example, or to be notified face to face if their supply is to be interrupted.

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. For PR19, we are making a distinction between this and the affordability of bills.

Through our 2016 Vulnerability focus report, we have put the issue of vulnerability firmly on the agenda. We have challenged companies to shape their strategies and policies to better identify and support customers in circumstances that might make them vulnerable. (This includes customers who might be about to be in circumstances that make them vulnerable). The way in which companies help customers in circumstances that make them vulnerable will be part of a price review for the first time in PR19.

Companies have the chance to show the progress they have made against the challenges set out in the 2016 Vulnerability focus report and to demonstrate the improvements their plans will give customers in vulnerable circumstances.

As vulnerability takes many forms and can be a transient state, 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.

Establishing which customers are in situations of vulnerability and engaging with them effectively is challenging, both for water companies and other providers of public services. However, we consider this tailored approach to addressing vulnerability is essential for good company performance, which will ultimately benefit all customers, drive efficiencies and bring down the costs associated with unpaid bills.

3.9 Our proposed approach for assessing how well companies address vulnerability

We have already signalled to the sector that we will consider how companies address vulnerability at PR19. In our 2016 vulnerability focus report, we stated that we will encourage CCGs to challenge companies' approaches to addressing vulnerability and feedback on this as part of their reports on business plans.

In our Customer Engagement Policy Statement for PR19, we said that one of the seven areas we would be looking for in business plans at PR19 was "understanding the needs and requirements of different customers, including customers in circumstances that might make them vulnerable".

Our customer engagement tests will assess how well companies have engaged with all customers, including customers in circumstances that make them vulnerable, and how well they have reflected these customers' views in their plans.

We will also use qualitative tests for how companies **address vulnerability** issues at PR19. These are based on our 2016 vulnerability focus report and are:

- how well companies have used data to understand their customers and identify those in situations of vulnerability;
- how well companies have engaged with other utilities and third party organisations on addressing vulnerability issues; and

- how targeted, efficient and effective companies' measures to address vulnerability have been.

The CCG's challenges, based on the results of the company's customer engagement and the expertise of the CCG, will provide important evidence on how the company is addressing the three challenges from the Vulnerability focus report set out above.

In addition to our customer engagement tests and our qualitative vulnerability tests, we propose two options for going further in our assessment of how companies address vulnerability issues:

Table 3.3 - Options for assessing how companies address vulnerability

Option	Option details	Option rationale
1	a) We will require companies to propose bespoke performance commitments in their business plans for addressing vulnerability, after engaging with customers and taking on board challenges from their CCGs. b) We will require companies to report to us publicly against common measures for how vulnerability is addressed. We will work with the companies and other stakeholders to develop these, and they could evolve into common performance commitments in the future.	Option 1 is our **preferred option.** The bespoke performance commitments will require companies to engage with their customers and CCGs on their future commitments to addressing vulnerability. Only some companies did this at PR14. The common measures will help customers and other stakeholders better understand vulnerability issues, understand variations between companies and provide the sector with better information to identify ways of improving the approach to vulnerability in the future.
2	a) We will require all companies to have a common performance commitment for addressing vulnerability, using a common definition. b) We will set a common level for the performance commitment, based on a comparative assessment of companies' past and projected performance.	Option 2 is not our preferred option. Although a common performance commitment with a common commitment level would incentivise companies to improve their performance, we do not think the data on how companies address vulnerability is mature enough to make this workable. A common commitment level might also not be suitable because of the transient and individual nature of vulnerability.

We invite views on our proposed approach to assessing how companies address vulnerability, including the two options above. We welcome views on suitable common measures and the associated benefits and drawbacks of these measures. Our initial proposals on suitable common measures, included in the draft business plan tables, are:

- proportion of eligible customers receiving support through vulnerability assistance option(s);
- the number of customers contacted by the company about eligibility for vulnerability assistance options; and
- the percentage of customers receiving vulnerability assistance option(s) who are satisfied with the assistance.

3.10 Initial assessment of business plans for addressing vulnerability

Based on our proposals, we will assess how companies address vulnerability in our initial assessment of business plans as follows:

Initial assessment test on addressing vulnerability

To what extent does the company identify and provide 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:

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

3.11 Decisions on the regulatory framework for addressing vulnerability

Table 3.4 summarises the decisions we have already made in relation to addressing vulnerability.

Table 3.4 - Summary of decisions

	Confirmed decisions
How companies address vulnerability	We will have a distinct test to assess how well companies' plans support customers who are in circumstances that make them vulnerable. We will assess, as part of our customer engagement tests, how well companies have engaged with customers in vulnerable circumstances. We will apply qualitative vulnerability tests at PR19 as follows: • how well companies have used good quality data to understand their customers and identify those in situations of vulnerability; • how well companies have engaged with other utilities and third party organisations on vulnerability issues; and • how targeted, efficient and effective companies' measures to address vulnerability have been. We will take CCGs' views into account.

3.12 Consultation questions for addressing vulnerability

Q3. Do you agree with our proposed option for requiring companies to propose bespoke performance commitments for addressing vulnerability in their business plan?

Q4. Do you agree with our proposed option for using common measures in our assessment of companies' approaches to addressing vulnerability in their business plan?

4 Delivering outcomes for customers

4.1 Summary

Outcomes are the high-level objectives that matter most to customers. This chapter sets out our proposals for outcomes for PR19, building on the outcomes consultation we published in November 2016, the workshop we held in February 2017 and other discussions with stakeholders.

Our approach to outcomes supports **the four key themes of PR19.**

Our proposals focus on ensuring companies set stretching commitments for all aspects of **customer service**.

We promote **long-term operational resilience** by proposing two new common performance commitments, alongside existing resilience-related performance commitments and requiring companies to include further bespoke performance commitments relating to resilience. We also require companies to have four common performance commitments on asset health, which is one constituent of resilience.

We promote **innovation** by encouraging companies to propose enhanced rewards and increased penalties for frontier-shifting performance on the common performance commitments. This mimics how a competitive market rewards the highest achievers and promotes innovation. We also expect companies to propose innovative, bespoke performance commitments that reflect their customers' preferences.

Our proposals take account of **affordability** by requiring companies to propose stretching performance commitments while keeping bills affordable. Companies should also take account of the impact on bills when proposing their Outcome Delivery Incentive (ODI) packages.

Key messages

We, and our stakeholders, have learned much from establishing the outcomes framework at PR14 and its operation since then. We consider:

- there is significant scope to make performance commitments more stretching, so that customers benefit from better service;
- there is significant scope to build on the ODI framework to incentivise companies to deliver more of what customers want by better aligning the interests of

company management and investors with those of customers. There should be greater incentive for companies to go beyond their service commitments to customers, and larger penalties for those who do not achieve their commitments; and

- better services can be achieved alongside keeping bills affordable for customers, given the scope for efficiency improvements at PR19.

Table 4.1 - PR19 Proposals for performance commitments and outcome delivery incentives

Proposal topic	Our proposal and rationale
Performance commitments	**We will encourage companies to propose stretching performance commitment levels.** Performance commitments enable customers, CCGs, other stakeholders and us to monitor companies' service performance and hold companies to account for achieving their commitments. Companies' performance commitments should be **supported by long-term projections** to encourage companies to consider their long-term ambitions and to help customers and stakeholders engage on longer-term issues. We propose **fourteen common performance commitments** with standard definitions. These cover the most important issues for customers such as reducing leakage, supply interruptions, the environment, resilience and asset health. These common performance commitments enable customers, CCGs, other stakeholders and us to understand the performance commitment levels companies are committing to, compared with other companies. **Two of the 14 common performance commitments relate to resilience** to fill a gap (the resistance and redundancy elements of resilience) not covered by the other common performance commitments. **Four of the 14 common performance commitments relate to asset health**. We also expect companies to cover asset health comprehensively by selecting from a long list of asset health measures with common definitions to ensure comparability. Companies will still be able to propose their own commitments to reflect their particular asset health challenges and to allow for innovation. We will continue to expect companies to develop **bespoke performance commitments** to reflect their customers' particular preferences. This should enable innovation in performance commitments. We expect companies to use **wide sources of information on customer preferences** (such as experiments, operational data and social media sentiment). They should also use **other approaches** than cost-benefit analysis to challenge the degree of stretch in their proposed performance commitment levels. For a number of the common performance commitments, such as supply interruptions and sewer flooding, we expect companies to set their performance commitment levels **at least at the forecast performance level of the top quarter of companies** (upper quartile performance) in 2024-25. For **leakage**, we propose companies set more stretching performance commitment levels than at PR14. We expect companies to justify their

Proposal topic	Our proposal and rationale
	proposals against options including a 15% reduction by 2025 or upper quartile performance on leakage per property per day.
Outcome delivery incentives (ODIs)	**We propose a package of measures to better align the interests of company management and investors with those of customers.** We will continue to **increase the impact ODIs have on reputation** by encouraging companies to provide contextual information, for example, such as league tables for performance. Companies (and customers) should **experience ODI payments closer in time to when the service that generated the payment was delivered**. We will require as a default companies to have in-period ODIs (i.e. ODIs paid between price reviews) and to have end-of-period ODIs that affect their revenue rather than their asset base (RCV). We will encourage companies to **propose enhanced, higher, rewards for significant performance improvement which moves the industry forwards** as part of their ODIs for the common performance commitments. This proposal mimics how a competitive market rewards and spreads innovation. The enhanced rewards should be accompanied by increased penalties for very poor performance. We will encourage companies to **strengthen their financial ODIs** by having financial ODIs as a default where customers are supportive. We propose not to cap the ODI rewards and penalties a company can receive overall and to **set an indicative range for the overall value of ODIs a company can receive of ±1% to ±3% of RoRE** (the return on regulated equity). We expect that our proposed measures will mean **an average company with average performance would expect to incur penalties on its ODI package, rather than rewards**. However, companies are able to manage this risk by ensuring they deliver for customers. We expect companies to assess the impact that their proposed packages of ODIs would have on **customer bills**. Companies should propose how they would smooth any potential bill volatility that may occur during the price control period.
New customer and developer services experience incentives	We propose to replace our existing customer service incentive - the Service Incentive Mechanism (SIM) - with **WaterworCX, comprising two new mechanisms to incentivise a better experience for residential customers and developer services customers.** **1. The Customer Measure of Experience (C-MeX)** • C-MeX will incentivise companies to improve the broader customer experience across the retail and wholesale parts of the value chain. C-MeX consists of two parts: (i) the satisfaction of customers who contact their company with a query or complaint (building on the existing qualitative part of SIM), and (ii) the satisfaction of customers who have not contacted their company. • C-MeX will apply a reputational incentive to reducing complaints. In addition to CCWater's existing scrutiny of complaints volumes, we will publish complaints numbers alongside C-MeX scores each year. We also propose widening the definition of "complaint" to include complaints made via social media where possible, and to require companies to offer more customer contact channels. • C-MeX will offer higher potential financial rewards than SIM (making the maximum rewards the same as the maximum penalties), but the higher rewards will only be available to companies that perform well compared to the upper quartile

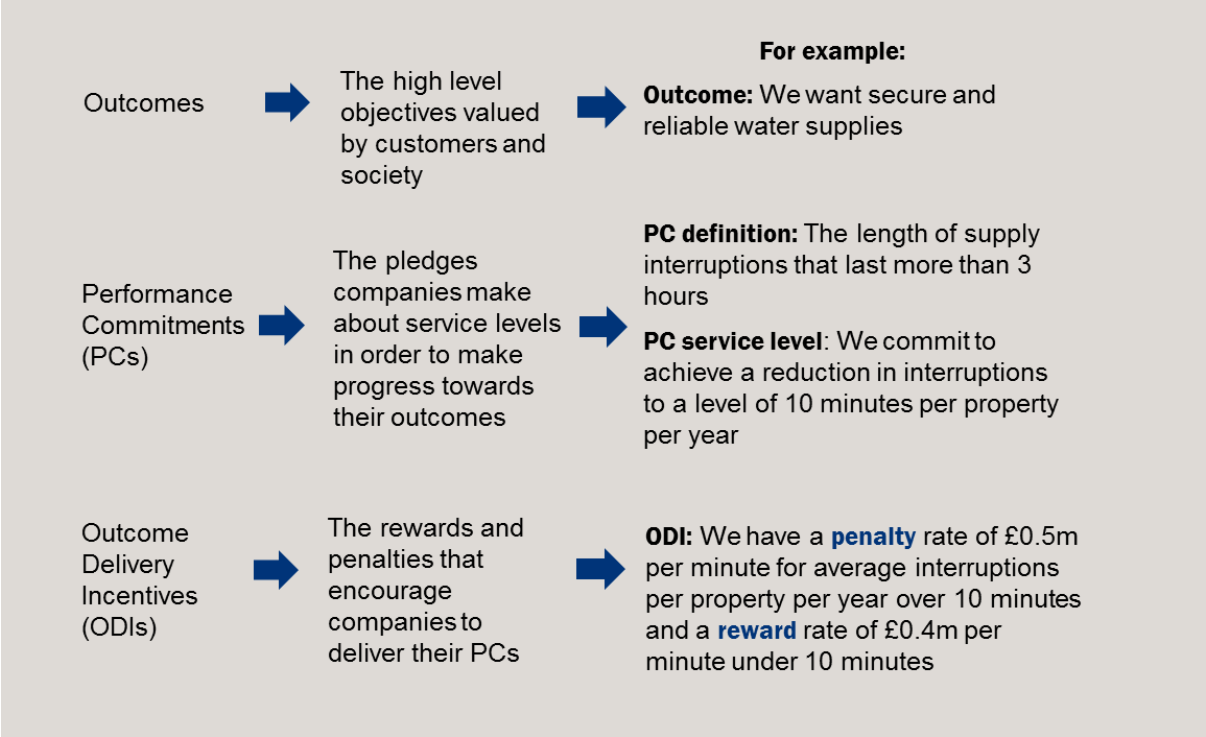
Proposal topic	Our proposal and rationale
	performance of other sectors which includes, for example retailers, banks and insurers. This will incentivise the water sector to catch up with the higher levels of customer service found in many other sectors. **2. The Developer services Measure of Experience (D-MeX)** • D-MeX is a new incentive with financial and reputational components for developer services (new connections) customers. • Our proposal is to base D-MeX on a telephone survey of developer services customers, but we are also considering other options and will develop them with those customers and other stakeholders.

4.2 Introduction

Our vision for the sector is one in which customers and wider society in England and Wales have trust and confidence in vital public water and wastewater services. For this to be realised, we need companies to focus on delivering the high-level objectives that matter to customers today, future customers and the environment. This is the aim of the outcomes framework.

The framework is illustrated in the figure below. It requires companies to engage with their customers about the high-level objectives that matter to their customers (their outcomes), the metrics by which they will judge their progress towards their outcomes (their performance commitments) and their pledges to achieve certain service levels (their performance commitment levels). Outcome delivery incentives (ODIs) are used to encourage companies to fulfil their performance commitments, and these have an impact on the reputation and/or the finances of companies. Customer Challenge Groups (CCGs) will assess the quality of companies' customer engagement and how well that engagement is reflected in their proposals for outcomes, performance commitments and ODIs.

Figure 4.1 – A summary of outcomes, performance commitments and ODIs



Our proposals are:

- to make performance commitments more stretching, so that customers benefit from improved service quality (section 4.3);
- to set clear expectations about how companies address resilience and asset health in their performance commitments (section 4.3.2 and 4.3.3);
- to make ODIs more powerful to better align the interests of company management and investors with those of customers (section 4.4); and
- a new customer experience measure (C-MeX) and developer services experience measure (D-MeX), which will stretch companies to deliver a better overall service to a wider range of customers (section 4.5).

4.3 Proposals for performance commitments

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

- **common performance commitments**, including the new common resilience performance commitments;
- **our approach to asset health**, which includes discussion of the four common asset health performance commitments;
- **bespoke performance commitments** (i.e. ones that are specific to each company);

- our expectations on using additional information and methods for setting **stretching performance commitment levels** for both bespoke and common performance commitments;
- our expectations for **stretching performance commitment levels for leakage**; and
- **transparency** in performance commitments.

4.3.1 Common performance commitments

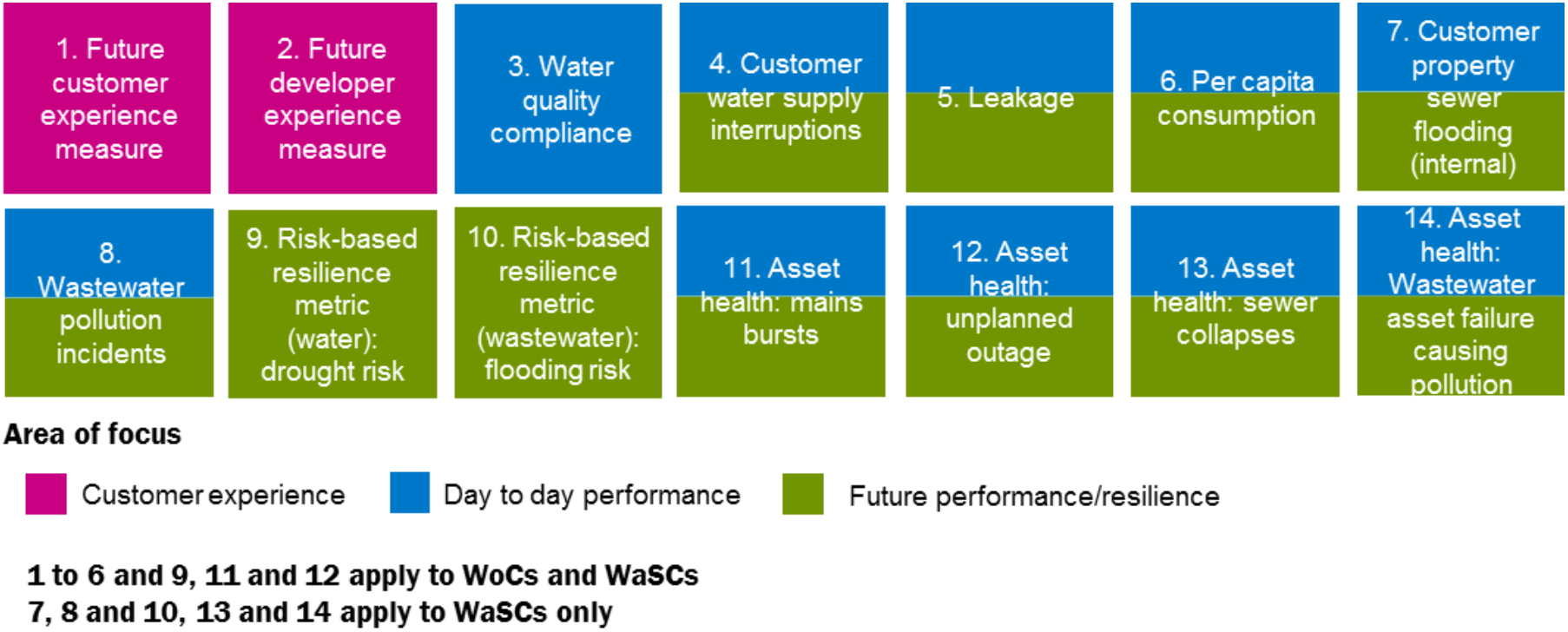
The outcomes approach is rooted in customer engagement. Companies engage with their own customers on their high level objectives and their performance commitments, their associated service levels and ODIs. At PR14, companies set their own performance commitments, which led to a number of similar, but not identical, definitions. As a result, it was more difficult to compare companies' performance than 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 would be beneficial for these core performance commitments to be common for all companies, with common definitions. This would allow customers, CCGs, other stakeholders and us to compare performance and to challenge companies on their proposed performance commitment levels.

We have taken into account responses on the ten common performance commitments we proposed in our November 2016 outcomes consultation. We are consulting on a list of **fourteen common performance commitments** including four asset health common performance commitments. We propose that all companies in England and Wales should make these commitments at PR19[11]. You can find more detail in Appendix 2 on Delivering outcomes for customers.

[11] The wastewater common performance commitments do not apply to water-only companies.

Figure 4.2 – Proposed common performance commitments for PR19



1 to 6 and 9, 11 and 12 apply to WoCs and WaSCs
7, 8 and 10, 13 and 14 apply to WaSCs only

This list of 14 common performance commitments ensures that there is a strong focus in our framework on the issues that matter to customers. It includes the quality and reliability of the water and wastewater supply, asset health, customer service and the environment. By measuring and incentivising companies against service failures, these performance commitments motivate water company management to identify and mitigate risks to their services. Companies should expect us to continue to incentivise metrics that are the same or similar to these common performance commitments[12] in the long term. This will incentivise companies to plan to improve their performance on these measures to ensure they can deliver good-quality services to customers over the long term.

The common performance commitments rely on good-quality, consistent definitions[13]. We have supported companies working together, co-ordinated by Water UK, and working with UKWIR to agree common definitions on leakage, supply interruptions and sewer flooding. We propose to use these definitions for the common performance commitments at PR19[14]. We are aware that some companies need to make changes to how they collect performance data to align to new definitions and that in some cases, it will take some time to have robust data. We expect companies to implement the common definitions to enable them to be used in final determinations. We will take into account companies' progress in the 'delivering outcomes for customers' tests in the initial assessment of plans.

In addition to the common performance commitments, we expect companies to set **bespoke performance commitments**, so that they can reflect their customers' preferences and innovate in the design of their performance commitments.

4.3.2 Proposals for the common resilience performance commitments

Above we proposed fourteen common performance commitments, which all companies must include in their outcomes packages for PR19. Eight metrics relate to the day-to-day service performance that customers experience, four relate to asset health and two focus on forward-looking resilience.

[12] Many of these were performance commitments at PR14.
[13] The detailed definitions are in the Outcomes technical definitions appendix 3
[14] Except for external sewer flooding which is not a common performance commitment.

We have worked to embed resilience in the common performance commitments. For example, the definitions for performance commitments at PR14 often excluded events such as extreme weather, which are precisely the events we want the sector to be resilient to. We have worked with the sector on the definitions of the common performance commitments to ensure that they do not include any such exemptions. We also consider C-MeX will incentivise companies to avoid system failures, including asset failures, and improve the quality of their responses to and recovery from disruption. 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 a further ten years. These projections will encourage companies to consider their long-term ambitions and will help customers and stakeholders engage on longer-term issues.

We consider that, in addition to the eight common performance commitments that reflect customers' day-to-day experience of service and the four asset health ones (discussed below), we need some additional metrics to better reflect the Cabinet Office definition of resilience (see the Securing long-term resilience chapter). This should benefit customers by ensuring companies have comprehensive coverage of all elements of resilience. We have been looking for two new metrics that:

- cover water and wastewater;
- focus more on resistance and redundancy (the other common performance commitments are more focused on the reliability and response / recovery elements of resilience); and
- focus on customers' current exposure to future risks (the other common performance commitments are more focused on past and current performance).

The Water and Wastewater Resilience Action Group (WWRAG) Task & Finish sub-group, and the UKWIR project on resilience, have been working intensively with us over the last six months to develop resilience metrics, which could be used as common performance commitments or which companies could use as their bespoke performance commitments. They have found that resilience metrics can be difficult to develop. We appreciate the efforts made and the complexity of the task, especially to deliver a comprehensive metric on the resilience of water and wastewater services. We expect work to develop such metrics to continue.

Based on this work, we are consulting on the following common resilience performance commitments for all companies to have, one for water and one for wastewater, as set out in the table below. For the wastewater resilience metric we

include three options, all of which require further development to meet the standards of common performance commitments.

We are not currently convinced that the wastewater resilience metrics available are sufficiently developed to achieve the standard required to be a common performance commitments (as described in Appendix 2 on Delivering outcomes for customers). However, in some cases, the proposed wastewater resilience metrics may have value as comparative performance information and/or bespoke performance commitments.

Table 4.2 Potential common resilience performance commitments

Common performance commitment on resilience	Description of potential metric (more detailed provided in the appendix)
Risk of severe restrictions in a drought	This measures the percentage of the population the company serves that would experience severe supply restrictions (e.g. standpipes or rota cuts) in a 1 in 200 year drought. It captures a company's resistance to a drought and the back-up available to continue to supply customers in the event of a drought. It also measures reliability.
Risk of flooding of wastewater systems We are looking at three potential metrics of the vulnerability of wastewater systems to future floods	1) Percentage of the population served by a wastewater system at risk of flooding. This metric focuses on pipes and captures a company's resistance to flooding. We present two options for this metric in the outcomes appendix.
	2) Vulnerability of combined sewer[15] overflows[16] (CSOs) to flooding from high intensity rainfall It measures the frequency of combined sewer overflows. This measure is in early stages of development.[17] Companies can improve performance on it by reducing the overflow frequencies. It captures one aspect of a company's resistance to flooding.
	3) Reduction in rainwater runoff / surface water in combined sewers, by looking at the size of the area that a company has disconnected from combined sewers, by retrofitting sustainable drainage. It captures a company's actions to improve resistance to future floods. However it only captures one aspect of improving resistance to future floods.

[15] Combined sewer systems are sewers that are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe.
[16] Overflows from a combined sewer when there is not enough capacity in the combined sewer.
[17] Measurement of overflows on a majority of CSOs is expected to be in place by 2020, but it might take several years of data collection before we can be assured the data is robust.

Adopting two resilience metrics as common performance commitments at PR19 will help ensure that the common performance commitments provide a view of all four aspects of the Cabinet Office definition of resilience. They will also enable customers and other stakeholders to better understand the resilience of the water and wastewater services provided by their monopoly water company.

If we conclude that none of the wastewater resilience metrics are sufficiently developed to use as a common wastewater resilience metric for PR19 we would still expect the sector to continue developing metrics for future use. We invite views on our proposals for resilience common performance commitments as well as suggestions for alternatives.

Applying ODI rewards and penalties to common resilience performance commitments requires us to be confident that the data used is robust, that companies are proposing stretching performance commitment levels and that they have customer support. We are cautious about requiring companies to have financial ODIs on these resilience metrics at present because they are at relatively early stages of development. It is also difficult for us to judge how stretching performance levels will be due to the lack of historical and comparative performance data. However, companies should propose financial ODIs on these common performance commitments if they reflect the particular resilience challenges facing them and are supported by their customers.

In addition, companies should not be rewarded for just providing the level of service that customers pay for. Where enhancements to resilience are being made and customers are funding these through additional cost allowances the inclusion of rewards for the enhanced resilience would lead to customers paying twice for the improved service.

As we explain below, we also expect companies to propose resilience metrics 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 metrics[18], 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.

[18] These are the Water and Wastewater Resilience Action Group (WWRAG) and UK Water Industry Research (UKWIR)

4.3.3 Proposals for asset health performance commitments

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

In 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.

Respondents to our November 2016 consultation supported the partial standardisation of asset health performance commitments in PR19, which we explored further in our outcomes workshop and subsequently via an industry working group. However, respondents did not support setting common service levels for the asset health common performance commitments.

We are now proposing to partially standardise companies' asset health performance commitments. We expect companies to:

1. have four common performance commitments on asset health - mains bursts, unplanned outages, sewer blockages and wastewater asset failure causing pollution incidents. This will enable customers, CCGs and us to compare performance and challenge companies on their proposals for these measures;
2. select metrics for bespoke performance commitments from our long list of asset health metrics with standard definitions enabling their customers to compare performance and challenge their company on those selected;
3. choose 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 the company;
4. have individual performance commitments on asset health with no aggregation into more complex measures. This will promote transparency on asset health both in a company's customer engagement and in the reporting of their results during the price control period (see section 4.3.5); and
5. fulfil our expectations on how companies communicate asset health outcomes (see Appendix 2 on Delivering outcomes for customers). The expectations include companies clearly presenting their approach to asset health outcomes in their business plans, engaging with their customers and CCGs on how their asset health performance commitments protect current and future customers and ensuring they are easy to understand.

More detail on the asset health performance commitments, the definitions and the rationale for them is contained in Appendix 2 on Delivering outcomes for customers.

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

The initial assessment of business plans will include assessing companies' assurance around long-term operational resilience, including their approach to asset health (see also the Securing Confidence and Assurance chapter).

4.3.4 Bespoke performance commitments

As well as the common performance commitments, we expect companies to develop bespoke commitments. These are performance commitments that the company proposes to reflect its customers' particular preferences, which are not captured by the common performance commitments. For example, this allows companies operating in Wales to reflect Welsh customers' priorities and government policy in Wales. Companies should engage widely with customers and local stakeholders on them. Bespoke performance commitments also enable companies to be innovative.

Companies should ensure that the definitions for bespoke performance commitments are clear. There should be no, or very few, exemptions included in the definitions and any exemptions would need to be well justified and supported by their customers. Companies will need to justify why they do not intend to continue with any of their PR14 performance commitments. We will expect strong evidence and reasoning for removing a performance commitment, particularly if the company was performing badly on the performance commitment during the last control period.

At PR14, some companies had more comprehensive coverage of their services, while others restricted themselves to a narrower set of outcomes. In a few instances, we intervened to require companies to include performance commitments in specific areas, in particular drinking water quality and the environment.

We consulted in November about whether bespoke performance commitments should cover important areas such as vulnerability and the new bioresources and water resources price controls. We wanted to ensure all companies covered areas that we considered mattered to customers, but could also reflect local preferences

and allow for innovation. Some respondents suggested that environmental issues should be covered by bespoke performance commitments.

After reviewing responses, we are proposing that companies must cover each of the following areas with their bespoke performance commitments:

Table 4.3 - Areas companies must cover with their bespoke performance commitments

Areas	Rationale
The different price controls	Companies need to show how they will be held to account for the revenue they receive for each price control by ensuring they have performance commitments that cover all relevant price controls (residential retail, water network plus etc.). This does not necessarily need to be a performance commitment specific to each control, but companies will need to demonstrate how their performance commitments cover the controls. For the residential retail control we are not expecting many bespoke performance commitments because C-MeX will incentivise companies to improve their customer service.
Vulnerability	We want companies to provide sensitive, well-designed and flexible support to customers in situations of vulnerability. We are consulting on this in the Addressing affordability and vulnerability chapter. Companies must propose a performance commitment on vulnerability.
Environment	Companies' engagement with customers in PR14 has shown that customers value improvements to the environment. We expect all companies to have one or more performance commitments relating to their environmental impact (some examples are contained in Appendix 2 on Delivering outcomes for customers).
Resilience	While we propose two common performance commitments for resilience, we recognise that they do not fully cover resilience. We expect companies to reflect the resilience issues that are most relevant to their region and customers in their bespoke performance commitments.
Abstraction Incentive Mechanism (AIM)	The AIM (see detail in Appendix 2 on Delivering outcomes for customers) is an important bespoke performance commitment that intends to encourage water companies to reduce the environmental impact of abstracting water at environmentally sensitive sites during defined periods of low surface water flows. Because AIM abstraction sites are unique for each company, AIM is not a common performance commitment. We consider that each company must propose a bespoke performance commitment in line with the AIM guidelines. We also require companies to propose financial incentives to accompany their AIM performance commitments. See Appendix 2 on Delivering outcomes for customers for more detail.

We recognise that there is a limit to how many performance commitments a company can reasonably expect to engage with its customers on. Companies will need to balance limiting the number of performance commitments with ensuring all their customers' main priorities are covered.

4.3.5 Aggregation of performance commitments

At PR14 some companies adopted performance commitments which were aggregated from a number of sub-measures, many of which related to asset health. In an aggregated performance commitment a failure to reach a particular level on one sub-measure can be offset by performance on another sub-measures. As a result aggregated performance commitments do not hold companies to account as effectively as individual performance commitments on specific metrics. Aggregated performance commitments are also less transparent to stakeholders about a company's performance on a particular metric.

In our November consultation we proposed reporting requirements to increase the transparency and clarity around aggregated measures, including those for asset health. A majority of consultation respondents supported the principles of increased transparency, but did not comment on whether or not to keep aggregation.

We are proposing not to allow any aggregated performance commitments in PR19. 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. It will also increase the incentive on companies to deliver against their commitments.

We acknowledge that C-MeX, the DWI's Compliance Risk Assessment and AIM involve aggregation to some extent. However, these are distinct cases because they aggregate together very similar elements (customer surveys, water quality compliance failures and different abstraction sites) rather than different measures and so hold companies to account for performance on a particular issue. They are also produced by, or under guidance from, regulatory bodies after consultation with stakeholders so customers can have confidence in their design.

4.3.6 Stretching performance commitment service levels

Performance commitment levels are just as important as the commitments themselves. We confirmed in the outcomes consultation that we expect companies to set performance commitments for the five years from 2020-21 to 2024-25, but also to support these with long-term projections for at least a further ten years. If we take forward a three-year price control for residential retail activities (see the Targeted controls, markets and innovation: retail controls chapter) the performance commitments for that price control would apply from 2020-21 to 2022-23 with long-term projections after that.

The first element of setting performance commitments is **setting the initial service level**. At PR14 companies forecast their initial service level for 2014-15, the year before the 2015-20 performance commitments applied. There were a number of cases in which a company outperformed its 2014-15 initial service level in that year, which made its performance commitments for the period less stretching than expected. This might have reflected companies making early progress on their performance commitments, but it could also mean that the initial service levels were set too generously for companies.

At PR19, we expect companies to forecast appropriate initial service levels (2019-20) and for CCGs to challenge companies on their proposals. We will scrutinise the initial service levels closely at PR19 and we will intervene when assessing business plans if we consider them too undemanding.

At PR14, we guided companies to set performance commitment service levels using cost-benefit analysis that set the service level at the economically efficient level[19]. Companies engaged with their customers to understand their priorities and their willingness to pay (WTP) for improvements to the services they receive. Companies mainly used stated preference WTP surveys. In some cases, companies found it difficult to obtain robust data and the wide variation in reported WTP values across companies also cast doubt on the robustness of the data. Our Customer Engagement Policy Statement and Expectations for PR19 responded to this concern by encouraging companies to use a wider variety of customer engagement methods in addition to stated preference WTP.

We propose that:

- companies should use alternative and complementary information to stated preference WTP surveys, such as revealed preference information, information gained from experiments and evidence obtained through day-to-day contact with customers;
- companies should challenge the level of stretch in their performance commitments against a range of approaches including, but not limited to, the approaches in the table below; and
- they should do this in a proportionate way – for example, giving more priority to performance commitments with high-value ODIs.

[19] Where marginal benefit (measured by marginal willingness to pay and marginal other benefits) intersected marginal cost.

We worked with Frontier Economics to develop the approaches to setting performance commitment levels set out in the table that follows. We have published their report alongside the PR19 methodology consultation document.

Table 4.4 - Approaches for assessing performance commitment levels

Approach	Description	How the approach can be used
Cost-benefit analysis	Companies identify and understand their marginal costs, customers' marginal willingness (using a wide range of customer information) and other marginal benefits, so that the service level is set at the most economic level of service.	Companies should take into account wider customer information than just marginal stated preference WTP. They should also take into impacts on the environment, biodiversity and natural capital where appropriate. Companies should challenge themselves about whether the cost information they use makes sufficient allowance for improvements in the future.
Comparative information	Companies can use robust comparative information on other companies' performance (and sometimes other sectors') to inform their performance commitment levels	Where comparative information exists companies should use it. Companies should use a forecast of upper quartile performance in 2024-25 for their commitment level or justify why they have not done so.
Historical information	Companies have information on their previous performance for many of their proposed performance commitments and can use this to inform their commitment levels.	Companies can use information on their best past performance and performance improvements to forecast a rate of future improvement and apply that to their proposed performance commitment levels.
Minimum improvement	Companies can consider a minimum improvement based on improvements seen in the past or forecast technological improvements and use this to inform their commitment levels.	An example of this might be proposing a 20% minimum improvement.
Maximum level attainable	Companies can work out the maximum possible level of performance as the reference point for setting the performance commitment level.	Companies can present a plan to achieve the maximum possible level over time or justify performance relative to the maximum, rather than taking the status quo as the initial commitment level.
Expert knowledge	Companies may have expert knowledge about possible improvements that are not captured in comparative or historical information, such as information from engineering models.	Asset health performance commitments might be informed by engineering expertise and/or models about what improvements can be made in the future.

CCGs will report on whether companies have used the above approaches as well as a wide set of customer information, to propose stretching performance commitment levels. CCGs will also report any other approaches companies have used. We will

intervene if we consider there was not sufficient customer engagement or scope for challenge in setting the performance commitment levels.

4.3.7 Stretching service levels for the common performance commitments

We want companies to engage with their customers on the appropriate performance commitment levels for the common performance commitments. We propose that companies use as many of the approaches as applicable in table 4.4 to set stretching performance commitment levels for their common performance commitments and any other they consider are appropriate.

However, the common performance commitments are of particular importance to all customers and are supported by good quality comparative information. Therefore we expect for a number of the common performance commitments that companies should propose their commitment levels to be at least the forecast upper quartile in 2024-25.

We also expect companies to meet their performance commitment levels in the first year and therefore they should not incorporate any transition period (or glide-path) to reach their stretching performance commitment level. Companies will still need to provide projections for the common performance commitments for a further ten years after 2024-25 as explained above.

The common performance commitments which we consider this approach should apply to, because there are no strong reasons why we should not expect companies to achieve the same level of performance, are:

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

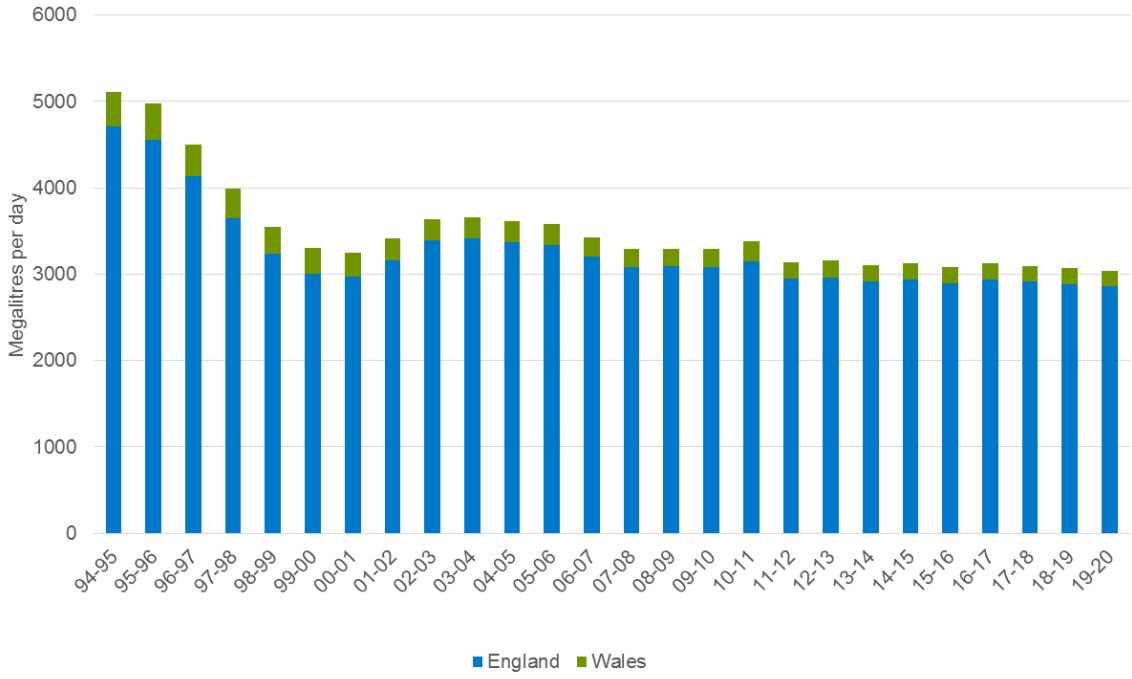
We invite views on an alternative option in which the performance commitment levels for the common performance commitments are updated during 2020-25 to ensure they reflect improvements in upper quartile performance over time. See Appendix 2 on Delivering outcomes for customers for more detail.

During our initial assessment of plans, we will review how well companies' proposed performance commitment levels meet our expectations.

4.3.8 Stretching levels for leakage performance – a common commitment

Leakage targets and performance commitments have historically been set in relation to the sustainable economic level of leakage (SELL[20]). However, we, the Environment Agency (EA) and Natural Resources Wales (NRW) are concerned that SELL is not driving companies to become more efficient in how they tackle leakage. In 2012, we commissioned Strategic Management Consultants (SMC) to review SELL. They found that SELL does not give companies an incentive to significantly reduce leakage over the long term. We provide a summary of their findings in Appendix 2 on Delivering outcomes for customers.

Figure 4.3 - Total leakage in England and Wales, 1994-95 to 2019-20 in megalitres per day (projected performance for 2016-17 to 2019-20)



The industry reduced leakage considerably in the late 1990s. However, since 2000, leakage levels have declined at a much slower rate in Wales and have stabilised in

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

England. In 2015-16, all companies achieved or outperformed their leakage performance commitments, which might suggest they were not sufficiently stretching.

In our November consultation, we invited views on our proposals to improve the way companies set their leakage performance commitment levels. We received a variety of responses. Several respondents argued we could challenge companies to be more ambitious on leakage and this fits with the views of SMC and the environmental regulators and the evidence on company leakage performance in 2015-16.

Our proposed approach is in line with the UK Government draft strategic priorities. The UK government's draft strategic policy statement states: "We expect Ofwat to promote ambitious action to reduce leakage and per capita consumption, where this represents best value for money over the long term".

The following table sets out our proposed approach to leakage performance commitments. It is very close to the proposal in the November outcomes consultation, but includes some further challenges to encourage more stretching performance commitments.

Proposed approach to setting leakage performance commitments

Leakage levels will be reported on a consistent basis[21] in megalitres a day using a three-year average. Companies should justify why they have adopted a whole company commitment level or a regional commitment level for leakage.

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

- take account of the view of their customers, local stakeholders and CCGs;
- relate to their water resource management plans (WRMPs);
- relate to their SELL, including the upper and lower limits;
- take into account the future value of water, water trading and resilience;

[21] As stated above we are aware that some companies need to make changes to how they collect performance data to align to the new leakage definition and that in some cases, it will take some time to have 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 'delivering outcomes for customers' tests in the initial assessment of plans.

- take into account the additional benefit that reducing leakage can have in encouraging customers to reduce their water usage; and
- take into account the expected improvement and innovation in the efficiency of reducing leakage.

Companies should set stretching leakage performance commitment levels to:

- achieve forecast upper quartile performance (in relation to leakage per property per day and leakage per km of main per day) where this is not being achieved – or justify why this is not appropriate;
- achieve ambitious leakage reductions. Companies will need to achieve the following minimum reductions or justify why not:
    - at least a 15% reduction (one percentage point more than largest reduction commitment at PR14); and
    - largest actual percentage reduction achieved by a company since PR14;
- justify their performance commitments relative to the minimum level of leakage achievable.

Companies should also consider how to innovate in reducing leakage. They could include an enhanced reward in their ODI to incentivise a major improvement in leakage performance, for example.

We expect proposed performance commitment levels for leakage to be informed by customer views on leakage.

Our proposed approach to leakage allows flexibility for companies. Companies can make the case for smaller leakage reductions where they can provide convincing evidence that larger leakage reductions would not be beneficial to customers.

There are more details on our approach to setting leakage performance commitment levels in Appendix 2 on Delivering outcomes for customers.

4.3.9 Other ways to develop a challenging set of performance commitments

We encourage companies to consider other ways of making performance commitments more challenging at PR19. This could include setting bespoke performance commitments for innovative measures that genuinely challenge a

company and lead to significant changes in operating practices or culture for the benefit of customers or environment.

A company could also develop a broad package of performance commitments that represent a stretching challenge across a wide range of the company's services and a number of price control areas. Another option is that performance commitments are jointly owned, so that companies work together to achieve the best, lowest cost or most sustainable outcome for a catchment.

4.3.10 Transparency of performance commitments

In our November consultation, we consulted on a range of proposals to promote more transparent performance commitments at PR19. There is information on our minded to decisions in this area in section 4.6.

4.4 Proposals for outcome delivery incentives

In the previous section, we set out a package of measures that should lead to companies committing to more stretching service levels for their customers. Incentives can help to ensure that companies deliver for customers – penalties if they do not deliver the committed service to their customers and where appropriate, rewards for going beyond the stretching committed service level and delivering additional value to customers.

We want to build on the early success of the ODI framework for PR19, and have consulted on a number of ways to do this, including strengthening ODIs. This section covers changes to the financial strength of ODIs, as well as changes to enhance the impact on companies' reputations, proposals on in-period ODIs and whether ODIs should impact on revenue or RCV. We expect all of this to sharpen companies' focus on service delivery and provides incentives to innovate and improve services levels for all customers well beyond what customers experience today.

We continue to believe that rewards and penalties are important elements of the outcomes framework. Rewards and penalties, where supported by customer engagement, align customer, management and shareholder interests by increasing focus on delivering improvements in services that customers care about. They also reward shareholders for the additional effort and risk-taking needed to deliver stretching performance improvements.

Our proposed measures will mean that an average company with average performance would expect to incur penalties on its ODI package, rather than rewards. However, we note that early evidence from PR14 shows that companies are able to offset the expected asymmetry of ODI returns by outperforming on their performance commitments. Our approach means that companies that do not deliver stretching levels of service for customers will incur net ODI penalties, but companies are able to manage this risk by ensuring they deliver for customers.

Some companies might respond strongly to the increased incentives and significantly improve their service performance, beyond what has been achieved by any other company. In these cases, customers might see higher bills than otherwise to pay for companies' ODI rewards in return for which these customers, will benefit from considerable improvements in service. Linking a higher proportion of revenue to in-period ODIs could also increase bill volatility, although this will depend on a range of factors such as inflation and the way companies set charges. Similarly, a high level of penalties will result in lower bills than otherwise would be the case. We propose companies must set out how they will manage bill volatility in their business plans. If required, we can intervene to ensure companies adopt appropriate bill smoothing.

This section covers our proposals for strengthening outcome delivery incentives as follows:

- strengthening **reputational incentives**;
- bringing **ODI payments closer in time to the service performance that generated them** by increasing the use of in-period ODIs, and by expecting companies to link rewards and penalties to revenue rather than the RCV;
- encouraging **enhanced rewards** for companies that make a real improvement in performance, and introducing **enhanced penalties** for very poor performance;
- **linking a higher proportion of revenue to service performance** through a greater onus on financial ODIs, removing the RoRE cap on a company's ODI package (±2% of RoRE) and setting an indicative range for ODIs of ±1% to ±3% of RoRE; and
- setting out our expectations for **penalties for asset health** performance commitments.

4.4.1 Reputational ODIs

All performance commitments are accompanied by reputational ODIs. A key benefit of these is that, by reporting on their performance to customers and CCGs, companies have the incentive to fulfil their performance commitments to customers.

Companies publish their performance results and submit their Annual Performance Reports (APRs) to us in July. We, and the sector, are already increasing the impact on reputation of the existing ODIs through the increased transparency and discussion around the publication of APRs, as well as through improvements to the Discover Water dashboard.

Most respondents to our November 2016 consultation believe that the reputational impacts of ODIs are important and think that we can strengthen existing channels, particularly Discover Water. We consider there are three main ways in which we can enhance the reputational impact of ODIs at PR19.

- **Initial assessment of plans test** – we expect companies to propose approaches for their reputational ODIs in their business plans. We will assess the quality and ambition in companies' reporting on ODIs, including how they plan to increase the 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 on reputation of their ODIs. For common performance commitments, this could involve league tables of performance, perhaps delivered through Discover Water, with forecasts of upper quartile performance to show the stretch companies can achieve. For bespoke performance commitments, companies could provide information on past performance and/or stretching forecasts of performance.
- **Link to financial ODIs** – our proposals to increase the financial strength and timeliness of ODIs will increase the stakeholder and media focus on ODIs, increasing their impact on a company's reputation.

4.4.2 Bringing ODI payments closer in time to service performance

Bringing the financial impact of an ODI closer in time to the performance that generated it focuses management and improves the accountability of companies to their customers. It also ensures that rewards and penalties related to current performance are not paid for, or received by, future customers. We are consulting on achieving this through further use of in-period ODIs and linking end-of-period ODIs to revenue rather than the RCV.

In-period ODIs

In-period ODIs are reconciled each year rather than at the following price review. For companies with in-period ODIs in this price control period, for example, performance

for 2016-17 will be reconciled in December 2017 and payments will be applied through the 2018-19 price controls.

In November 2016 we consulted on our outcomes proposals. Most respondents agreed that there would be benefits in bringing rewards and penalties closer in time to the performance than generated them. At the same time, we also consulted on licence changes that enable all companies to have in-period ODIs. All companies have now accepted this change to their licence. There is a summary of these changes in Appendix 2 on Delivering outcomes for customers.

We want companies to strengthen the incentives for improving service performance by increasing the number of in-period ODIs. For PR19, we propose that:

- companies should adopt in-period ODIs as a default for all their ODIs and will need to justify why an in-period ODI is not appropriate against the criteria set out in Appendix 2 on Delivering outcomes for customers;
- all the common performance commitments should have in-period ODIs attached to them with the exception of the two resilience common performance commitments because they are at relatively early stages of development;
- companies will need to explain their overall balance between in-period and end-of-period ODIs in their business plans;
- companies must set out how they propose to manage bill volatility over the period to limit undue bill volatility; and
- we will set out our process for assessing in-period ODIs for PR19 in an information notice, learning from the 2015-20 experience. We will ensure that this approach is proportionate and transparent.

If a company proposes not to apply an in-period ODI, it will need to justify, with evidence, why this would not be in customers' interests. It will need to explain why future customers should pay for, or benefit from incentives, related to the service performance affecting current customers. The evidence should include customer research and the views of CCGs. Alternatively, a company would need to justify why an in-period ODI would not be appropriate to incentivise improved performance for customers, for example a performance commitment that relates to a long-term objective or cases where in-period ODIs might limit the company's ability to innovate.

End-of-period ODIs linked to revenue

As with in-period ODIs, linking end-of-period ODIs to revenue rather than the RCV brings rewards and penalties closer in time to the performance that generated them and strengthens the incentive for companies to fulfil their service commitments to customers. At the moment, 28% of ODIs are linked to the RCV rather than revenue.

Adjustments to the RCV can take more than 20 years to have their full financial effect on a company, which means that the impact of current performance is felt far in the future when the customer base will have changed considerably.

We propose that end-of-period ODIs, by default, should be linked to revenue unless companies can justify, and provide evidence, why this should not be the case.

Some companies currently re-invest their ODI penalties in their businesses rather than paying them directly to customers. In line with our views above, we also consider that adjustments to revenue are more appropriate than ODI penalties being applied through re-investment, as they have a stronger reputational impact.

4.4.3 Enhanced rewards and increased penalties to drive step changes in performance for customers

Introducing innovative ways of delivering services is beneficial for customers. The sector will also need to innovate to address the challenges facing the sector, such as population growth and climate change.

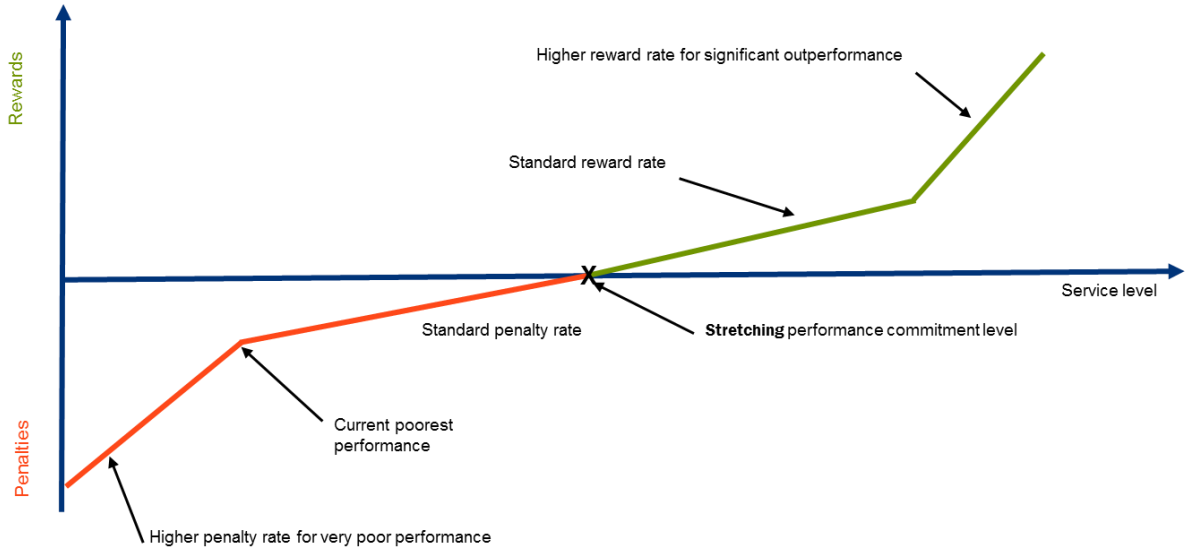
However, calculating rewards and penalties based purely on customer valuations does not take into account the wider benefits that customers should obtain from shifts in performance that set a new benchmark for industry performance.

We propose to incentivise companies to improve performance beyond the best level currently achieved by any company. This is likely to involve innovation and risk taking by companies as they seek to drive up their performance. We are encouraging companies to propose higher rewards for very high levels of performance for their common performance commitments. We can then set new improved performance levels in future price controls to benefit customers of all companies. This mimics the dynamic effects of a competitive market in improving customer service.

The threshold for the enhanced rewards should be set at the performance level of the current leading company, or preferably higher. The enhanced reward would compensate companies for the extra effort and risk involved in delivering a major improvement in the sector’s performance.

We would expect the enhanced reward rate to be accompanied by an enhanced penalty rate for below-standard, poor and unacceptable performance. This would protect customers in case companies took unreasonable risks in a bid to achieve high performance and ended up with very poor performance.

Figure 4.4 Illustration of proposed enhanced reward and penalties at PR19



Enhanced rewards and penalties are only appropriate for the common performance commitments with established metrics so that customers, CCGs and we can be more certain that the enhanced reward threshold truly represents frontier-shifting performance.

One of the key benefits of shifting the frontier is that customers of all companies benefit when service levels are improved. For this to happen, there needs to be knowledge sharing within the industry to enable the other companies to learn from the leading companies. Companies proposing enhanced rewards and penalties should explain in their business plans how they plan to achieve their service improvements and how they will share any success with the industry during the price review period. Receiving the enhanced reward will depend on whether the company has a credible plan for sharing its approach with the sector.

We are inviting comments on these proposals and there is more detail in the Appendix 2 on Delivering outcomes for customers.

4.4.4 Linking a higher proportion of revenue to service performance

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

Based on the experience so far in PR14, we are beginning to see the power of financial ODIs in improving service performance. We consider there is now scope to further incentivise companies to innovate in service performance, where customers support this. We also see scope to sharpen the incentives for underperformance and we consider this should be reflected in the range of returns for over- or under-performance in 2020-25.

Our proposals for linking a higher proportion of revenue to service performance are as follows.

- **A greater onus on financial ODIs**
  At PR14, just over half of ODIs had financial rewards and penalties. Most respondents to the November 2016 consultation agreed that the overall proportion of financial ODIs should increase, but felt that this should be done on a case-by-case basis. At PR19, we propose that companies should justify, with supporting evidence, whenever a performance commitment is not supported by a financial ODI. This will help ensure that companies are suitably incentivised to meet their performance commitments to customers.
- **Removing the RoRE cap on ODIs**
  At PR14, we specified an overall range for ODI rewards and penalties of between ±1% and ±2% of RoRE, with a cap and collar set at ±2%. We are consulting on removing the RoRE cap and collar imposed at PR14 to give companies an opportunity to put forward higher rewards and penalties, where customers support this.
- **Setting an indicative RoRE range for ODIs**
  We propose an indicative range for the size of companies' ODI rewards and penalties of ±1% to ±3% of RoRE at PR19. The lower half of the range is consistent with the guidance we gave at PR14. The upper end 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 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 symmetric. This is because the availability of rewards and penalties will be informed by customer engagement and some ODIs will likely be penalty-only. Additionally, commitments set at upper quartile levels will require companies to deliver stretching performance for rewards to be achieved. Furthermore, we may limit the ODI rewards from bespoke performance commitments for a company categorised as being under significant scrutiny in the initial assessment of plans, as we will have limited assurance of the stretching nature of their commitments for bespoke outcomes.

4.4.5 Penalties for poor asset health performance commitments

At PR14 we had to intervene during the determination process for three companies because their proposed penalties associated with not achieving their asset health performance commitments were too low. In addition, because we allowed companies to adopt innovative bespoke approaches to asset health, it was difficult for stakeholders to identify the scale of penalties associated with companies' asset health performance commitments, because those ODIs relating to asset health were not clearly identified.

We are proposing for PR19 that, in line with our approach to ODI rewards and penalties generally, companies should set their asset health 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 us how their asset health penalties (and any rewards) relate to their past performance and the asset health challenges they face. Companies should report their proposed asset health penalties as a percentage of RoRE so that they are comparable across companies. This will provide clarity on whether companies are sufficiently incentivised to maintain their asset health. We will intervene to increase the asset health penalties at PR19 if we consider the proposed penalties are too low compared across companies and compared to the level needed to incentivise a company to deliver asset health.

In the November consultation we invited views on when ODI rewards might be appropriate for asset health performance commitments. Respondents generally did not support ODI rewards for asset health because they felt customers would not support them and that companies were trying to achieve stable asset health rather than large improvements. We suggest that companies can only propose rewards for asset health performance commitments if they can show there are benefits to customers and have customer support for improvements.

4.4.6 ODI design

We are consulting on a number of other areas of more detailed ODI design. We discuss these fully in Appendix 2 on Delivering outcomes for customers. Our main proposals are as follows.

- **Averaging** – we propose that companies use annual data for their performance commitments, as these are clearer for customers. However, in the case of

leakage, a three-year annual average is appropriate to encourage companies to focus on a downward trend for leakage performance.

- **Deadbands** – we are discouraging companies from proposing deadbands because they remove the incentive for companies to improve their performance.
- **Caps and collars on individual ODIs** – we are proposing to remove the overall cap on ODIs. However, companies can propose reward caps and penalty collars on individual ODIs if supported by their customer engagement. In doing so companies will need to consider the costs of such caps and collars, which include reducing the incentives for companies to improve their performance near, at and beyond the cap and collar. There are benefits of such caps and collars, which include avoiding the exposure of companies and customers to unlimited rewards and penalties on individual ODIs and allowing companies to have higher reward or penalty rates focussed over a smaller performance range. Individual caps and collars are also likely to be more appropriate where data quality is lower or there is less comparative or historical information on performance.
- **Gated ODIs** – We have considered whether there is a case for “gated ODIs”, where earning a reward on one ODI depends on the performance on another ODI. A benefit of gated ODIs is that they avoid a situation in which a company performs very poorly on one or more performance commitments, but still earns rewards for good performance on other commitments. However, gated ODIs can reduce or distort the incentive for companies to improve their performance to the detriment of their customers. For example, if a company was performing poorly on sewer flooding it might not lead to the best outcomes for customers to then remove the company’s incentive to improve its performance on leakage or supply interruptions. We are therefore discouraging the use of gated ODIs. However, we believe companies need to take a responsible attitude to claiming ODI rewards when they have performed poorly in some areas - some companies have already chosen not to take their full ODI rewards for this reason. Where a company has performed so poorly on a performance commitment that it might be in breach of its duties we can consider using our enforcement powers.
- **Common ODIs** – we are not proposing ODIs that are the same for all companies (“common ODIs”), so that companies can set their ODIs based on their customer engagement. However, if companies’ proposed ODIs for the common performance commitments vary widely, and this is not supported by good evidence, we will consider intervening to protect customers’ interests by ensuring that ODIs have a robust basis and that customers are not exposed to risk from outlier incentive levels.

- **P10/P90 guidance**[22] – just as at PR14, we would like companies to consider the impact of their ODI rewards and penalties by assessing the P10/P90 level. We give guidance on how to do this in Appendix 13 on Aligning Risk and Return.
- **Guidance on ODI reward and penalty setting** – we provide guidance on how to set ODI rewards and penalties in Appendix 2 on Delivering outcomes for customers. In summary, companies can base their ODI penalty and reward rates on the existing penalty and reward formulas but companies should cross check the marginal WTP input with alternative customer valuations. Companies should include future cost improvements in their estimates of marginal cost. Companies can also use other customer evidence to propose changes to the ODI penalty and reward rates calculated according to the existing formulas, provided they are well grounded in customer evidence.

4.4.7 How our ODI proposals will affect customers' bills

Linking a higher proportion of revenue to ODIs should encourage companies to improve services, within the limits of keeping bills affordable.

We expect that the performance commitment and ODI measures we are proposing will mean the average company is more likely to incur penalties on its ODIs than rewards. This is because companies will still have some penalty-only ODIs (on asset health, for example) and because performance commitments will be stretching. As a result, we expect the customers of an average company to see bills reduced by the impact of ODIs.

Some companies might respond strongly to the increased incentives and significantly improve their service performance, beyond the level of any other company. In these cases, customers might see bill increases to pay for companies' ODI rewards in return for which these customers, will benefit from considerable improvements in service. Bill impacts of all the incentives on companies are discussed in the Aligning Risk and Return chapter.

Linking a higher proportion of revenue to in-period ODIs could also increase bill volatility. We propose that companies must set out how they will manage bill volatility

[22] The P90 and P10 are points on a risk distribution. The P90 points means there is only a 10% chance that the outturn RoRE will be above the threshold provided.

in their business plans. If required, we can intervene to ensure companies adopt appropriate bill smoothing.

Companies will need to take account of the impact of ODIs on affordability, as explained in the Addressing affordability and vulnerability chapter.

4.5 Two new customer experience measures

Levels of trust and confidence in public water and wastewater services are highly affected by customers' interactions and experiences with their water companies. We introduced the SIM in 2010, which incentivises water companies to provide excellent customer service to residential customers. We discussed eight aspects of the new customer experience measure in the November 2016 outcomes consultation. Following on from this, we propose to replace the SIM with two new customer experience measures. These are described below.

4.5.1 The case for change

Whilst there is wide agreement that SIM has led to improvements in customer service since its introduction in 2010, and its refinement at PR14, there are a number of reasons why it needs to change for PR19:

- The water sector has **relatively low levels of customer service satisfaction** compared with other sectors of the economy. In the January 2017 UK Customer Satisfaction Index (UKCSI)[23], the average customer satisfaction score of the 10 water companies in the index was 74.9, compared with the UK all-sector average of 77.8[24]. In addition, few water companies have achieved external standards for customer service, such as the Institute for Customer Services' ServiceMark and

[23] UKCSI is a measure of customer satisfaction in the UK. UKCSI is run by the Institute of Customer Services and is based on data from on a six-monthly online survey of consumers in 13 sectors of the economy. Further information can be found here: https://www.instituteofcustomerservice.com/research-insight/uk-customer-satisfaction-index

[24]The 13 sectors covered in the January 2017 UKCSI, ranked in order of highest to lowest were: Retail (Non-food); Retail (Food); Tourism; Leisure; Banks & Building Societies; Insurance; Automotive; Services; Transport; Public Services (National); Public Services (Local); Utilities (which includes water and energy) and Telecommunications & Media. Within the Utilities sector, water scores higher than energy.

the BSI's Customer Service Kitemark™, which are one way of improving customer service.

- Based on the 2015-16 SIM results there appears to be **convergence of SIM scores** with 13 of the 18 companies scoring within 6 percentage points of one another. This convergence can make it difficult to differentiate company performance. Whilst we welcome the improvement of those companies that are moving towards the industry's leading ones, we note the SIM does not appear to be incentivising the industry leaders to improve the performance frontier.
- SIM can **discourage companies from proactively addressing customer concerns** if this generates customer complaints that would then be penalised by the quantitative component of SIM.[25] This perverse incentive can also encourage companies to make it difficult for customers to contact them and can distort how companies use their communication channels to handle issues.
- **Customers' behaviour and attitudes around interacting with service providers are changing as technology changes**. The future incentive needs to take account of these changes, and of the opportunity they create for water companies to innovate to improve the customer experience.
- **New connections (developer services) customers continue to raise concerns about poor quality service** from water companies.

4.5.2 New customer experience incentives

We consider that the design of our new customer experience measures should:

- encourage companies to improve customer experiences and innovate;
- be simple and meaningful for companies and customers;
- be proportionate;
- be practical to implement; and
- measure performance across companies consistently, reliably and fairly.

In light of these principles, responses to the November outcomes consultation and subsequent stakeholder engagement, we propose to replace SIM at PR19 with **WaterworCX**. This is an umbrella term for a mechanism to incentivise a better

[25] The quantitative component of SIM comprises the number of written complaints and unwanted phone contacts (i.e. where the phone contact is 'unwanted' from the customer's point of view), received by the company.

customer experience for a wider range of water customers, and comprises two new measures:

- the Customer Measure of Experience (C-MeX); and
- the Developer services Measure of Experience (D-MeX).

4.5.3 Options for the Customer Measure of Experience (C-MeX)

We are consulting on three options for the C-MeX, which applies to residential customers in England and Wales, as set out in Figure 4.5, below.

Figure 4.5 – C-MeX options for consultation

	Customer service quarterly satisfaction survey via online channels, of contacts based on the handling and resolution of a recent matter or complaint	Customer experience quarterly satisfaction survey via phone, of customers who have not contacted their company	Net promoter score using monthly data submitted by companies of the net proportion of customers who would recommend their water company	Complaints volumes based on application of updated guidance (includes complaints made via social media)
Option 1	50% weighting	50% weighting	Not applicable	Reputational incentive
Option 2	40% weighting	40% weighting	Not applicable	20% weighting
Option 3	40% weighting	40% weighting	20% weighting	Reputational incentive
All options: Combined into a single C-MeX score benchmarked against an upper quartile UKCSI all-sector threshold				

Our preferred option for C-MeX is Option 1, which has the following features:

- 50% of the financial incentive is based on an online **customer service satisfaction survey of customers who have contacted their companies**. This will incentivise companies to improve their handling and resolution of customer contacts and complaints. We propose a sample size of 200 customers per company per quarter. It would also be possible to carry out this survey via text message.
- 50% of the financial incentive is accounted for by a **customer experience satisfaction survey of customers who have not contacted their company** via a telephone survey of 200 customers per company per quarter. This will incentivise companies to improve overall service satisfaction for a wider range of customers, not just those who have chosen to make direct contact with their company.

- As with SIM, both surveys will be **conducted for Ofwat by an independent third party** to ensure the process is fair and consistent across companies. Each year, the results of the two surveys will be combined, with equal weightings, into a single C-MeX score. A larger quarterly sample size for both surveys added together makes C-MeX more robust so that annual incentives can be applied.
- A **reputational incentive applied to the volume of complaints**. We will work with CCWater to modify the definition of "complaint" to include complaints made via social media, where they can be attributed to a customer. We will require companies to offer at least four communications channels, including at least two online channels, for receiving customer contacts and complaints, and we propose to apply a downwards adjustment to a company's C-MeX score if they do not adhere to this. We will publish CCWater's complaints data by company, annually, alongside C-MeX scores. Removing written complaints and 'unwanted' phone contacts from the financial element of C-MeX is intended to reduce the disincentive for companies to proactively contact and engage with their customers, as exists in the SIM, and as explained above.
- **Higher rewards of up to 12% of residential retail revenues will be available** to the best-performing companies. The collar on penalties will remain at 12% of residential retail revenues. The current reward cap is 6% of residential retail revenue. An increase in rewards will incentivise the leading companies to improve the best levels of customer experience in the sector. **The higher rewards will only be available if a company performs at or above a threshold based on the all-sector UKCSI** converted into a C-MeX equivalent. This threshold could be the upper quartile all-sector performance on the UKCSI to ensure higher rewards are only available for truly stretching levels of performance, but we will decide this during PR19 when we have new information on how stretching this threshold looks.
- We propose that the **C-MeX financial incentives are applied in-period** (reconciled for each year individually) to strengthen the incentive for companies to improve the overall experience of their customers more quickly. To ensure the annual results are robust, we are increasing the overall sample sizes for C-MeX by including the experience survey. The annual financial incentives are capped at 2.4% of retail revenues for rewards and penalties (12% of residential revenues divided by five years).
- We propose to **pilot C-MeX in 2018-19**.

There are two further options for C-MeX:

- **Option 2** reduces the weighting of the two surveys in option 1 from 50% to 40% for the financial incentive and includes a 20% weighting for complaints (but does not include the number of 'unwanted' phone contacts as SIM does). This is in response to comments from some respondents to the November outcomes

consultation that complaints are an important measure of customer service and there needs to be a financial incentive to reduce them.

We can see a good case for option 2. However, this is not currently our preferred option because we want to avoid the disincentive in the current SIM – namely that companies could avoid proactively contacting their customers in case it generates complaints.

- **Option 3** is the same as option 2 but replaces the complaints element with a 20% Net Promoter Score (NPS) component. This is because NPS is a widely used measure in other sectors. It is based on a single question that asks customers how likely they would be to recommend a particular product or service following an interaction, and is often sent by text message. NPS results reveal the proportion of respondents that would recommend a company less the proportion that would not.

  Asking a customer whether they would recommend their company is arguably a more demanding test than asking whether they are satisfied with it. In its report for us on the future of the SIM,26 Economic Insight concluded that NPS is credible and widely used but may not be suitable where customers cannot choose their supplier. We note however that it has been used in such situations in other sectors, for example in the NHS to drive service improvements from patient feedback. The report also concluded that NPS has shown evidence of unexplained fluctuations that may make it less reliable than a satisfaction survey. For these reasons, option 3 is not our preferred option.

We provide more detail on our options assessment in Appendix 2 on Delivering outcomes for customers.

[26] In 2016, we commissioned a report from Economic Insight on how best to identify, measure and benchmark customer service outcomes. This work, which we published alongside the November 2016 outcomes consultation informed our thinking about the replacement for SIM. Future Customer Service Incentive for Water, Economic Insight, November 2016.

4.5.4 Proposal for a new Developer services Measure of Experience (D-MeX)

The November consultation highlighted the importance of providing excellent service to wider water company customers, such as developer services[27] (new connections) customers and retailers. Developer services customers continue to raise concerns about poor service from some water companies. This is despite the fact that, since July 2015, Water UK has published quarterly performance results for water companies against a set of standards that developer services customers can expect for the provision of housing development infrastructure. This has encouraged improvements in the timescales for service delivery, but more needs to be done to improve the quality of customer service received.

We recognise that developer services customers have different needs and expectations, and require different services delivered to different timescales to those for residential customers. We are therefore proposing a new developer services measure of experience (D-MeX) at PR19, applied to the regulated wholesale business.

Our preferred option for D-MeX is as follows:

- setting up a **D-MeX Task and Finish Group** of developer services customers and water companies to further explore how best to develop and implement a regular **satisfaction survey that could be compared across companies**. We will focus on discussions with developers, self-lay organisations (SLOs) and new appointments and variations (NAVs) and their representatives to identify their main areas of concern. We will also work with relevant industry stakeholders;
- **ranking company performance annually** on the D-MeX;
- **applying financial rewards and penalties** for the best and worst performers in D-MeX. These financial incentives could be up to 5% of annual developer services revenue. We would like these **rewards and penalties** to **be applied annually**;
- Water UK continuing its quantitative measures. We can explore with the Task and Finish Group **whether the existing quantitative measures should be incorporated into D-MeX** in any way; and
- we are aiming to **pilot D-MeX in 2018-19**.

[27] Developer services customers consist of developers, SLOs and NAVs. Developer services customers can also be referred to as new connections customers.

We have considered three alternative options for D-MeX (and provide more detail on our options assessment in Appendix 2 on Delivering outcomes for customers):

- including developer services customers in the C-MeX. However, we do not believe this would provide sufficient incentive for companies to improve their service quality for developer services customers;
- offering financial incentives linked to the current levels of service measures companies report through Water UK. However, initial feedback from some developer services customers is that it is the overall quality of service that matters more than the specific measures achieved, even though these are important; and
- requiring companies to propose bespoke performance commitments for their developer services customers. However, we consider that a common incentive mechanism for comparing water company performance would be more powerful in incentivising companies to improve their service to developer services customers.

4.5.5 Retailers

We are not proposing to cover retailer satisfaction with wholesaler services through WaterworCX. The business retail market operates within a legal framework which regulates the behaviour of market participants, and the market is at an early stage of development so it is not yet clear what, if any, service incentive would best fit the needs of retailers. Given the limited number of retailers and the relationships between associated retailers and wholesalers, it seems unlikely that our approach for C-MeX or D-MeX would be appropriate for retailers at this point. Market Operator Services Limited (MOSL) monitors wholesaler performance and there are procedures for retailers to raise disputes about wholesalers. We will be monitoring the development of the market and will work with MOSL, retailers and wholesalers to ensure that wholesalers are encouraged to deliver good-quality customer service to retailers.

4.5.6 Customers in circumstances that make them vulnerable

One of the questions in the November outcomes consultation was whether the future customer satisfaction measure should play a part in addressing the issue of vulnerability. In light of consultation responses and further analysis, we do not propose to address vulnerability through WaterworCX. Instead, we propose to include it as an explicit part of PR19 by requiring companies to develop bespoke

performance commitments in this area, and to report against common measures of vulnerability. We will also apply qualitative vulnerability tests as part of the initial assessment of plans. See the Addressing affordability and vulnerability chapter.

4.6 Minded to decisions on the regulatory framework for outcomes for PR19

As well as consulting on the proposals set out in this chapter, we are also proposing minded to decisions on three elements of the November consultation.

Table 4.5 – Minded to decision summary for outcomes

	Minded to decisions
Transparency	We are minded to confirm our proposals to promote more transparent performance commitments at PR19 • Company performance commitments should be clear, unambiguous, complete and concise. • Companies should explain in their business plans how they will publicise their performance information during the 2020 – 2025 period to ensure it is visible to customers, CCGs and other stakeholders.
Scheme-specific performance commitments	Where companies propose any scheme-specific performance commitments, we are minded to confirm the principles and process improvements relating to them in the outcomes consultation. More detail is provided in Appendix 2 on Delivering outcomes for customers.
Early submission of performance commitment definitions	We are minded to confirm that companies will submit the definitions of their performance commitments to us on 3 May 2018, four months ahead of 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 to check for inappropriate exemptions in the definitions of bespoke performance commitments. We will provide feedback to companies on their performance commitment definitions ahead of them submitting their business plans.

4.7 Initial assessment of business plans

Based on our proposals, we will test outcomes, performance commitments, outcome delivery incentives and the focus on service performance in our initial assessment of business plans as follows:

Initial assessment tests 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. Does the company show appropriate focus on service performance in its risk/reward package?

In assessing these tests we will take into account:

- 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 its ODIs;
- a company's plans for reporting and assurance in relation to its performance commitments and ODIs;
- the proposed use of enhanced rewards and penalties and how the company will share information on how it achieved the performance improvement that earned it an enhanced reward;
- the overall acceptability of the package of performance commitments and ODIs to customer; and
- the CCG's views.

As set out in the Securing confidence and assurance chapter, we expect companies to demonstrate good assurance at all times.

4.8 Consultation questions

Q1. Do you agree with our proposals for common and bespoke performance commitments?

Q2. Do you agree with our proposals on setting performance commitment levels?

Q3. Do you agree with our proposals for strengthening outcome delivery incentives?

Q4. Do you agree with our proposed Customer Measure of Experience (C-MeX)?

Q5. Do you agree with our proposed Developer services Measure of Experience (D-MeX)?

5 Securing long-term resilience

5.1 Summary

Long-term resilience in water and wastewater supply is at the centre of our strategy for the water industry and is one of our four key themes for the 2019 price review (PR19).

Our approach to resilience supports the **four key themes of PR19.**

- It promotes includes a package of proposals designed to drive **long-term resilience**
- Our proposed resilience initial assessment of business plans tests, and resilience principles, emphasise that **customers** should be at the heart of resilience proposals
- They also set out that companies should consider the full range of resilience management options, with a view to providing the best value for customers over the long term. This helps ensure **affordable bills**.
- Finally they encourage companies to consider **innovative** approaches to resilience.

Key messages

We believe that these proposals in PR19, together with our other tools, will drive resilience in the round. This means having the right skills, the right leadership, and the right systems; as well as having a robust infrastructure.

Table 5.1 Summary Box – PR19 resilience proposals

Proposal topic	Our thinking and proposals
Resilience	We have developed seven principles which set out our expectations for resilience planning in PR19 business plans. We have proposed two specific initial assessment of business plans tests on resilience. The first relates to the identification of risks to systems and services and the second relates to the appropriate mitigation of those risks.

5.2 Introduction

This chapter sets out how we see resilience, and how we propose to enable and encourage firms to provide resilient services.

Resilience is also covered in a number of other chapters in this document. Chapter 4 set out how the performance commitment and outcomes framework could be enhanced to further operational resilience. Chapter 11 set out proposals relating to financial resilience and Chapter 13 contains proposals relating corporate resilience.

This chapter is set out as follows.

- We first set out why resilience is a key issue for us (section 5.3)
- We explain that a company's resilience has to be considered in the round, including corporate, financial and operational aspects, with customers at the heart (section 5.4).
- We propose seven principles which capture the way that companies should plan for resilience in their PR19 business plan (section 5.5).
- We also set out how we intend to assess resilience in our initial assessment of business plans tests in line with these principles (section 5.6).
- We explain how these PR19 proposals, taken in aggregate and in combination with our other regulatory tools, help drive strong financial, corporate and operational resilience (section 5.7-5.9).
- At the end of this chapter, we summarise our consultation questions on resilience (Section 5.10).

5.3 Background

Resilience is important to current and future customers. Customers expect continuous water and wastewater services, and the impact of interruptions on customers can be significant.[28] Interruptions to supply may also have negative effects on wider society, for example through the impact on the environment. It is therefore vital that we enable and encourage companies to provide resilient services.

External challenges to resilience are increasing. Climate change and population growth make it harder for supply to keep pace with demand. Water companies also face additional pressure from aging assets and the need to keep bills affordable for all. But, at the same time, there is significant potential to address these challenges using new and innovative technologies and working with customers.

[28] See, for example, Consultation on the outcomes framework for PR19, Ofwat, November 2016, page 15.

Companies have already made steps to address these issues but more could be done. For example, the water industry acknowledged the significant and growing risk of drought in a report it published in 2016. It suggested that extensive measures to manage demand and enhance supplies of water are needed to contain the risk of drought.[29]

These concerns have been reflected by Government. In 2014, the UK and Welsh Governments introduced an additional primary duty for us relating to resilience.[30]The UK Government draft strategic priorities and Welsh Government policies and draft objectives also emphasise the importance of resilience. The UK strategic policy statement stated that historically there has been insufficient investment to secure long-term resilience in some regions and that parts of the country face unacceptable levels of risk from drought.[31] These priorities and objectives, and the additional duty, make clear that companies need to focus on the resilience of their system to environmental pressures and population growth to meet customers' need for water and wastewater services in the long term. They suggested that this could be done through long-term planning and investment and by promoting efficient water use.

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.[32] These are legal obligations on the companies which they must fulfil regardless of the funding we allow water companies.

We have also sought to encourage resilience through our price reviews. For example, 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 were meeting statutory obligations. The totex cost assessment process considered and allowed funding for enhancements to resilience such as the Birmingham Elan Valley resilience project.

Following PR14, we established an independent 'task and finish' group to consider what resilience means for the water sector.[33] We set out our response to this in 'Towards resilience' published in December 2015 and subsequently consulted on

[29] 'Water resources long-term planning framework (2015-2065)', July 2016, Water UK
[30] The Water Act 2014 introduced a duty to further the resilience objective as one of our general duties under section 2 of the Water Industry Act 1991.
[31] The government's strategic priorities and objectives for Ofwat, Draft for consultation, Department for Environment Food & Rural Affairs, March 2017.
[32] Section 37 and 94 Water Industry Act 1991.
[33] Ofwat, 'Resilience task & finish group', 2015

how to better incentivise resilience through our outcomes framework. We have also recently undertaken a targeted review of asset health during PR14.

Our proposals in this chapter build on this work. We aim to encourage companies to focus on innovation and to consider innovation broadly, looking beyond infrastructure investment. We want to encourage firms to focus on the long-term, as well as the next five years. This should help secure better value for customers. We would also like companies to exploit opportunities to collaborate with partners and other water companies, and to better integrate water and wastewater resources.

We intend to continue this work by publishing further details on our expectations for resilience in September 2017. Appendix 4 sets out our progress against the Task and Finish group recommendations.

5.4 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.[34]

The Cabinet Office suggested that resilience of critical infrastructure and essential services could be secured through a four key strategic components, or 4Rs.

- 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 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.

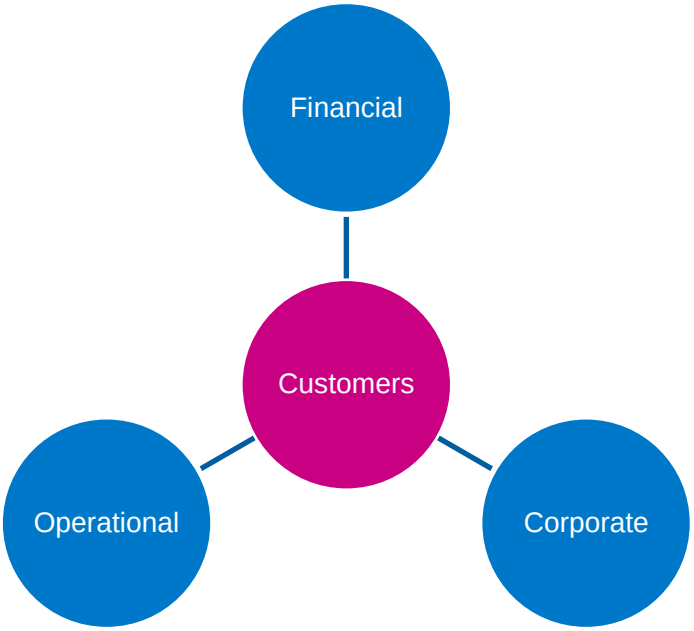
[34] Ofwat, 'Resilience task & finish group', 2015

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 the following.

- 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 its business operations.
- Financial resilience: an organisation’s ability to avoid, cope with, and recover from, disruption to its finances.
- 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.

These factors are interdependent and so effective resilience requires companies to consider their systems as a whole, taking into account the relationship between different aspects of their business. Effective resilience means not only considering the next five-year period, but also looking well beyond that.

Figure 5.1: Resilience in the round



5.5 Resilience planning principles

We have developed a set of principles which clarify our expectations for resilience planning in PR19 business plans. These build on the principles proposed in our outcomes consultation (included at Appendix 4).[35]

The responses to our outcomes consultation were generally supportive of the principles it proposed. However, one response expressed concern that the principles did not sufficiently distinguish risk (the possibility of an adverse stress or shock taking place) from resilience (the ability to maintain service and recover from any disruptions).[36] We have, therefore, amended the principles to distinguish more clearly between risk and resilience, and to clarify the relationship between the two.

Another response suggested an additional principle. This principle would focus on ensuring the resilience of the natural environment and ecosystems on which their operations depend.[37] We agree with this suggestion and have included a further principle emphasising the role of the environment in sustaining the resilience of systems and services.

We have also updated the principles to be clear that resilience means 'resilience in the round', and for the long-term.

Our revised proposals for 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 corporate, financial and operational aspects of their business. This assessment should consider short, medium and long-term risks.

[35] Consultation on the outcomes framework for PR19 consultation on the outcomes framework for PR19, Ofwat, November 2016
[36] Response from the Centre for Water Systems at the University of Exeter
[37] Response from Blueprint for Water (an environmental NGO coalition)

Principle 2: A naturally resilient water sector
Resilient ecosystems and biodiversity underpin many of the key services provided by companies. This should be considered as part of the decision-making process for ensuring resilient services, as far as this is consistent with companies' role as providers of water and wastewater services.

Principle 3: Customer engagement
Assessments 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 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 (such as transfers and cross boarder 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 The initial assessment of business plans – tests

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, companies' resilience will contribute to our decision on categorisation of company plans and so whether companies receive reputational, procedural or financial rewards.

We will consider companies' approach to resilience planning by applying the following two tests.

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 risks and consequences of disruptions to its systems and services and engaged effectively with customers on the risks and consequences?
2. How well has the company objectively assessed the full range of mitigation options and chosen the interventions that represent the best value for money over the long term and 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. Our September 2017 document will contain further details on our expectations for resilience.

5.6.1 Initial assessment of business plans test 1: evidence to assess and prioritise risks to resilience

In line with Principle 1, we expect companies to look at resilience in the round and consider the long term as well as the next five-year period. It will be important that companies undertake forward-looking appraisal across key service areas. These should include a robust, objective, comprehensive and quantitative assessment of the risks they face as an input into their business plans. This should range from risks associated with infrastructure to those associated with systems, processes and people. It should also consider hazards and threats, such as cyber security, flooding and disruptions to energy supplies. In all cases, firms should use best available evidence to assess these risks. We will consider the extent to which these are supported by sophisticated and global best practice techniques to understand and appraise uncertainty.

One approach, proposed by United Utilities considers possible points of failure across the organisation relating to operational, corporate and financial resilience.[38] It gives each possible point of failure a risk score which relates to the likelihood of a bad outcome occurring, the vulnerability of the system to that bad outcome, and the consequences to consumers of it going wrong. It then considers the extent to which the risk to consumers has been mitigated by each of the "4Rs". This could be used to prioritise key threats where further mitigation may be beneficial and results could be published to provide greater transparency on resilience to stakeholders.

In line with Principle 2, the risk assessment should consider the resilience of the ecosystem. Firms should have regard to the wider costs and benefits to the economy, society and the environment, including the sustainable use of natural capital – that is, our natural assets such as rivers and groundwater.

We will assess the extent to which customers are at the heart of the process throughout, in line with Principle 3, including the extent to which accurate and high-quality comparative data facilitates informed choices. 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. Our policy statement recognised that companies' engagement with their customers on the resilience of their systems and services will require better quality comparative data. It also said companies will need to work with customers to co-create and co-deliver resilience. We consider these issues in more detail in Chapter 2.

5.6.2 Initial assessment of business plans test 2: Resilience mitigation options that represent best value for money over 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.

In line with the Cabinet Office's 4Rs, resilience mitigation should not only outline solutions to ensure resilience, reliability and redundancy, but also cover solutions to

[38] Measuring resilience in the water industry, United Utilities and Arcadis, June 2017

enhance response and recovery. This will minimise the impact on customers if there were to be a shortfall in resilience.

In line with Principle 2, when mitigating risks it is critical that companies actively involve their customers, as it is the impact of resilience on customers that is important. It is therefore crucial that customers understand the risks they face, and actively buy into potential mitigations; particularly where these might involve higher bills or a change in the level of service they receive.

5.7 Operational resilience

Our PR19 proposals, in combination with other tools, will incentivise strong operational resilience.

5.7.1 Wider regulatory tools

There is a range of statutory requirements to help ensure operational resilience, particularly for water resources. Companies have a statutory duty to produce WRMPs. This is a plan for how the company will manage and develop water resources so as to be able, and continue to be able, to meet its water supply obligations. We will work closely with the EA and NRW to provide input on WRMPs. Companies also have to produce drought plans which set out the operational actions a company will take to make sure there are supplies during periods of drought.

We expect improvements in long-term water planning for PR19. Specifically, we expect companies to integrate the development of their WRMPs into their business planning[39]. We also expect them to take account of outputs from regional planning groups such as Water Resources South East and Water Resources East. This wider perspective will be particularly important to ensure best value for customers in the long term with respect to cross-company, regional and potentially national options.

There is no equivalent to the WRMP process for wastewater services, although the drainage strategy framework[40] and the current work of the 21st Century Drainage

[39] See the extract of our joint letter to water companies, accompanying the draft WRMP guidance, on p23 of Water 2020: Regulatory framework for wholesale markets and the 2019 price review, Ofwat, December 2015

[40] Drainage Strategy Framework: Good practice guidance commissioned by the Environment Agency and Ofwat, Halcrow, May 2013

Board do provide context and guidance for forward planning. Nevertheless, resilience planning for the long term in wastewater service provision is less developed and less transparent to stakeholders than water resources. Companies should take the lead on enhancing long-term wastewater planning. Companies should engage with stakeholders and ensure that they bring forward well-developed, long-term wastewater plans to support their business plans.

5.7.2 PR19 proposals

We address operational resilience in PR19 by our approach to the initial assessment of business plans and by our approach to targeted controls, markets and innovation, delivering outcomes for customers and securing cost efficiency.

Our approach to the initial assessment of business plans will help promote operational resilience. The initial assessment of business plans tests will include assessing companies' assurance around long-term operational resilience, including their approach to asset health (see also Chapter 13). The assessment of risk should be comprehensive, including having detailed and accurate information on the state of assets, to ensure that customers are not unknowingly exposed to significant risks.

We will also consider the extent to which the company has developed new and innovative approaches to risk management and mitigation, including but not limited to the role of infrastructure investment. These approaches will need to include solutions that extend beyond traditional boundaries. Such solutions may encourage customers to change their behaviour through smart customer engagement. They are likely to include partnerships and catchment working. For example, water companies may work with other partners, such as local farmers, to decrease pollution and so reduce water treatment costs.

We will also consider companies' approach to technological and other forms of innovations. Rapid technological change means that there are real opportunities to improve asset performance, customer information, leakage management and efficiency.

We will take account of companies approach to collaboration and integration in their business plans. We will 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 or at a regional level or even national level

(for example on public campaigns to promote water conservation). We will also expect companies to work more effectively to integrate water resources and drainage management.

The focus on the long term should also include firms identifying and addressing possible skills gaps in the future. One report on the energy and utilities sector, including the water and wastewater sector, estimates that a third of vacancies are "hard-to-fill" and over 220,000 new recruits are required by 2027.[41] Companies therefore need to ensure that they have continuity plans, including by transferring knowledge and increasing diversity. We expect companies to work effectively with other companies and wider utility sector to address issues.

Companies should consider how they can effectively utilise options beyond their boundary to mitigate risks in its own area (and to consider whether they can support long-term resilience beyond their boundaries). In particular, we expect more use of markets to help ensure resilience. For example, we are promoting markets in bioresources and water resources. Our proposals to promote water trading and bioresource will increase the diversity of water sources and bioresource processing capacity a company can draw on, reducing the risk of a single point of failure and dependence upon resources or processing in a particular area. Water trading will also increase the options available to deal with long-term pressures, such as population growth and climate change. Interconnectivity with companies, between companies and with third parties will improve the resilience by allowing companies to target abstraction in areas of low environmental impact – for example, when flows are low.

As set out in Chapter 4, resilience will also be supported by our proposals to improve the outcomes framework. We propose that all companies measure, and are incentivised on, certain critical service failures, such as internal sewer flooding and supply interruptions, as well as four asset health metrics. These common performance commitments will motivate management to identify and mitigate relevant risks to service. We expect to continue using these or similar service metrics in the future, incentivising companies to consider resilience and asset health. This will make sure they can deliver good quality services to customers in the long term. Our proposed customer experience metric will support this by incentivising firms to minimise the impact on consumers when supply is disrupted.

[41] Workplace Renewal and Skills Strategy 2020, the Energy & Utilities Skills Partnership, February 2017

We also propose to introduce two common resilience metrics which incentivise long-term resilience. Common metrics should make it easier to compare the relative resilience of different companies. We expect firms to challenge the service levels they set. Companies should also cover resilience in their bespoke performance commitments to reflect their own local circumstances and customer views.

Finally, we will allow for efficient investment in resilience through our cost assessment process, set out in Chapter 9. As set out in that chapter, we will fund proposals to enhance resilience where these: meet a need, are based on the consideration of a full range of options, are customer focused, and are cost beneficial.

When firms put forward their plans for resilience, they should also bear in mind that previous price controls funded firms to maintain serviceable assets. We will only fund activities which are additional to the investment that we would have expected them to undertake in previous periods, so that customers are not paying for the same activity twice. Where the need for investment arises because of historical shortcomings in a company's approach to resilience, we will also consider the extent to which companies have provided credible assurance that processes, structures and governance would avoid similar situations reoccurring.

5.8 Financial resilience

Our proposals for PR19 will facilitate water companies' financial resilience by complementing and consolidating our wider regulatory tools.

5.8.1 Wider regulatory tools

We regulate companies' financial resilience through, amongst other tools, their licences. For example, the licence operates to ring-fence the regulated business activities from non-regulated business activities. This makes sure customers' interests are not put at risk by activities outside our regulatory control.

Most company licences also include a requirement to maintain an investment grade credit rating – an approach that incorporates an independent assessment of financial resilience and risk. Where companies are at risk of breaching this condition, a cash lock-up applies. This prevents companies making certain payments (including dividends) outside the regulatory ring-fence.

Another tool we have introduced is the financial monitoring framework to make sure that service providers' financial resilience is consistent and transparent. We gather, analyse and report on information on the regulated companies. This gives a clear and broad view of their solvency, liquidity, and risk management. It also shows their long-term financial viability in light of anticipated investment programmes. This allows us to identify emerging risks and helps us decide when we need to intervene to protect customers' interests.

As of 2015/16, water companies were required to produce Long-Term Financial Viability Statements (LTVS), reflecting the 'UK corporate governance code' (September 2014) which requires listed companies to include a statement about their long-term financial viability in their statutory accounts. We have reviewed the LTVSs and, learning from best practice, have provided additional guidance to companies.[42]

This guidance will make sure that future LTVSs contain more detailed information about the processes company Boards have followed to determine whether companies are viable for the long term. We will continue to both monitor the quality of the LTVSs that companies produce, and provide guidance to make sure all companies' statements are clear and meet the same high standards.

5.8.2 PR19 proposals

Chapter 11 set out specific proposals for PR19. These proposals will ensure financial resilience through our assessment of a company's ability to finance its business plans. Our assessment of financeability will be carried out for the appointee with an efficient notional capital structure and an efficient level of expenditure.

Company Boards will be required to set out the level of investment grade credit rating they are targeting, and the reasons why they consider that level to be appropriate. Companies are responsible for submitting business plans, and will need to provide Board assurance that their plans are financeable. This assurance should be determined using both the notional capital structure and the company's actual capital structure.

The resilience tests in our initial assessment of business plans, set out above, focus on resilience in the round, including financial resilience and so will form part of

[42] See S3.13 of RAG 3.09 – Guideline for the format and disclosures for the annual performance report, Ofwat, October 2016.

categorisation of business plans. As set out above, we expect firms to plan beyond the next five-year period.

5.9 Corporate resilience

Our proposals for PR19 and our wider regulatory tools will help the corporate resilience of water companies.

5.9.1 Wider regulatory tools

We expect companies to meet our Board leadership, transparency and governance principles published in January 2014. These principles help secure corporate resilience by making sure that Boards can provide independent challenge. They also make sure that Boards have the right mix of skills and experience and are appropriately focused on the regulated business, rather than on other interests within a company's ownership structure.

We are reviewing these principles to make sure that they continue to reflect best practice, are up to date, and remain relevant to the challenges within the sector. We will consult on the proposed changes in due course.

Companies have requirements in their licences relating to their corporate governance arrangements. For example, the licences stipulate that companies should have adequate management resources and systems of planning and internal control. They also include the requirement for water companies to operate as if they are independent from any wider group.

Companies are also required to get certain legally binding undertakings from the bodies that ultimately control them. These undertakings include controlling bodies not doing anything that would cause the regulated company to breach any of its obligations.

Keeping to these licence requirements will help make sure that water companies can operate independently. This means they will be resilient to impacts from the wider corporate environment in which they operate.

We also require companies to provide risk and compliance statements in their annual performance reports. Company Boards should confirm that the company has appropriate systems and processes in place to allow it to identify, manage, mitigate and review its risks as part of these statements.

The requirement to provide these statements should help Boards make sure that the correct systems and processes are in place, making the company more resilient.

5.9.2 PR19 proposals

Our PR19 methodology will support our wider regulatory tools by incentivising corporate resilience through our initial assessment of business plan tests.

Good corporate governance processes are critical to having confidence in a water company's business plan and its ability to deliver its plan. In line with our regulatory approach, we expect companies to own their plans, and company Boards to provide suitable assurances around those plans. To reflect this, we have created initial assessment tests on Board assurance (see Chapter 13). This includes testing Board assurance on business plans, data tables, and the future delivery of statutory requirements and licence obligations.

The confidence that we will have on those assurances will, in part, depend on the quality of past assurances and performance. We have therefore included initial assessment tests on the 2018 company monitoring framework and company performance over the 2015-20 period. We are emphasising the role of corporate governance in the initial assessment of business plans test, set out above. Good and resilient corporate governance will be critical to the delivery of these tests.

5.10 Consultation questions

Q1. Do you agree with our resilience planning principles?

Q2. Do you agree with our approach to assessing resilience in the initial assessment of business plans?

6 Targeted controls, markets and innovation: wholesale controls

6.1 Summary

This chapter outlines our approach to setting revenue controls for wholesale activities, including:

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

We build on our May 2016 decision document, which set out a number of key decisions for the wholesale revenue controls to be set at PR19. For the purposes of this chapter, 'wholesale activities' are those functions of a water company's appointed business that are not designated as retail activities.

Our approach to wholesale controls supports the **four key themes of PR19:**

- our proposals will ensure companies are incentivised to deliver frontier-shifting performance on **customer service** and **affordable bills** through targeted controls that each align company and customer interests;
- we will promote **long-term resilience** by expanding the scope of bioresources and water resources service providers; and
- we will incentivise **innovation** by promoting markets in areas of wholesale service provision.

Key messages

- Our approach will protect customers, through better targeted regulation; and create value through wholesale markets where appropriate.
- We will continue to set wholesale price controls using a building block approach.
- Our aim is to promote a greater role for markets in water resources and bioresources services, creating opportunities for companies to look beyond traditional company boundaries and their own in-house solutions to meet the long-term needs of customers.

Table 6.1 Summary box – PR19 proposals for wholesale revenue controls

Control	Our proposals
Overall approach to wholesale revenue controls	Set revenue controls using a building block approach, for a period of five years, indexed by the relevant index. RCV on 1 April 2020 will be indexed 50% by the retail price index (RPI) and 50% by relevant index initially, with all new RCV additions indexed by the relevant index.
Network plus water and network plus wastewater controls	A total revenue control, set on broadly the same basis as the wholesale water and wastewater controls at PR14. An adjustment mechanism for changes in the volume of developer services over 2020-25, applied at the end of the period. Maintaining water trading incentives, with payments reflecting the move to separate controls. A revenue forecasting incentive will apply, with in-period adjustments. To propose an equivalent licence modification to that applying for the current period to allow in-period revenue adjustments in 2020-25 and beyond.
Water resources	A total revenue control for water resources activities. To extend our protection of past, efficiently-incurred investments included in the RCV, up to 31 March 2020. Water company investments from 1 April 2020 will not receive the same degree of regulatory protection. Water resources yield will act as our capacity measure, underpinning this control. For English water companies an in-period adjustment mechanism will apply for bilateral market entry, with adjustment based on the cost of the capacity displaced by entry. Require water companies with significant investment in new water resources following 2020 to propose risk sharing arrangements to share market-wide utilisation risk with their customers. An in-period revenue forecasting incentive will apply. To propose an equivalent licence modification to that applying for the current period to allow in-period adjustments in 2020-25. English water companies will need to submit proposed access prices for each water resource zone (WRZ) at PR19 and demonstrate how these prices align with their own costs.
Bioresources	An average revenue control, using tonnes of dry solids (TDS) as the volume measure. We propose to extend our protection of past, efficiently-incurred investments included in the RCV, up to 31 March 2020. Water company investments from 1 April 2020 will not receive the same degree of regulatory protection. An in-period reconciliation (or true-up) for variance between collected revenue and allowed revenue. A limit on the total revenue companies can collect. A financial incentive for forecasting accuracy.
Thames Tideway	A separate control for Thames Water's wastewater services interfacing activities for the Thames Tideway Tunnel project.

6.2 Introduction

Wholesale activities account for around 90% of the water and wastewater value chain. Our price control framework plays a vital role in delivering benefits to customers, the environment and wider society. Our approach to this reflects our statutory duties (including our duty to further the resilience objective), and is aligned with our strategy, our enduring price control principles, and the UK Government draft strategic priorities and Welsh Government policies and draft objectives.

Our approach is to develop a targeted, transparent, and predictable set of controls that we can adapt to changes in water and wastewater services – and changes in our overall approach to regulation – over time. We want to ensure our price control framework encourages companies to take a long-term perspective and manage long-term risks and opportunities effectively on behalf of customers, rather than focusing unduly on the five-year price control cycle. In this way, our regulatory approach will help to secure a resilient future for water and wastewater services, delivering sustainable and affordable water and wastewater services for customers and ensure that the environment is protected.

This chapter sets out our thinking and approach for setting wholesale revenue controls at PR19 – specifically:

- the background to setting wholesale revenue controls (see section 6.3);
- our proposals for the form of control for water and wastewater network plus activities (see section 6.4);
- our proposals for the form of control for water resources activities (see section 6.5);
- our proposals for the form of control for bioresources activities (see section 6.6);
- our consideration of a revenue forecasting incentive across wholesale activities (see section 6.7);
- our approach to Thames Water's control for its Thames Tideway work (see section 6.8); and
- our proposed initial assessment of business plan tests that relate to the wholesale revenue controls (see section 6.9).

6.3 Background to setting wholesale revenue controls

Our revenue controls will 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.

In the future, markets can play a greater role. They can create opportunities for companies to look beyond traditional company boundaries and their own in-house solutions to meet the long-term needs of customers. Markets can encourage:

- sharing of existing capability to improve efficiency and maximise the value of existing resources;
- the collaborative and coordinated 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.

6.3.1 Targeted regulation of wholesale services

At PR19, we will expand the number of separate binding wholesale revenue controls from two to four, covering the following sets of activities:

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

Network plus activities, which represent the majority of the wholesale value chain, will continue to be regulated as monopolies during 2020-25. For water resources and bioresources we have introduced separate binding price controls as a targeted and proportionate response to the challenges facing the sector. The separate controls will help us to set better targeted incentives; supporting company decision-making. They promote:

- protecting customers, through better targeted regulation; and
- adapting the regulatory framework to create value through wholesale markets where appropriate.

We will continue with total revenue controls for network plus water, network plus wastewater, and water resources. For bioresources, we propose setting an average revenue control, to help to reveal more information about the volumetric unit costs of delivering bioresource services. Each of the wholesale revenue controls will be set for five years using a building block approach.

6.3.2 Promoting wholesale markets

Our regulatory approach will promote a greater role for markets to inform, enable and encourage greater efficiency in England and, where it aligns with Welsh Government policy, in Wales. To meet future challenges, we need to ensure that water and wastewater services are resilient, efficient and that water companies are taking a long-term approach. New markets – places where buyers meet sellers – can help companies meet these challenges through promoting choice, resilience and increased information.

At PR19, our aim is to promote:

- a greater role for markets in water resources and bioresources services; and
- third party delivery (including design, build, ownership and operation) of large discrete investment projects (direct procurement for customers).

In relation to water resources, trading is below its optimal level, and taking steps to reduce identified barriers to this could result in significant benefits for customers. There is also scope for participation from third parties to sell water into the public water supply and, looking further ahead, third parties in England negotiating directly with water retailers as the retail business market develops in line with 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, looking further ahead, greater participation from firms operating in wider waste markets – to drive benefits of greater efficiency.

We are also introducing 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 of a higher quality.

In addition for water resources we are introducing a requirement for companies to produce a bid assessment framework to create more clarity and confidence to third parties that their bids to supply water resources, leakage or demand management services will be assessed fairly. Appendix 9, ‘Company bid assessment frameworks: the principles’ sets out for consultation the principles we expect companies to follow in preparing their frameworks which are centred on the need to provide transparency, ensure equal treatment, non-discrimination and a proportionate approach to procurement.

We propose to incentivise companies to use direct procurement for customers for high value capital projects. Direct procurement for customers takes place when a water company procures services, on behalf of customers, including the project's financing. It can generate savings from development, construction and operating costs and cheaper financing – under our approach, these savings are shared with customers. It can also encourage companies to take a long-term view of projects, better aligning to longer-term outcomes for customers and the environment. Further detail around this is set out in Chapter 7.

In addition to promoting markets in water resources, bioresources and direct procurement, water companies should also consider that greater use of markets in other parts of the value chain. For example water companies could make greater use of markets in catchment management.

6.4 Network plus water and wastewater

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

6.4.1 Decisions

The table below summarises our decisions about the network plus controls set out in the May 2016 decision document, most of which have been incorporated into licences.

Table 6.2 Decision summary for network plus water and wastewater

Component	Confirmed Approach
Form of control	Total revenue control, set using a building block approach.
Length of control	Five years.
Boundary of control	Network plus water: regulated wholesale water activities that are not defined as water resources activities. Network plus wastewater: regulated wholesale wastewater activities that are not defined as bioresources activities, as set out in paragraph 2 of companies' licence condition B.
Inflation indexation of revenues	Annual adjustment to reflect any percentage change in the Relevant Index, plus or minus an adjustment factor "K".

Component	Confirmed Approach
RCV allocation	Network plus water: allocate water RCV to the water resources control using an unfocused approach, with the remaining value allocated to the network plus water control. Each company will propose its own allocation of the water RCV between the controls for us to review Network plus wastewater: allocate wastewater RCV to the bioresources control using a focused approach, with the remaining value allocated to the network plus wastewater control. Each company will propose its own allocation of the wastewater RCV between the controls for us to review.
RCV indexation	Index 50% of the RCV at 1 April 2020 to RPI. Index the remainder of the 1 April 2020 RCV and all future RCV additions to the Relevant Index.

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

- returns 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 ratio (PAYG)); and
    - expenditure added to the RCV and recovered in future periods (through future returns and depreciation); and
- an allowance for corporation tax.

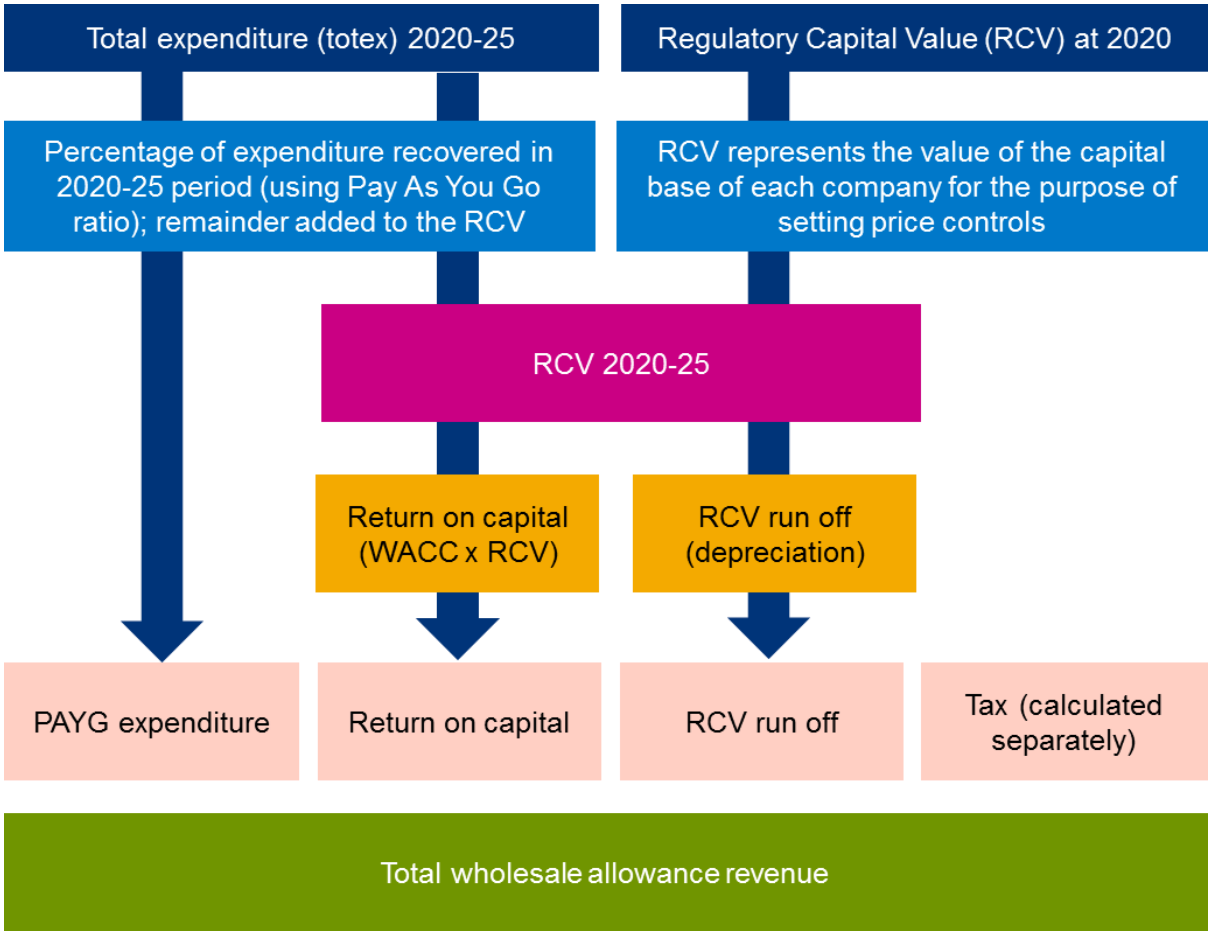
We propose to extend our protection of past, efficiently-incurred investments included in the RCV, up to 31 March 2020, to ensure that all elements (whether water resource, bioresource or network plus) of the wholesale controls are given common level of protection to align with common treatment in the 2015-20 control. Beyond 31 March 2020, we are not providing further explicit commitment to protection for investments added to the RCV over and above our existing commitments. This is because our regulatory approach means that we expect companies to be able to recover costs efficiently incurred over the 2020-25 period and this approach is consistent across the network plus controls.

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



At PR14, the wholesale water and wastewater controls included income from developer services (including infrastructure charges and payments for the requisition of new infrastructure). Below we set out our proposals for this issues for 2020-25.

At 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 6.7.

6.4.2 Proposals

Developer services

For PR19, we have considered how we treat income from connection charges and other developer services, and whether or not revenues and cash receipts from these services should be included within the total revenue controls for network plus water and wastewater. We intend for customer-facing activities relating to developer services to remain within the scope of the retail business, with the wholesaler responsible for providing the physical infrastructure in line with our approach at PR14.

Including developer services within the scope of the network plus revenue controls may not fully align incentives of companies to be responsive to demand for new connections. It may also create cross-subsidies between developer charges and customer charges. On the other hand, removing developer services from the scope of the controls will dilute regulatory protection for developers, relying more on the effectiveness of competition and ex-post regulatory tools (such as licence enforcement and Competition Act powers).

The demand for new connections and other developer services is closely linked to the health of the local economy, making it difficult to predict year on year. There are also regional variations in the extent and nature of competition for the provision of new connections and other developer services.

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

- include developer services and connection charges within the scope of the network plus revenue controls;
- introduce a symmetric volume correction mechanism – to encourage companies to respond to changing demand for developer services, and ensure that costs are recovered appropriately from customers and developers;
- apply no adjustment for changes in the average cost of delivering those activities, to preserve the incentives for cost efficiency in the delivery of these services;
- apply the volume 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 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 believe that our proposed approach strikes an appropriate balance between protecting the interests of water customers and developers in the long term. The full details of our approach and the other options we considered are set out in appendix 7, 'Wholesale revenue incentives'.

Water trading incentives

Water trading incentives for new water exports and imports were introduced at PR14. We reviewed the impact of these incentives on water trading while developing this methodology.

Water trading is where a company responsible for supplying water in an area buys it from someone else, either another water company or third party, rather than developing its own schemes. It is a part of the mix of solutions to the long-term challenges the sector faces and can have large benefits for customers and the environment. Encouraging water trading has been a key theme of our Water 2020 programme.

Our impact assessment in May 2016 for example, identified potential savings of £810 million net present value (in 2015-16 prices) from increased water trading between water companies. Supporting this the Water UK water resources long-term planning framework study found that to meet future water resource needs, inter-regional transfers will be required to carry water from the North and West across to the South and East of England.

Our water trading incentives are designed to encourage new water trades by increasing the financial rewards for exporters and lowering the cost of trading for importers. The incentives set at PR14 were carefully calibrated and extensively consulted on with stakeholders. However, the incentives were only confirmed after draft water resources management plans, where most trades are likely to have been identified, had already been submitted. This suggests the existing water trading incentives are unlikely to have significantly influenced company's plans for 2015-2020 and that 2020-25 may be the first time we can fully assess their impact.

In light of these considerations, we propose to maintain the water trading incentives, both export and import, for new water trades agreed in 2020-25. To protect customers and the environment we propose to maintain the caps set at PR14. In order to qualify for the incentive the company must also show that its 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 the price review process and payments are made in subsequent control periods.

Any incentive payments from new water trades in 2015-20, due to be paid in 2020-25, will need to be allocated between the water resources and network plus water control. This is because the trades will utilise assets across the both controls. As part of their business plans we expect companies to allocate the incentive payments from new water trades across water resources and network plus water for us to review. For future trades in the 2020-25 period, we would expect companies to propose an indicative split for expected future incentive payments between the water resources and network plus controls. However, this allocation will be revisited at PR24 to reflect the proposed approach to regulation of wholesale water activities at that time.

Appendix 7, 'Wholesale revenue incentives' provides a full overview of our proposed approach and the options we considered. We welcome views on whether companies need further incentives to facilitate the development of water trades, including whether to allow cost recovery for development costs regardless of whether a trade goes ahead.

6.5 Water resources

PR19 is the first time we will set a separate total revenue control for water resources. Introducing this will inform, enable and encourage an effective market for new water resources by revealing improved information that will help us to set better targeted incentives; support company decision-making; mitigate cross-subsidy concerns; and help to create greater management focus in relation to these activities.

Our control will also provide a framework to protect the interests of customers, enabling greater collaboration between companies and other water resource service providers to maximise the value of existing resources and develop new water resource options efficiently. We expect that our approach will encourage:

- more trading of existing water resources between water companies;
- water companies more actively procuring water resources and innovative demand-side solutions from third parties service providers; and
- a co-ordinated collaborative approach to development of new water resources solutions, including partnership approaches.

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 be compatible with the development of this bilateral market, if implemented during the 2020-25 period. The Welsh Government has decided not to extend business retail competition at this time, and has indicated that it does not intend to implement the framework for the bilateral market in Wales. We recognise

that the UK Government decision on implementation and of timing for the provisions for England remains uncertain.

Our approach to the water resources control encourages companies to take a long-term perspective and manage the long-term risks and opportunities effectively on behalf of customers, rather than focusing unduly on the five-year price control cycle. This includes developing targeted long-term incentives to more appropriately align the interests of companies and future customers, and where appropriate, reduce regulatory uncertainty.

6.5.1 Decisions

The table below summarises our decisions about the water resources control made in the May 2016 decision document, key parts of which have been incorporated into licences.

Table 6.3 Decision summary for water resources

Topic	Confirmed Approach
Length of control	Five years
Boundary of control	The focus of the water resources control will be abstraction licences and raw water abstraction activities. At a high level where an asset or an incurred cost provides a quantity of water available for transport and ultimately treatment then they will sit within water resources. Example assets include water resource storage reservoirs, river abstraction assets and borehole pumps. (See Regulatory accounting guideline 4.06 for definitions of abstraction licences and raw water abstraction)
Inflation indexation	Annual adjustment to reflect any percentage change in the relevant inflation index
RCV allocation between water resources and water network plus	Required to make the separate water resources and network plus water control possible. We will use an unfocused approach that allocates pre-2020 RCV value proportionally between network plus water and water resources. Each company will propose in January 2018 its own allocation to the water resources control for us to review
RCV protection	Our price control framework at PR19 will provide the same type and degree of regulatory protection as at present for the RCV allocated to water resources at 31 March 2020. From April 2020, new investments will retain a high degree of regulatory protection within the water resources revenue control.
Compatibility with future bilateral market	Our revenue control is designed to accommodate the development of the bilateral market if it is introduced in the 2020-25 period, including a revenue adjustment mechanism where bilateral trades reduce the demand for water resource capacity provided by water companies.

Topic	Confirmed Approach
	Adjustments will be limited to investments in new water resources made from 1 April 2020 that is displaced by third party trades. The adjustment will only apply to English companies. A new access-pricing framework for English water companies to help third parties enter the bilateral market in the future, if they can provide new water resources as efficiently as water companies. Access prices will include a combination of cost-based charges for network plus services; and an equalisation (formerly compensation) payment that reflects the incumbent's forward-looking incremental water resource costs

You can find more information about our previous decisions in the May 2016 decision document and the 'Background' section of appendix 5, 'Water resources control'.

6.5.2 Proposals

We propose setting the total revenue control for water resources using a building block approach. The figure below illustrates these building blocks, which incorporate:

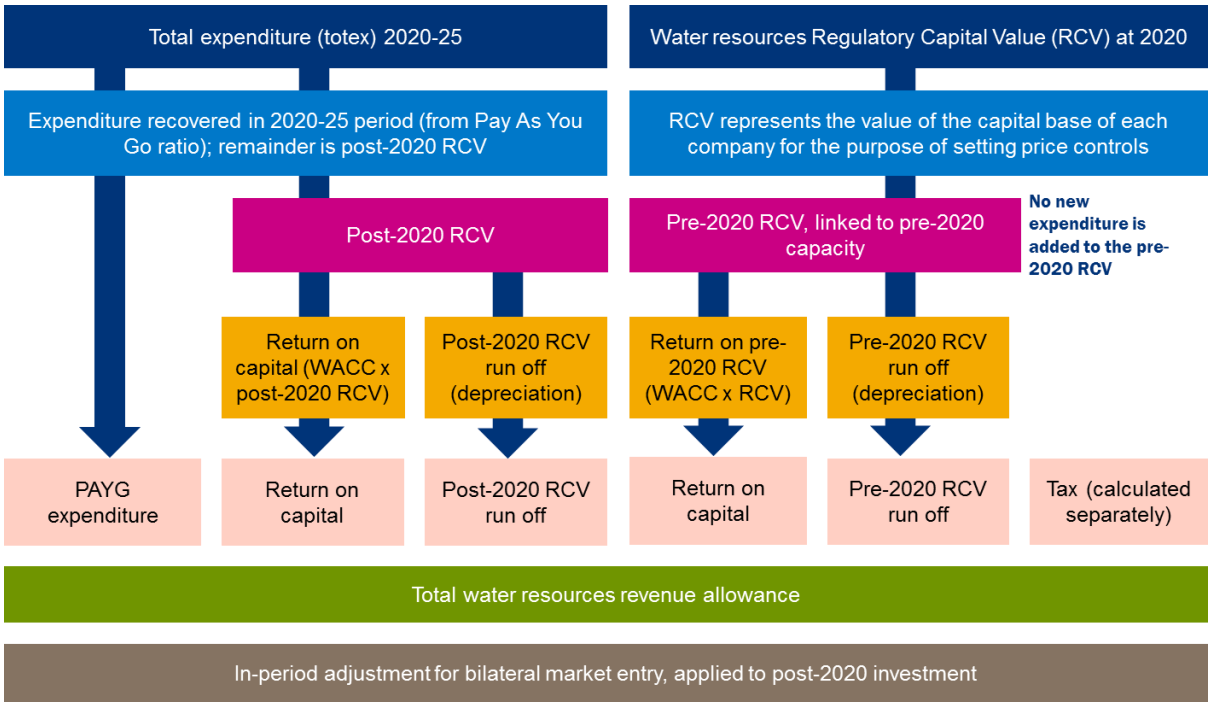
- returns and depreciation of the pre-2020 water resources RCV
- an assessment of:
    - efficient totex during the 2020-25 period;
    - funding expenditure to be recovered within the period (determined by the PAYG ratio); and
    - expenditure recovered in future periods (return and depreciation on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

We will include an in-period revenue adjustment mechanism to accommodate the development of the bilateral market in England if introduced in the 2020-25 period.

Our approach will ensure that:

- water companies can fully recover efficiently incurred investments in existing water resources up to 31 March 2020; and
- water companies and not customers will face utilisation risk from bilateral market entry, to the extent that third party entry defers or displaces the need for to invest to deliver future capacity.

Figure 6.2 The building blocks of the water resources total revenue control



We are maintaining our building block approach to pre- and post-2020 investment, providing greater certainty over 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.

Our May 2016 decision document set out that from 1 April 2020 expenditure added to the post-2020 RCV would not receive additional regulatory protection and that revenues would need to be recovered on a standalone basis from water resource activities. For English companies, where new capacity is exposed to the future bilateral business market, companies may face some risk around the long-term utilisation of new water resources capacity, depending on market development. Nonetheless, our proposed total revenue form of control will provide a high degree of regulatory certainty to companies and exposes companies to limited volume risk, compared to the historical approach to price controls, where allowed revenues were directly linked to volumes.

We propose using capacity to distinguish between pre- and post-2020 investment. Drawing the distinction in this way means we can meet our commitment to protect efficiently incurred pre-2020 RCV in the wholesale water control and limit the change in regulatory protection to post-2020 investment in new water resources capacity. Our proposed 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 water companies' standard supply–demand balance calculation used for water resources planning.

We considered an alternative approach: setting a unit cost based revenue allowance for new post-2020 water resource capacity. This allowance would be intended to cover development, maintenance, operational and financing costs and would be paid when the capacity is delivered. This would potentially realise future market benefits more effectively as it would more closely resemble the flow of revenues under the bilateral market for third parties. However, this approach would result in less certainty about revenue, which we consider would be disproportionate at this stage of the market's development. The bilateral market is not expected to open until later in the 2020-25 period and will be small and nascent as it will be focused around incremental new water resources, rather than the total market. Nevertheless we welcome, in the context of future market development, stakeholder's views on the scope for setting future controls on this basis.

Companies plan their long-term water resources investments to meet customers' demand and provide a resilient water service in the future. These investments can involve water companies developing new resources themselves or by using sources and services provided by third parties. Our price review will determine the total revenue allowance needed, both to maintain the existing capacity and to invest to meet future customer needs.

For English companies, a bilateral market would potentially 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 capacity to meet future demand.

To reflect this we propose that bilateral market entry should 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 adjustment uses water resources yield which is our measure of capacity. It accounts for the level of bilateral market entry that wasn't forecast by the incumbent and whose post-2020 capacity is no longer required. The adjustment is based on the total forecast post-2020 capacity requirement (incumbent plus bilateral) as a ratio of the actual capacity supplied (forecast incumbent plus actual bilateral). The adjustment only accounts for bilateral entry risk and not market wide utilisation risks.

The financial value of the adjustment reflects the costs of the post-2020 capacity funded through the control. The full mechanics of the adjustment mechanism are explained in appendix 5, 'Water resources control'.

Our approach to the adjustment mechanism is compatible with our proposed approach to access pricing, which is designed to facilitate the future bilateral market. As part of our methodology, we are asking English water companies to submit a proposed access prices as part of their business plans. Companies will need to show how their proposed access prices align with their own costs and how they will help facilitate the bilateral market on an equivalent basis.

The architecture of the bilateral market and the detailed design of access pricing are outside the scope of the methodology. In autumn 2017, we will publish a wholesale market architecture discussion paper which will consider some of these issues further.

Our decision document highlighted the fact that customers bear much of the risk around whether companies' investment plans to meet future water demand will deliver secure, sustainable, efficient, and resilient outcomes in the longer term. Large-scale under- or over-investment could have significant consequences for customers. We consulted on whether customers should continue to bear almost all of those utilisation risks or whether a proportion of utilisation risk should be shared by the companies.

A majority of respondents were opposed to being exposed to some market-wide demand utilisation risk. The key challenges identified include interactions with resilience, the potential for unintended consequences, and the potential adverse impact on the cost of capital.

We have considered the responses alongside the development of our wider methodology. At PR19 we want companies to take a long-term approach that considers the real option value of its decisions, and the long-term risks associated with them. This means making sure companies bear an appropriate balance of risk over the long term and provides a stronger incentive for efficient decision making. This should encourage companies to focus on the outcomes they propose to deliver over the long term. We therefore believe that it is appropriate that companies face long-term incentives that align their interests and the interests of customers.

We expect water companies proposing significant investment in new water resources to also propose long-term risk sharing arrangements as part of their business plans for us to review. This is a targeted and proportionate approach and allows the 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, we would not expect them to propose risk sharing arrangements at this time. There is no exposure to market wide utilisation risk through the form of control.

We expect companies to share some of the risk where actual future demand is significantly different from what was expected when investment decisions were made. We might expect risk sharing arrangements to apply to both material overestimation and underestimation of demands, although risks might not be shared symmetrically. A risk sharing arrangement could, for example, take the form of a multi-period ODI in which financial adjustments are introduced at later reviews, once the long-term outcomes of investment decisions can be fully assessed. A company-based approach means the risks introduced can be tied to the nature of the investment. This approach should also help enhance the legitimacy of company business plans, as it ensures that companies have an interest in efficient utilisation of resources and assets.

The table below summarises our key proposals for the control. Further detail on this including background, detailed policy appraisal and an explanation of how key features of the control work is set out in appendix 5, 'Water resources control'.

Table 6.4 Key proposals for the water resources control

Topic	Our thinking and approach
Post-2020 investment	Maintain a building block approach, rather than using a unit cost based revenue allowance for post-2020 investment with expenditure added to a post-2020 RCV. We welcome, in the context of future market development, stakeholder's views on the scope for setting future controls using a unit cost based revenue allowance.
Water resources capacity measure	Water resources yield (as described in annex 1 of appendix 5, 'Water resources control')
In-period adjustment mechanism	To make sure the control is compatible with the development of the bilateral market. Adjustment based on the approximate cost of the post-2020 capacity displaced by entry.
Access pricing for the bilateral market	English companies to submit proposed access prices. As part of their business plans, companies should demonstrate how their proposed access prices align with their own costs.
Long-term incentives	No exposure to market-wide utilisation risk introduced in the form of control; individual companies take ownership of the issue We expect water companies proposing significant investment in new water resources to also propose long-term risk sharing arrangements as part of their business plans for us to review.

6.6 Bioresources

PR19 is the first time we will set a separate revenue control for bioresources. Introducing a separate binding revenue control for bioresources will inform, enable and encourage an effective market by revealing improved information. This should deliver increased optimisation of activities across the companies – and, looking further ahead, greater participation from firms operating in wider waste markets. This will drive benefits of greater efficiency and broader environmental benefits.

Our revenue control will provide a framework to protect the interests of customers, enabling greater collaboration between companies and other firms operating in wider waste markets to maximise the value of existing capability to treat, transport and recycle organic waste. We expect that our approach will encourage:

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

At PR19, we will expect each company to set out a long-term bioresources strategy. The strategy should explain how it will use a market based approach 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. This includes maximising renewable energy generation from sludge treatment processes, where appropriate. In England and Wales, careful treatment of bioresources will enhance the economic, social and environmental wellbeing of people and communities.

We want to make sure our price controls encourage companies to take a long-term perspective around how they best obtain and deliver bioresources services for their customers, including how to maximise the opportunities to create value through use of markets. Adopting a separate binding revenue control encourages companies to improve their understanding of costs and service performance of their activities, creating greater management focus and encouraging a commercial culture.

We propose to set an average revenue control, to align with the contracting basis for bioresource and organic waste processing. The average revenue control means that companies will have an allowed revenue per tonne of dry solid (TDS) (expressed as £/TDS), and the total revenues they can collect from customers will be calculated the measured volume (TDS) of bioresources they produce by treating wastewater

multiplied by the average revenue allowance. Under our approach companies will bear volume risk arising from changes in measured volume of bioresources that they produce by treating wastewater, consistent with our view that companies are best placed to manage those risks. This form of control provides an incentive to optimise activities around treatment sites that deliver the greatest value (or deliver services at the lowest cost) and it is neutral between procuring services from third parties and providing services in-house.

Combining better targeted regulation (provided by the separate control) and opportunities for third parties to provide more bioresource services will enable companies to optimise their capacity more efficiently and sustainably. For example, understanding the value of bioresources services and the scope for trading in those services will create economic value and deliver benefits to the environment.

6.6.1 Decisions

The table below summarises our decisions about the bioresources control set out in the May 2016 decision document, most of which have been incorporated into licences.

Table 6.5 Decision summary for bioresources

Topic	Confirmed approach
Type of control	Average revenue control to be set at company level; this will reflect the volume of sludge produced by water and sewerage companies (WaSCs).
Length of control	Five years.
Boundary of control	See Regulatory accounting guideline (RAG) 4.06 and paragraph 2 of companies' licence condition B for definitions of the activities that could be covered by the bioresources price control.
Inflation Indexation	Annual adjustment to reflect any percentage change in the relevant inflation index.
Trading incentives	We will not introduce explicit sludge trading incentives at PR19.
RCV allocation	Allocate the RCV to the separate bioresources control using a focused approach. Determine the bioresources RCV using the concept of forward-looking economic value of the assets. We set out the approach companies should take when proposing their bioresources RCV allocations in April 2017. Determine allocation of RCV to the bioresources and network plus wastewater control (the remainder) as part of PR19 determinations.
Protecting the pre-2020 RCV	We propose to extend our protection of past, efficiently-incurred investments included in the wholesale wastewater RCV, up to 31 March 2020. However, we have concluded there is no need to create a specific regulatory mechanism at PR19.

You can find more details about the key decisions we have already made in the 'Background' section of appendix 6, 'Bioresources control'.

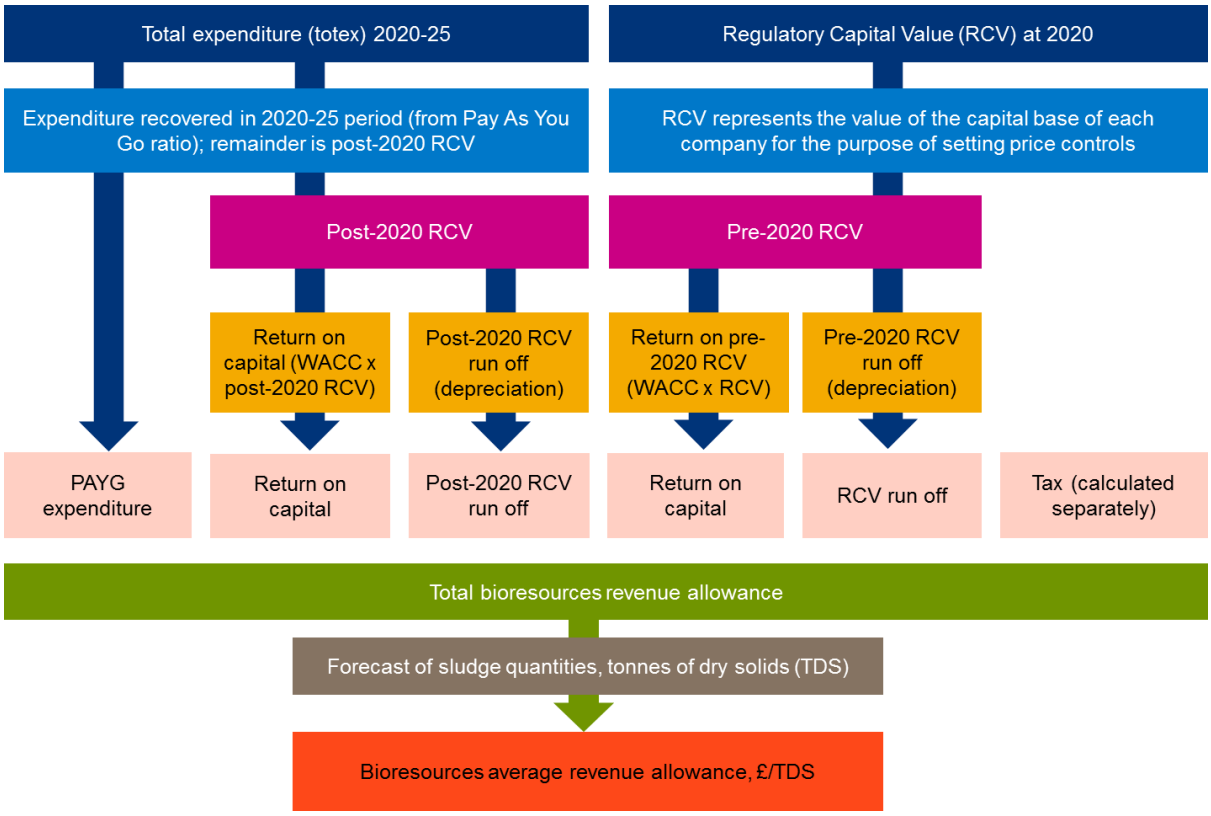
6.6.2 Proposals

We plan to use a building block approach to calculate bioresources revenues. The figure below illustrates the bioresources building blocks, which incorporate:

- returns and depreciation of the pre-2020 bioresources RCV;
- an assessment of:
    - efficient totex during the 2020-25 period, which will reflect an expected volume of sewage sludge produced by wastewater treatment;
    - 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.

This will be expressed as an average revenue allowance, expressed as £/ TDS.

Figure 6.3: The building blocks of the bioresources average revenue control



We summarise below the main features of the bioresources control that we are consulting on here, and you can find more details about the bioresources control in sections 3 and 4 of appendix 6, 'Bioresources control'.

We propose calculating each company's average revenue allowance by determining the total revenues needed to fund the efficient costs of providing bioresources services for a given forecast volume of sludge over the period, expressed as a single £/TDS figure on a net present value (NPV) basis. The revenue control will be linked to the volume of indigenous sewage sludge produced from wastewater treatment and exclude volumes of sludge treated on behalf of the non-appointed business. This incentivises each company to optimise its operations to maximise the volume of sludge that it can treat efficiently, including looking for lower cost solutions through transfers between treatment centres that it owns and trades with other parties. The detail of the proposed NPV calculation is set out in the financial model.

Where companies export indigenous sludge to neighbouring companies or other waste operators, then costs will be recovered in the bioresource control, and treated the same as a company's own cost of processing. In the 2024 price review, we will look to share efficiency benefits from trading with customers when we assess efficient costs for all companies at PR24. Where companies offer services to

neighbouring wastewater companies and other waste operators, this will be non-appointed activity and companies will be free to negotiate their charges for these services, subject to complying with competition law and regulatory accounting guidelines. The volumes of sludge treated through non-appointed activities will not be subject to the average revenue control and companies will assume the volume risk.

Where companies use assets of the appointed business to treat another company's sludge, companies will need to set transfer prices calculated in line with the Regulatory Accounting Guidelines, RAG 5 to avoid cross-subsidy between the appointed and non-appointed businesses and to share the benefits of trading with its customers. We propose that the transfer price is treated as a negative cost against the price control and that benefits from trades would be passed through to customers through a mechanistic in-period revenue adjustment mechanism. Companies will need to set out in their business plan forecast volumes of sludge that they expect to treat on behalf of other wastewater companies, information on how costs vary with volumes and how they will determine the appropriate share of benefit with their customers.

Our initial assessment of business plan test on bioresources (see section 4.9) will consider the evidence companies provide on the use of third-party delivery of their bioresources services. We will also look for evidence where companies are planning to provide third party bioresources services to others using existing assets paid for by customers. Our assessment will consider how companies share some benefit with customers for using such assets. We would expect the benefit sharing to lead to lower revenue requirements and thus lower bills than if services to third parties using existing assets were not proposed.

Our decision document stated that the wholesale wastewater RCV at 31 March 2020 would be allocated on a focused basis between bioresources and network plus water activities. It also stated that the RCV allocated to bioresources at 31 March 2020 would receive the same type and degree of regulatory protection as it would have received under the wholesale wastewater revenue controls, in that it is underwritten by the network plus wastewater control to the extent that the bioresources revenue control does not fully recover past efficiently incurred investments.

We stated that investment from 1 April 2020 would not receive the same regulatory protection and that revenues would need to be recovered on a standalone basis from bioresources activities. Because companies will still have direct control over who treats their sludge – themselves or third parties – we consider that there is limited scope for RCV stranding risk at PR19. Instead, the volume risk comes from variations in sludge produced by treating wastewater from domestic and business

customers. In future, if we move to setting more “gate fee” type charges derived on 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.

Volume measure for bioresources average revenue control

The total revenues that companies can earn through the average revenue control will vary, according to the volume of bioresources each company produces by treating wastewater in its area. In the April 2017 information notice, IN 17/04, we set out the following proposed definition of sludge production.

For the PR19 average revenue control, sludge production (in TDS):

- is a measure of untreated sludge (primary, secondary and tertiary) produced by in-area wastewater treatment processes in a year;
- does not include the grit and screenings removed through preliminary wastewater treatment processes; and
- is ideally measured at the boundary between network plus and bioresources as defined in RAG 4.06, or if not, at the point of treatment. There should be continuous measurement via instrumentation, rather than by composite or spot sampling.

We developed this definition in consultation with stakeholders, particularly the sludge working group. In IN17/04, we set out that we expected companies to take advantage of early notice of the volume definition and form of control, and so gather better and more accurate data on bioresources volumes to inform their business plans.

For many companies, they estimate rather than measure sludge volumes and do not currently record and report sludge production in accordance with our proposed definition above. This will mean that companies will need to derive volume forecasts based on available data and engineering models of their treatment processes in advance of measuring volumes in the future. Companies will need to provide a detailed description of how they have derived their forecast data in their business plan, including their data assurance around both direct sludge volume measurement and around related data, such as measured sewage loads, they may use to calculate sludge production volumes.

Companies have a good understanding of the anticipated total costs of providing bioresources services. Our proposed average revenue control relies on companies providing accurate estimates of sludge production for the 2020-25 price control period to derive a unit revenue allowance based on those expected costs. Large

under or over estimation of sludge volumes will distort the average revenue controls that we set, in terms of the levels at which the average revenue allowance is set and the charges that customers pay. To protect customers, we are proposing a forecasting accuracy incentive that will be based on the variation between actual and business plan forecast volumes over the five-year period.

We would apply a financial penalty as a proportion of allowed average revenue, for significant variations between actual and forecast sludge volumes. We propose to allow actual volumes to vary by up to 3% from the forecast volumes before any penalty is applied. Our preferred approach is to apply the financial penalty symmetrically to differences above or below the forecast of sludge volumes.

We also propose that the penalty rate will vary according to the size of the forecasting error, such that more significant penalty rates apply the greater the differences between actual and forecast sludge volumes. In doing so, we intend to limit the degree to which revenues can exceed the forecast sludge volumes to no more than 7%, effectively capping the amount by which total revenues over the period can exceed the expected revenues. We will apply the forecasting accuracy incentive as part of the reconciliation of 2020-25 performance.

We expect companies to measure sludge volumes from the beginning of the price control period consistent with our definition of sludge volumes. We would expect companies to set out how they are proposing to measure sludge volumes as part of their business plans. As a result, companies will improve the accuracy of their measurement of sludge volumes, which will enable better operational decisions and facilitate trading between companies on a comparable basis.

The transition to more accurately measured volumes of sludge may contribute to variations between reported and forecast volumes, although there is no evidence that this increases the risk under the forecasting accuracy incentive. We therefore propose to continue to apply the forecasting accuracy incentive as set out above to the differences between measured and forecast volumes. However, where a company can provide evidence within the first two years of the price control period that material variations in recorded volumes from the forecast are the result of measurement changes rather than forecasting error then we would consider a request made by the company to adjust the way that the forecasting accuracy incentive is applied as part of the end of period reconciliation.

You can find more details about the forecasting accuracy incentive in appendix 6, ‘Bioresources control’.

Dealing with in-period revenue variations

We expect that companies will set charges based on the best information available at the time and to ensure that the revenues that they earn are consistent with the limits determined by the bioresources average revenue control. Companies set wastewater charges in advance of the start of the year, based on the best information available to ensure that their expected average revenues from charges are aligned with their average revenue allowance of the price control. Nevertheless, actual average revenues that wastewater companies earn from bioresources may still, depending on the design of company charging schemes, vary from the average revenue allowance. In this case, a revenue correction mechanism may be required to correct for under- or over-recovery in average revenues.

Our preferred approach is that companies would adjust the allowed average revenue, £/TDS, in subsequent years to correct for any under- or over-recovery of average revenue in an earlier year. This would be similar to the PR14 wholesale revenue correction mechanism.

We would set out how it would work in our final determinations.

Summary of proposals for bioresources

Table 6.6 Key proposals for the bioresources price control

Proposal Topic	Our thinking and approach
Post-2020 investment	Building block approach. The return and depreciation on efficiently incurred investment will be recoverable in the 2020-25 period. Post-2020 investment incorporates all investment. We are not making a distinction between maintaining existing bioresources treatment capacity and building new capacity.
Allowed average revenue for each charging year	For each company, calculate the average revenue in £/TDS, using an NPV approach. Divide the NPV of total revenue by the total five year forecast of sludge volumes in TDS. Revenue for bioresources will be net of both income (transfer price) from any trading activity and costs of undertaking any non-appointed business. Index the average revenue figure by the relevant inflation index through the form of control.
Forecasting accuracy incentive mechanism	Apply a penalty for significant inaccuracies in sludge volume forecasts in companies' business plans for variations greater than ±3% from the forecast used in setting the revenue control. Returning revenue to customers where five year total sludge volume are greater than 7% of those used in setting the revenue control. These adjustments will be applied as part of the 2020-25 reconciliation at PR24.

Proposal Topic	Our thinking and approach
In-period true-up for revenue variance	A company should collect the revenue associated with the volume of sludge it produces through treating wastewater. This revenue equals the company-level average revenue, in £/TDS, multiplied by the measured tonnes of dry solids produced. We propose to limit the total revenue companies can collect. Where required, alter the average revenue, £/TDS, in subsequent years to correct for any under- or over-recovery in an earlier year.

6.7 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 their revenues allowed under their controls. Nevertheless, revenues they earn from charges may still, depending on the design of company charging schemes, vary from the revenue allowance.

There are many factors that may cause 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, metering uptake and developments in the non-household market. Failure to set charges to recover allowed revenues by a company over the control period means that its future customers face risk of being asked to pay more in future periods or that future customers benefit at the expense of current customers.

At PR14, we introduced a wholesale revenue forecasting incentive mechanism to encourage companies to accurately set charges to recover allowed revenues. We are consulting on our approach for 2020-25. At PR19, the water resources and network plus wholesale controls will place limits on total revenues. We would expect some difference between the revenues that companies actually recover and the limits placed on total revenue. This suggests an incentive mechanism is required for these three controls.

In contrast, for bioresources, as set out above, we propose introducing a separate revenue correction mechanism for changes in average revenues and a volume forecasting incentive mechanism to protect customers by ensuring that companies forecast sludge volumes accurately. We therefore do not consider an additional revenue forecasting incentive to be appropriate for bioresources.

For water resources, network plus water and network plus wastewater therefore, consistent with our approach at PR14, it is necessary to allow companies to true-up for under- or over-recovered revenues in any year of the control period. We propose to offer a licence modification to ensure that in-period adjustments are allowed in 2020-25 and future price review periods. This will be equivalent to the licence modification we made in 2016 for most companies in relation to the current price review period.

To protect customers from excessive variation between bills, we have considered a correction mechanism to make adjustments for under- or over-recovered revenue. Specifically, we have considered:

- in-period revenue correction and financial incentives, where any revenue variations from year to year are recovered from or returned to customers in subsequent years; and
- end of period adjustments, where companies can recover any revenue variations in the next price control period.

Our proposed approach is to continue with an in-period adjustment mechanism. We also note that under a revenue control, companies can change charges on an annual basis. This should enable them to manage forecasting and revenue risks more effectively.

We also consider bill volatility to be important. A penalty applied only at the end of the price control period may reduce companies' incentives to minimise undue bill volatility within the period, increasing the potential for significant variations between bills. It may also create perverse incentives, where companies can bring forward or defer revenue from customers, creating volatility within the period, without suffering any financial penalties.

We want to companies to take responsibility for providing accurate forecasts as part of their business plan to align their interests with 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.

Further detail on our approach to this is set out in appendix 7, 'Wholesale revenue incentives'.

6.8 Additional wholesale controls: Thames Tideway Tunnel (TTT)

Through an amendment to Thames Water's licence before PR14, 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').

When we set the TTT control in PR14, we anticipated it would stay in place for the 2020-25 period, due to Thames Water's continuing interfacing activities. We therefore propose once again setting 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 propose that the TTT control will operate in the same way as a wholesale network plus control, as summarised in the table below.

Table 6.7 Preferred 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 RPI Index the remainder of the 1 April 2020 RCV and all future RCV additions by the relevant index.
Indexation of revenues	Annual adjustment to reflect any percentage change in the relevant index, plus or minus an adjustment factor.

Because of its separate project licence, no PR19 process will be required for the main TTT works, which are being delivered by Bazalgette Tunnel Limited ("Tideway").

6.9 Initial assessment of business plans

A number of tests under our initial assessment of business plans 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 area are shown below, some of which 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 is able, through its systems, processes and people, to deliver results for customers and the environment from innovation?
2. How well has the company used markets to drive efficient costs and harness innovation?[43]
3. To what extent has the company set out a well evidenced long-term strategy for delivering resilient water resources, integrating an assessment of the value of third party options (both supply- and demand-side), to help deliver future water needs for the 2020-25 period and over the longer term?
4. To what extent does the company have a well-evidenced long-term strategy for bioresources, integrating an assessment for delivery of bioresources services by third parties for the 2020-25 period and over the longer term?
5. Has the company clearly demonstrated that it has considered all relevant projects for direct procurement for customers, and has it provided a well-reasoned value for money analysis to support its decisions about whether or not to take forward any of these projects using direct procurement for customers?
6. 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 any feedback we have provided?

6.10 Consultation questions

Q1. Do you agree with our proposals for the form of control for network plus water and network plus wastewater set out in the 'wholesale controls' chapter and appendix 7, 'Wholesale revenue incentives'?

[43] This question also applies to targeted controls, markets and innovation: retail controls.

Q2. Do you agree with our proposals for the form of control for water resources as set out in the ‘wholesale controls’ chapter and appendix 5, ’Water resources control’?

Q3. Do you agree with our proposals for access pricing for English water companies set out in the ‘wholesale controls’ chapter and appendix 5, ’Water resources control’?

Q4. Do you agree with the proposals for company bid assessment frameworks set out in appendix 9, ‘Company bid assessment frameworks: the principles’?

Q5. Do you agree with our proposals for the form of control for bioresources as set out in the ‘wholesale controls’ chapter and appendix 6, ‘Bioresources control’?

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

7.1 Summary

Direct procurement for customers (DPC) involves arrangements where a water company competitively tenders for services. In effect, the appointee becomes the buyer of services on behalf of customers. In May 2016, we set out our initial view that companies should consider DPC for relatively discrete, large-scale enhancement projects expected to cost over £100 million based on whole-life totex. DPC would apply to English water companies and Welsh water companies.

Our approach to direct procurement for customers supports the **four key themes of PR19:**

- Our proposals will ensure companies consider using direct procurement to deliver large-scale projects efficiently contributing to **affordable bills** and **long-term resilience** for customers.
- Our proposals will promote **innovation** by allowing new players to bring new ideas and approaches to the delivery of key projects.

Key messages

- Our approach will create value for customers by encouraging new delivery models for large discrete infrastructure.
- Competitive tendering should lower project costs by focusing competitive pressure on, for example, capital and operational expenditure (capex and opex).
- Competition involves the market, rather than the regulator, setting the cost of capital for a specific project and promotes innovation by encouraging new providers to deliver and operate infrastructure.

We expect companies to consider using DPC for suitable projects when preparing the business plans for the 2020-25 period, focussing on cases where competitive tendering is likely to deliver the greatest customer benefits. Table 7.1 below sets out a summary of our proposals in this chapter for DPC.

Table 7.1 Summary Box – PR19 proposals for direct procurement

Proposal topic	Our thinking and proposal
Projects in scope	We want companies to focus on projects likely to deliver the greatest customer value.

Proposal topic	Our thinking and proposal
Initial assessment of business plans tests	Our initial assessment of business plans will include a test to assess whether companies have considered DPC for relevant projects, and how well considered potential DPC projects are in business plans.
Type of DPC tender model	We are open to views on the tender model for DPC (for example, whether it includes initial design, and whether to use an 'early' or 'late' tender model).
Procurement process	Companies will be the purchaser and will run the procurement process, then manage the competitively appointed provider (CAP). We expect appointees to run a fair and open procurement process for DPC. We do not expect companies to bid into the process in their own area of appointment when also running the tender process.
Commercial model	We expect companies to enter into a long-term contract with the competitively appointed provider for a revenue stream.
Regulatory arrangements and treatment of costs	We will allow companies to recover the cost of tendering a project under base totex allowances. This will be under their existing price controls. We will amend companies' licences to allow them to recover the CAP's revenue from their customers.

7.2 Introduction

In May 2016, we confirmed our intention to introduce DPC at PR19. By DPC, we mean arrangements where a water company competitively tenders for services, particularly large scale, and discrete infrastructure projects. This enables third parties (a competitively appointed provider, or CAP) to design, build, finance and operate infrastructure that would otherwise have been delivered by the incumbent water companies.

DPC is different to other tendering and contracting arrangements that appointees[44] 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

[44] We use the term 'appointee' in this chapter and the direct procurement appendix for water only companies and water and wastewater companies.

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 in the following ways.

- DPC may reduce the direct costs that customers pay for the largest/most expensive new assets.
- Competitive tendering should lower project costs by focusing competitive pressure on, for example, capital and operational expenditure (capex and opex).
- Competition involves the market, rather than the regulator, setting the cost of capital for a specific project. We consider that the evidence from the water sector and others (such as electricity transmission) shows that this has the potential to lower financing costs for projects.
- DPC may drive innovation across the sector, improving customer outcomes for both the project being tendered and other services.
- We expect DPC to promote 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.
- DPC may help improve our cost benchmarking for price controls in the future.
- DPC may provide both us and appointees with benchmarks for efficient costs, which we can reflect in future price controls.

We will develop our approach to DPC with these potential benefits in mind. We will continue to keep potential benefits under review as we develop the model.

In this consultation, we provide more details about how we propose the DPC model will work. We expect that doing so will help appointees appraise potential projects they plan to bring forward at PR19, to see whether or not DPC is a suitable delivery route. We are also seeking stakeholders' views on our proposed approach to DPC, to help us refine our thinking ahead of our final methodology.

This chapter contains the following:

- guidance on the types of projects appointees should consider for DPC at PR19;
- our initial views on the type of the DPC tender model;
- our proposed approach to developing the DPC commercial model;
- how we propose to assess costs for DPC projects;
- how we propose to mitigate the risk of a failed tender process; and
- how we will assess appointees' proposals for DPC as part of our initial assessment of business plans.

Alongside this consultation, we publish a report[45] we commissioned in which KPMG summarises the views of a range of potential investors. The report suggests that the key points that investors raised are:

- Establishing the precise risk allocation of the proposed DPC model is central to ensuring projects are financeable and attractive to target investors;
- The certainty of the DPC revenue stream from the appointee's price control and the entitlement to cash flows from customers will be a key consideration for investors;
- The scope of activities covered by the DPC arrangements will affect the appetite for investment and the opportunities to drive benefits for customers;
- Investors will be attracted to higher value and discrete projects (which have a low likelihood of interoperability issues with the appointees assets); and
- Investor confidence is likely to be heightened by Ofwat's involvement, as this is viewed as providing long-term certainty on revenues.

7.3 Projects appointees should consider for DPC at PR19

In May 2016, we set out our initial view that appointees should consider DPC for relatively discrete, large-scale enhancement projects expected to cost over £100 million based on whole-life totex.

We still consider these parameters to be appropriate. To maximise benefits to customers from DPC, we consider that appointees should focus on using DPC 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.

For PR19, we therefore propose to provide appointees with guidance (Table 7.2), on the most suitable projects. We have developed this guidance alongside our proposals for other aspects of DPC, including specifically our proposed contract principles. We will review our approach at future price reviews, when we have had the opportunity to incorporate any lessons learned from PR19.

[45] Direct Procurement for Customers: A report prepared for Ofwat, May 2017

Table 7.2 Guidance on potential DPC projects for PR19

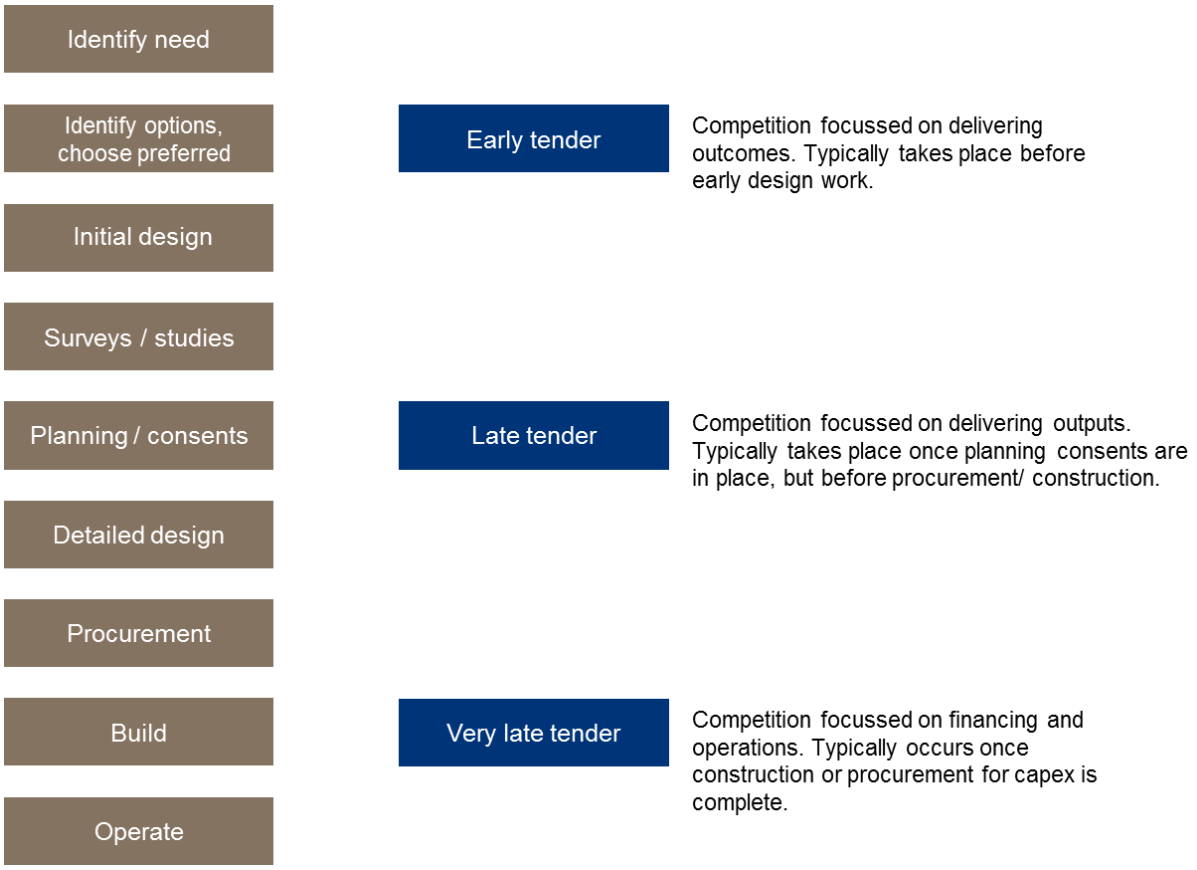
Area	Guidance
Definition of a 'project'	A project should be an efficient package of works, or multiple packages of works to be delivered together, which meet a common need. A project should not include a range of different asset types, addressing different needs, bundled together without the justification 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).
Identifying 'discrete' projects	We think some highly integrated projects in appointees' networks may not be suitable for DPC. When considering potential DPC projects, appointees should look to minimise the number of complex interfaces with existing assets. Appointees should also consider the complexity of operational and other dependencies between the project and the appointee's assets.
Identifying projects with high value for customers	Appointees should aim to achieve the greatest possible customer benefits at PR19 from proposed DPC projects. Greater customer benefits are likely to be associated with larger projects. These are likely to provide greater benefits relative to the administrative costs of implementing DPCs. A high proportion of capex, relative to opex, also increases the scope for financing benefits. We expect that competitive pressure on design, build and financing could help realise significant customer benefits.
Analysing DPC proposals' value for money	We expect appointees to analyse whether they expect projects to deliver customer value under the DPC route. Appointees should, for example: • analyse and quantify any project-specific risk factors which could erode customer benefits; • analyse the extent to which the project can drive innovation and therefore realise customer benefits; and • analyse potential indirect customer benefits through tendering the project. Any assumptions appointees use to perform this analysis must be clearly outlined and justified.
Project delivery	We consider that, in general, tendering need not delay delivery, as the early stages of the project 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 seek views on this draft guidance. We also ask appointees to respond to this consultation with an outline of the projects they are currently developing that, based on our guidance, they consider may be suitable for DPC. This will help us to assess how effective our draft guidance is in helping appointees to identify appropriate projects. This will help us to finalise this guidance for our final methodology. We expect this will mean appointees can gain greater confidence about alignment of their planning with our expectations for PR19.

7.4 Possible types of DPC tender model

In May 2016, we stated that we would consider different procurement models for DPC. We specifically mentioned ‘design and build’ and ‘design, build and operate’ as potential options. We also noted that we see competing financing costs as a key component of DPC where we see scope for customer benefits. We now discuss choice of tender model in terms of scope to tender at different stages in the project lifecycle (Figure 7.1). All the models we have consider involve competing project financing.

Figure 7.1 Simplified representation of different tender models



We consider all models to have the potential to drive significant customer benefits, albeit by focusing competitive pressure in different areas. We also consider that having a single, standard tender model could realise customer benefits through its simplicity and, potentially, through increased investor interest. We outline further details of these models in Appendix 10. We also outline in the appendix further details of the principles we would expect appointees to follow when running DPC tenders.

We are interested to hear views from stakeholders on which model could work best for DPC and in what circumstances. We are also interested in views on whether

different project types may lend themselves to different tender models. We consider there is merit in allowing appointees some flexibility to choose between, for example, an 'early' and a 'late' model for DPC projects, subject to justifying their choice in their business plans. Therefore, we do not propose to prescribe the tender model, but will consider as part of our initial assessment of business plans whether the proposed tender model will deliver the anticipated 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 do we expect to regulate successful bidders directly. Instead, we will regulate the appointee which procures the service on behalf of its customers. We therefore expect appointees to take responsibility for developing their DPC proposals and to act as buyers of services on behalf of customers.

However, we also note the feedback investors have provided in KPMG's report which sets out the importance of regulatory predictability and transparency when developing DPC arrangements. We also consider that we need to play a role to protect customers such as from the costs of a failed tender process or an inefficient allocation of risk.

We therefore propose the following approach.

- We outline draft contract and procurement principles for DPC in Appendix 10. We seek feedback on these principles, and expect to finalise them in December 2017 when we publish our final methodology.
- We expect appointees pursuing DPC at PR19 to develop arrangements that adhere to these principles and so help ensure there is a common DPC framework across the sector.
- We do not expect that all arrangements would need to be finalised by the time companies submit their business plans for PR19. We also expect that tenders would occur following our final determinations for PR19.
- We acknowledge the contribution a number of stakeholders have made to developing arrangements to date. We welcome further contributions from stakeholders on areas where they consider more clarity is required. We also

welcome stakeholders' views about any policy issues that they consider we should address before publishing our final methodology.

- We expect that, following a successful tender process, we would then change an appointee's licence to allow them to recover the CAP's revenue from their customers.

We welcome views on our proposed approach, including on how stakeholders propose to contribute to the ongoing development of DPC arrangements.

7.5.2 Awarding project licences to successful bidders

We propose that the core element of the DPC model is a long-term (eg 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 drafting contract terms in Appendix 10.

In certain circumstances we may be able to award a project licence to a CAP. This would be the case if a project meets the criteria to be specified under the Water Industry (Specified Infrastructure Projects) (English Undertakers) Regulations 2013 (SIPR)[46]. A current example of a SIPR project is the Thames Tideway Tunnel.

First Economics, in a recent report for several appointees, raised the possibility of licensing successful bidders through DPC under the NAV regime[47]. The NAV regime allows new water companies to be appointed if certain conditions are met. However, the NAV regime is intended to apply to specific circumstance and there are some practical barriers arising from the rights and responsibilities of a water undertaker or sewerage undertaker conferred to a NAV that are likely to present challenges in applying this framework under DPC.

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

[46] Ofwat, 'Criteria for selecting specified infrastructure projects – Ofwat guidance', May 2015
[47] First Economics, 'Direct procurement of water industry projects', February 2017

the CAP and the appointee. So if licensing is a practical option, we would consider carefully the balance between items specified in the contract and the licence.

7.5.3 Compliance with statutory obligations

Under our proposed model, based on a contract between the CAP and appointee, the appointee, as the procurer of the service, would continue to be responsible for ensuring compliance with requirements and standards enforced by Ofwat, the EA, the Drinking Water Inspectorate or NRW. 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 consider that DPC arrangements are able to deliver highest level of compliance with statutory obligations and high quality of service and expect that the appointee will provide clarity and appropriate assurances on managing these arrangements as part of their DPC proposals.

7.5.4 Who can compete to provide services under DPC

In general, existing appointees and associated companies should not be able to bid into their own tender process. We consider that there are significant real and perceived conflicts of interest that may distort the competitive process if we allowed this. In order to maximise potential competition and therefore benefits to customers in terms of innovation, financing and other costs, it will be vital that potential bidders perceive that competition is open to all. While, in theory, the potential and actual conflicts of interests could be managed by strict governance arrangements and “Chinese walls” between appointee and DPC bidder, these arrangements introduce additional complexity and may reduce or confuse the accountability of the procurer and/or provider of services. We want to ensure that the appointee plays a complete role as the buyer of services as this will help ensure best value for customers.

We also want to make sure appointees effectively manage their relationship with the CAP over the duration and ending of the contract in the interests of customers. For example, we would expect the appointee to have ongoing oversight of the performance of the CAP, take steps to remedy poor performance and where appropriate take action to enforce compliance under the contract. We consider that this would be less likely to happen if the CAP was, for example, an associated

company of the incumbent.[48] We consider that existing appointees could compete for a DPC project outside of their appointed area, as part of their non-appointed business.

The potential for perceived and actual conflict of interest will be diminished where an associated company of the incumbent is only one of several equity holders, particularly where the associate has a non-controlling interest in a potential bidder. However, even in these cases, it would be important that sufficiently robust arrangements could be put in place to manage actual and perceived conflicts of interest potentially with strict rules of separation and control. We would require companies to justify any proposed involvement in the bidding process in terms of potential benefits to customers and to explain how they were safeguarding their role as procurer in the process and over the delivery of the contract.

7.6 Our approach to cost assessment for DPC projects

Appointees using DPC will incur costs for pre-construction activities, as well as tender or procurement activities. We expect that, as with other efficiently incurred totex costs, appointees would recover these from their customers.

The CAP's project costs will also need to be recovered from customers. We therefore expect that DPC will need a specific revenue and cost recovery model to make sure all parties are protected, including customers. We do not expect appointees to need a separate price control for project costs.

7.6.1 Project development costs

We propose allowing appointees to recover costs they incur while developing and tendering projects as part of totex allowances for PR19 (that is, under the same price control). This would include all pre-construction costs, as well as tender and procurement costs. We expect that these costs would be similar to the costs appointees already incur to develop projects. We have included a separate data table appointees can use to set out these costs at PR19.

[48] We use the term 'incumbent' in this chapter and the direct procurement appendix to refer to an appointee that is responsible for running a competitive procurement under DPC.

We welcome views on this approach. You can find more details in Appendix 10.

7.6.2 CAP project costs and arrangements

We expect that the CAP's revenue stream (eg project totex and financing costs that the appointee pays to the CAP) could only be finalised following the tender process. As the CAP will finance the infrastructure, as well as building and operating it, these costs would not sit in an appointee's cost allowances or in its RCV. If they did, customers would pay the financing costs twice (once for the CAP, and once for the appointee).

We propose that, much like with Thames Tideway, the appointee would be able to recover the CAP's costs from its customers, then pass them through to the CAP. We consider that this would require a licence change:

- to enable the appointee to recover these additional costs, where they sit outside existing price controls; and
- to give the CAP enough certainty over its cost recovery to make the DPC model financeable.

We also expect that we would look to reflect certain aspects of the contract between the appointee and the CAP in appointees' licences. We consider that this would:

- give the CAP investors a degree of certainty about their contractual revenue stream, minimising the credit risk and improving financing terms;
- establish a way to assess any flexible elements of the contract (for example, changes in opex over time);
- potentially make the allocation of risk clearer, where required; and
- allow us a role in resolving certain disputes between the appointee and CAP. We again note the potential for this to improve credit quality and therefore customer outcomes.

To do this, we propose adding a new DPC-related licence condition(s) for appointees. We outline our initial views on the scope of these in Appendix 10.

7.7 Mitigating the risk of a failed tender process

We consider there to be a risk of an appointee committing to using DPC for a project in its business plan, but ultimately not tendering the project, or proving unable to appoint a CAP. For example, this could happen as a result of:

- a project identified for DPC in business plans for PR19 changing in scope, to the extent that it is no longer suitable for DPC (perhaps because the revised scope changes what must be delivered); or
- a tender process run by an appointee failing to appoint a successful bidder (perhaps because there is not enough interest in the project, or market conditions are poor).

In such circumstances, where the project is still needed, we consider the most suitable 'last resort' to be for the appointee to deliver the project in-house.

We note that, under our proposals, appointees would not have cost allowances in their price controls to deliver the project. In most cases, we would therefore expect the appointee to address any failed procurement process in its next business plan. The appointee should analyse the reasons for the tender's failure, including using independent assurance to assess its process against the principles we have set out and report on whether its process has met these principles. It should outline its proposed approach, including whether to retender, rethink the approach or self-provide.

However, we consider it important to make sure the appointee fulfils its responsibility as procurer on behalf of customers. DPC proposals should not just be developed to pass our tests as part of our initial assessment of business plans (see section 7.8). We propose the following measures to make sure the appointee acts in the best interests of customers:

- As part of licence changes for DPC we expect to include a condition for appointees to use all reasonable endeavours to ensure that the process is successful. We could then take enforcement action if we considered that this was not the case.
- The principles we are developing for the contract and procurement model will, as far as possible, promote a successful tender outcome.
- If the process fails, and the appointee could have prevented this failure, we would consider how best to protect customers' interests so that they do not suffer financially. This could include, for example, requiring the appointee to bear the procurement or tendering costs; and/or adjusting its allowed revenues to reflect efficiency gains from the DPC model, compared to in-house provision. We consider that this would provide appointees that commit to delivering a project under DPC with appropriate incentive to act in the interest of the customer.

We expect these mitigating measures to help make sure an effective market for DPC develops, by making our expectations for appointees clear to potential bidders. We seek views from appointees as well as potential bidders.

7.8 Initial assessment of business plans

As we have noted, we expect to test companies' approaches to DPC as part of our initial assessment of business plans.

Initial assessment test on targeted controls, markets and innovation: Direct Procurement for Customers

Has the appointee clearly demonstrated that it has considered all relevant projects for direct procurement for customers, and has it provided a well-reasoned value for money analysis supporting its decisions about whether or not to take forward any of these projects using direct procurement for customers?

As part of this assessment test, we will take into account:

- evidence that the appointee has considered DPC;
- evidence that the appointee has a high-quality framework for assessing its potential to deliver projects by DPC – which should:
- focus on both the benefit and cost/risk elements;
- present clear evidence that the company has analysed the potential benefits and opportunities;
- clearly explain and quantify the risks, wherever possible;
- clearly consider how the company can mitigate risks, and whether this could incur any extra costs; and
- consider the potential wider benefits of DPC (for future projects, for example, or for promoting more innovation).

7.9 Consultation questions

Q1. Do you agree with our draft guidance that appointees should focus on projects likely to deliver the greatest customer value for DPC at PR19? (We ask that appointees provide a list and description of which projects, based on our guidance, they consider would be in scope at PR19.)

Q2. What are your views on the type of tender model (ie an early or late tender model) appointees should use? Do you have any views on whether or not we need to specify a tender model companies should use?

Q3. What are your views on the overall commercial and regulatory model, including our draft procurement and contract principles set out in Appendix 10?

8 Targeted controls, markets and innovation: retail controls

8.1 Summary

This chapter sets out our approach to setting price controls for:

- residential retail activities49 of English companies and Welsh companies; and
- business, charity and public sector ("business") retail activities for English companies and Welsh companies.

Our form of retail price control will contribute to the PR19 key themes of:

- **affordability** by encouraging companies to minimise their costs per customer (including bad debts) through setting separate retail and business price controls and an average revenue control per customer; and
- **innovation** by considering three-year price controls to provide an earlier opportunity for learnings from opening of the competitive business retail market in England to be reflected in price controls.

Key messages

- We propose to continue to use a weighted average revenue control for residential retail activities of English and Welsh companies.
- We propose to continue to use an average revenue control for business retail customers in Wales not subject to competition.
- We will continue to consider setting price controls for business retail activities of incumbent England and Welsh companies that are subject to competition. We will not set price controls for companies that have exited the market. Instead former customers of these companies are protected by the retail exit code.
- We consider that three-year retail price controls may be appropriate.

[49] For the purposes of this document, 'retail activities' are those parts of the retail function of a water company's appointed business that we designate as retail activities.

Table 8.1 Summary box – 2019 price review proposals for retail price controls

Proposal topic	Our thinking and proposal
Form of Control	We will set a weighted average revenue control, where appropriate taking account of different costs by customer type for residential retail activities in England and Wales. We will set an average revenue control for business retail activities for Welsh companies. This control will be for all sewerage services and for water supplies less than 50 megalitres a year. We are continuing to consider whether to set price controls for business retail activities for Welsh water companies in relation to water supplies of at least 50 megalitres of water a year. If required we will set an average revenue control based on a gross margin cap. We are considering what type of price protection should apply for business retail activities for English water companies, where an appointed company has not exited the market. If we did set price controls for these companies we would use the same approach as used in the 2016 price review (PR16).
Duration of price controls	We consider that a three-year price control may be appropriate for retail activities as this would give us an earlier opportunity to take account of information and lessons from the English competitive business market.

8.2 Introduction

In PR14 we introduced separate price controls for residential and business retail activities for the first time.

Introducing separate retail price controls has allowed us to better target the efficiency challenge, and to focus management attention on this part of water companies' businesses in both England and Wales. In England, separate business price controls also helped to introduce competition to the business retail market on 1 April 2017. In Wales, business retail competition has not been extended beyond water supplies to customers of at least 50 megalitres a year.

In PR14, we set business retail price controls for a two-year period. This allowed us to review the business retail price controls immediately ahead of market opening and decide if they were appropriate. We set new price controls through PR16 process that would apply for three years, starting on 1 April 2017.

This chapter sets out:

- our proposals for continued price controls for residential retail in England and Wales (section 8.3);
- our proposals for continued price controls for business retail for Welsh water companies in Wales (section 8.4.1);
- our consideration on whether to continue controls for business retail customers in the competitive market in England for non-exited incumbent water companies (section 8.4.2); and
- our consideration of the duration of retail price controls (section 8.5).

In addition to price controls, a number of other elements of the PR19 draft methodology contribute to the regulatory framework on residential and business retail.

- Chapter 4 sets performance commitments and outcome delivery incentives, including incentives directly related to retail. This includes the new customer experience measure for residential customers.
- Chapter 9 sets out our approach to assessing the efficient costs for retail price controls, including doubtful debt costs.
- Chapter 10 discusses how we will set an appropriate return for retail activities as a margin on wholesale costs.

8.3 Residential retail controls in England and Wales

Residential retail customers do not have access to competition in England or Wales. We therefore propose to keep setting price controls for the residential retail activities of English and Welsh water companies to protect the interests of customers.

At PR14, we effectively 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 (i.e. unmetered);
- dual service (water and wastewater) unmeasured;
- water only measured (i.e. metered);
- wastewater only measured; and
- dual service measured.

The revenue allowance was made up of the retail cost to serve plus an allowance for the 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 propose to 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 propose to set an average revenue control to reflect the variation in retail costs by customer numbers and provide strong incentives for cost efficiency.

8.4 Business retail controls

Given the expected opening of the business retail market in England in April 2017, we introduced a safeguard price control for business retail in PR14 – an average revenue control by customer group (customer groups were proposed by companies). 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 following market opening.

In PR16, we reviewed the form of business retail controls to make sure they were still appropriate for the retail market opening in England. For consistency, PR16 reset business retail price controls in 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 a year for English companies, and 50 megalitres a year for Welsh companies. This replaced the retail ‘cost to serve’ and ‘net margin’ approach, which was retained for all other customers.

The opening of the business retail market in England has created new opportunities. New water supply and sewerage licensees can enter the business retail market and compete for customers. It has also allowed companies to exit the business retail market.

Customers of companies who have exited the market are protected through the retail exit code and competition law. The retail exit code requires companies to offer default tariffs that are no higher than would have been available if the company had

remained in the market. We will review the price requirements in the retail exit code by the end of the 2017-20 period.

8.4.1 Business retail controls in Wales

Wastewater business retail customers of Welsh water companies – and water business customers of Welsh companies operating using up to 50 megalitres a year – do not have access to competition. These customers will require price and service level protection in a similar way to residential customers.

Business customers of Welsh water companies who use at least 50 megalitres of water a year can switch from their existing water supplier. For Welsh companies, the current 50 megalitres a year threshold and restriction of competition to water supply only will continue. This reflects the policy position of the Welsh Government.

We only recently reviewed the form of business retail price control through PR16, publishing our final determinations in December 2016. So for those customers not in the competitive business retail market we continue to consider that we should use a cost to serve and net margin approach to setting price controls.

For water business retail customers in the competitive market who use more than 50 megalitres a year in Wales, we are still considering whether we should provide price protection to these customers beyond 2020. These customers are well placed to take advantage of the freedoms provided by competition to drive a better deal on retail services.

However, as monopoly water companies cannot exit the business retail market in Wales, these customers will not have the backstop price and service protection provided by the retail exit code. We will continue to review the development of the business retail market in Wales. In the meantime, we will collect data to allow us to set a price control if required. If required we consider that we should use the additional flexibility of gross margin controls that were used in PR16.

8.4.2 Business retail controls in England

In the lead-up to the opening of the business retail market, most English monopoly water companies exited the business retail market. Customers have been transferred either to associated retailers (for example a separate retail licence holder in the same group of companies) or an entirely separate retail licensees.

As these monopoly water companies have exited the market, they will not have a business retail operation. Consequently, it is not possible for us to set business retail price controls for these companies. Instead, former customers of these companies will be protected by the retail exit code and competition law.

A small number of monopoly water companies in England have not exited the business retail market. The retail exit code would not apply to the customers of these companies until they choose to exit. Consequently, if we remove business retail price controls from these companies, there would not have the same backstop price and service protection for their business retail customers, as set out in the retail exit code. We are therefore considering what form of price regulation should apply to these non-exited companies.

As the competitive business retail market only opened in April 2017, robust information on the operation of the market is not yet available. It may be necessary to implement price control for non-exited English companies to make sure their customers have access to at least the same level of protection as customers of companies that have exited the market. We only recently reviewed business retail price controls in PR16. So in the absence of information on how the market is operating, if we do choose to continue with controls, our default proposal is to continue with the existing form of control. That is an average revenue control based on a cost to serve and net margin approach for customers using up to five megalitres a year and a gross margin cap for customers using more than five megalitres a year. We therefore propose to collect data to allow us to set these average revenue controls. We will review this approach as evidence on the development of the market becomes available.

8.5 Proposals for the duration the controls

Apart from the business retail controls in PR14, 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 price review period. The disadvantage of longer term control is that provide 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 controls, 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 and then three year period, while for residential controls we set controls for five year period.

We consider that there is a strong argument for having controls that are shorter than five years. For both the residential sector in England and Wales, and the business sector in Wales, a three-year control may be appropriate.

A key argument for shorter controls is that the introduction of competition (on 1 April 2017) in the business sector in England could reveal valuable information. This information is likely to relate to the cost of retail activities and the broader service benefits for customers.

In PR19, we will have access to early evidence from the introduction of business retail competition by the time of final determination, but company business plans will be prepared around one year after market opening. PR19 is therefore likely to only capture limited information from the operation of business retail market. A three year price control would enable a more comprehensive reflection of evidence from the first five years of competition and so would allow the benefits to be passed onto customers well in advance of a five year control.

Taking into account these considerations, we are consulting on whether a three-year control would be appropriate.

It should be noted that if a decision were made to have a three-year control, we would still need to collect data for years four and five, for modelling purposes. This would allow us to undertake the financeability assessment at appointee level.

8.6 Consultation questions

Q1. Do you agree with using a weighted average revenue control, where appropriate taking account of different costs by customer type for the residential retail price controls for English and Welsh water companies?

Q2. Do you agree with using an average revenue control for business retail price controls for Welsh companies not subject to competition?

Q3. Do you support price controls for business retail activities for English water companies that have not exited the business retail market?

Q4. Do you support price controls for water service customers of Welsh companies using more than 50 megalitres a year?

Q5. Do you support a three year price control for residential retail activities and business retail activities?

9 Securing cost efficiency

9.1 Summary

In this chapter we discuss our approach to setting efficient cost allowances for each company in the 2020–2025 period (PR19). It is vital company business plans demonstrate that companies are providing value for money to their customers. An important element is that company business plans are efficient – customers should not pay extra for inefficient services. We are expecting companies to make a step change in their efficiency in PR19 and that this will be reflected in their business plans. We discuss our approach to encouraging companies to submit efficient business plans and our approach to setting efficient totex allowances.

Our approach to setting efficient costs allowances supports the **four key themes of PR19.**

- Our proposals will ensure companies are incentivised to deliver efficient business plans with frontier-shifting performance on costs. This will help deliver **affordable bills**.
- We will promote **long-term resilience** by ensuring a robust approach to assess cost adjustment claims.
- We will promote **innovation** by setting challenging cost allowances for companies upfront, allowing companies to retain a portion of their cost savings, and using the totex approach.

Key messages

- In PR19 we expect a step change in the efficiency of the sector due to the benefits from the totex and outcomes frameworks. We will look for evidence from outside the sector, where appropriate, to inform the efficiency challenge for water companies.
- We propose a new cost sharing incentive to incentivise companies to submit and deliver efficient business plans.
- We propose use benchmarking as the main tool for cost assessment. We propose to develop new econometric models. We propose to use a combination of top-down (aggregate) models as well as granular benchmarking analysis.
- We propose to use forecast data for benchmarking where appropriate. In particular, for enhancement activities with little historical evidence on efficiency.
- We propose to fund unconfirmed environmental requirements in a way that better protects customers.

- We propose a high bar to accept cost adjustment claims. We propose a mechanism to make the process more symmetrical to protect customers.
- We propose to use econometric benchmarking to set efficient cost allowances for residential retail. We propose not to automatically index the retail control to a measure of inflation.
- We propose to consider the benefits of retaining a transition programme in PR19

Table 9.1 Summary Box – PR19 Proposals for securing cost efficiency

Proposal Topic	Our thinking and proposal
Cost sharing incentive	We want to incentivise companies to submit efficient business plans that deliver for customers. We propose a new cost sharing incentive for that purpose. We propose not to have a menu approach for PR19 to simplify the regulatory framework. The new cost sharing incentive should provide a more effective incentive than the menu.
Modelling approach	Benchmarking is a powerful method to assess cost efficiency and set efficient cost baselines. We will use benchmarking analysis by econometric models to assess cost efficiency. We will develop our models using historical data. However, we expect a step change in efficiency in the sector. To capture such step change and future trends, we will also use forecast data in cost models. To set efficient baselines, we will use evidence from top down "aggregate wholesale" econometric models, as well as from granular models that benchmark business unit costs and new resource controls. Each approach has advantages and this dual approach will help identify the efficient level of costs.
Enhancement expenditure	We recognise that enhancement expenditure, in most cases, has unique cost drivers. There is also less data for robust benchmarking, as enhancement activities are not routine. To better protect customers from inefficient spending on enhancement activities, we propose to draw upon a range of approaches. We will use totex econometric models where appropriate and assess other elements separately, using benchmarking analysis that draws on historical and, where appropriate, forecast data. In view of uncertainty surrounding parts of the environmental programme in the 2015-2020 period (PR14), we are consulting on how to better protect customers. We propose either to make an allowance against a conservative forecast of the likely scope of the programme, or to introduce a unit cost adjustment mechanism. These proposals will ensure that customers only pay for environmental outcomes that are delivered.

Proposal Topic	Our thinking and proposal
Adjustments to our cost baselines	We consider that the "special cost factor" process of PR14 was focused on companies and may have not fully protected customers in all cases. To better protect customers, we propose to make the process more symmetrical, allowing for downward, as well as upward, cost adjustments To assist the process of reviewing cost adjustment claims, we also propose that companies submit information on their expected cost adjustment claims on 3 May 2018 – four months before business plan submission.
Setting efficient baselines	We will set challenging efficiency baselines, which will incorporate an element of catch-up efficiency and a frontier shift (dynamic efficiency). We consider that companies should be efficient from the start of the new regulatory period, and so will not allow for a gradual catch-up over each year of the price control.
Retail controls	We propose to move away from the Average Cost to Serve (ACTS) approach of PR14 and instead use an econometric approach to benchmark companies' costs and set efficient baselines, with no gradual catch-up (glide path) to the efficient frontier. We propose to use evidence on efficiency in provision of retail services in other sectors to inform our cost baselines for water companies. We will use a proportionate approach to assess business retail costs, comparing projected costs to historical levels and to evidence from relevant comparators. This will include evidence from the English business retail market. We propose not to index retail (residential and business) controls to a general measure of inflation, we consider this approach provides appropriate incentives for retailers to manage input costs. Our preference is to deal with input price pressure as part of our totex allowance, rather than through indexation.
Transition programme	We consider that with the move to an outcomes and totex framework there should be less need for a prescribed transitional mechanism. However, there may still be benefits to a transition programme for some elements of expenditure and we are seeking views on whether to retain this for PR19.

9.2 Introduction

This chapter sets out how we propose to incentivise companies to submit efficient business plans, and how we set efficient cost allowances in PR19.

Cost assessment is the setting of an efficient baseline for totex 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 control;
- residential retail controls; and
- business retail control for Welsh companies[50].

Our cost baselines feed into the calculation of our allowed revenue and RCV additions. These play a key role in determining current and future bills.

The remainder of the chapter is structured as follows:

- In section 9.3 we set out our expectation for efficient business plans;
- In section 9.4 we propose a new incentive to submit efficient business plans;
- In section 9.5 we set out our approach to assessing costs;
- In section 9.6 we discuss our approach to applying adjustments to our cost baselines;
- In section 9.7 we discuss our approach to setting retail price controls;
- In section 9.8 we discuss the case for a transition programme; and
- Finally, in section 9.9 we introduce our approach to the initial assessment of business plans for securing cost efficiency.

Appendix 12 on securing cost efficiency provides further detail on our proposals.

[50] A small number of monopoly water companies in England have not currently exited the business retail market. We are therefore considering what form of regulation should apply to these non-exited companies (see the Retail controls chapter for further detail).

We have been working with water companies through the cost assessment working group. Our proposed approach in this chapter is influenced by discussions we have had with the group.

9.3 Expectations of companies' business plans

It is vital that company business plans deliver value for money to their existing and future customers. An important element is that company business plans are efficient – customers should not pay extra for inefficient services. We expect as part of their business planning, companies will be identifying significant scope to improve efficiency in the delivery of their services, and that these efficiency gains will be set out in their business plan.

It is the responsibility of water companies to put together business plans that deliver for their customers. We expect the companies to challenge their own business plans to ensure customers are not paying for inefficient levels of performance, an inefficient delivery of work, or an inefficient level of risk.

Companies will have to show that their plan provides value for money to customers over the long-term. 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. Where business plans do not appear efficient we will step in to protect customers by setting efficient cost baselines.

Companies will also have to show that their plans do not expose customers to an undue risk, such as where companies have some ability to control risk or its impact on cost.[51] Where investment depends on uncertain forecasts, we expect companies to explain how customers are protected. Companies will need to consider and demonstrate, through robust options analysis, whether the uncertain investment can be postponed, or whether options can be kept open until such time as more information becomes available.

[51] See the chapter on aligning risk and return for a wider discussion on the risk that companies ought to manage.

9.3.1 A step change in efficiency for PR19

Our price control framework is designed to reward and encourage efficiency and innovative thinking. In PR14 we introduced the totex and outcomes frameworks. These frameworks provide companies with more flexibility than before to decide how best to deliver their services, and to come up with the most cost-efficient way of achieving customer outcomes. The new frameworks should also encourage innovation, for example, through the use of operational solutions.

As with competitive sectors, we expect companies to be identifying significant efficiency gains in their business plans. Changes in technology, innovation, use of markets and business process redesign to focus on customers all offer significant scope to reduce costs. Companies should not assume that rolling over base costs from the previous price review is a sound basis for business planning. Customers, including other businesses, are dependent on their water supplier to take firm action to drive efficiency into their businesses. 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 that water companies, as well as the supply chain, will have better embedded the totex and outcomes frameworks in their business planning process. In light of the opportunities from innovation, markets and focusing on customers, along with the flexibility of the totex framework, we expect a step change in cost efficiency in the sector.

We have seen significant efficiency gains amongst regulated energy transmission and distribution companies that have moved to the totex and outcomes framework. Companies who are successful in adapting to the new frameworks will shift the efficiency frontier forward on costs. This in turn, will drive our view of the efficient level of costs for PR19. We expect companies to set out their proposed level of efficiency gains, relative to 2015-20, including for base and enhancement expenditure and explain how their efficiency gains compare to broader evidence of best practice efficiency gains in the wider economy. Where companies do not identify and propose efficiency gains in their business plan, we will step in to protect customers from inefficiency by setting cost allowances to only cover efficient costs and encourage companies to make efficiency gains.

9.3.2 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 the most efficient companies in the sector. We will use historical cost performance and future trends in the sector, as well as relevant evidence from the wider economy to inform our efficiency challenge.

In PR14 our efficiency benchmark was set at the “upper quartile” level of historical totex performance. That is, we set an efficiency challenge based on the historical performance of a (notional) company that was more efficient than 75 percent of its peers, but less efficient than 25 per cent of its peers. In PR19 we will consider whether a more stringent efficiency challenge is appropriate. We expect companies to catch up with frontier performance, rather than with an “upper quartile” level of performance and consider the role of forecast as well as historical evidence.

Where appropriate, we will use evidence from the wider economy to inform the efficient level of costs and the level at which we set our cost baselines. We will look at other sectors that have adopted the totex and outcomes frameworks for evidence of the efficiencies and innovation they have delivered. In addition, we will use evidence from the wider economy on the rate of technological progress to push the sector’s frontier further.

We will set efficient cost baselines from the start of the price control period. We will not allow a gradual catch-up over each year of the price control. Companies should be efficient from the start.

Our approach to setting baselines means that “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 consumers and it would be inappropriate at this point to rule out the use of capping. We will consider issue further as part of setting draft determinations.

9.4 A new cost sharing incentive to submit efficient business plans

Cost sharing rates are the proportion of cost underrun that investors get to keep, or the proportion of any cost overrun that investors will have to bear. The cost sharing ensures that customers benefit when companies outperform their cost allowance, whilst they are partially protected when companies overrun their allowance. We are proposing to use cost sharing rates to incentivise companies to submit stretching efficient plans for PR19.

The cost sharing incentive that we propose will replace the menu regulation approach that we used for PR14. The menu approach was used as an incentive to submit accurate cost forecasts in business plans. Our experience with menus at both PR09 and PR14 suggests that companies found them difficult to understand and that they had little or no impact on company behaviour. Given the additional complexity that the menu approach adds to the regulatory process and little evidence of customer benefits, we are proposing to simplify our approach and not use menus in PR19.

We are proposing to retain a cost sharing mechanism for total revenue controls, namely for the water network plus, wastewater network plus and the water resources controls. Cost sharing is an effective way to allocate cost performance risk between customers and companies. It removes some risk of uncontrollable cost overruns from companies and allows us to set a stricter determination that results in lower bills for customers. It also ensures that customers share the benefits of company cost savings.

We propose not to apply a cost sharing scheme in bioresources and retail, which are average revenue controls. This is because in average revenue controls the cost performance risk is significantly lower due to the ex-post volume adjustment.

Under a menu regulation approach, we had limited flexibility in setting cost sharing rates across companies[52]. As we are proposing not to use menus in PR19, we will have flexibility about the way we set cost sharing rates. We will use this flexibility to propose a cost sharing scheme that will incentivise the submission of efficient and stretching cost forecasts in business plans.

The cost sharing scheme that we propose is illustrated in figure 9.1. The scheme has two crucial characteristics:

1. the scheme is asymmetric – the cost sharing rate for outperformance is different from the one for underperformance; and
2. from a company perspective, cost sharing rates are better for a more efficient business plan.

For each company, its cost sharing rates will be based on the ratio of its business plan totex, to our view of efficient totex.

[52] The menu scheme imposed a restriction on the shape of cost sharing rates. Cost sharing rates were high for efficient plans and low for inefficient plans. The restriction was necessary to balance against other factors, such as the “additional income” to ensure the menu provides an incentive to submit accurate cost forecasts.

Figure 9.1 Our proposed cost sharing scheme to incentivise submission of efficient business plans

Business plan totex	80	85	90	95	100	105	110	115	120
Ofwat's totex baseline (ie "cost allowance")	---------- 100 ----------								
Ratio (row 1 / row 2)	80	85	90	95	100	105	110	115	120
Cost sharing rate (outperform)	60%	58%	55%	53%	50%	48%	45%	43%	40%
Cost sharing rate (underperform)	40%	43%	45%	48%	50%	53%	55%	58%	60%
Actual expenditure	Reward*								
80	12.0	11.5	11.0	10.5	10.0	9.5	9.0	8.5	8.0
85	9.0	8.6	8.3	7.9	7.5	7.1	6.8	6.4	6.0
90	6.0	5.8	5.5	5.3	5.0	4.8	4.5	4.3	4.0
95	3.0	2.9	2.8	2.6	2.5	2.4	2.3	2.1	2.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105	-2.0	-2.1	-2.3	-2.4	-2.5	-2.6	-2.8	-2.9	-3.0
110	-4.0	-4.3	-4.5	-4.8	-5.0	-5.3	-5.5	-5.8	-6.0
115	-6.0	-6.4	-6.8	-7.1	-7.5	-7.9	-8.3	-8.6	-9.0
120	-8.0	-8.5	-9.0	-9.5	-10.0	-10.5	-11.0	-11.5	-12.0

* Rewards represent the incentive mechanism adjustments expressed as a percentage of our independent view of totex.

The highlighted cells indicate the maximum reward for given outturn expenditure. It shows that companies will have an unambiguous incentive to submit efficient plans, regardless of expected outturn.

This structure of cost sharing rates can be viewed as consistent with the level of risk built-in to companies' plans. Companies that submit high, inefficient, cost forecasts will have greater exposure to cost overrun risk than companies that submit efficient cost forecasts. The high exposure to cost overrun risk will provide a strong incentive for inefficient companies to contain their costs. This will ensure that customers of companies that deliver business plans that are inefficient are protected in the event of subsequent inefficient delivery.

We consider this best aligns company and customer interests, with incentives designed to address both the submission of efficient business plans and the subsequent delivery of those plans.

For the avoidance of doubt, the illustrative matrix in figure 9.1 is not a menu of the sort that we used in PR14. Companies do not get to choose their cost sharing rates. Rather, each company's cost sharing rates will be determined by the ratio of their view of totex (as in their business plans) to our view of efficient totex.

We will continue to use the totex approach where the cost sharing rate applies to over or under-spend of totex. We will not differentiate between operating expenditure and capital expenditure for the purposes of the cost incentive. This will ensure that companies focus on minimising total expenditure without undue preference for capital or operational solutions. The totex approach also reduces overall cost performance risk as companies have more flexibility to manage costs.

The cost sharing rate will not necessarily be the same across controls. In each control it will be based on the ratio of the company cost forecast to our cost baseline.

The calibration of the matrix above is just for illustration. Different calibrations can make the incentive stronger or weaker. Some examples are given below.

- The cost sharing rates in figure 9.1 range from 40% to 60%. Setting a wider range, for example, from 30% to 70%, will make the incentive stronger. We assume that beyond the high or low points of the matrix the cost sharing rates remain fixed at the same value as in the relevant extreme. For example, under the matrix above, a business plan with forecast costs of 70 would have cost sharing rates that are the same as a company with forecast costs of 80.

- The cost sharing scheme in figure 9.1 is linear. An alternative S-shaped scheme will provide a stronger incentive around our estimate of efficient totex, but a weaker incentive farther from it.
- Last, there may be benefits to setting higher cost sharing rates for underperformance. Historical evidence suggests that companies tend not to significantly underperform the regulator's cost allowance, which suggest they have significant degree of control over risks. Higher cost sharing rates for underperformance would provide a stronger incentive on companies to perform efficiently and mean that customers bear less costs where companies are inefficient. For example, the cost sharing rate for outperformance can range from 40% to 60% with a corresponding cost sharing rate for underperformance from 70% to 50%. Cost sharing rates for outperformance and underperformance need not add up to 100%.

We have published an excel model to demonstrate the cost sharing scheme alongside our draft PR19 methodology consultation document. The spreadsheet model allows the user to examine the effect of different calibrations of the cost sharing scheme.

For companies whose plans are assessed to need significant scrutiny, we set out in the aligning risk and return chapter our proposal to set a cost sharing 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. This will incentivise investors to hold companies to account and so strongly incentivise companies to deliver good business plans. It will also protect customers of companies who have supplied poor quality or incomplete information that does not give us confidence in setting the price control.

Proposals for cash flow impacts of the incentive mechanism

A company's totex cost allowance will be determined by our independent view of efficient costs. The matrix determines the overall reward or penalty for cost out- or under-performance against our independent view. There are a number of options as to how these rewards or penalties could flow through company cash flow.

One option is that cash flow in the PR19 determinations reflect our view of efficient totex, with reward or penalties reconciled at the end of the control period. Another option is that cash flow in the PR19 determination reflect the position that outturn totex is consistent with the business plan. For a company that delivers at the cost set out in its business plan, this will minimise the size of the reconciliation adjustment at PR24. We propose the latter option and illustrate it below.

The two options have different implications on when customers benefit from a share of the reward, or pay for a share of the penalty, in particular, on the amount that is paid for by customers in 2020-25 versus the reconciliation process at PR24.

For the avoidance of doubt, the options differ only in their cash flow implications. Under both options a company's cost allowance is equal to our view of efficient totex and its final position, including any reward or penalty, is the same on a net present value basis.

Box 9.1 an example of our proposed cost sharing scheme for total revenue controls

The example below is based on the cost sharing scheme in figure 9.1.

A company submits its business plan with £110 million of totex forecast for the period 2020-25. Our independent view of totex for the same period is £100 million. This means that the ratio is 110 and the cost sharing rates are 40.9% for outperformance and 59.1% for underperformance against our independent view of totex.

Scenario 1: underperformance

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 £11.8 million of this cost overrun (59.1% x £20 million). The remainder, £8.2 million, will be recovered from customers.

Scenario 2: outperformance

If the company's actual expenditure turns out to be £90 million – an outperformance of £10m against our independent view of totex – its investors will gain £4.1 million of this cost underrun (40.9% x £10 million) with the remainder, £5.9 million, returned to customers.

Cash flow

The company would be remunerated for totex of £104.1 million in our determination (calculated as £100 million + (£110 million - £100 million) x 40.9%).

Under scenario 1, as £4.1 million was recovered from customers in 2020-25, an additional £4.1 million would be recovered in 2025-2030.

Under scenario 2, as £4.1 million was recovered from customers in 2020-25, £10 million would be returned to customers in 2025-2030.

9.5 Overall approach to cost assessment

For PR19, we propose to estimate the efficient level of costs for each company, independent of the evidence provided in an individual company's business plan. This approach provides a strong incentive for companies to submit efficient cost forecasts in their business plans. This approach is similar to PR14, but is significantly different from the approach of earlier price controls, where we used the costs put forward by the companies and applying an efficiency challenge to them.

To form our independent view of efficient costs we propose to use benchmarking analysis. Namely, to estimate the efficient level of cost for a company based on a comparative analysis of cost data for all companies. In PR14, we introduced advanced econometric models to do the analysis in a robust way. Our econometric models were used to assess most of the companies' expenditure. Some costs, such as business rates, were excluded from our econometric models and were subjected to a separate efficiency assessment. Sometimes we also excluded enhancement expenditure and used a more bespoke benchmarking analysis for their assessment.

In PR14 we also introduced a new "special cost factors" process to assess company claims for deviations from our cost baselines.

In PR19 we will build on the approach used in PR14, including using benchmarking analysis to assess costs and set initial cost baselines. We will supplement our analysis by an adjustment process to account for special cost factors and model imperfections. We will modify our approach taking account of learning from PR14, industry feedback, and the Competition and Markets Authority (CMA) reference on Bristol Water's PR14 price controls.

In this section we set out our approach to assessing costs and setting efficient cost baselines. The section includes:

- our approach to cost modelling (section 9.5.1);
- our approach to enhancement expenditure (section 9.5.2); and
- the adjustment process (section 9.6).

9.5.1 Our approach to cost modelling

We will continue to use benchmarking analysis for cost assessment

Benchmarking models compare costs across companies. We will develop econometric models to do this comparison in a robust way. The models take into account known factors that affect costs, for example, the difference in scale and operating environments across companies. These help distinguish between "legitimate" differences in costs and differences that may be attributed to efficiency.

The approach of using benchmarking analysis to set baselines is also advantageous in terms of the incentives that it provides. It means that our cost allowance for any given company is not directly based on its own cost performance. There would be no extrapolation or roll forward of each company's historical expenditure to generate its baseline. 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, companies do not have a perverse incentive to submit high forecasts in their business plans.

We propose to continue to exclude certain costs from our benchmarking analysis, such as business rates and remaining pension deficit repair costs. We discuss these costs in the securing cost efficiency appendix.

Data

On 15 July 2017 we will receive cost and other data from water and wastewater companies. The information will cover six years, from 2011-12 to 2016-17, and will allow us to develop cost models.

We will complement this data as required, with data from external sources (for example, from the Office for National Statistics (ONS)) or from our older June returns.

Using historical data for benchmarking has some advantages over forecast data. Historical data is often more robust for benchmarking analysis as it represents actual expenditure. Forecast data may vary across companies, due to efficiency and uncontrollable factors (eg customer number, urbanity, rurality), and also due to different assumptions about future growth, input prices etc. This makes it harder to identify inefficiencies through benchmarking. On the other hand, historical data will not itself take account of expected future efficiency gains and will reflect any inherent inefficiency in the sector, which may weaken the efficiency challenge.

While we will develop our models using historical data, we intend to test our model and assess their predictions using forecast data. As we said above, we expect companies to forecast a step change in efficiency and we will take account of this information in our initial assessment of business plans. Using forecast data in our models has the potential to capture forward trends and future efficiency gains. It also makes sure that these gains will be shared with customers through lower cost baselines.

In our May 2016 document we said that we will deflate the base cost data using the same measure of inflation we will apply for revenues. Consistent with our proposal to index price controls to the CPIH, we will deflate the base cost data using the CPIH.

A mix of top-down and granular benchmarking analysis

We propose to develop a richer set of benchmarking models relative to what we had in PR14. Our benchmarking analysis will include “top down” models that compare aggregate wholesale costs across companies, similar to those used in PR14. We also propose to develop granular models. The granular models will benchmark expenditure on individual services, such as, treatment, distribution, water resources and bioresources.

Our granular benchmarking analysis will help reveal information on the cost of different services. This will allow us to better identify where companies are inefficient and raise the efficiency challenge, as companies will need to be efficient on all controls. It will also support our new regulatory framework where we need to set separate cost baselines for water resources, bioresources and the two network plus controls.

More granular benchmarking analysis enables us to take into account a greater number of potential factors that explain costs. For example, we may consider the availability of land for disposal as a cost driver of bioresources, but given that it is relevant only to disposal costs of bioresources, it is unlikely to be significant in the context of a wastewater wholesale model. It is more likely that a granular model looking only at bioresources, will capture it as a statistically significant cost driver.

Granular modelling also has some disadvantages such as the difficulty to capture cost complementarities between different services, such as spending more on treatment to reduce distribution costs and being more subject to allocations of shared service costs. These issues can be addressed by taking a more aggregate approach.

A further issue is that separate reporting of water resources and bioresources expenditure was introduced relatively recently. While we have improved our reporting guidance for the allocation costs across services, there may still be issues around data allocation across services that would impact the consistency of reporting and therefore, the quality of data. This is particularly an issue for water resources and bioresources if our analysis draws on a longer time period of data. For this reason we consider that it would be essential to use a top down aggregate wholesale benchmarking analysis for the water resources and bioresources controls, as well as granular cost models.

We consider that it will be important to retain a full range of options for estimating efficient cost allowances, both drawing on the granular cost models as well as more aggregated approaches. The granular cost models are a new approach and we will need to consider the appropriate weight to place on their results.

Sharing our cost models with stakeholders

On 15 July 2017 we will receive cost and non-cost data from water and wastewater companies. The information will cover the years 2011-12 to 2016-17 and will allow us to develop cost models.

We will consider whether it would be helpful to publish more details in early 2018 on the development of our cost models. 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.

9.5.2 Our approach to enhancement expenditure

Enhancement expenditure refers to expenditure for the purpose of enhancing the capacity or quality of service beyond current levels. Enhancement expenditure is generally not routine expenditure and is distinguished from base expenditure, which includes the costs of running the service at its current level.

Enhancement expenditure is typically more difficult to compare across companies. The expenditure may be driven by a number of factors, including population growth, new statutory obligations, government policy and strategic prioritisation by company boards (often in consultation with their customers). As a result, it can be quite company-specific, irregular and difficult to predict.

Our proposed approach for PR19

We have said that our preferred approach to assessing efficient costs is to develop a fully integrated totex approach, combining operating and capital expenditure in our benchmarking analysis. The advantage of such an approach is that it seeks to identify business cost drivers and efficient levels of costs based on relatively high-level data. This means we avoid difficult and burdensome assessments of companies' operating practices and capital plans. That is why, where appropriate, we will include elements of the enhancement programme in our econometric benchmarking models.

However, for the reasons outlined above, it may be difficult to develop robust benchmarking of total costs. There may be elements of enhancements for which it would be more appropriate to have a separate assessment.

We will consider and test which elements of enhancement expenditure can be included in our benchmarking models. Some activities, such as those to address growth, may be more predictable and linked to the high level cost drivers of the econometric models. There may be a stronger case to include their costs in a model with base expenditure. Where there is a stronger case to exclude enhancement costs from our main benchmarking models (for example, quality enhancements), we will assess these costs separately.

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 specific 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.

Our approach will be proportionate. For material areas of enhancement expenditure, we will look to complement our analysis with an expert review and examination of additional information.

Approach to unconfirmed requirements in environmental programmes drawn up by the EA and NRW

A large portion of enhancement expenditure, particularly in the wastewater network plus control, is driven by environmental requirements, as specified in the EA's Water Industry National Environment Programme (WINEP) and NRW's National

Environment Programme (NEP). Some of these requirements will be confirmed as definite by the time the third release of these documents is issued in March 2018. But others, principally driven by the Water Framework Directive (WFD), 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 also needed to deal with uncertain enhancement requirements under the National Environment Programmes in England and Wales. Our final determinations in December 2014 had to anticipate ministerial decisions on the scale of the Programmes of Measures for the second round of the River Basin Management Plans (RBMPs). These decisions were not due to be made until a year later. Programme of Measures list the actions needed to meet the requirements of the WFD and other environmental legislation in each river basin district. At PR19, the gap between final determinations and finalisation of the Programme of Measures will have extended by a further 12 months. This means there will be greater uncertainty with regard to the required actions to be taken by companies at the time we make our final determinations.

Evidence from PR14 suggests that the scale of the programme driven by the WFD is generally smaller than what was included in company business plans and assumed in our final determinations (see the cost efficiency appendix). This highlights the risk that customers may pay for enhancement schemes that will not be required to be delivered. The reduction in the scale of the WFD-driven programme may also suggest that companies are able to influence the scale of the programme. We would like to keep the incentive on companies to engage constructively to ensure that only efficient schemes will be required.

In PR19 we propose to adapt our approach to funding unconfirmed environmental requirements. We propose two alternative options. The aim is to better protect customers against the uncertainty related to unconfirmed environmental requirements, and at the same time provide companies with incentives to manage the scale and costs of the programme.

One option is to retain our general approach taken at PR14 but apply a more conservative forecast regarding the scale of programme. Under this option we would allow efficient expenditure to fund only part of the anticipated, but yet unconfirmed, programme in PR19. For example, we could set allowances to cover 25% of the anticipated programme in terms of say, river length improved or pollutant load removed. Once WFD requirements are confirmed, companies will have until the statutory deadline in December 2027 to comply. This means that companies will be able to seek efficient funding for any requirements beyond what was funded for

PR19 as part of the 2024 price review process. If necessary, a transition programme in the 2024 price review, which would facilitate companies bringing forward investment, could be used to make sure companies are compliant with statutory deadlines. While such option substantially reduces the risk that customers will pay for enhancement schemes that will not be required, it provides little incentive for companies to engage with the environment regulator and influence the scale of the programme where appropriate.

Alternatively, we could set an allowance to cover a higher percentage of the anticipated programme. A higher percentage may strike a better balance between customer protection and incentive on companies to engage with the environmental regulator to ensure appropriate schemes are included in the programme.

A second option is to set a cost allowance based on the full extent of the programme anticipated by the company as being required by 2025. However, unless relatively trivial (for example, the cost of investigations), expenditure against unconfirmed requirements would need to be linked to an outcome and a unit cost. We would use the unit cost to make an adjustment 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. Again, while this option removes the risk that customers will pay for enhancement schemes that will not be required, it provides little incentive for companies to engage and influence the scale of the programme where it is appropriate to do so.

We present evidence from PR14 and discuss these options at more length in the securing cost efficiency appendix. We would welcome stakeholders' views on whether the approach to funding the 'managing uncertainty' programme taken at PR14 needs to be adapted to better protect customers. If this is the case, we would like to know which of the two options described is preferred, and why.

9.6 Adjustments to our cost baselines

Our basic cost assessment approach relies on benchmarking models to set an efficient cost for each company. However, statistical models are imperfect and cannot take into account all relevant factors that affect costs. There may be instances where an adjustment is required to correct these imperfections.

The special cost factor process was an important component of our cost assessment framework in PR14. The mechanism allowed companies to make a claim for a cost adjustment, where our models and baselines had not adequately captured expected costs. Such costs are typically company-specific:

- Company-specific statutory requirements;
- An atypically large investment by the company; or
- Regional operating circumstances that result in higher costs.

We will retain an adjustment process for PR19. However, we will set a high evidential bar for allowing adjustments. We discuss the evidence that we expect companies to provide to justify cost adjustments in the securing cost efficiency appendix.

We consider that in many cases companies can avoid the need to raise cost adjustment claims by taking a more balanced approach. Just as there might be costs that are not adequately captured in our models, there may also be costs that are over-estimated 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 this in their business plan submission and refrain from submitting some cost adjustment claims they would otherwise have made.

In contrast to PR14, we aim to take account of cost adjustment claims in assessing business plan totex efficiency in the initial assessment stage. We invite companies to submit information on expected cost adjustment claims earlier than business plan submission to enable that.

Our initial assessment of business plans will also consider a company's *approach* to cost adjustment claims. Other things being equal, a company that raised cost adjustment claims only where necessary, and the claims were well evidenced and efficient, may have a higher categorisation than a company that used the process more freely, and whose claims were unwarranted and of low quality.

Introducing a process for downward cost adjustments

At PR14 the adjustment process was generally one-sided. Companies would make claims for cost adjustments and, where accepted, they resulted in upward adjustments to their cost baselines. There was no process to identify instances where downward adjustments might be required.

We consider it very important that the process is symmetrical. We want to protect companies in cases where the models underestimate their cost requirements, and customers in cases where the models overestimate companies' expenditure requirements. The CMA, in its review of Bristol Water's appeal, highlighted this point.

To make sure our process adequately protects customers, we will scrutinise business plans to identify appropriate downward adjustments to our cost baselines. We will particularly scrutinise business plans that include a large number of cost adjustment claims.

We are also proposing a mechanism to make the adjustment process more symmetrical. We explain this further below.

Companies' claims for cost adjustment relate to company-specific costs that they expect to incur in the next price control period. But many such costs will have been incurred in the past, on an on-going basis. Cost adjustment claims due to regional factors, such as topography or geology, are examples. Given that these costs are not new, they will be reflected in our cost baselines. This is because they will be included in the underlying data used to develop our models. The effect is that the industry cost baselines would be, on average, higher than they would have been if these costs were not in the underlying data. Cost baselines would be higher also for companies for which the regional factor is irrelevant.

Under the proposed mechanism, for each cost adjustment claim that we accept, we will consider whether offsetting adjustments are warranted to protect customers. The offsetting adjustments will reduce modelled allowances across companies. Box 8.2 provides an example.

Box 9.2 a hypothetical example of our proposed mechanism for downward cost adjustments

Company 1 makes a cost adjustment claim for £10m due to significantly higher than average regional labour costs. The claim is successful and we make an upward cost adjustment of £10m to the modelled cost baseline of Company 1.

After reviewing the claim, we consider that the **same** costs were present in the past (specifically, in our modelling data) and are therefore in companies' modelled baselines. We will therefore look to offset the upward adjustment with offsetting downward adjustments that total £10m.

In this specific example, we calculated the amount to be deducted as a proportion to each company's totex baseline. This is shown in the table below. Notice that a negative adjustment (of £3.3m) was applied also for the Company 1, to account for the "implicit allowance" of the claim in its own baseline.

Company		1	2	3	4	5	Total
Totex baselines (£m)	[1]	25	20	15	10	5	75
Upward cost adjustment (£m)	[2]	10	0	0	0	0	10
Allocated proportion of downward adjustment (%)	[3] = [1]/sum[1]	33.3	26.7	20.0	13.3	6.7	100
Allocated amount for downward adjustment (£m)	[4] = [3]*£10m	3.3	2.7	2.0	1.3	0.7	10
Total adjustment made to company cost baseline	[5] = [2]-[4]	6.7	-2.7	-2.0	-1.3	-0.7	0

We recognise that the mechanism is not appropriate to all types of cost adjustment claims. Some claims relate to new costs or atypically large projects that will not be included in the historical data and so it would be inappropriate to make a symmetrical adjustment to baselines.

Early information on cost adjustment claims

Learning from PR14, and following discussions with the water companies at the cost assessment working group, we propose that companies submit information on their expected cost adjustment claims by 3 May 2018. That is four months before business plan submission. Receiving early information on expected cost adjustment claims would 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.

Companies are invited to submit any information they have to support their claims. We discuss the evidence that we expect to receive in support of cost adjustment claims in the securing cost efficiency appendix. Early submission will give us the opportunity to ask the companies for further information or clarification, where appropriate.

We do not expect companies to provide assurance with this early information and it will not automatically 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.

9.7 Our approach to residential retail controls

PR14 was the first time that we set a separate price control for retail services. For residential retail, which is about 9% of companies' total expenditure, we assessed costs using the ACTS approach.[53] Our cost allowance for companies was set equal to the ACTS, unless the company's projection was lower (ie more efficient) than the ACTS, in which case, we allowed the company projected costs instead. The retail control was not automatically indexed to an economy-wide measure of inflation, but some companies whose cost projections were relatively efficient (ie below the ACTS) were given an allowance for input price pressure.

Below we set out our proposals for assessing residential retail costs at PR19. To ensure the incentives for companies to submit stretching retail cost projections at PR19 are strengthened we are proposing a number of changes. We propose to change the way we assess residential retail costs and the way we set our cost baseline at PR19.

Expectation of efficient business plans

We expect companies to submit efficient cost projections for residential retail in their business plans. Companies will need to provide evidence that their planned costs are efficient through benchmarking with other retailers. This will include, where appropriate, retailers in other sectors.

Doubtful debt and debt management expenditure is a material component of residential retail costs (around 46% in 2015-16). We consider that this is an area where companies can achieve efficiencies and do more to reduce current levels of bad debt. Our residential retail review[54] highlighted that total stock of residential bad debt in water represents 22% of total revenue, compared with 4% of total revenue in the energy sector[55]. We therefore expect companies to challenge their current approach. Customers should not pay for bad debt that is a result of poor revenue recovery and debt management practices.

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[53] 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 the securing cost efficiency appendix for further detail of our PR14 approach.
[54] http://www.ofwat.gov.uk/regulated-companies/future-markets/extending-retail-competition-to-households/
[55] Costs and benefits of introducing competition to residential customers in England, Ofwat, September 2016.

Companies should show that their revenue recovery and bad debt management costs and practices 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 the management and collection of bad debt and deliver improvements for customers.[56]

The UK Government has highlighted the issue of bad debt in its recent consultation on its strategic policy statement:

> "We expect companies will share best practice and take steps to significantly reduce bad debt and that Ofwat's regulatory framework will incentives this".[57]

We will consider the efficiency of retail costs and the approach to levels of bad debt in our initial assessment of business plans.

Cost assessment of residential retail using econometric modelling

We took a balanced approach to setting baselines at PR14. Our aim was to deliver savings for customers while setting achievable cost reduction targets for companies. At PR14 Final Determination[58] we said that we expect our approach for residential retail to evolve so that in future price controls our cost baselines would be based on efficient companies rather than on the industry average.

At PR19 we propose to move away from the ACTS approach of PR14 and instead use an econometric approach to benchmark companies' costs and set efficient baselines. We will retain an efficient cost to serve (ECTS) approach as an alternative to econometric benchmarking if we are unable to produce robust econometric models for residential retail.

[56] Companies may find our recent publication useful, Unlocking the value of Customer Data, June 2017 http://www.ofwat.gov.uk/wp-content/uploads/2017/06/Unlocking-the-value-in-customer-data-5.pdf
[57] Defra's strategic priorities and objectives for Ofwat, Draft for consultation, March 2017. The Welsh Government will set strategic priorities and objectives for Ofwat in relation to Welsh companies.
[58] Ofwat, Final price control determination notice: policy chapter A5 - household retail costs and revenues, December 2014, http://www.ofwat.gov.uk/wp-content/uploads/2015/10/det_pr20141212hhretail.pdf

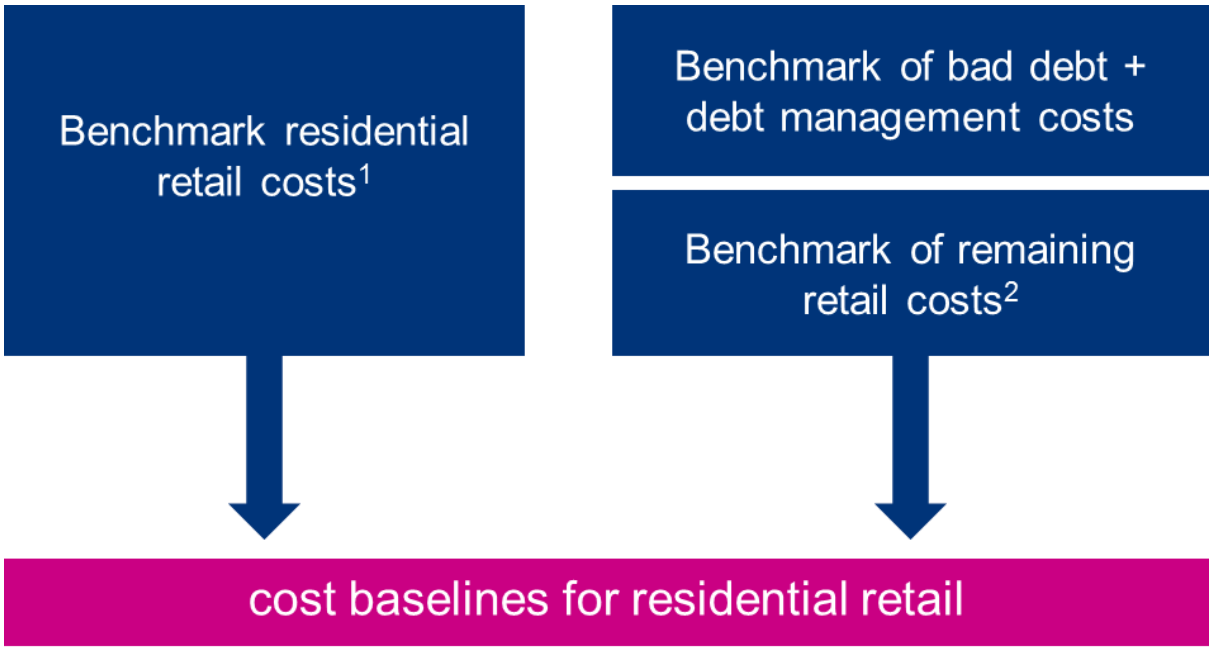
In PR14 we used one year of data to develop our cost baseline – the ACTS. In July 2017, we will have four years of actual data to develop cost baselines for PR19, with an additional year of data in 2018.

One of the advantages of an econometric approach is that the model can simultaneously account for multiple factors that can drive differences in costs across companies. This should lead to fewer off-model adjustments to our modelling benchmark. For example, the model can account for the impact of dual bill versus single bill customers and avoid the off-model adjustment that we made at PR14. At the same time the model can account for differences in the cost to serve a metered versus an unmetered customer. We will also consider bill size and deprivation levels in the area served as factors that are relevant to the assessment of bad debt levels.

We do not propose to account for variation in regional labour costs in our benchmarking analysis. With the exception of metering, which is around 5% of total retail costs, we consider that the impact of regional labour costs can be substantially mitigated or removed in retail activities.

We propose to use econometric models to benchmark companies' residential retail costs as a whole. Due to the unique drivers and cost characteristics of bad debt, we propose that in addition we will develop a separate benchmarking model to assess the efficiency of bad debt costs (including bad debt management costs) and another model to assess retail costs excluding bad debt to complement it.

Figure 9.2 Setting efficient cost baselines for residential retail



[1] Total operating costs plus depreciation on retail assets
[2] Operating costs associated with metering, customer service and other residential retail activities plus depreciation on assets.

Setting efficient cost allowances for residential retail

We will continue to set totex baselines for residential retail. For the retail control, this includes operating costs plus depreciation on assets.[59] We consider that there is a large scope to unlock further cost efficiencies in retail due to the totex approach. For example, companies can make a decision between purchasing versus leasing IT equipment based on a long-term cost benefit analysis without undue preference to the capex (purchase) solution.

We will use cost benchmarking to identify an efficient level of total retail costs taking into account a company's operating environment. We will use our benchmarking analysis to set efficient costs for all companies. This is a different from our approach to retail costs in PR14, where companies with cost projections below the ACTS were allowed to recover their projected costs. We explain the benefits of our proposed approach in section 9.3.2.

[59] Consistent with our approach at PR14, see the securing cost efficiency appendix for further detail.

We do not propose to allow a gradual catch-up (glide path) to the efficient frontier. By 2020, companies will have had five years of the residential retail controls (introduced at PR14) to catch up to the efficient level of retail costs.

PR14 was the first time that we set separate price controls for retail, with a cost efficiency challenge for retailers. We expect that the new retail controls have focussed companies to deliver this service efficiently. We would expect that in the initial years of this control companies would be able to realise substantial efficiencies in this service. To develop our benchmarking analysis we will use information on retail costs from 2013-14 and later years. However, we will consider whether more weight should be given to more recent years or to future cost projections, to ensure our cost allowances are forward looking efficient.

To push the efficiency frontier further, we will look for evidence on efficiency in provision of retail services in other sectors. We will benchmark levels of doubtful debt and debt management practices of water companies against other sectors.

We will also look for evidence of value for money in the provision of customer services such as billing and complaint handling. We will consider how companies are proposing to address poor payment practices and to support customers in need.

As we explain above, companies will be able to make a cost adjustment claim where they consider that our baseline failed to capture a specific, material cost in their totex projection. However, we consider that our econometric approach and the use of richer data should result in fewer adjustments than we had in PR14.

Our approach to input price pressure

In PR14 we did not index the retail controls to a measure of general inflation. This was different to our approach to wholesale controls, where we indexed the allowed revenue and RCV to the RPI.

We consider that this approach is still appropriate for the retail controls, and provides appropriate incentives for companies to manage input costs.

The rationale for indexation is that customers are better placed to bear general inflation risk, which is largely outside companies' control. However, we consider that in retail, which predominantly consists of labour costs, inflation risk for the price review period is controllable by companies.

Also, the fact that there is no RCV in the retail controls means that indexation would be relevant only to the allowed revenue. Indexation is not needed to protect the long-

term value of the RCV against long-term inflation risk. From a company perspective, the relevant inflation risk in retail is the risk that input prices increase in the short term.

We recognise that input price pressure might still present a cost that we need to deal with. Our preference is to deal with input price pressure as part of our totex allowance, rather than through indexation. It will be for companies to present evidence to support any claim for an allowance for input price pressure.

Further details on our appraisal of this policy can be found in the securing cost efficiency appendix.

9.7.1 Our approach to business retail controls

As outlined in retail controls chapter, we will continue to set a control for relevant business[60] customers of Welsh companies[61].

At PR19 we propose to use a proportionate approach to assess the costs proposed by the relevant business retailers. We expect companies to provide robust evidence to justify their future level of retail costs for business customers.

PR14 was the first time that we set separate price controls for business retail. We expect that the new retail controls have focussed companies to deliver this service efficiently and that in the initial years of this control companies would be able to realise substantial efficiencies in this service. We expect to see this efficiencies reflected in future cost projections, leading to lower charges for business customers.

We will assess the evidence submitted to us in companies' business plans. We will also assess the efficiency of companies projected costs by comparing it to historical levels and to any relevant evidence from other comparators. This will include evidence from the English business retail market and cost efficiency in the residential retail service.

[60] Including businesses, charities and public sector organisations (i.e. non-residential premises)
[61] Welsh companies not subject to competition. We are considering what form of regulation should apply for (i) water service customers of Welsh companies who use more than 50 megalitres a year and (ii) the small number of monopoly English water companies that have not currently exited the business retail market (see the Retail controls chapter for further detail).

In line with our approach for residential retail, our preference for business retail is to address input price pressure as part of our cost allowance rather than through automatic indexation. Companies will have to present strong evidence to support claims that material input cost pressures exist beyond their control.

Further details on business retail can be found in the securing cost efficiency appendix.

9.8 Transition programme

The transition programme was introduced in PR14. As part of the review, we allowed companies to bring forward planned investment from 2015-20 to 2014-15, where it was efficient to do so. Although the expenditure would be incurred in 2014-15, for the purpose of cost performance incentive, it was considered as expenditure incurred in the following regulatory period (2015-20).

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. The programme can also help to smooth investment in the sector and address the issue of investment cyclicality around price reviews.

We consider that with the move to an outcomes and totex framework, there should be less need for a prescribed transitional mechanism. Our outcomes and totex regulatory frameworks are aimed at encouraging long-term planning, and investment aimed at minimising whole life cost. In contrast to PR09, cost allowances are not linked to specific schemes and companies are able to bring forward investment, if it is more efficient to do so.

However, we are mindful that the transition programme may allow companies to respond efficiently to new information related to the next price control period. We are also aware that there is still cyclicality around price control, with low investment in the first year of the period.

In PR14 we allowed £118m of wholesale water expenditure and £240m of wholesale wastewater expenditure as part of the transition programme. Actual transition expenditure in 2014-15 was significantly lower - £88m in wholesale water and £124m in wholesale wastewater. Therefore, if we were to retain a transition programme, we would ask companies to explain why it is efficient to bring the investment forward and why it was not part of its long-term planning (and therefore part of the PR14 settlement).

We note that South West Water is proposing to take responsibility for the Isles of Scilly, expanding its appointment area. This expansion is expected to take place from 2018 onwards. South West Water anticipates incurring additional costs to upgrade networks on the Isle of Scilly. We propose that South West Water is able to use a transition process to bring forward efficient costs associated with the Isles of Scilly to 2018-19 and 2019-20.

If we decide to allow a transition programme, we are proposing not to allow any transition expenditure (ie spending in 2019-20 for 2020-25 deliverables) in water resources and bioresources investment (except for efficient investment relating to the Isles of Scilly). This is because there are unlikely to be early delivery dates driven by environmental requirements for water resources and bioresources investment. This is also to avoid any additional complexity caused by the different treatment of pre-2020 RCV and post-2020 investment.

9.9 Initial assessment of business plans

Based on our proposals for cost assessment, we will apply the following tests in our initial assessment of business plans;

Initial assessment tests on securing cost efficiencies

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 doubtful 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 assessing the extent to which the company has provided efficient and appropriate costs, we will take into account:

- the quality of evidence provided for efficient and challenging forecast costs for each price control (wholesale water including water resources, wholesale wastewater including bioresources, and retail including doubtful debt); and

- the quality of evidence to support any cost adjustment claim, demonstrating that adjustment is needed and the costs are efficient and challenging.

9.10 Consultation questions

Q1. Do you agree with our overall approach to cost assessment?

Q2. Do you agree with our proposed cost sharing incentive? We welcome thoughts on the calibration of the incentive.

Q3. Do you agree with our proposals to funding unconfirmed environmental requirements? Which of the two options do you consider is more appropriate, and why?

Q4. Do you agree with our approach to cost adjustment and our proposed approach to make the process more symmetric?

Q5.Do you agree with our proposed approach for assessing retail (residential and business) costs at PR19?

Q6. Do you agree with our preferred approach not to index the retail controls to a measure of general inflation, and, if appropriate, deal with input price pressure as part of our totex allowance?

Q7. Do you agree with our proposals for the transition programme?

10 Aligning risk and return

10.1 Summary

In this chapter we discuss the alignment of risk and return for companies as well as our proposed approach to setting the cost of capital, the approach to indexation for inflation and to setting tax allowances.

The allocation of risk and setting of allowed returns affects how much customers pay and the quality of service they receive. The overall level of return includes financial penalties or rewards for service levels, cost out- or under-performance, as well as the base return from the allowed cost of capital.

Our objective is to align the interests of companies and their investors with the interests of their customers. Companies need to be remunerated for the risk associated with their investment; customers should expect that the returns investors receive are no more than is reasonable to compensate for that risk.

Our approach to risk and return supports the **four key themes of PR19.**

- Our proposals will ensure companies are incentivised to deliver frontier-shifting performance on **customer service** and **affordable bills** through the design of the incentive package that aligns investor and company interests with customers.
- We will promote **long-term resilience** by ensuring notionally efficient companies can continue to finance their functions and invest in the services they provide by earning an appropriate return which reflects the risks they face.
- We will promote **innovation** by providing an incentive for companies that deliver exceptional quality business plans, and penalties for companies that fall short of customer expectations.

Key messages

- Current evidence indicates lower costs of both debt and equity and so we expect the return on capital or base returns to be lower for PR19.
- We propose to index the cost of new debt. This will reduce the scope for debt outperformance from changes in debt markets. We consult on our proposals for the detailed design of the indexation mechanism.
- We propose a high bar to accept any proposals for risk pass through mechanisms from companies to customers.
- We propose to increase the proportion of revenue at risk from service performance through ODIs and we propose to sharpen the cost sharing

incentives to reward companies who deliver larger efficiency gains for customers. Inefficient companies will bear a greater proportion of the cost of underperformance. We consider these changes will encourage companies to focus delivering more that matters for their customers.

- We propose that price controls should be indexed to CPIH, so that water bills better reflect the overall rate inflation faced by customers and discontinuing using the RPI index, which tends to overstate inflation.
- We propose a mechanism to pass through material changes in tax to customers. Customers will benefit where there are reductions in tax rates that were not anticipated at the time of the price determination

Table 10.1 Summary Box – PR19 Proposals for Risk and Returns

Proposal Topic	Our thinking and proposal
Incentive framework	We propose an overall incentive framework to align company interests with customer interests now, and in the long term.
Overall approach to the cost of capital	We propose to set the cost of capital at company level, then set the cost of capital for each control with reference to this. The cost of capital for wholesale price controls will be set by reference to an efficient notional capital structure. The household retail price control will be set by reference to a margin that covers earnings before interest and tax. The cost of capital should be the same for the wholesale price controls in Wales and in England. We will need to set a retail margin for non-household controls as well as household controls in Wales.
Cost of equity	We propose to set the cost of equity by reference to market evidence in a way that reflects expected economic conditions through the 2020-25 period. Our assessment of current evidence points to a much lower Total Market Return (TMR), which is used to calculate the cost of equity, than the TMR set in PR14.
Cost of debt	We propose that the cost of new debt will be indexed to an efficient benchmark, with fixed allowances for embedded debt. We include proposals on how the indexation mechanism will work
Treatment of inflation	We propose to transition to the CPIH inflation index. We note the UKSA has not designated CPIH as a national statistic and so we will consider this issue further in the final methodology.
Return on Regulated Equity (RoRE) analysis	We propose that companies continue to use RoRE[62] analysis to assess risk and return within their plan.

[62] RoRE is the Return on Regulatory Equity. We calculate it as the return to equity investors in a company with a notionally efficient capital structure. We will assess the notionally efficient capital structure (that is the proportion and type of debt and equity used to finance an efficient company) when we making our decision on the cost of capital.

Proposal Topic	Our thinking and proposal
Uncertainty	We propose adopting a high evidential bar where companies request notified items. There is no presumption that the Notified Items that apply in 2015-20 should remain for 2020-25.
Tax	We propose to set tax allowances for each of the wholesale controls as if they were stand-alone entities. We propose that the margin for the retail controls will include an allowance for tax. We propose to introduce a pass through mechanism to allow for significant changes in elements of the tax framework outside company control such as the corporate tax rate and capital allowances.

10.2 Introduction

Our aim is for customers to receive the levels of service they expect at an efficient cost and affordable price. To achieve this, the price controls should reflect an efficient allocation of risk; risks must be allocated to companies and investors where they are best able to manage them. This allows incentives to be targeted, and companies to operate and manage themselves efficiently.

The rest of this chapter considers:

- our approach to incentives to drive company performance, align the interests of companies with customers and incentivise companies to prepare high-quality business plans (section 10.3);
- our regulatory approach to managing risks and uncertainty (section 10.4);
- how we propose to decide the returns companies can make by setting the cost of capital (section 10.5), including specifically the cost of equity (section 10.6) and the cost of debt (section 10.7);
- our approach to indexation of price controls, specifically considering our move to a more legitimate measure of inflation (section 10.8); and
- how we propose to allow companies to recover tax costs (section 10.9).

10.3 Incentives to drive company performance

An efficient allocation of risk and return helps to align company management and investors' interests to their customers' interest in both the short and the long term.

To do this, the regime currently embeds a number of incentives designed to mimic competitive pressures, to drive better business planning and to encourage company management to deliver better service, at an efficient cost. There are three types of incentives that form part of the overall package.

- **Financial:** financial incentives directly reward management and shareholders for improving service performance or to incentivise efficiency savings. For example, allowing companies to retain a proportion of the cost savings they make against the cost allowed in final determination.
- **Reputational:** reputational incentives work by public recognition of performance to enable the direct accountability of companies to the water sector's other regulators and stakeholders, who can and do use this information to challenge companies on their performance.
- **Procedural:** procedural incentives allow for targeted and proportionate regulation. Procedural incentives allow well performing companies to go through less onerous regulatory processes, which save management time and money, as a result of those processes being more targeted at other companies who require closer scrutiny. This means that, for example, where companies provide high-quality plans in the customer interest, they benefit from early clarity around the outcome of the review, saving management time and allowing early start on preparation for the price control period.

Evidence from PR14 and the current price control period suggests that **financial, reputational** and **procedural** incentives can be effective. Where we need to further sharpen incentives, we can do so with well calibrated financial incentives. These align companies' interest with their customers'.

We commissioned PwC[63] to consider the incentives framework for PR19 and our proposals for the incentive mechanisms for PR19 and the 2020-25 period draw on PwC's conclusions. To align customers', management and shareholders' interests, 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
- provide appropriate penalties for companies that deliver poor business plans or poor performance.

We must also make sure the relative strength of different incentives means they will work together and drive the right behaviour. These conclusions are integrated into the proposals on:

[63] PwC, 'Refining the balance of incentives for PR19', March 2017

Initial assessment of business plans: as well as a focus on quality, plans will now be assessed on their approach to innovation and level of ambition for delivering more of what matters for customers. We propose to retain a similar financial reward for exceptional plans that we had at the 2014 price review. We propose to calculate an allowed reward, as 0.2% of RoRE. Companies could take the reward as revenue or as an increment to the RCV depending on company preference. Companies with exceptional plans will also receive procedural and reputational benefits, including an earlier draft determination. An early draft determination provides companies with exceptional plans a chance to implement their plans earlier and therefore scope to focus on further cost or service outperformance. Significant scrutiny plans will be subject to tougher cost-sharing rates and may have their potential to earn ODI rewards capped. We do not propose to adopt a 'do no harm' rule (as we did at PR14) for companies with exceptional plans as we will provide early guidance on the cost of capital and retail margins for companies to use in preparing business plans alongside our final methodology.

Outcomes: we propose increasing the potential amount at risk from service delivery by removing the RoRE cap on rewards and penalties and setting a higher indicative range of return at risk (RoRE ±1% to ±3%) for ODIs. The Delivering Outcomes for Customers chapter also sets out our proposals to further strengthen ODIs by introducing enhanced rewards and penalties on common performance commitments and having a greater onus on financial ODIs.

Cost assessment: we propose removing menus and introducing asymmetric cost sharing rates. Our aim is to simplify regulation and enhance power of efficiency incentives. Our proposal will ensure companies that have the most efficient business plans and subsequently deliver the most efficiencies retain the greatest share of outperformance. Companies that submit inefficient plans and deliver the least efficiencies bear a greater proportion of the cost of underperformance.

These proposals are covered in more detail in the risk and return appendix and in the relevant chapters on Securing Cost Efficiency, Delivering Outcomes for Customers and the Initial assessment of business plans.

The changes to the strength in financial incentives are summarised in table 10.2 below.

Table 10.2: Summary of strength of key financial incentives, in RoRE terms

Incentives	Summary of our proposal	Change from PR14
ODIs	Remove cap on ODIs, set expectation that ODI rewards and penalties should deliver rewards and penalties within a ±1% to ±3% RoRE range. Companies will only earn rewards for delivering beyond stretching service levels and will incur penalties for service below expected levels. This range includes enhanced rewards and penalties for common performance commitments. In practice, companies are unlikely to simultaneously achieve top or bottom end performance on all ODIs.	Increase from PR14 level of ±1% to ±2%. This is consistent with increasing revenue at risk from operational performance. Higher returns for high performing companies and lower returns for poor performers.
Totex	Asymmetric cost sharing. Illustrative RoRE range around ±2.0% based on 10% cost out/underperformance, and around -3% to +1% for companies under significant scrutiny (as discussed in the initial assessment of business plans chapter).	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 middle of the pack companies and lower returns for poor performers.
C-MeX and D-MeX (customer and developer services measure of experience incentives)	C-MeX symmetrical at 12% residential retail revenue, D-MeX symmetrical at 5% developer services revenue. Overall impact around ±0.5% RoRE.	Similar penalty range for C-MeX as for the Service Incentive Mechanism it replaces. Move from asymmetric to symmetric reward/penalty for C-MeX reflects the move to benchmarking with other sectors. D-MeX is a new incentive for PR19 with reward/penalty symmetry.
Initial assessment of business plans	Reward calculated as +0.2% RoRE for exceptional plans. Amendment to the cost sharing rates for significant scrutiny plans as explained in totex section above.	Similar level of reward to the enhanced company reward at PR14, but the bar for exceptional is higher as it includes ambition and innovation.
Financing	Indexation of the cost of new debt means less scope for outperformance or underperformance on financing costs. Companies would still be able to outperform on the cost of embedded debt.	Reduced scope for out/underperformance against the cost of notional debt.

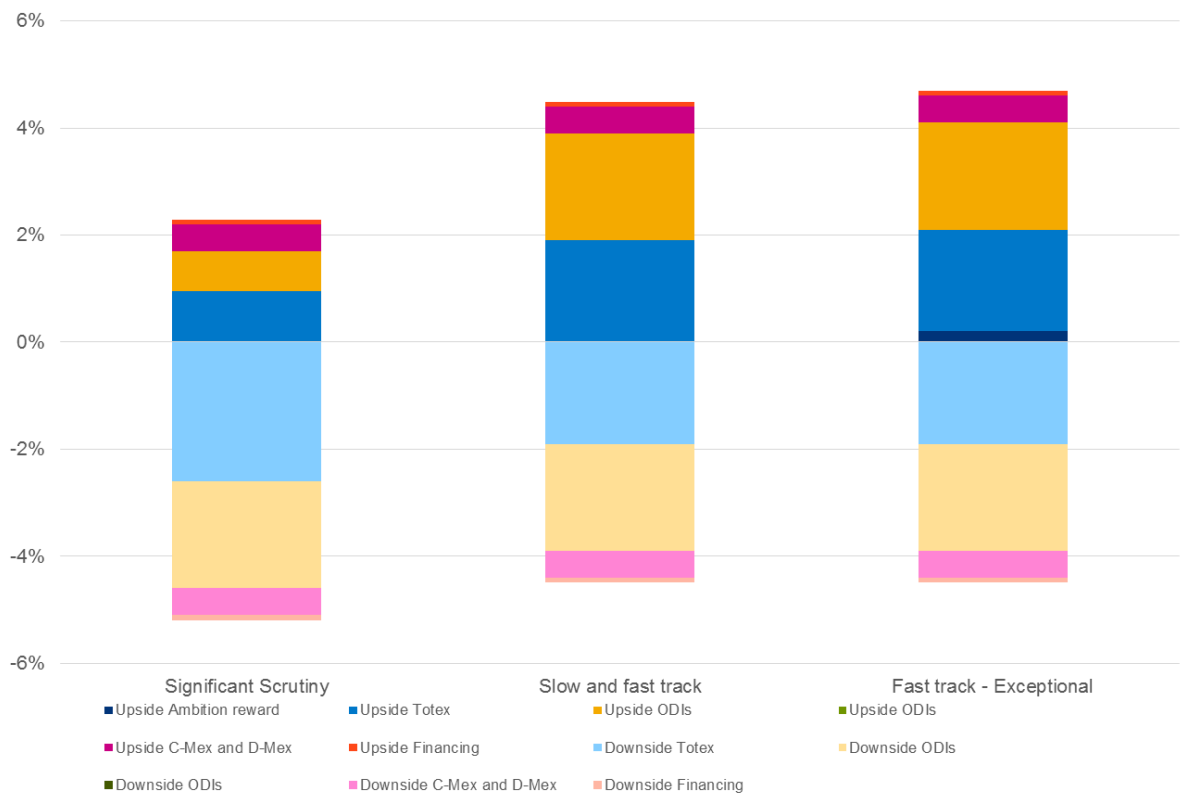
10.3.1 Overall strength of incentives

Our proposals for this overall risk and reward package are illustrated in Figure 10.1, a stylised RoRE chart for the 2020-25 period. This chart shows a plausible range of company returns based on an assessment underpinned by industry RCV, gearing and totex data from PR14.

The chart shows the lower potential for a significant scrutiny company to earn rewards, and higher potential downside than for the other categories of business plan. It also shows that while there are more potential rewards available within the PR19 price control, there are also more significant penalties for companies that fail to deliver for customers.

This chart is illustrative, based on a notional company. It relies on a number of assumptions. Within this chart, an outturn of zero means investors in the notional company receive the cost of equity that underpins the cost of capital. It shows the likely RoRE range for companies that fall into the categories of the initial assessment of business plans at PR19, broken down by mechanism.

Figure 10.1: Illustrative percentage of RoRE chart



For ODIs, we have used a stylised, illustrative RoRE example of ±2%, which, is the mid-point of the expected 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. This ±2% includes any rewards and penalties from the new enhanced rewards and penalties on the common performance commitments. The chart also assumes we may limit the ODI rewards 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 drawn from the upper and lower RoRE range presented in the PR14 final determination, adjusted for the cost sharing rates that underpin the totex sharing rates proposed for this consultation.

The difference between 'slow and fast track' and 'fast track exceptional' in this chart is driven by the IAP incentive for exceptional status. In reality, we may expect the exceptional company is likely to earn higher rewards through outturn performance on totex and ODIs.

This chart shows that while the potential to earn higher returns for high performance has increased from PR14, the downside for poor performance has increased too, reflecting a sharpening of the incentives. However, we note that historical evidence suggests that, company management is strongly incentivised to avoid significant downside, more so than achieving significant outperformance and this may lead to an asymmetric effect on actual outturn performance.

To put our proposals into context for purposes of the consultation, we have illustrated the effect of the incentive mechanisms in monetary terms[64]. The illustrative impacts of the incentive mechanisms are as follows and compare against an industry regulated equity of £24.3 billion.

- **Reward from initial assessment of business plans:** the illustrative impact of the average reward from the initial assessment of business plans is less than £2 of the 2015-16 average combined household bill[65]. We expect only a very limited subset of companies to benefit from exceptional status. For an average size

[64] The illustrative impacts are calculated are based on PR14 data on a 2015/16 average bill. Average combined bills vary between companies and so bill impacts will vary. This is driven by a range of factors, including levels of required investment, number of customers and customer type.
[65] For the purposes of this illustration, the average combined household bill is where both services are provided by a water and sewerage company.

water and sewerage company, the average annualised exceptional reward would be around £5 million.

- **ODI reward/penalty:** the plausible maximum ODI reward or penalty would have around a £20 impact on the 2015-16 average combined household bill. In a reward scenario, this would require particularly strong performance across all ODIs across each of the price controls. As discussed in the Delivering outcomes for customers chapter, we expect companies to consider bill smoothing to protect customers against undue bill volatility. For an average size water and sewerage company, the bill impact would equate to around £45 million on an annualised basis.
- **Totex outperformance/underperformance:** based on 2015-20 totex allowances, we estimate that 10% out or under performance over the five years of the price control[66] would have an annualised impact of around £10 on the average combined household bill in the next price control period and further impact beyond 2025 from the change to the RCV. For purposes of illustration, the average size water and sewerage company, would receive an annualised benefit of around £35 million in an outperformance scenario. This would require 10% outperformance against each of the wholesale price controls.
- **Outperformance/underperformance on the cost of new debt:** the illustrative impact of out or underperformance against the cost of new debt indexation mechanism by ten basis points, equates to a bill impact of less than £1. This equates to around £1 million on an annualised basis for an average size water and sewerage company.
- **C-MeX**: The average bill impact of the maximum reward or penalty under C-MeX would have a £4 impact on the combined household bill. This equates to around £10 million on an annualised basis for an average size water and sewerage company.

The bill figures discussed above are illustrative and based on average maximum impacts. We expect companies to assess the impact that their business plans would have on bills, in particular the ODI package, and gain support for the level of incentive through the process of customer engagement.

[66] This analysis uses the PAYG rate that underpins the PR14 final determinations, which means that some of the out and under performance impacts on future customers and assume 50% sharing of cost out and under performance between customers and companies.

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. Consistent with the expectations set out in our financial monitoring framework, we expect companies to demonstrate a clear understanding of the risks within their business plan and to provide clear evidence of the risk management measures they have in place.

We expect business plans will contain statements by company Boards, explaining how they have identified risks associated with delivering the plan and how the Board has assured itself that the risk mitigation and management plans in place are appropriate. How well companies are able to demonstrate this understanding, the impacts and mitigation measures will be assessed as part of the initial assessment of business plans.

Company licences allow price limits to be reopened in certain limited circumstances as a result of material events that are beyond prudent management control (standard and substantial effect interim determinations). Notified items allow for specified items to qualify for an interim determination, where in aggregate the materiality threshold is met. 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 the determination.

However, given the mechanisms already embedded within the control and new mechanisms being introduced for PR19 for new debt and tax that reduce risk to companies, we will place a high evidential bar where companies request notified items. There is no presumption the notified items that were allowed for at the PR14 price control (business rates for water wholesale and the specific items related to the Thames Tideway Scheme) should remain in place for the 2020-25 period. We will only accept a request to include a notified item, or bespoke uncertainty mechanism, where robust and well evidenced cases are made that set out compelling reasons as to why the risk in question should be more efficiently allocated to customers than to the company and its investors. This would need to be supported by a company's risk analysis to demonstrate that a notified item is an appropriate mechanism for dealing with the risk or uncertainty associated with the item.

As for the PR14 price control, we propose that companies use RoRE analysis to assess the impact of upside and downside risk on the delivery of company business plans. We propose prescribing a set of scenarios that companies should use. This

will be a smaller set of scenarios than was required at the PR14 price control. It will represent the minimum we would expect to be analysed in business plans.

In addition, we are proposing that each company will need to show:

- a good understanding of the type and impact of risks that may affect the delivery of its plan; and
- that its business plan is underpinned by robust risk mitigation and risk management practices.

We expect companies to show that their approach to risk management considers the interests of customers and investors in particular we expect companies to be clear about where they have made trade-offs and why they are appropriate. As well as downside risks, companies will also need to demonstrate they have considered a robust upside, outperformance scenario and the drivers of this.

10.4.1 Prescribed scenarios

Prescribed scenarios will focus on movements in revenue, totex, ODIs and the cost of new debt. We expect companies to use the specific RoRE functionality in the financial model to provide the upside and downside scenarios based on high and low probability of events occurring.

At PR14, we specified these at the P10/P90 range of probabilities. This means there is a 20 percent chance of the key risk factor(s) falling outside of the P10 and P90 assumptions used for the scenario[67]. We consider the P10/P90 range of probabilities remain appropriate for the PR19 price control, but we invite views on this.

We expect each company to set out the analysis it has carried out to derive the performance ranges, which will be specific to its circumstances. But in addition to the scenarios stated above, companies will have the flexibility to specify their own scenarios and provide additional information, as considered appropriate, to show how they have assessed risk and that they have appropriate risk management procedures in place.

We will take this and the Board statements on risk into account as part of the initial assessment of business plans, when we assess whether companies have

[67] Discussed further in the appendix 13: risk and return

demonstrated a robust understanding of risk and whether they have appropriate risk management practices in place.

At the PR14 price control, we published medium term economic forecasts to inform the upside and downside scenarios. Given the more limited suite of scenarios we propose for the PR19 price control, we consider it unnecessary to publish such economic information. We do, however, invite views on whether we should publish such economic information for companies to base their assessments on.

See the Aligning risk and return appendix for more discussion and guidance on these scenarios.

10.5 Our overall approach to the cost of capital

We propose to take the following approach to remunerating returns in the wholesale and retail price controls.

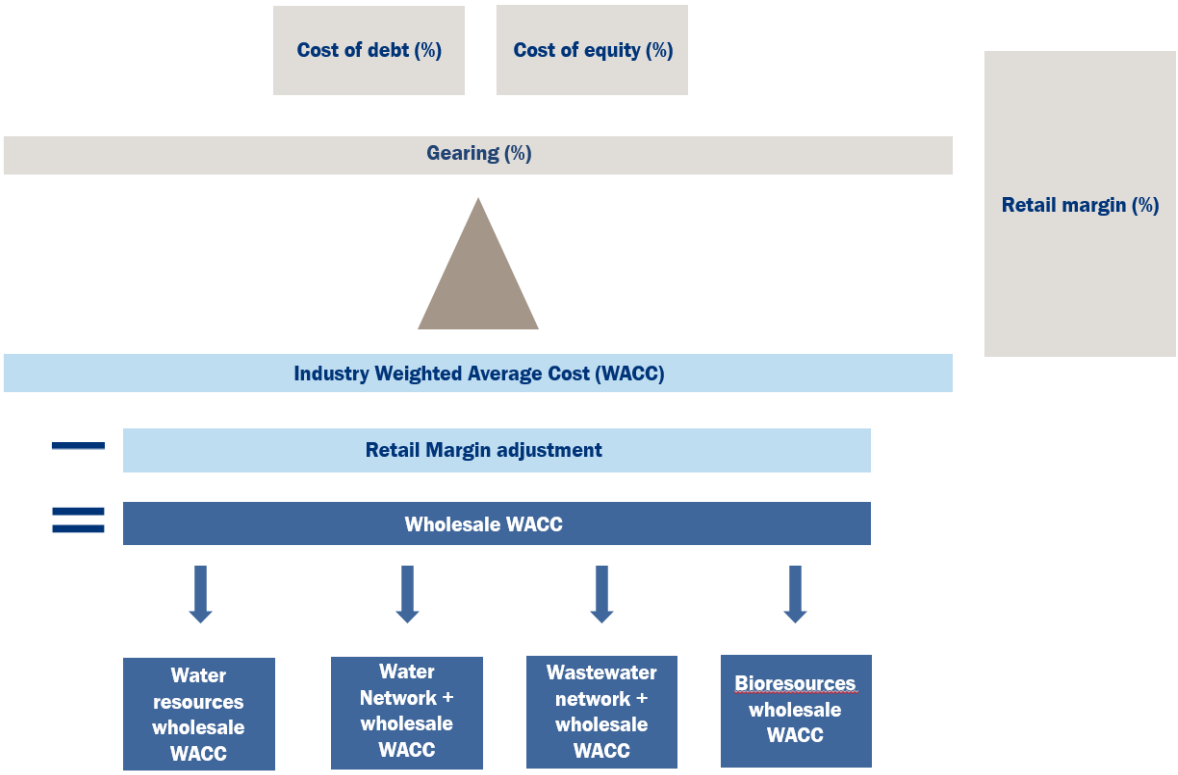
- Wholesale services are capital intensive (they require a lot of capital expenditure). We will therefore set the cost of capital by allowing a return on a company's capital base (or RCV).
- As retail businesses are not capital intensive (they involve less investment in long-lived assets like water pipes or reservoirs), a return based on capital base is not appropriate. We will therefore allow companies to earn a margin over their retail costs to remunerate them for the capital they need to use to provide retail services.

We will still set the cost of capital by reference to a notional capital structure. Stakeholders who responded to our cost of debt consultation[68] strongly supported this approach. We continue to consider that the notional approach incentivises companies to secure efficient costs of finance, and protects customers from the risk of companies' decisions. This means that we set allowances for all companies at the level we consider an efficient company should require.

Figure 10.2 outlines our overall approach across retail and wholesale price controls for PR19.

[68] 'Water 2020: consultation on the approach to the cost of debt for PR19', September 2016

Figure 10.2: Our approach to the cost of capital



Reflecting on our lessons learned from the PR14 price review[69], we have already confirmed we will provide an early initial view of the cost of capital for PR19. We will publish this alongside our final methodology in December 2017. This will allow companies to take account of our view of the cost of capital (for wholesale and retail price controls) to inform their customer engagement and develop their business plans. Within this methodology consultation document is an early discussion on the issues relevant to the cost of equity and our approach to the cost of debt.

10.5.1 Wholesale cost of capital

Each of the four wholesale price controls (set out in the Wholesale controls chapter) is 'binding'. This means that each must stand alone and have, among other things, its own weighted average cost of capital (WACC). We will use the industry WACC,

[69] 'Reflections on the price review – learning from PR14', July 2015

net of the retail margin adjustment, to calculate a WACC applicable to each binding wholesale price control.

The wholesale WACC could be different for each control, if systematic (or undiversifiable) risk is different. This would arise if one price control has a different level of exposure to the impact of market wide risk, like changes in economic cycles, which investors cannot mitigate by investing in a range of different assets. We discussed the relative level of systematic risk across different wholesale controls in May 2016. In summary, we found that there is no increase in systematic risk across the network plus price controls from separating the controls. We found that bioresources, where we are introducing an average price control, had the potential to increase systematic risk by exposing companies to volume risk, based partly on exposure to market wide demand. However, we also found that this increase would be offset by greater capital intensity, in the notional financial structure, through a focussed RCV allocation.

We have now developed our proposals for bioresources in more detail, as set out in the Wholesale controls chapter. Companies will bear some volume (and revenue) risk, however this is related to a range of factors, including the accuracy of forecasts, as well as the impact of customer demand or weather. We do not consider that these proposals would have a significant impact on systematic risk in the 2020-25 period, given that market wide demand is only one factor among many that could lead to variance in revenues. PwC found no material increases in beta associated with reform of the bioresources market because any beta increase resulting from volume risk would be broadly offset by the relative increase in the capital intensity of the bioresources control, resulting from a focussed RCV allocation[70]. We also note that companies will have the choice around the processing and disposal of bioresource, which will enable them to recover the cost of post-2020 investment where efficient.

For water resources, we set out our expectation in the Wholesale controls chapter that companies that propose new water resource investments should propose a long-term risk sharing mechanism. In our May 2016 document we said that some aspects of market wide demand risk, such as changes in industrial demand, could impact on the cost of capital, but others such as weather and per capita consumption, are not likely to be strongly correlated with equity markets. Given our revised proposal for the utilisation risk and the long-term nature of both the investment and the expected risk sharing mechanism, we would expect very

[70] These issues are discussed in Balance of risk, Risk and reward across the water and sewerage value chain. The RCV allocation is discussed in the Wholesale controls chapter.

compelling evidence if companies proposed a cost of capital increment for new water resource investment in 2020-25. We still consider that investment related to capacity in the pre-2020 RCV will not be affected by utilisation risk.

We therefore expect that companies will have the same cost of capital across the four wholesale price controls at PR19.

10.5.2 Retail margin

The retail net margin will apply to residential customers of English and Welsh companies, and business customers of the Welsh companies, where there is no competitive market[71]. The retail market for business customers of Welsh companies is not open to competition except in relation to supplies of water of at least 50 Ml a year and so we will need to set a net retail margin for business customers of the Welsh companies.

For companies that have not exited the non-household market, the licence allows us to set a price control. In the event that we do so, we will determine an appropriate margin to ensure that customers are protected.

As for PR14, we propose the net retail margin will cover earnings before interest and tax. To set net retail margins, we will look at relevant comparator benchmarks and consider working capital requirements. This is consistent with our approach at the 2014 price review. We will collect details on companies' working capital requirements in the business plan data tables. As we will not collect this data until 2018, the initial view of the cost of capital we publish in December is likely to be primarily based on benchmarks.

[71] In April 2017 the retail market for business customers of English companies was opened to competition. Most English water companies have exited the business retail market and their business customers have transferred to water supply and/or sewerage licensees. We do not set individual price controls for those licensees, although the retail exit code imposes some restrictions on what acquiring licensees can charge.

10.5.3 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 two water only companies higher cost of debt allowances based on both cost and benefits tests.

Where companies request an uplift to any component of the cost of capital to reflect their particular circumstances, we would need to see very compelling evidence to provide an uplift, particularly given our duty to customers. We consider there is no robust evidence that company size should be a factor in setting the cost of equity. We discuss these further in the risk and return appendix.

For the cost of debt, small companies do not necessarily face higher debt financing costs than a company with a notionally efficient capital structure, particularly, given development of private placement markets for corporate bonds in recent periods. The timing and tenor of debt issuance are likely to be the main determinants of pricing differences across the industry, neither of which relates specifically to company size.

If any company considers its size specifically results in it having higher financing costs than a notionally efficient company, and it considers these should be reflected in a company-specific cost of capital adjustment, we would expect the additional costs to customers would be more than offset by the benefits customers receive from the company. We expect evidence demonstrating this to be clearly set out in the business plan.

10.6 Our approach to the cost of equity

10.6.1 Background

Economic regulators' methodologies for estimating the cost of equity consider a range of evidence. This includes, for example, long run data from historical datasets, evidence from water company equity trading, transaction data and market evidence on expected dividend growth. However, regulators have traditionally placed the greatest weight on long-run historical evidence on the equity market risk premium and/or total market return.

Our views have also been informed by studies regulators have commissioned. These include 'A study into certain aspects of the cost of capital for regulated utilities in the UK', by Smithers & Co in 2003. This suggested the total market return has

been relatively stable over time, while the other components of the capital asset pricing model (CAPM) – the risk free rate and equity risk premium – would be expected to change. In price reviews since the Smithers review, we have given considerable weight to long-term evidence. However, we have also taken account of market circumstances at the time of the review. For example, in the 2009 price review, we increased the allowed equity return to allow for the expected impact of the global financial crisis.

The current extended period of ultra-low interest rates and low market returns, which is expected to persist through 2020-25[72], leads us to consider carefully our approach for PR19.

There is good evidence to suggest equity returns[73] vary over time. This raises questions about how we should determine the cost of equity when market returns are expected to be lower or higher than those implied by the long-term historical datasets.

We appointed PwC to consider the issues associated with setting the cost of equity in this context. Our work so far, and PwC's analysis, suggest that placing too much weight on long-term, historical evidence is likely to overstate the cost of equity for 2020-2025. This would lead customers to pay more than should reasonably be expected. This is because there is good reason to expect significantly lower returns to persist to 2025 than observed from long-term historical evidence. We comment on the market evidence and the issues associated with assessing the cost of equity within the current market context in the risk and return appendix.

PwC recommend using a range of approaches to assess a market based cost of equity, placing less weight on long-run historical average equity returns. These include dividend discount (or growth) model analysis, a cost of equity inferred from transaction and trading data and survey outputs. The total market return implied for all UK equities is then used with the CAPM to estimate the cost of equity for a notionally efficient company. PwC considers that this approach would capture both short- and long-term expectations of future dividends, making it suited to the current economic context.

We also note the potential to compare these outputs and estimates with relevant historical observations – for example, from previous periods of very low real interest

[72] Discussed further in appendix 13: Aligning risk and return
[73] Discussed further in appendix 13: Aligning risk and return

rates, where equity returns were also lower. We consider that using a range of evidence, all rooted in the current market context, will provide us with sufficient certainty over total market returns.

PwC estimates a range of nominal total market return of 8% to 8.5% (or 5.1% to 5.5% in real-RPI terms) based on this approach. Using the PR14 final determination gearing and asset beta, this implies a nominal cost of equity in the range 6.7% to 7.4%, compared with 8.6% at PR14. This is equivalent to a cost of equity range of 3.8% to 4.5% on a real RPI basis, compared to 5.65% at PR14.

It is too early for us to take a definitive view on the cost of equity for PR19 and we have not undertaken work on some parameters such as betas for PR19 at this point. We will set out an initial view of the cost of capital including the cost of equity in our December methodology statement. However, we consider there is strong evidence that the allowance for total market returns will be much lower at PR19, as reflected in the recommended range from PwC. We consider that it important to set both the cost of equity and cost of debt allowances at PR19 to reflect expected market conditions, as this best meets our customer and financing functions duties over multiple control periods.

We continue to do work in this area, including around the theoretical underpinnings of the impact of prolonged low interest rates through the UK Regulators Network. We will consider responses to this methodology consultation and further evidence of market returns and other parameters of the cost of equity such as the asset beta.

10.7 Our proposed approach to the cost of debt

We consulted on a proposed approach to the cost of debt in September 2016. The consultation set out our preferred option for PR19: to index the cost of new debt to remove the forecast errors from estimating the cost of debt. We have considered responses[74] to that consultation and views stakeholders expressed at two workshops[75]. We have summarised the consultation responses in the risk and return appendix.

[74] The responses we received to that consultation are on our website
[75] Details of our workshops are available on our website: http://www.ofwat.gov.uk/consultation/cost-debt-consultation/

Consistent with our consultation proposition, we propose to continue to look separately at new debt (debt that needs to be raised over the price control period to fund new investment or refinance existing debt) and embedded debt (debt that is expected to remain on the company balance sheet) for a notionally efficient company.

Embedded debt

We propose to set a fixed allowance for the cost of embedded debt. Our assessment will draw on relevant benchmark data (for example, indices of bonds for companies with similar credit ratings) and information contained in company balance sheets. Where there is evidence the sector outperforms market benchmark data, we will take this into account in setting the efficient cost of embedded debt. This is the same broad approach we took at PR14. We will consider relative weights to put on benchmark versus sector cost of debt as part of our estimate of the cost of capital.

There are significant differences between companies in their cost of embedded debt. This range of performance is driven by the choices companies have made about their financing structures and the timing and tenor of debt issuance. The difference between the efficient cost of debt for the notional company and the cost of debt embedded in company balance sheets will drive a range of financial outperformance and underperformance in 2020-2025. This is consistent with our view that the risk associated with such choices lies with investors and not with customers.

This is consistent with our long-held policy that choices around financing structure and debt issuance are a matter for companies and their investors.

New debt

Taking into account responses to our cost of debt consultation and the views we received through the workshops, referenced above, we propose to index the cost of new debt. We consider this will benefit customers by removing the risk of forecast error from our estimations of the cost of debt. This will result in customers paying less for financing costs which currently include a premium for forecast risk in the cost of new debt. We set out our rationale in the risk and return appendix.

Our previous consultation only considered whether we should adopt an indexation mechanism in principle. This methodology consultation discusses the mechanics of the indexation mechanism. We propose to set an upfront allowance for the cost of new debt. This will be transparently derived from a published market index. To implement the indexation of new debt we propose to:

- base the allowance on changes in the iBoxx indices for non-financial companies with a tenor of 10-plus years. We consider a 50:50 mix of A and BBB rated indices reflects the appropriate credit profile of the notional company and constitutes a robust benchmark with a range of different companies and sectors. The average tenor of debt in these indices is also aligned with the borrowing profile of the sector;
- retain the option to allow for ex-ante adjustments to this benchmark if evidence persists that efficient companies can outperform the market cost of debt. Our final decision for any such adjustment would be set in the final determination and fixed for the 2020-25 period;
- reconcile, or true-up, for differences between our upfront allowance and movements in the cost of debt index at the end of the 2020-25 period. We consider an end of period adjustment is the best approach to mitigate bill volatility that would otherwise occur within period as it relates to factors beyond a company's control and would allow for upward and downward adjustments to be netted against one another; and
- adjust both our ex ante assumption, and the figures derived from the index, for the long-term view of inflation. The iBoxx tracks the cost of nominal bonds. Consistent with our proposal to transition price controls to CPIH (discussed in section 10.8), we consider the relevant long-term measure should be CPIH and that we will fix this for the 2020-25 period. We consider that long-term inflation best matches the inflation costs that are priced into nominal debt, and is therefore more appropriate than a short term view.

We set out further detail in the risk and return appendix on how we propose the indexation of new debt will work. We have also published an illustrative model alongside this document.

10.8 Our approach to inflation

Companies cannot control general price inflation. They can control their costs and are exposed to this risk through price controls. If companies were exposed to general inflation risk, customers might pay a premium for the risk exposure and would not receive a corresponding benefit as companies would not be well placed to manage this risk effectively. Indexing our wholesale price controls[76] to a measure of

[76] This section discusses our approach for indexation of the wholesale price controls at PR19. We consider how inflationary pressures should be addressed in the retail controls in the securing cost efficiency chapter.

inflation is, therefore, a core part of our regulatory approach. It promotes efficiency by ensuring risks are allocated to the party best able to manage them.

In May 2016, we decided to move away from indexing price controls to the RPI and toward a more legitimate inflation measurement. We said that revenues would be linked to either the consumer price index (CPI) or the consumer price index including housing costs (CPIH) and that we would also transition the indexation of the RCV. We said we would index 50% of the RCV at 1 April 2020 to RPI, and the rest, including all new RCV added after 1 April 2020, to CPI or CPIH.

Companies subsequently accepted the necessary licence modifications. As part of the licence modification process, we committed to confirm our decision on the applicable index by January 2018.

In our May 2016 document, we outlined the uncertainty over whether CPIH would regain its status as a national statistic (conferred by the UK Statistics Authority, UKSA). We said that this assurance on the robustness of CPIH would be an important part of our decision on which index to use.

Since May 2016, there have been several developments which we have considered in reaching our decision on whether to transition price controls to CPI or CPIH.

- In November 2016, the National Statistician announced the intention of the ONS to make CPIH its preferred measure of inflation. As part of this he also committed the ONS to "continue to work towards redesignation [as a national statistic] as early as possible"[77].
- In March 2017, the ONS began to report changes in CPIH as its headline measure of inflation for the UK. This reflects the ONS's view that CPIH is a preferable index in terms of how effectively it measures price changes.
- The ONS has made progress towards addressing the UKSA's concerns about the calculation of housing costs in CPIH. We also note the UKSA's expectation of seeing improvements in data assurance[78].

We have carefully considered the merits of adopting either CPI or CPIH for the indexation of future price controls. We note that CPI has a longer track record and is

[77] Office for National Statistics, 'Statement on the future of consumer price inflation statistics in the UK', November 2016
[78] UK Statistics Authority, 'Minutes', January 2017

more widely used. We also note that CPIH is not currently designated a national statistic.

However, we consider CPIH to be a more legitimate index for customers, given its inclusion of housing costs (which are a significant expense for most household customers). We also note the ONS's view that CPIH is the preferred inflation index and the National Statistician's decision to work towards designating CPIH as a national statistic as soon as possible.

On balance, we propose to adopt CPIH, subject to the UKSA re-designating it as a national statistic, before we publish our final methodology. We outline further details of our decision in the risk and return appendix.

10.9 Our approach to corporation tax

As part of setting price controls, we calculate a separate tax allowance to ensure the revenue that companies receive covers all the relevant expenditure including tax. This is consistent with the basis for setting the cost of capital on the basis of pre-tax debt and post-tax equity. As the return includes a post-tax cost of equity, it does not provide any amount to cover tax liabilities.

Our proposals for the approach to remunerating corporation tax take account of the findings of the National Audit Office (NAO) in 2015 and our targeted review of tax, undertaken by Alvarez & Marsal. We also appointed Deloitte to review the basis for setting tax allowances at PR19. We have published the Deloitte report alongside this consultation, and have taken account of their findings and recommendations in determining our proposed approach.

Our overall approach to tax aims to incentivise companies to manage their tax affairs efficiently – while recognising that it is important for companies to take responsibility for the tax elements of their plans – and to make sure the approach we adopt is fair to customers.

For PR19 we propose to introduce a mechanism to make adjustments to the tax allowance for certain matters that are outside company control such as changes in the corporate tax rate and capital allowances. We are also seeking views as to whether we should extend that proposed mechanism to include adjustments for other changes in corporation tax legislation or accounting standards which may have a material impact on the level of corporation tax that companies pay. A tax cost pass-through mechanism would ensure that customers pay no more than is implied by prevailing tax rates where tax rates are below our price determination

assumptions, but would pay more where tax rates turn out to be higher than our price determination assumptions.

Consistent with the approach we have adopted in previous price reviews, we propose calculating tax allowances on the basis of the gearing that underpins the notional financial structure, or a company's actual gearing if higher. This will ensure that customers, rather than investors, benefit from the higher tax shield from interest payments. Where a company increases gearing as a result of a financial restructuring, we propose to claw back the tax benefits for customers as part of the next price review. This removes the incentive for companies to increase gearing simply to benefit from a lower tax bill.

We set out detailed information about our proposals for a pass through mechanism and the basis on which we will calculate tax allowances in the Aligning risk and return appendix.

10.10 Initial assessment of business plans

Based on our proposals above, we propose applying the following tests for assessing risk and return in our initial assessment of business plans:

Initial assessment tests 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 margin that underpins its retail price control(s), on those we stated in our methodology statement? If not, has the company robustly justified, for customers, its proposed costs of capital and retail margin(s) within the context of expected market conditions for 2020-25?

2. How clearly has the company understood and assessed the potential risks and shown evidence of the risk management measures it will have in place across each of the price controls?

Where business plans are underpinned by a different **cost of capital or retail margin**, 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.

In assessing the extent to which the company has demonstrated the required understanding and evidence on **risk management**, we will take into account evidence provided by the company that it has:

- a clear understanding of the risks that could affect the delivery of its plan;
- clearly evidenced that it has appropriate management practices in place to manage the impacts of risks should they arise; and
- clearly and robustly evidenced the scenario analysis it has undertaken.

In addition to the initial assessment tests above, the quality of information, assurance and commentary on corporation tax will be taken into account as part of the wider initial assessment test relating to a company's PR19 business plan tables submission.

10.11 Decisions on the regulatory framework for Risk and Return for PR19

Table 10.3 summarises all the issues for risk and return set out in the May 2016 decision document.

Table 10.3: Decision summary for risk and return

Topic	Confirmed decisions
Notional capital structure	• We will set out price determinations on the basis of a notionally efficient company.
Cost of capital	• We will set a wholesale WACC for each binding price control. • We will separately set a retail margin for retail price controls.
Indexation of price controls	• We will transition away from RPI from April 2020. • We will set a single nominal WACC for wholesale price controls, and then express this in real CPIH and real RPI terms.
Scenario analysis	• Companies will be expected to carry out scenario analysis to demonstrate their assessment of risk.

10.12 Consultation questions

Q1. Do you agree with our proposed approach to setting the cost of equity, based on the best estimate of expected returns in the 2020-25 period?

Q2. Do you agree with our approach to indexing the cost of new debt?

Q3. Do you agree with our proposal to index price controls to CPIH (subject to its redesignation as a national statistic before we publish our final methodology)?

Q4. Do you agree with our approach to setting tax allowances at PR19, including the proposed true up mechanism?

Q4a. Should the true up mechanism be limited to change in corporate tax rates and capital tax allowances or should we extend that true-up mechanism so we can also make adjustments for other changes in tax legislation or accounting regulations which have a material impact on the amount of tax companies are liable to pay?

Q5. Do you agree with the set of scenarios for RoRE analysis we have prescribed, the guidance we propose and to use our financial model to provide the suite of prescribed scenarios?

11 Aligning risk and return: financeability

11.1 Summary

This chapter sets out our proposals related to cost recovery and financeability.

We have a duty to ensure that an efficient company which is efficiently financed is able to finance its functions and to raise capital on reasonable terms. Our approach will assess whether revenues, relative to allowed costs, are sufficient for a company to finance its investment on reasonable terms, while securing the interests of customers now and in the long term.

We discuss the overall approach to assessing financeability, using a notional capital structure, and we set out a suite of financial metrics we will use in our assessment.

We discuss how companies can use financial levers (pay as you go (PAYG) and run off of the RCV (RCV run-off rates)) to balance cost recovery between current and future customers and the options available to companies to address financeability constraints.

Our approach to financeability supports the **PR19 key themes of:**

- **Long-term resilience** by ensuring notionally efficient companies can continue to finance their functions and invest in the services they provide by earning an appropriate return which reflects the risks they face.
- We will consider carefully how companies balance the needs of current and future customers when addressing financeability constraints. We will assess whether company plans appropriately balance the recovery of costs between current and future customers and we will intervene to protect customers where necessary. This will help deliver **affordable bills**.

Key messages

- Each company will need to submit a plan that is financeable and provide Board assurance that it is financeable on both the notional and actual financial structure.
- We propose to assess financeability at appointee level by reference to the notional structure that underpins the cost of capital.
- 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.

- Choice of capital structure and financing is a matter for companies and their shareholders. Companies should not expect customers to bear the costs of resolving financeability constraints arising from a company's choice of financial structure or inefficient financing strategy.

Table 11.1 Summary Box – PR19 Proposals for Financeability

Proposal Topic	Our thinking and proposal
Financeability	We will assess financeability at **appointee level** by reference to the **notional capital structure** that underpins the cost of capital. We will also carry out a cross-check to make sure there is enough cash flow headroom in each wholesale and retail price control to allow each one to operate on a stand-alone basis. If individual controls are not financeable on a stand-alone basis then we will consider whether we need to address this to ensure that there is an appropriate balance between customers of each price control. Each company will be required to submit a financeable business plan, with Board assurance that its plan is financeable on both the notional and actual capital structure. The financeability assessment will be made by reference to a suite of cash flow financial metrics, drawn from those used in the financial markets, including the credit rating agencies. 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. Choice of actual capital structure and financing is a matter for companies and their shareholders. Companies should not expect customers to bear costs to resolve a financeability constraint arising from a company's actual financial structure or an inefficient financing strategy.
Cost recovery for wholesale controls	PAYG and RCV run-off rates allow companies to balance recovery of costs between different generations of customers. We expect companies to provide evidence setting out how they have identified the natural levels for these rates for each of the wholesale price controls and to explain clearly in their business plans why they depart from the natural rates. Companies will also need to provide evidence of customer support for their proposals and demonstrate how they have taken into account customer views. We will test this evidence as part of the initial assessment of business plans. We will consider how the 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.

11.2 Introduction

When setting price controls, we act in the way we consider best meets our statutory duties under the Water Industry Act 1991. These include primary duties 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 to further the consumer objective 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 our allowed cost of capital; and
- raise finance on reasonable terms.

This approach is also consistent with our resilience duty, as an efficiently structured and operated company should be financially resilient over the longer term.

The financeability assessment also acts as a final check that, when all the individual components of 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.

As at previous price reviews, we will assess financeability primarily at the appointee level, which is consistent with our duty. We propose assessing financeability on the basis of the notional efficient capital structure, using our view of efficient financing costs based on the allowed cost of capital. This will ensure any risks related to a company's actual capital structure are not passed on to customers.

We will expect business plans to include Board statements that provide us with assurance that the plan is financeable on both the notional and the actual capital structure, and that the plan protects customer interests in both the short and the long term. The statements should clearly set out the steps taken to provide this assurance. Where the assurance provided is insufficient to meet our expectations or inconsistent with evidence provided elsewhere in the plan, we will reflect this in our initial assessment of business plans.

There is a close relationship between affordability and financeability. In our initial assessment of business plans we will assess the steps companies have taken to make sure their plans address affordability and financeability. This will include assessments of:

- the bill profile for customers in the 2020-2025 period and in subsequent years, which should be smooth and avoid unnecessary volatility (bill volatility has been identified as an issue by both Defra and the Welsh Government in their draft strategic policy statements);
- the steps companies have taken to make sure bills are affordable for current and future customers; and
- the approaches companies have taken to address any financeability constraints (including the rationale and evidence of customer support).

To allow us to assess the second criterion above, we expect companies to explain the drivers of bill profiles and to use the functionality of the financial model to demonstrate how they expect bill profiles to evolve beyond 2025. Recognising the greater uncertainty associated with costs in 2025-2030, companies will need to make assumptions about totex and financing costs through 2025-2030. We have developed a draft version of the financial model[79] which we will use to assess plans and to aid us in making our determinations. We will expect companies to provide a completed version of the model when they submit their business plans. Companies will be expected to use the functionality in the financial model to insert their proposed assumptions and show the likely bill profile.

11.3 Approach to assessing financeability

We propose assessing financeability by reference to a notional company with a notional efficient structure and an efficient level of expenditure. At PR14 we used a notional capital structure based on gearing of 62.5% (calculated as net debt/RCV).

We will publish an indicative view on the **gearing**, alongside our final methodology, when we also provide an initial view on the cost of capital for the 2020-25 period. At this point in time we are minded to set it no higher than 62.5%. We have, for example, observed a downward trend in debt to enterprise value for listed utility and non-financial corporates in the UK and Europe over the last 4-5 years.

We recognise that a number of companies (13 at 31 March 2016) have gearing in excess of 62.5%, which in many cases reflects company and investor choices made in past restructuring decisions. Our view remains that the risks relating to choice of capital structure should remain with the shareholders of each company. It would be

[79] We have published version PR19 05z alongside this consultation

inappropriate for the gearing of the notional financial structure to be driven by the financial restructuring decisions of companies that are highly geared.

Equity has a significant role to play: to manage the impact of risks where they arise, but also to hold management to account and to help the sector adapt to change. Market evidence indicates that both the cost of debt and the cost of equity are likely to be lower than in the 2015-20 period; this would result in a lower cost of capital. Increasing gearing above the level used at PR14 would place more pressure on the financing of the notional company structure, which could reduce financial headroom (measured by financial indicators).

Index-linked debt has an interest cost that reflects a real, rather than a nominal, rate of interest. Using index-linked debt has a positive effect on adjusted interest cover.

In previous price determinations, we have assumed a proportion of the notionally structured company's debt is financed by index-linked debt. While we are moving to CPIH indexation at PR19, a significant proportion of the embedded debt of the sector is linked to RPI. We propose to take account of the high level of embedded index linked debt in our approach to PR19, drawing on our assessment of embedded debt for the notional company.

We are aware of some CPI-linked debt issued by United Utilities in 2016 and 2017. To the extent that an efficient market develops for CPI or CPIH products, this is evidence that we would take into account when assessing a company's ability to raise debt and the impact of that on a company's financeability at a price control.

Consistent with our statutory duty, we propose carrying out the **financeability assessment at the level of the appointee**. For English companies, this assessment will encompass the efficient costs included within the wholesale and household retail price controls. For Welsh companies and for those English companies who have not exited the market for whom we set a separate non retail household price control, this will also encompass the non-household retail control.

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 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.

We propose continuing to assess financeability using a suite of **financial metrics**. These will be metrics which are drawn from those commonly used in the financial markets, including those used by the credit rating agencies

We will look at the average value of each of the metrics over the price control period and at the trends. As for PR14, we do not propose setting targets for each of the financial metrics; instead, we expect each company to explain and justify the credit rating targeted by the business plan, and how the financial metrics meet that objective.

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 propose to carry out a headroom check to make sure each control can generate sufficient cash flows to service its working capital needs.

We expect each company to provide **Board assurance** that its plan is financeable on both the notional and the actual capital structure. The issues around notional structure were debated in the company workshop we held in February 2017. Given our commitment to give an early indication of the cost of capital for the 2020-25 period, we consider companies are well able to take steps to provide the necessary assurance. In doing so, companies can set out any assumptions they have made to ensure the plan is financeable on a notional basis.

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 should demonstrate how the plan is financeable on the basis of the suite of financial metrics we propose in section 11.5 (and any other metrics the company considers relevant) and provide any other relevant supporting evidence.

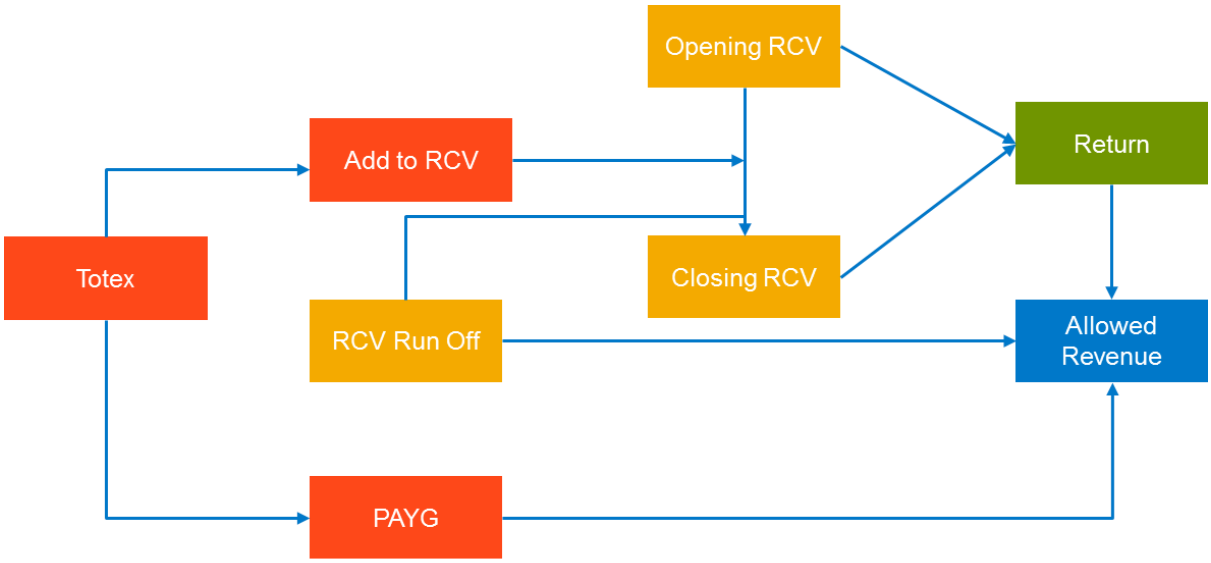
Our price determinations include a number of **incentive and risk mitigation mechanisms**, designed to align the interests of companies with those of customers. To maintain the incentives on management, we will make rewards or penalty adjustments after carrying out our financeability assessment. This ensures customers do not end up paying more to address financeability constraints arising from poor performance. Similarly, it ensures the value of financial rewards are not eroded as a result of adjustments made following the financeability assessment.

11.4 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. Allowed expenditure (totex) can be recovered in the year it is incurred through PAYG or it can be added to the RCV and recovered over a longer period through the RCV run-off (deprecation of the RCV) as shown below.

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 propose that totex expenditure incurred in the 2020-25 period which is not recovered through PAYG will be recognised as ‘post 2020 RCV’ as it does not benefit from the same protections

as the RCV in place as at 31 March 2020 ('pre 2020 RCV')[80]. In the 2020-25 period, the post 2020 RCV can be recovered through a post 2020 RCV run-off rate, and will receive a return in the same way as the other RCV components.

We discuss in the appendix 6, 'Bioresources control', our proposal to calculate the average bioresources revenue based on a single price per tonne of dry solid for each company on an NPV basis. We propose this calculation is performed after the financeability assessment. We note this may lead to a different revenue profile for a given volume of sludge compared with that which underpins the financeability assessment. However, the NPV adjustment will ensure revenues allowed over the five years are consistent with those used in the financeability assessment and we note this approach is consistent with the way in which revenue reprofiling adjustments have been made to smooth customer bills in previous price reviews.

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. Therefore we will consider – using the approach set out below – how companies have justified the PAYG rates and RCV run off rates in the IAP.

We will carefully consider:

- the profile of bills for customers both within the current regulatory period and in future periods;
- how companies have taken the views of customers into account; and
- the impact of bills when companies have adjusted their PAYG or RCV run-off rates to address financeability concerns or other issues.

In considering the profile and intergenerational impact of company bill proposals for customers we will also consider whether customers are getting value for money both now and in the long term. Bills should also be affordable for people who struggle, or are at risk of struggling, to pay. Our assessment will also take into account the way that companies have considered customers who are in circumstances that make them vulnerable. Details of our approach in this area, are set out in the chapter 3 'Addressing affordability and vulnerability'.

We will intervene to protect customers, if the evidence does not support that the chosen PAYG or RCV run-off rates are appropriate.

[80] We discuss these issues further in the Wholesale controls chapter.

We would not expect PAYG and RCV run-off or post 2020 RCV run-off rates to be the same for all controls, or the same for investment incurred before or after 2020. The rates that companies propose will need to appropriately reflect the operational needs, investment and depreciation profile of each control, while securing the financeability of the notional financial structure.

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 'natural' rates 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 show clearly explain their choice of PAYG and RCV run-off rates, in relation to evidence on the natural rates.

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 any impact from unwinding of capex bias to be taken into account.

Our starting point for the assessment of cost recovery rates is the underlying economic substance. As such, 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. As discussed in chapter 10 'Aligning risk and return', we anticipate transitioning to CPIH as our primary inflation rate from 2020. In our May 2016 publication, we confirmed that if supported by customers, companies could use RCV run-off or PAYG rates to smooth the impact of the transition on customer bills. Where

companies use the cost recovery rates for this purpose, we expect the rationale to be clearly set out, together with evidence of customer support.

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 support.

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.

5. We will intervene, where necessary, if the balance of evidence suggests that a company's overall PAYG or RCV run-off proposals have been to solve financeability constraints driven by actual financial structure.

One credit rating agency has suggested that that one of the factors it will take into account in its assessment of future cash flow ratios is adjustments made to PAYG/RCV run-off rates, in relation to the transition of the RCV from RPI. We consider this to be a matter for companies to manage under their actual financial structure, as the issue arises where the proportion of RCV financed by RPI-linked debt is above our notional assumption. 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 adjusted interest cover.

11.5 Proposed financial metrics

The financial metrics we will use to assess financeability are incorporated in the draft version of the PR19 financial model. They comprise debt ratios, equity ratios and other return metrics, as are set out in the tables below.

These metrics draw on common approaches used in the financial markets, and include metrics used by the credit rating agencies. As each credit rating agency adopts a slightly different approach, we will not follow the approach used by any particular 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. As

for PR14, we propose to consider the average of each metric over the price control period. We will look at trends over the price control period, rather than focusing on individual metrics in a single year.

Table 11.2 shows the primary financial ratios we propose using in our assessment.

Table 11.2 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.
Adjusted cash interest cover ratio (ACICR)	$\frac{\text{FFO(pre interest)-RCV run off}}{\text{Cash interest}}$	ACICR measures a company's ability to meet its interest payments after payment of capital charges. Capital charges are the cost of maintaining the RCV at its existing level. They are represented in the calculation by the RCV run-off. ACICR is a more conservative measure than interest cover. It provides an indication of interest coverage assuming companies cannot reduce capital charges. 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. This metric will therefore be higher than if we had made no assumptions regarding index-linked debt.
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 companies' ability to pay dividends. Companies should determine an appropriate dividend policy which reflects their circumstances.
Retained cash flow (RCF)/Net debt	$\frac{\text{FFO (post interest)-dividends paid}}{\text{Net Debt}}$	RCF/Net debt measures companies' 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	$\frac{\text{EBIT-tax-(cost of debt* net debt)}}{\text{equity component of the RCV}}$ 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.
Net debt represents borrowings less cash, and excludes any pensions deficit liabilities. **FFO** is cash flow from operational activities, and excludes movements in working capital. **Cash interest** excludes the indexation of index-linked debt.		

We do not propose to set target levels for these metrics. As we have previously stated, 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.

Companies must consider how much financial headroom they believe is appropriate and take this into account when engaging with their customers. 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.

As explained above, the financial ratios in the table do not follow any individual rating agency's methodology, and the calculations used by some credit rating agencies may be different. While we expect all companies to include the primary financial ratios, as defined above, in their business plans, we will consider the views of companies where they suggest an alternative calculation.

Therefore, within our draft version of 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.

11.6 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 those constraints; and
- the approach to addressing the constraint is appropriate, taking account of the effects on customers' bills.

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 11.3.

Table 11.3 Options for addressing financeability

Option	Usage	Comments
Use of PAYG/RCV run-off levers	The PAYG and RCV run-off levers can be used to move revenue between control periods on an NPV-neutral basis.	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 will expect to see evidence of customer support and be satisfied that the use of the financial levers does not result in unaffordable bills.
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.
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 may be reasonable where there is significant RCV growth. Raising additional equity may prove challenging if the existing shareholders cannot meet the additional requirements.

As stated above, companies will need to provide Board assurance that the plan is financeable based on the actual capital structure. Where a company expects a financeability issue to arise based on its actual company structure, but not the notional structure, that could affect its ability to maintain an investment grade credit

rating, it will need to give separate consideration to how it will address the issue and provide the necessary assurances about its approach.

The options available to companies in such circumstances may be different than for addressing a financeability concern under the notional capital structure. A company's choice of actual company structure is a matter for company management and shareholders. Customers should not bear the cost of resolving an issue arising from inefficient choices made by companies.

11.7 Initial assessment of business plans

Based on the proposals for financeability we have set out in this chapter, we will carry out the following tests in our initial assessment of business plans.

Initial assessment tests on aligning risk and return: financeability?

1. Has the Board provided a clear statement, with appropriate supporting evidence, that its plan is financeable on both an actual and a notional basis?

2. How appropriate are the company's PAYG and RCV run-off rates? How well evidenced are these, including that they are consistent with customers expectations' both now and in the longer-term?

When assessing the extent to which a company has shown that it is financeable on both a notional and an actual basis, we will take into account:

- the statement given by each company's Board as to why they consider the plan to be financeable for both the notional and the actual capital structure;
- 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 the underlying economic substance (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.

11.8 Decisions on the regulatory framework for financeability for PR19

Table 11.4 Decision summary for financeability

Topic	Confirmed decisions
Notional capital structure	We will continue to consider financeability by reference to a notionally efficient company with a notional capital structure.

11.9 Consultation questions

Q1. Do you agree with our overall approach to assessing financeability?

Q2. Do you agree the calculation of the metrics set out in section 11.5 of the 'Aligning Risk and Return: Financeability' chapter that we are proposing to use in our assessment?

12 Accounting for past delivery

12.1 Summary

This chapter sets out how we will take account of past company performance in assessing business plans, including how we will reconcile the PR14 incentive mechanisms in PR19 and take account of the remaining adjustments for the final 2010-15 reconciliation.

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 ODIs attached to them. The remainder were reputational incentives.

Companies also committed to timely and efficient investments, customer engagement and sharing gains with customers. Company performance is much wider than the commitments made in business plans, however, and involves how companies deal with customers day-to-day, such as when dealing with customer contacts or handling major incidents.

We also propose to take account of company performance during the 2015-20 period in our IAP assessment. We expect companies to explain their performance and how they have engaged with their customers on their performance and how their learning is reflected in their business plan. We note that if a company meets its commitments in one period, this can provide greater confidence around its plans, processes and future operations.

PR14 included a series of incentive mechanisms, for example outcome delivery incentives and cost sharing. These will generate RCV and revenue adjustments for the price controls in the 2020-25 period.

Our approach for taking into account past company performance will support our assessment of how well companies' business plans will deliver against the four key themes of PR19: **customer service**, **affordable bills**, **long-term resilience** and **innovation**.

Key messages

We propose that our PR19 methodology will take into account 2015-20 performance in two ways.

- We will adjust revenues and the RCV for the 2020-25 period to take account of the incentive mechanisms we set in PR14, and for performance in the final year of the 2010-15 period.
- We will take into account company performance in the 2015-20 period in assessing the confidence we have in company business plans and future delivery of services for customers.

Table 12.1 Summary Box – PR19 Proposals for Company Performance 2015-20

Proposal topic	Our thinking and proposal
Reconciling the service incentive mechanism	The four years 2015-16 to 2018-19 will be used to calculate the financial rewards and penalties. SIM will operate in some form for 2019-20 for the purpose of companies reporting against their reputational outcome delivery incentives. Revenue adjustments at PR19 will be in the range of -12% (penalty) to +6% (reward) of residential retail revenues. Rewards and penalties will be based on companies' relative performance.
Applying reconciliation adjustments in 2020-25 price controls	Wholesale RCV adjustments will be applied to water resources and water network plus proportionately and to all of wastewater network plus. Wholesale revenue adjustments will be applied to network plus controls except where an outcome delivery incentive is clearly linked to water resources or bioresources. Revenue adjustments can be flexibly applied either in the first year or spread over a number of years.
Initial assessment of business plans	The initial assessment of business plans will include two test areas on past performance: • how well the company gave evidence of its proposed reconciliations for the 2015-20 period; and • how well has the company delivered its business plan to customers, over the 2015-20 period and how well has it engaged with its customers on its performance.

12.2 Introduction

Company performance in the 2015-20 period is important 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 chapter is structured as follows:

- reconciliation for 2015-20 performance and 2010-15 performance (section 12.3);
- applying reconciliation adjustments in the 2020-25 price controls (section 12.4);
- including reconciliations in business plans (section 12.5);
- taking past performance into account (section 12.6); and
- taking 2015-20 performance into account in the initial assessment of business plans (section 12.7).

12.3 Reconciliation for 2015-20 and 2010-15 performance

In PR14, we set mechanisms to incentivise companies to do the right thing for their customers. Through these, company performance can have a real impact on company revenues and the RCV (in addition to customer outcomes) from the £44 billion expenditure in the PR14 price controls. 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. Publishing the rulebook as early as possible has helped make regulation more transparent and improved confidence across the sector.

The rulebook describes the approach to the reconciliation of the following mechanisms.

- **Outcome delivery incentives** – rewards for companies that stretch and meet performance targets and compensation for customers if performance is below performance targets.

- **Wholesale total expenditure (totex) sharing** – where company over- and underperformance is shared with customers.
- **Wholesale revenue forecasting incentive mechanism (WRFIM)** – financial incentives for companies to make accurate forecasts, ensuring under- and over-recovery is reconciled.
- **Residential retail** – the total revenue allowance is adjusted for actual customer numbers.
- **Final 2010-15 reconciliation** – for performance against the PR09 incentive mechanisms.
- **Land disposals** – adjusting the RCV to share any proceeds from land sales equally with customers.

For each of these, the rulebook sets out how we treat mechanism specific issues, inflation and whether companies and customers should be compensated for the time value of money and taxation.

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 finished, so companies made a forecast, which we considered and adjusted for inclusion in the PR14 final determination. We are updating 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 final 2010-15 reconciliation adjustments in due course. These adjustments will be implemented as part of PR19.

In addition to reconciliation for the 2014-15 financial year, in PR19 we will also implement the adjustment to ensure consistency in how we apply inflation indices for the PR09 capital incentive scheme. The need to do this was flagged in the 2014 final determinations. We consulted on this adjustment in the PR14 reconciliation rulebook consultation in March 2015 and concluded in February 2016. This leads to a one-off change to the RCV for all companies. At an industry level, this would 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 propose to use the SIM results from the four years 2015-16 to 2018-19 to calculate the financial rewards and penalties for companies, based on their performance over those four years. We will not use the SIM results from 2019-20 for rewards and penalties as performance for that year will not be known during PR19 when we will decide on the SIM rewards and penalties.

We are proposing that the SIM will not operate in 2019-20, but instead we will pilot C-MeX that year. Some companies have reputational incentives for SIM in 2019-20. We could 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 would enable companies to assess whether they had met their reputational incentives for SIM in 2019-20. Alternatively we could drop the assessment of the 2019-20 reputational incentives for SIM on the basis that C-MeX will provide a reputational incentive for companies to improve their performance in 2019-20. We invite views on the relative merits of these two options.

Setting rewards and penalties: We confirm that the revenue adjustments at PR19 will be in the range of -12% (penalty) to +6% (reward) of residential retail revenues.

At PR14 we set rewards and penalties 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 rewards and penalties, for example, taking a point other than the mean as the point at which no rewards or penalties apply or using absolute rather than relative scores.

We propose that each company's reward or penalty will depend on its performance and those of all the other companies, i.e., 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, to ensure we apply appropriate rewards and penalties.

12.4 Applying reconciliation adjustments in 2020-25 price controls

We have confirmed the final 2010-15 reconciliation adjustments and set out how we will calculate the adjustments from companies' 2015-20 performance. We have not decided, however, how the adjustments will apply at PR19. 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 propose to 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 propose to apply them wholly to the wastewater network plus control. To facilitate bioresource markets, the bioresources RCV will be based on the economic value of bioresource assets. We do not propose, therefore, to apply the reconciliation adjustments to the bioresource 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 final 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 therefore propose to 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 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 would 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 propose to 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 reward or 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 engages with customers to prepare its business plan and when it 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 rewards or penalties are not offset, wholly or partially, as a result of the financeability assessment.

Table 12.2 summarises the adjustments produced by each of the past performance incentive mechanisms and the price controls we propose to apply them to.

Table 12.2 Applying past delivery adjustments to price controls

Incentive mechanism	RCV adjustment	Revenue adjustment
Final 2010-15 reconciliation	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
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
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 or bioresources).	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
Wholesale revenue forecasting	Not applicable	Network plus
Residential retail revenue	Not applicable	Retail
SIM	Not applicable	Retail

12.5 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, in July 2018 with the regulatory accounts reporting. This will 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 the business plan expectations chapter.

We propose using 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 model and RCV adjustments 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. 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.

12.6 Taking past performance into account

Company performance in 2015-20 will have an important impact on customers during the 2015-20 period and is an important for companies to consider how they have learned from their performance to deliver for customers in the future. Some of this performance is directly affected by financial incentives, such as ODIs and totex cost sharing. Some is covered by reputational incentives, such as performance commitments, and some is covered indirectly by the regulatory regime – the inclusion of complaint and customer contact data in the service incentive mechanism.

We want to take overall company performance into account in assessing the achievability of business plans. We expect companies to set out how they have delivered overall for customers in the 2015-20 period, including against our final determinations and company business plans. This should include outcomes and performance commitments, timely and efficient investment, operation of the water

and wastewater network, and dealing with major incidents and issues that could affect customers, including its communication with customers and how it has responded to and addressed service failures. Given this overall performance, companies should set out the measures they have put in place to ensure they deliver their 2020-25 business plans.

12.7 Initial assessment of plans

We expect to test two areas of business plans in our initial assessment.

Initial assessment test on accounting for past delivery

1. How well has the company given evidence of 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 delivered its business plan to customers over the 2015-20 period, and how well has it engaged with its customers on its performance.

We expect to test two areas of business plans in our initial assessment.

1. How well has the company given evidence of 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 delivered its business plan to customers over the 2015-20 period, and how well has it engaged with its customers on its performance.

In this assessment, we would expect to consider overall performance, including performance against our final determinations and company business plans, and:

- how well the company has performed in the round and given evidence of meeting its outcome and performance commitments;
- how well the company has performed and given evidence of its timely and efficient investment and operating efficiency;
- how the company has dealt with and given evidence of its performance on major incidents;
- how well it has 'owned' the customer relationship in major incidents or when complaints are escalated; and
- what measures the company has put in place to ensure it delivers its 2020-25 business plan.

To run this test, we will primarily draw on other test assessments and bring these together into a test score for the business plan. For example, our assessment of proposed performance commitments (see the Delivering outcomes for customers chapter) will look at a company's evidence that its commitments are credible in the light of its past performance. Our view of this evidence will be used to make the assessment under the past performance test.

This will ensure we avoid any double counting or inconsistency in the assessments. It is important to include a separate question on this to emphasise the importance of plans being credible given levels of past performance and how companies have learned from their 2015-20 experience.

12.8 Consultation questions

Q1. Do you agree with our proposed approach for dealing with PR14 reconciliations and SIM? If not, please explain your alternative approach and why this would be in customers' interests.

Q2. Do you agree with our proposed approach for reflecting how well the company is delivering for customers over the 2015-20 period in the initial assessment of

business plans? If not, please explain your alternative approach and why this would be in customers' interests.

13 Securing confidence and assurance

13.1 Summary

This chapter sets out our expectations for company business plans, business plan data tables and assurance.

In PR14, we did not prescribe how companies should present their business plans. One of the lessons we learned from the PR14 process was that this freedom made it difficult to find the relevant supporting evidence in the business plans.

Our PR19 business planning proposals build on the PR14 approach. It is up to companies to decide the best way to present their proposals. But in this chapter we set out our expectations for companies' business plans.

Our proposals for PR19 aim to reveal more granular information than ever before, 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.

We need a consistent, accurate and assured set of information across companies so that we can carry out our analysis and assessments and set each price control. We will obtain this information through a common set of data tables. This chapter outlines our data requirements.

Companies and their Boards are responsible for submitting high-quality business plans which include good assurance and have been put together using good governance processes. This chapter sets out our expectations on assurance and governance processes.

This chapter also sets out proposals for an improved business plan submission process.

Our expectations for business plans, data and assurance are key to the delivery of high-quality business plans which deliver against the four key themes of PR19: **customer service**, **affordable bills**, **long-term resilience** and **innovation**.

Key messages

We want companies' plans to be more focused and succinct, more accessible and easier to navigate than in PR14. So, we want a narrative that clearly explains the company's proposals. We propose that:

- every company provides a guide to its plan that clearly signposts key information about its proposals; and
- companies' main business plan narratives should be no more than 200 pages long for water only company and 300 pages long for a water and sewerage company.

Companies need to submit a consistent, accurate and assured set of information in line with our data table requirements.

Companies and their Boards are responsible for submitting high-quality business plans which includes good assurance and governance processes.

Table 13.1 Summary Box – PR19 proposals for business plan information requirements

Proposal topic	Our thinking and proposal
Expectations for companies' business plans and narratives	Companies should clearly signpost the areas of their plans that we should refer to when carrying out the tests involved in the initial assessment of business plans. Companies' narratives should clearly explain their proposals, supported by strong evidence. They should provide a summary of how their plans will deliver our key PR19 themes (customer service, affordability, resilience and innovation) and the UK and Welsh Government strategic policy statements. Companies' main business plan narratives should be no more than 200 pages long for water only companies and 300 pages long for water and sewerage companies, and in a single document. We expect companies to provide all supporting evidence, analysis and models underpinning their business plans.
The supporting data tables	Companies should complete a full set of data tables covering each price control, together with suitable explanations and commentaries. Companies should highlight any changes to previously reported data, and explain the steps they have taken to communicate and reconcile such changes with their customers and stakeholders. Companies should ensure consistency between their business plan tables, the supporting feeder models and the financial model. Small companies are not expected to complete and submit the proposed tables.
Assurance and governance arrangements	Companies and their Boards are responsible for submitting high-quality business plans, which includes good assurance of the plans. It is for the

Proposal topic	Our thinking and proposal
	companies and their Boards to determine how best to provide this assurance, including determining the role of external assurance. Each company's full board should provide us with an assurance statement that demonstrates: • how it has challenged and satisfied itself that all the elements add up to a plan that is high quality; • how it has challenged and satisfied itself that the overall strategy to data assurance and governance processes delivers high-quality data; • how it has challenged and satisfied itself that the business plan will enable the company to meet its statutory obligations, now and in the future; • how it has challenged and satisfied itself that its plan will deliver operational, financial and corporate resilience over the next control period and long term through its governance and assurance processes, taking account of its track record of performance; and • how it has provided ownership of the overall strategy and direction of the plan in the long term. Companies should provide evidence that the data and information provided within the plan has been subject to good assurance processes to ensure it is consistent and accurate.
Submission process	Companies will be able to submit their data tables, narratives and commentaries using our new secure data capture platform.
Expectations for transparency	Companies should publish the whole of their business plans and will need to provide very good reasons should they choose to excise information.

13.2 Introduction

We want to implement a proportionate and targeted price limit setting process. This process should be founded on key information supported by strong evidence. High-quality business plans and data and robust assurance are key to the delivery of our four PR19 key themes.

This chapter sets out our proposals for companies' business plans, data and assurance. It covers our proposals and expectations for:

- company business plans and narratives (section 13.3);
- the supporting data tables (section 13.4) ;
- early data submissions (section 13.5);
- how to approach small companies (section 13.6);
- assurance and governance arrangements (section 13.7); and

- an improved submission process (section 13.8).

13.3 Expectations for company business plans and narratives

We expect company business plans to:

- contain well-written narratives that are both easy to follow and understand and are no more than 300 pages;
- summarise how companies will deliver our key PR19 themes and the UK and Welsh Government strategic policy statements;
- summarise how companies will deliver outcomes that reflect the priorities of the customers and communities they serve;
- demonstrate how those outcomes are grounded in high-quality customer engagement;
- contain fair proposals to share rewards and penalties with customers;
- set out how they meet each of the initial assessment tests and signpost supporting evidence;
- contain consistent, accurate and assured information;
- provide strong evidence to support companies' proposals;
- be owned by the company and its full Board;
- be published by the companies; and
- be accompanied by an independent report for Ofwat from their CCGs;

Further expectations on company business plans are set out in the initial assessment of business plans.

We are not prescribing the form of the business plans. However, we will need to be able to easily identify relevant supporting evidence in the business plans.

We therefore expect company business plans to incorporate a clear, concise and well-reasoned narrative with all necessary supporting evidence. We expect companies to provide to us with all supporting evidence, analysis and models they have used in preparing their plans.

Company's business plan narratives should summarise the overall strategy for the plan, how it delivers the four key themes of PR19 (customer service, resilience, affordability and innovation) and the UK and Welsh Government strategic policy statements. They should also summarise how the company will deliver the outcomes that reflect the priorities of the customers and communities they serve. Companies will need to demonstrate how those outcomes have been grounded in high-quality customer engagement.

We expect companies to submit more focused, succinct business plans than in PR14 and previous price reviews. 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 sewerage company.

Company business plans should set out how they meet each of the initial assessment tests set out in our PR19 methodology consultation document. The business plans will need to clearly signpost the areas of the plan where we can find evidence about how the company is meeting the tests for the initial assessment of business plans. You can find a draft pro forma for this signposting exercise in IAP pro forma published with this consultation.

We expect company business plans to be accompanied by an independent report to Ofwat from the CCGs, which provides their 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.

The format and detail of this independent report is up to the CCG to decide. In our Customer engagement policy statement and expectations for PR19 May 2016, we set out the questions CCGs reports should address. But to allow CCGs flexibility, this is not an exhaustive list.

We said in our 2016 May Customer engagement policy statement that we would need to consider in more detail the methodology for assessing business plan quality in the equivalent of the risk-based review for PR19, including in relation to customer affordability. This is set out in the Addressing affordability and vulnerability chapter and also sets out our approach on companies addressing vulnerability. We will use the CCG's views towards evidence on how companies' business plans are addressing affordability and vulnerability. We will continue to work with the CCG Chairs to facilitate their role in providing independent challenge to company evidence on customer engagement.

13.3.1 Expectations for transparency

To assist engagement, 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, for example as it is commercially sensitive information, then the company will need to provide strong, robust reasons for this that are specific to the information concerned.

We will continue with our approach of publishing financial models and supporting feeder models, to provide transparency and understanding of our decision making.

13.4 The supporting data tables

The companies' business plan narratives will provide us, customers and other stakeholders with an overview 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 propose collecting this data using a suite of supporting data tables. You can find these in the spreadsheets accompanying this consultation.

We have identified 100 data tables that we expect companies to complete and submit with their business plans.

In particular, we are asking for detailed information:

- about outcomes; and
- for cost assessment purposes.

You can find more details in the supporting document Delivering Water 2020: consultation on PR19 methodology: Guidance on business plan data tables.

13.5 Early data submissions

By working with the industry since 2016, we have identified a need to collect information in selected 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. We summarise these submissions in Table 13.2.

Table 13.2 Early submission summary

Data required	Purpose	By when	How	Reference
2016-17 cost and explanatory variable information	To inform our cost assessment work.	15 July 2017	Separate information submission with the 2017 Annual Performance Report	IN17/03 'Expectations for monopoly company annual performance reporting 2016-17', February 2017
Debt costs	To help us analyse water companies' borrowing costs and provide an indicative cost of capital alongside our final methodology document.	15 July 2017	With the 2017 Annual Performance Report	Information request emailed to Regulatory Directors on 23 May 2017
Companies' proposed allocations of historical RCV for bioresources	To give companies feedback on their asset valuations and proposed RCV allocations (by the end of January 2018).	29 September 2017	Tables set out in 'Economic asset valuation for the bioresources RCV allocation at PR19', April 2017	IN17/01 'Allocation of RCV to water resources and bioresources at 31 March 2020', January 2017
Companies' proposed allocations of historical RCV for water resources	To give companies feedback on their allocations before they submit their business plans (by the end of April 2018).	31 January 2018	Separate tables set out in PR19 Jan 2018 tables – WR RCV allocation	
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 Spreadsheet similar to table App1 in the accompanying spreadsheet file.	'Water 2020: our regulatory approach for water and wastewater services in England and Wales', May 2016
Cost adjustment claims	To assist the cost assessment review process – it will provide valuable additional time to	3 May 2018	Separate information submission	

Data required	Purpose	By when	How	Reference
	take into account companies' cost adjustment claims in the initial assessment of business plans.			
PR14 reconciliation information	To help us understand and review the data on which companies have calculated adjustments for their performance during the 2015-20 period.	15 July 2018	With the 2018 Annual Performance Report	

13.6 Approach to small companies

We define a small company as one with an annual turnover of less than £6.5 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 area.[81] We use the term NAVs to describe small entrant water companies.

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).

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.

For NAVs we do not propose making any changes at this stage to the relative charge control in NAV licences at least for residential customers[82]. Each NAV's charges will continue to be capped at would be fixed relative to, and could not exceed, the equivalent charges of the previous incumbent company or companies. We therefore

[81] A new appointment is where a limited company is first appointed by us to be a water undertaker and/or sewerage undertaker for a specific geographic area or areas. A variation is where we vary the appointment of an existing appointed company to include a new area.
[82] We propose to continue with our existing approach for Albion Eco Limited, which only has two large business customers and so prices are set by agreement

do not require NAVs to submit business plans or supporting business plan data tables.

However, this approach is no longer possible in relation to business customers of NAVs because an incumbent company that has exited the business retail market 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 did not set separate price controls for retail and wholesale activities.

Cholderton and District Water now wishes to become a private water supplier (see our consultation). If this proposal proceeds, then we will no longer regulate the company. The company has stated its intention to have its price limits set by its Customer Challenge and Action Group instead.

If the company does not become a private supplier, then we propose continuing with a simplified approach and requiring the company to submit a simplified business plan. This plan would be less data-onerous than those submitted by the larger incumbent companies.

13.7 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 provided within the plan has been subject to good assurance processes to ensure it is consistent and accurate.

Second, the assurance a company's full Board provides of the business plan. This would include ensuring that the business plan is of a high quality in the round. This may involve for example, challenging the management team to deliver an ambitious well evidenced plan that properly reflects the views of customers.

Each company's full Board should provide us with an assurance statement that demonstrates:

1. how it has challenged and satisfied itself that all the elements add up to a business plan that is high quality;
2. how it has challenged and satisfied itself that the overall strategy to data assurance and governance processes delivers high-quality data;
3. how it has challenged and satisfied itself that the business plan will enable the company to meet its obligations, now and in the future;
4. how it has challenged and satisfied itself that its plan will deliver operational, financial and corporate resilience over the next control period and long term through its governance and assurance processes, taking account of its track record of performance; and
5. how it has provided ownership of the overall strategy and direction of the plan in the long term,

We define corporate resilience as 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 its business operations.

We propose that this assurance statement covers the specific areas set out below.

Table 13.3 Proposals for Board assurance

Area	Board assurance requirements
Business planning	How it has challenged and satisfied itself that all the elements add up to a business plan that is high quality. How it has challenged and satisfied itself that the overall strategy to data assurance and governance processes delivers high-quality data. How it has challenged and satisfied itself that the business plan will enable the company to meet its statutory obligations, now and in the future. How it has challenged and satisfied itself that its plan will deliver operational, financial and corporate resilience over the next control period and long term through its governance and assurance processes, taking account of its track record of performance. How it has provided ownership of the overall strategy and direction of the plan in the long term.
Customer engagement	Assurance that the company's business plan has been informed by: • customer engagement; and • feedback from the company's CCG in relation to the quality of its customer engagement and how this has been incorporated into its plan.
Outcomes	Assurance that the company's proposed outcomes, performance commitments and ODIs reflect customer preferences and are grounded in customer engagement. Assurance that the company's proposed approach to reporting on its performance commitments, ODIs and projections of outcomes is robust.
Resilience	Assurance that the company's business plan has been informed by: • a robust and systematic assessment of the resilience of the company's systems and services;

Area	Board assurance requirements
	• customer views on managing resilience; and • a comprehensive and objective assessment of interventions to manage resilience in customers' long-term interests.
Cost assessment	Assurance that the expenditure forecasts included in the company's business plan are robust and efficient.
Risk and return	Assurance that the Board has identified the risks associated with delivery of the plan and the risk mitigation and management plans it 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.

It is for the companies and their Boards to determine (taking account of the Company Monitoring Framework) how best to provide this assurance, including the role of external assurance. We do not prescribe what form this assurance should take.

The evidence companies provide in the business plans about how they assured themselves that data is consistent and accurate, and the process the Board followed to challenge management to deliver a high-quality plan, will provide us with confidence in the plan. Our assessment of these forms part of our initial assessment of business plans in relation to confidence and assurance. We discuss the areas we propose testing in the following sections.

13.7.1 Assessing the quality of Board assurance of the plans

We expect a company's Board as a whole to take responsibility for assuring business plans. We also expect them to put in place, and explain, any processes that they feel they need to be sure they are submitting high-quality plans that can be delivered.

To provide confidence in their plan, a company's Board needs to provide us with a statement, in their own words, of why they consider 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.

The statement should explain how the Board's governance and assurance processes and strategic leadership in developing the plan, provide operational, financial and corporate resilience over the control period and long term.

13.7.2 Assessing assurance of business plans meeting statutory obligations

We need to have confidence that companies have planned effectively to deliver everything they are required to do.

Later this year we expect the EA and Natural England to set out their strategic environmental requirements for PR19, which will remind water companies of their statutory obligations, expectations and best practice for the sector.

We expect companies to meet their statutory obligations both now and in the future. Company Boards should provide assurance that their business plans will enable them to comply with their statutory obligations.

The UK and Welsh Government through their strategic policy statements and the EA and Natural England through its strategic environmental requirements also set out wider expectations on companies. We expect companies to take into account these expectations when developing their business plans and outcomes and implement them when they are in customers' interests and have customer support.

13.7.3 Assessing a company's record in producing high-quality data

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 demonstrate good assurance at all times. The initial assessment of business plans will focus on the quality of submissions associated with the business plan. The company monitoring framework focuses on companies' assurance of all the information it submits to us and shares with stakeholders.

Taken together, these assurance statements give us, investors and other stakeholders, information about companies' overall approaches to assurance.

When we published the 2016 company monitoring framework assessment, we said that companies would need to demonstrate good assurance practices if they wanted to achieve the highest category under the initial assessment of plans. Consistent with this, we intend to use the 2018 company monitoring framework assessment in our initial assessment of business plans.

When it comes to the assurance of business plans, we consider that an 'assurance in the round' approach is appropriate. A company that provides good assurance of all the information it provides, regardless of whether it relates directly to price review information, is demonstrating it takes the quality of the information it provides and its governance processes seriously all the time, providing greater trust and confidence.

So we propose taking the 2018 company monitoring framework assessment in the round into account, as part of the initial assessment of business plans, which includes assessments of a company's information assurance not directly related to PR19.

13.7.4 Assessing the quality of data submitted as part of PR19

We want to be confident that the data submitted to us is consistent, accurate and assured and in line with our information requirements.

We expect companies to complete a full set of data tables, 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;
- their assurance of this data;
- the steps they have taken to make their customers and stakeholders aware of the changes; and
- the steps they have 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 will need to explain clearly why data needs to be submitted later and how this reflects on the assurance of their plans. We are likely to take this into account in our assessment of the quality of assurance of the data provided in the business plan. Depending on the circumstances, it might also 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 (see section 13.8). They should provide specific assurance statements through this system. Alongside their tables, companies will be able to submit auditor reports or free-form assurance statements.

13.7.5 Summary of initial assessment tests

To assess our confidence in the assurance of a company's plan, we are including the following five tests in our proposals for the initial assessment of business plans.

Initial assessment tests on securing confidence and assurance

1. To what extent has the company's full Board provided comprehensive assurance to demonstrate all the elements add up to a business plan that is high quality, deliverable and 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 provide operational, financial and corporate resilience over the control period and long term?

3. To what extent has the company's full Board provided comprehensive assurance to demonstrate that the business plan will deliver and monitor delivery of its outcomes (which should meet relevant statutory requirements and licence obligations and take account of the UK and Welsh Government strategic policy statements)?

4. To what extent does the company have a good track record in producing high-quality data, taking into account the company's data submission, assurance

process and statement of high quality, and our assessment of the company against the 2018 company monitoring framework?

5. 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?

13.8 An improved submission process

Our PR19 proposals address some of the practical issues associated with a price review: 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 consider there is scope to improve auditing and validating of data in the business plan submission process. The importance of both these issues became increasingly evident in PR14 when we were managing the large volume of data and files we received throughout the price review.

To address this, we are proposing to integrate a secure data capture system into our database. The overall aim is to replace the current system of spreadsheet tables with an online portal for Ofwat data.

The new online data capture system will:

- make it easier for companies to complete and transfer data submissions;
- improve data validation;
- provide more control over changes than the previous Microsoft Excel-based templates; and
- make more use of automation, reducing reliance on manual inputs.

We are currently in the development stages of the data capture project. We plan to undertake formal testing of the system later this year. We will give companies more information about this in our final methodology document in December 2017.

13.9 Consultation questions

Q1. Are the business plan and data requirements clear and sufficiently specified?

Q1a. Are there any areas we need to look at again?

Q1b. Is there any data missing, or included but not required?

Q2. Do you agree that our approach to assessing assurance can provide us and stakeholders with confidence in the companies' business plans?

14 The initial assessment of business plans: securing high quality, ambition and innovation

14.1 Summary

In this chapter we set out what we aim to achieve with the initial assessment of business plans, and how we propose to approach the process and incentivise companies. We want companies to produce high-quality, ambitious and innovative business plans, pushing forward the performance of the sector as a whole and stretching the boundaries for delivery and efficiency.

Our approach to the initial assessment of business plans, including through the proposed test areas and key characteristics we are looking for, will help deliver against the four key themes of PR19: **customer service**, **affordable bills**, **long-term resilience** and **innovation**.

Key messages

We propose an approach which:

- tests company business plans in nine key test areas which incorporate and reflect the UK Government draft strategic priorities and Welsh Government policies and draft objectives for the water sector and will help us best deliver the PR19 themes;
- assesses company business plans against three key characteristics (high quality, ambition, innovation);
- categorises company business plans into four categories (significant scrutiny, slow track, fast track, exceptional); and
- incentivises companies with a range of financial, procedural and reputational incentive; and

We propose to make the initial assessment of business plans, and the associated categorisation of companies, a **“one-shot” process** for water companies; and to issue our categorisation decisions in January 2019.

There are further details on how the initial assessment of business plans will work in Appendix 14.

Table 14.1 Summary Box – PR19 proposals for the implementation of the initial assessment of business plans

Proposal topic		Our thinking and proposal
Overall approach to the initial assessment of business plans	Test areas	We propose to test company business plans in nine key 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.
	Business plan characteristics	We propose to assess against three key characteristics: • high quality; • ambition; and • Innovation.
	Categorising business plans	We propose to categorise companies into four categories: • exceptional; • fast track; • slow track; and • significant scrutiny.
	Incentives	We propose to incentivise companies through a range of incentives which can be: • financial; • procedural; and • reputational.
Assessing innovation capability		We want to assess that companies are able to innovate as demonstrated through their business plans.
[Content below is covered in Appendix 14]		
Test areas: questions and what we will look for **(covered in Appendix 14)**		Against each of the nine test areas, we set out key questions and what we will be looking for in terms of high quality, ambition and innovation.

Proposal topic	Our thinking and proposal
Scoring business plans into categories: requirements and expectations **(covered in Appendix 14)**	Our starting assumption will be that all plans require significant scrutiny until shown otherwise. It is up to companies to demonstrate, through their business plan, that they can move up in terms of their categorisation. Where company business plans score well against our tests, the plan will move up through our categories. A plan will stay in the significant scrutiny category if it falls well short of what is needed to score well against a broad range of tests Slow track status will be given to plans where material interventions are required in some areas to protect the interests of customers. In order to move out of slow track, the plan must be of high quality, requiring no material interventions from us. The threshold to progress to fast-track should be high. To move from fast-track to exceptional status, companies will need to demonstrate that they have a high-quality business plan with significant ambition and innovation for customers.
Schedule for initial assessment of business plans **(covered in Appendix 14)**	For PR19, we intend to make the initial assessment of business plans, and the associated categorisation of companies, a "one-shot" process for water companies. We intend to publish: • our categorisation decisions in January 2019; companies will have 'one shot' at this; • draft determinations for exceptional and fast-track companies in March/April 2019; and • draft determinations for slow-track and significant scrutiny companies in July 2019.

14.2 Introduction

The challenges facing the sector require companies to be ambitious and innovative, to push the frontier on what they provide for customers, the environment and wider society. This includes understanding and managing risks to service delivery effectively and efficiently. To facilitate this objective, companies will need to take ownership of and produce high-quality, ambitious and innovative plans for PR19.

The initial assessment of business plans is at the heart of this process and will incentivise companies to make a step change in quality, ambition and innovation. They will be encouraged to develop high-quality, truly ambitious and innovative plans that push sector performance and that allows them to share in the value created. 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.

The initial assessment of business plans is the successor to PR14's risk-based review. We have renamed the process to better reflect its relationship to the overall price review, and to reflect that it is different to the approach taken in PR14. The initial assessment of business plans is our process for assessing the quality, ambition and innovation of companies' business plans.

At PR14, the purpose of the risk-based review was to provide incentives for companies to take ownership of and produce high-quality business plans. It was a key part of the shift away from a prescriptive, regulator-led approach towards companies developing plans to deliver what their customers wanted, based on their engagement with customers.

We aim to build on the PR14 approach for PR19 and to see companies strengthen their customer engagement and understanding.

In this chapter, we set out our:

- objectives for the initial assessment of business plans;
- approach to the initial assessment of business plans along four key dimensions:
    - test areas;
    - business plan characteristics;
    - business plan categories; and
    - Incentives.

14.3 Objectives

We want **companies to produce high-quality, ambitious and innovative** business plans, pushing forward the performance of the sector as a whole and stretching the boundaries for delivery and efficiency.

The initial assessment of business plans is our process for assessing the quality, ambition and innovation of companies' business plans. The purpose of the initial assessment of business plans is to incentivise:

- all companies to produce well evidenced and efficient plans – by offering reputational and procedural benefits for companies whose plans do not require our material intervention to protect the interests of customers; and procedural, reputational and financial disincentives to discourage less ambitious companies from preparing low-quality plans; and

- the best companies to push the frontier for all companies – by offering procedural, reputational and financial rewards for companies with high-quality, ambitious and innovative plans.

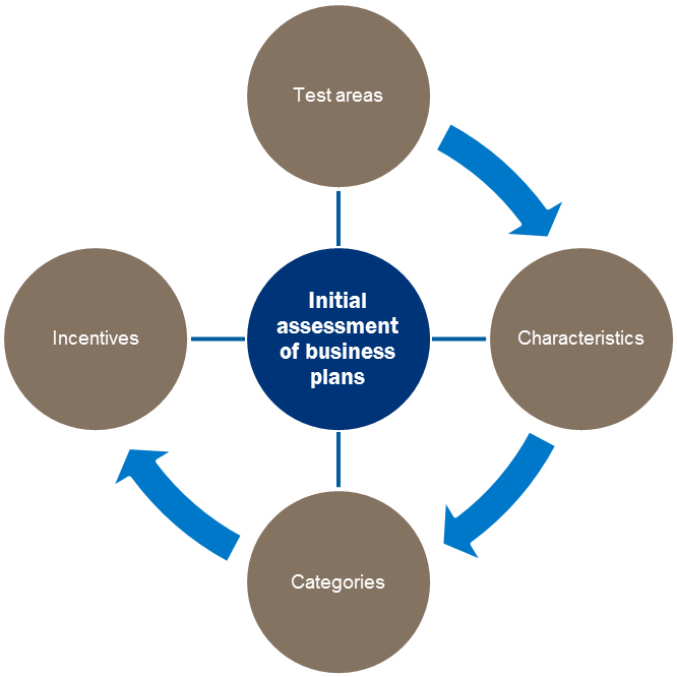
We will use this assessment to give all companies strong incentives to produce high-quality business plans that are right first time, and to demonstrate that their plans will benefit customers, the environment and wider society.

14.4 Our approach

There are four key dimensions to our initial assessment of business plans (see figure 14.1). These are:

- the **areas** we will test;
- the **characteristics** we are looking for;
- the **categories** we will assign; and
- the **incentivisation** we will apply through rewards and penalties.

Figure 14.1 Key dimensions to our initial assessment of business plans



The initial assessment of business plans will incorporate and reflect the UK Government draft strategic priorities and Welsh Government policies and draft objectives for the water sector. We consider the same approach should be used in

both England and Wales. This will allow us to make direct comparisons between companies. The strength of the incentives will be greater if we can use a common approach across England and Wales. We will carefully consider the degree of tailoring needed within the detailed tests to account for differences between the policy and legal frameworks in England and Wales.

14.4.1 Test areas

Setting out a framework of tests will give companies a clear indication of our assessment expectations and priorities. The framework also breaks down the assessment into manageable portions, allowing us to carry out the initial assessment of business plans effectively within the limited time available.

As noted above, the initial assessment of business plans will incorporate and reflect the UK Government draft strategic priorities and Welsh Government policies and draft objectives for the water sector. Our initial assessment will help ensure that company plans reflect these priorities. We want the initial assessment of business plans to help us best deliver the PR19 themes:

- great customer service that shows real innovation, reliability and responsiveness, to match the experience that customers get from the best companies in other sectors;
- affordable bills that offer value for money;
- long-term resilience – meaning resilience ‘in the round’, building on our resilience framework; and
- innovation and new ways of doing things.

The initial assessment will cover all areas of a company’s business plan, and we propose to 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.

Some of the test areas will directly relate to specific themes, such as past delivery addressing great customer service, while other tests (such as targeted controls, markets and innovation) will address aspects of a number of the themes.

Each test area will be assessed in terms of high quality, ambition and innovation (see below) against a number of questions. Appendix 14 provides further information on the proposed questions for these test areas, and the type of evidence we will be looking for.

We have not set out detailed criteria for these assessments. This is to ensure companies can take full ownership of their business plans, without taking a “tick box” approach to writing their business plans. We also reserve the right to consider wider factors if required.

14.4.2 Characteristics

We will look for companies to demonstrate how their business plans meet three overarching business plan characteristics:

- high quality;
- ambition; and
- innovation.

A **high-quality** plan will mean that a company’s proposals are not only efficient, resilient and affordable, but also include stretching performance commitments that really deliver for customers. It will mean we have high confidence that the business plan will be delivered. A high-quality business plan will also provide a focused and persuasive vision for the future with clear evidence appropriately used and with well set out and 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. For us, a high-quality business plan:

- is grounded in excellent customer engagement, with stretching outcomes and performance commitments that reflect what customers want;
- is cost-efficient while delivering stretching outcomes that include improving resilience;
- is resilient and addresses near-term through to long-term;
- is sustainable while meeting water and wastewater needs for current and future customers;

- shows that their approach to identifying, managing and mitigating risks considers the interests of customers and investors; in particular we expect companies to be clear about where they have made trade-offs and why they are appropriate;
- is affordable for all current and future customers, with appropriate assistance provided where needed;
- effectively and efficiently protects vulnerable customers;
- uses markets appropriately, including direct procurement for customers to drive efficiency and benefit customers;
- shows the company can innovate for the benefit of customers;
- gives a high level of assurance – including assurance from the company's Board that the business plan is of high quality, provided ownership of the overall strategy and direction of the plan in the long term, and will meet its current and future obligations;
- has high-quality data, including evidence of the assurance process including Board assurance and how it has addressed issues identified in previous company monitoring framework (CMF) assessments (to the extent they are relevant to the business plan);
- business plan table submission (including the allocation of costs between business units, PR14 reconciliation, assurance of the tables and any commentary on the tables) is consistent, accurate and assured; and
- takes account of performance in the 2015-20 period.

These factors will inform our assessment of company business plans in terms of high quality. For further detail on what we may be looking for against individual test areas, please see Appendix 14.

This approach will help ensure that companies are focused on the four PR19 themes and the UK Government draft strategic priorities and Welsh Government policies and draft objectives for the water sector.

An **ambitious** business plan pushes forward the efficiency and delivery frontier for the sector, setting a new standard for the future. We expect all companies to be ambitious and innovative in their business plans and aim to excel for their customers.

Ambition could be reflected in how a company challenges itself on costs, committing itself to significantly reducing cost and improving efficiency beyond the efficiency frontier for the sector. Similarly, a company that commits to a significant improvement in service for customers at efficient cost could also be considered ambitious. Another example may be where a company's plan could be ambitious if it demonstrated a clear understanding of the risks facing service delivery and had an exceptional approach for managing and mitigating those risks and so improving resilience for customers in a cost-efficient way.

To achieve exceptional status (see section 11.4.3 below), a company will need to demonstrate a level of ambition and innovation that pushes the boundaries of what the sector currently offers. A company will need to demonstrate that it is stretching itself beyond the industry norms in areas that are important to customers. A company will need to demonstrate how the plan is achievable, both in the light of past performance and the changes it is making for PR19. We will not allocate any plan to this category unless it is sufficiently ambitious and innovative at PR19.

We do not want to restrict how companies develop a high-quality business plan which is also ambitious and innovative. We are not going to be overly prescriptive about how ambitious a plan would need to be or what form that ambition would take for a plan to be classed as exceptional. We will test ambition on a relative basis across companies.

Meaningful **innovation** leads to new benefits for customers, companies and the environment, and to better management of risks and opportunities. For a company to have an ambitious plan, 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.

Innovation will be seen in the culture, the processes and the people in the company. It will not be limited to the use of new technology or a new service. It could involve new ways of encouraging customer participation in service provision or new and more collaborative ways of working with the supply chain and wider stakeholders, further development of markets and catchment management approaches. High levels of innovation would lead to a step-change in the ways in which a company delivers its services. This would result in benefits for customers, companies and the environment, and better management of risks and opportunities.

To be classed as exceptional, in addition to being ambitious, a business plan must therefore show how innovative approaches will be used to make costs more efficient and/or to give an exceptional level of service.

We have not explicitly incentivised innovation at previous price reviews. UK water companies commonly spend around 0.5% of turnover on innovation, compared to more than 5% in the unregulated engineering and technology sectors, suggesting further scope for development[83]. Water companies have, though, demonstrated some good practice in terms of innovation. For example, we have seen catchment

,[83] Statistic quoted from Utility Week's Innovation in UK utilities: a state of the Nation report

management used to improve water quality in a practical, affordable and sustainable way. There is a long way to go, however, in terms of innovation for the sector as a whole.

We created a framework that supports innovation through the totex and ODI mechanisms at PR14. The totex framework enables companies to choose the best combination of capital and operational solutions when innovating. ODIs reward companies for outperformance and penalise companies for poor performance. Companies can tailor rewards to risks.

We consider that companies should be paid by results for innovation through the cost outperformance incentives, and the enhanced rewards and penalties from frontier-shifting performance on common performance commitments (as discussed in Chapter 4). These enhanced rewards compensate companies for the risks associated with trying new approaches with an added incentive if innovation is successful. Companies will also receive a financial reward if they are assessed as 'exceptional' under the initial assessment of business plans if they have a high-quality, ambitious and innovative business plan.

In addition, as part of our initial assessment of business plans, we propose assessing companies' capacity and readiness to innovate. In terms of companies' overall innovation strategy, we would expect this to be built into various elements of the plan in a similar way to resilience strategies. 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 the companies have developed and delivered innovations in the past, where they demonstrate that its proposals take account of and build on this experience (both where innovations have been successful and less successful). We propose to use the following question for our initial assessment test on innovation:

Initial assessment test on innovation

How well does the company's business plan demonstrate that it is able, through its systems, processes and people, to deliver results for customers and the environment from innovation?

In addition, as set out in the Appendix 14, we propose specific elements we may be looking for in terms of ambitious and innovative business plans against individual test areas.

14.4.3 Categories

Company performance against the characteristics will drive how the business plans are categorised. At PR19, we will use four categories, which will reflect the quality, ambition and innovation of the plan. The 4 categories are as follows:

Exceptional status will be awarded to plans that are high quality with significant ambition and innovation for customers.

Fast track status will be given to plans that are high quality and do not require material intervention to protect customer interests, but which are not ambitious and innovative enough to attain exceptional status.

Slow track status will be given to plans where material interventions are required in some areas to protect the interests of customers.

Significant scrutiny status will be given to plans which fall well short of the required quality and where material interventions are required to protect the interest of customers.

We consider that using four categories will give the best balance between incentivising all companies to improve their plans and running an effective price review process across all companies. We assessed using different numbers of categories, from two categories to five categories. Appendix 14 sets out our more detailed reasoning for proposing these categories.

14.4.4 Incentives through rewards and penalties

We want companies to develop high-quality, ambitious and innovative plans that push sector performance and that allows customers, the companies and their investors to share in the value created. Through our initial business plan assessment process we want to give companies clear **financial**, **procedural** and **reputational** incentives to produce high-quality business plans for their customers.

Companies whose business plans we categorise as **exceptional** will receive:

- financial rewards;
- procedural rewards from receiving an early draft determination in March or April 2019; and
- reputational rewards from being – and being seen as – exceptional compared to their peers and from the communication opportunities this will offer.

We will not use this category if plans are not sufficiently high quality, ambitious and innovative. Only companies with exceptional plans will receive additional financial rewards, in recognition of the quality, ambition and innovation in their plans. This financial reward is to recognise and encourage development of plans that will ultimately benefit all customers in the sector by pushing boundaries for efficiency and delivery. As set out in Chapter 10, we propose a financial reward equivalent to a +0.2% RoRE reward for exceptional plans.

Those companies whose plans we categorise as **fast track** will be recognised by Ofwat and will receive early draft determinations in March/April 2019, reflecting that material intervention is not required to protect customer interests and as a procedural reward to the company. These companies will not require the same level of regulatory engagement as companies in other categories throughout the rest of the PR19 assessment period. There is also a reputational incentive in achieving this status.

Companies whose plans we categorise as **slow track** require a level of intervention and may be required resubmit some of their business plan or to provide additional evidence. These plans will receive draft determinations in July 2019. There are procedural and reputational disincentives associated with this status.

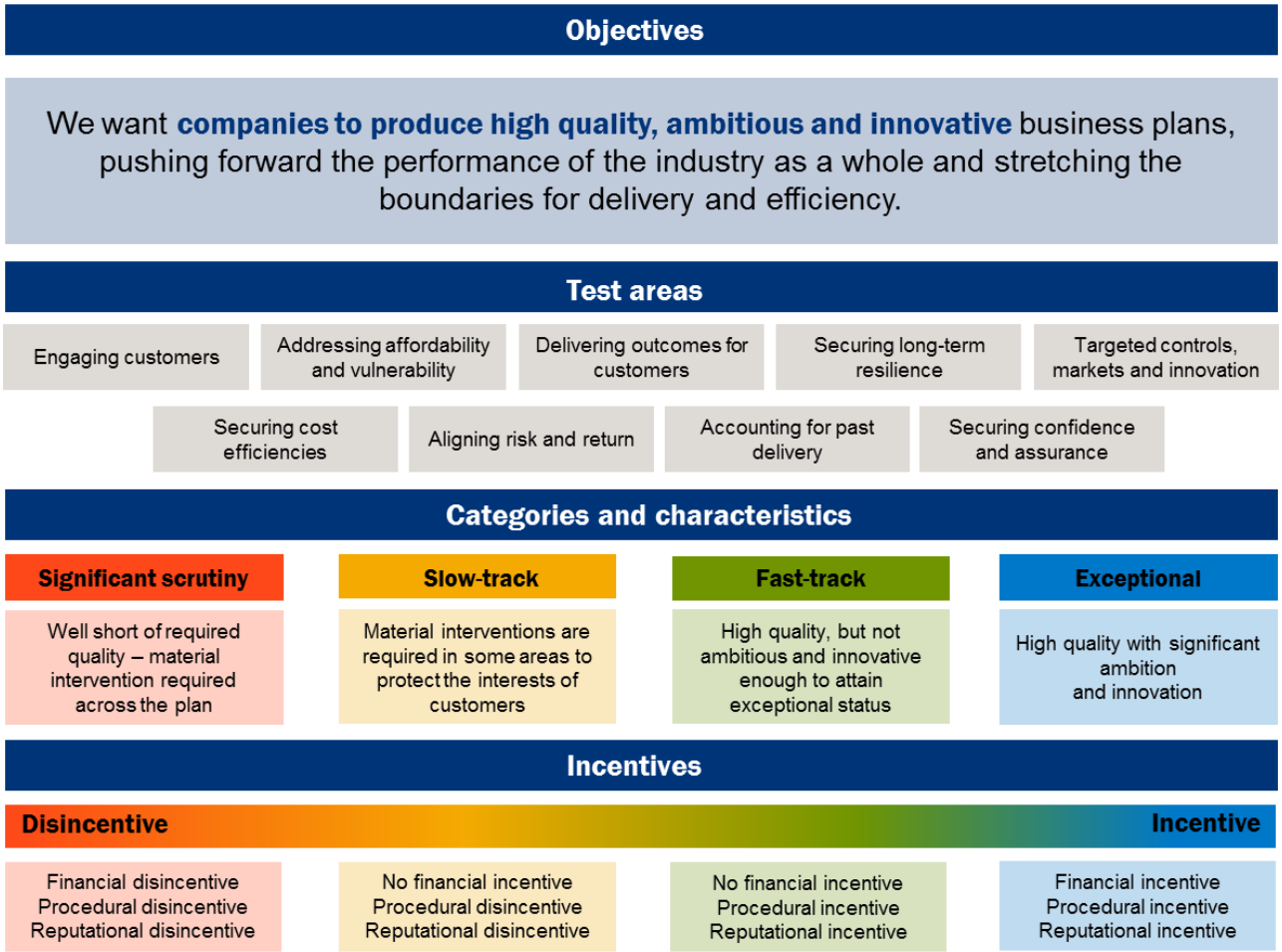
Significant scrutiny will be given to business plans which fall well short of the required quality and where major intervention is required to protect the interest of customers. This may include companies being expected to resubmit business plans to address the material concerns we have identified. Companies whose plans fall into this category will require increased ongoing regulatory scrutiny and assurance. These plans will receive reputational and procedural disincentives, reduced cost sharing, and potentially capped ODI rewards. 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 terms of reduced cost sharing, as set out in Appendix 13 on aligning Risk & Return, we propose a 75:25 cost sharing rate; that is, these companies will share only 25% cost outperformance and bear 75% of cost underperformance. We consider this will incentivise investors to hold companies to account and so strongly incentivise companies to work hard to deliver high-quality business plans. It will also protect customers of companies who have supplied poor quality or incomplete information that does not give us confidence in setting the price control.

Table 14.2 Summary of the main incentives we propose for the initial assessment of business plans

Category	Reputational incentives	Procedural incentives	Financial incentives	
		Draft determination	Financial reward	Cost sharing rates
Exceptional	Published performance relative to peers + communication opportunities	Early (March/ April 2019)	Allowance calculated as +0.2% return on regulatory equity (RoRE)	Standard
Fast track	Published performance relative to peers	Early (March/ April 2019)	None	Standard
Slow track	Published performance relative to peers	July 2019	None	Standard
Significant scrutiny	Published performance relative to peers	July 2019	None. Potential cap on outcome delivery incentive (ODI) rewards	Reduced

Figure 14.2 Summary of our approach to the initial assessment of business plans



14.5 Consultation questions

Q1. Do you agree with our proposed approach to the initial assessment of business plans?

- Q1a: In terms of the nine test areas?
- Q1b: In terms of the business plan characteristics we want to see? (high quality, ambition and innovation)
- Q1c: In terms of the business plan categories we propose to assign companies to? (significant scrutiny, slow track, fast track, exceptional)
- Q1d: In terms of the financial, procedural and reputational incentives we propose to put in place?

Q2. Do you agree with our proposed approach to assessing a company's ability to deliver results for customers and the environment from innovation?

The following consultation questions relate to Appendix 14 on the initial assessment of business plans:

Q1. Do you agree with the key questions under each of the test areas?

Q2. Do you agree with what we will look for in terms of high quality, ambition and innovation under each of the test areas?

Q3. Do you agree with our high-level approach for scoring business plans into the four categories (significant scrutiny, slow track, fast track, exceptional)?

Q4. Do you agree with our proposed schedule for the initial assessment of business plans?

List of consultation questions

Overview

n/a

Customer engagement

n/a

Affordability and vulnerability

Q1. Do you agree with our proposal to use the five principles of customer engagement; customer support; effectiveness; efficiency and accessibility to assess how a company is addressing affordability in their business plan?
Q2. Do you agree with our proposal to use information and measures, including possible common measures, to assess how a company performs against the five principles in addressing affordability in their business plan?
Q3. Do you agree with our proposed option for requiring companies to propose bespoke performance commitments for addressing vulnerability in their business plan?
Q4. Do you agree with our proposed option for using measures in our assessment of companies' approaches to addressing vulnerability in their business plan?

Outcomes

Q1. Do you agree with our proposals for common and bespoke performance commitments?
Q2. Do you agree with our proposals on setting performance commitment levels?
Q3. Do you agree with our proposals for strengthening outcome delivery incentives?
Q4. Do you agree with our proposed Customer Measure of Experience (C-MeX)?
Q5. Do you agree with our proposed Developer Measure of Experience (D-MeX)?

Resilience

Q1. Do you agree with our resilience planning principles?
Q2. Do you agree with our approach to assessing resilience in the initial assessment of plans?

Wholesale controls

Q1. Do you agree with our proposals for the form of control for network plus water and network plus wastewater set out in the 'Wholesale controls' chapter and appendix 7, 'Wholesale revenue incentives'?
Q2. Do you agree with our proposals for the form of control for water resources as set out in the 'Wholesale controls' chapter and appendix 5, 'Water resources control'?
Q3. Do you agree with our proposals for access pricing for English water companies set out in the 'Wholesale controls' chapter and appendix 5, 'Water resources control'?
Q4. Do you agree with the proposals for company bid assessment frameworks set out in appendix 9, 'Company bid assessment frameworks: the principles'?
Q5. Do you agree with our proposals for the form of control for bioresources as set out in the 'Wholesale controls' chapter and appendix 6, 'Bioresources control'?

Direct procurement

Q1. Do you agree with our draft guidance that appointees should focus on projects likely to deliver the greatest customer value for DPC at PR19? (We ask that appointees provide a list and description of which projects, based on our guidance, they consider would be in scope at PR19.)
Q2. What are your views on the type of tender model (ie an early or late tender model) appointees should use? Do you have any views on whether or not we need to specify a tender model companies should use?
Q3. What are your views on the overall commercial and regulatory model, including our draft procurement and contract principles set out in appendix 10, 'Direct procurement for customers' ?

Retail controls

Q1. Do you agree with using a weighted average revenue control, where appropriate taking account of different costs by customer type for the residential retail price controls for English and Welsh water companies?
Q2. Do you agree with using an average revenue control for business retail price controls for Welsh companies not subject to competition?
Q3. Do you support price controls for business retail activities for English water companies that have not exited the business retail market?
Q4. Do you support price controls for water service customers of Welsh companies using more than 50 megalitres a year?
Q5. Do you support a three year price control for residential retail activities and business retail activities?

Cost assessment

Q1. Do you agree with our overall approach to cost assessment?
Q2. Do you agree with our proposed cost sharing incentive? We welcome thoughts on the calibration of the incentive.
Q3. Do you agree with our proposals to funding unconfirmed environmental requirements? Which of the two options do you consider is more appropriate, and why?
Q4. Do you agree with our approach to cost adjustment and our proposed approach to make the process more symmetric?
Q5.Do you agree with our proposed approach for assessing retail (residential and business) costs at PR19?
Q6. Do you agree with our preferred approach not to index the retail controls to a measure of general inflation, and, if appropriate, deal with input price pressure as part of our totex allowance?
Q7. Do you agree with our proposals for the transition programme?

Risk and return

Q1. Do you agree with our proposed approach to setting the cost of equity, based on the best estimate of expected returns in the 2020-25 period?
Q2. Do you agree with our approach to indexing the cost of new debt?
Q3. Do you agree with our proposal to index price controls to CPIH (subject to its redesignation as a national statistic before we publish our final methodology)?
Q4. Do you agree with our approach to setting tax allowances at PR19, including the proposed true up mechanism?
Q4a. Should the true up mechanism be limited to change in corporate tax rates and capital tax allowances or should we extend that true-up mechanism so we can also make adjustments for other changes in tax legislation or accounting regulations which have a material impact on the amount of tax companies are liable to pay?
Q5. Do you agree with the set of scenarios for RoRE analysis we have prescribed, the guidance we propose and to use our financial model to provide the suite of prescribed scenarios?

Financeability

Q1. Do you agree with our overall approach to assessing financeability?
Q2. Do you agree the calculation of the metrics (as set out in Section 11.5 in the Financeability chapter) that we are proposing to use in our assessment??

2015-20 performance

Q1. Do you agree with our proposed approach for dealing with PR14 reconciliations and SIM? If not, please explain your alternative approach and why this would be in customers' interests.
Q2. Do you agree with our proposed approach for reflecting how well the company is delivering for customers over the 2015-20 period in the initial assessment of business plans? If not, please explain your alternative approach and why this would be in customers' interests.

Securing confidence and assurance

Q1. Are the business plan and data requirements clear and sufficiently specified?
Q1a. Are there any areas we need to look at again?
Q1b. Is there any data missing, or included but not required?
Q2. Do you agree that our approach to assessing assurance can provide us and stakeholders with confidence in the companies' business plans?

The initial assessment of business plans: securing high quality, ambition and innovation

Q1. Do you agree with our proposed approach to the initial assessment of business plans?

- Q1a: In terms of the nine test areas?
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Q4. Do you agree with our proposed schedule for the initial assessment of business plans?

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 projets 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
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
WRMPs	water resources management plans

Acronym	Text
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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