December 2022

Creating tomorrow, together:
Our final methodology for PR24

Appendix 14
Impact assessments

Ofwat

About this document

This appendix presents a set of tables summarising the expected impacts of our main PR24 methodology proposals as set out in the main final methodology document. Full details of the expected impacts for specific policy proposals can be found in the corresponding appendices.

Contents

1. Introduction

In developing our PR24 final methodology, as set out in the main document, we have assessed the expected impacts of our decisions. Details can be found in the relevant appendices, but for key decisions, we have summarised these in a set of tables in this appendix.

We have focused these summary impact assessment tables on key components of the PR24 final methodology where there is a significant change from PR19, and therefore cover the following areas:

- Site-specific developer services
- Bioresources
- Direct procurement for customers
- Reflecting an understanding of customers and communities
- Collaborative approach in Wales
- Performance commitments
- Outcome delivery incentives
- Incentivising efficient net zero investment
- Full indexation of the RCV by CPIH
- RCV run-off
- Notional gearing
- Long-term delivery strategies
- Quality and ambition assessment

In each case we summarise the main options considered including, where possible the PR19 arrangements, our proposals for PR24, as well as other key options. For each option, we summarise the contribution to delivering against the four inter-related ambitions for PR24, as set out in Chapter 2 of our PR24 final methodology, i.e.

- Increasing focus on the long term
- Delivering greater environmental and social value
- Reflecting a clearer understanding of customers and communities
- Driving improvements through efficiency and innovation.

In addition, we consider the potential impact on customer bills, the impact on companies, including returns and the potential regulatory burden, the potential impact on other stakeholders and the practicality of implementation.

Each option is scored with a number of ticks (✓) from 1-3, with 1 reflecting a low impact and 3 representing a large positive impact. Where there is expected to be a negligible impact, a dash is used, and n/a is used where the criteria is not considered to be applicable.

2. Summary impact assessment tables

2.1 Site-specific developer services

The table below summarises the impact assessment for site-specific developer services. Site-specific developer services work includes new connections, water mains and sewer requisitions, and diversions under section 185 of the Water Industry Act 1991 (section 185 diversions). Details of the options considered below can be found in Appendix 3 - Developer Services.

For English companies, Option 4 is our preferred option for water and wastewater site-specific developer services at PR24.[1]

For Welsh companies, Option 2 is our preferred option. We will remove wastewater site-specific developer services from the wastewater network plus price control at PR24 as nearly all wastewater site-specific developer services are delivered by developers. But water site-specific developer services will remain in the water network plus price control because competition is less widespread, and we do not have powers to establish charging rules to protect developer services customers which means Option 4 is not feasible.

	Option 1: Improved status quo, consider making improvements to PR19 approach where possible	Option 2: Remove competitive market segments from price controls (Our preferred option – Welsh Companies)	Option 3: Separate developer services price control	Option 4: Remove all market segments from the price control, with backstop regulation for market segments with limited competition. (Our preferred option – English Companies)
Increasing focus on the long term	The developer services revenue adjustment (DSRA) mechanism provides companies with certainty that they will be able to recover efficient costs if growth is more	Removing competitive market segments from the price control will put a greater importance on setting cost reflective charges. Companies will need to engage	A separate developer services price control may offer a clearer route towards lighter touch developer services regulation than under Option 1.	Removing all market segments from the price control will put a greater importance on setting cost reflective charges. Companies will need to engage more with

[1] Except for water section 185 diversions, which will remain in the price control as it is not currently contested.

	than expected. This should allow companies to focus on the long term, instead of short-term issues caused by unexpected growth. The revenue forecasting incentive (RFI) encourages companies to accurately forecast developer services demand when setting charges each year. But no clear route shown to lighter touch regulation at future price reviews. ✓	more with developers to better understand the volume and mix of work that will be required in the year(s) ahead to ensure they can recover efficient costs. A pathway to lighter touch regulation is shown, which should incentivise water companies to encourage competition in the market segments that remain in the price control. ✓✓	But there may be less cost recovery certainty than Option 1 given the link to the network plus price controls will be removed. ✓	developers to better understand the volume and mix of work that will be required in the year(s) ahead to ensure they can recover efficient costs. The prospect of removing back stop regulation at future price reviews for market segments that currently have limited competition should incentivise water companies to encourage competition in these market segments. ✓✓
Delivering greater environmental and social value	We are introducing an incentive at PR24 to encourage water companies to offer discounts to developers that build water efficient developments. ✓✓	We are introducing an incentive at PR24 to encourage water companies to offer discounts to developers that build water efficient developments. A more competitive market may also lead to a greater focus on more environmental / social value if that is what developers demand. For example, grey water reuse. ✓✓✓	We are introducing an incentive at PR24 to encourage water companies to offer discounts to developers that build water efficient developments. ✓✓	We are introducing an incentive at PR24 to encourage water companies to offer discounts to developers that build water efficient developments. A more competitive market may also lead to a greater focus on more environmental / social value if that is what developers demand. For example, grey water reuse. ✓✓✓
Reflecting a clearer understanding of customers and communities	Developer services measure of experience (D-MeX), introduced at PR19, would continue to incentivise water companies to provide excellent customer experience to	Removing competitive market segments from the price control would allow for benefits of competition such as greater choice and better service quality.	Developer services measure of experience (D-MeX), introduced at PR19, would continue to incentivise water companies to provide excellent customer experience to	Removing all market segments from the price control would allow for benefits of competition such as greater choice and better service quality.

	developers, self-lay provides and new appointees. ✓✓	Developer services measure of experience (D-MeX), introduced at PR19, would also continue to incentivise water companies to provide excellent customer experience to developers, self-lay provides and new appointees. ✓✓✓	developers, self-lay provides and new appointees. ✓✓	Developer services measure of experience (D-MeX), introduced at PR19, would also continue to incentivise water companies to provide excellent customer experience to developers, self-lay provides and new appointees. ✓✓✓
Driving improvements through efficiency and innovation	Developer services costs are excluded from cost sharing to make sure companies have an incentive to deliver cost efficiencies like self-lay providers and new appointees. Inclusion in the network plus price control reduces market share risk water companies are exposed to. This reduces their incentive to compete with self-lay providers and new appointees, reducing the benefits of competition. At the same time, inclusion in the control puts less emphasis on the importance of setting cost reflective charges. This risks companies setting developer charges too low. This may prevent third parties from entering the market and reduce the benefits of competition (eg innovation and efficiency.) ✓	Removing competitive market segments from the price control would allow for benefits of competition such as greater choice, better service quality, cost efficiency, and innovation. This option allows us to benchmark costs between companies and apply an ex-ante cost efficiency challenge to market segments with limited competition. But this is likely to be challenging. ✓✓	This option allows us to benchmark costs between companies and apply an ex-ante cost efficiency challenge. But this is likely to be challenging. ✓✓	Removing all market segments from the price control would allow for benefits of competition such as greater choice, better service quality, cost efficiency, and innovation. Backstop regulation should also lead to some efficiency and innovation through the developer services measure of experience incentive. Leaving open the possibility of removing backstop regulation at future price reviews should also encourage the incumbents to facilitate competition. But it may lead to inefficiencies if price limits applied through our new connection charging rules are set too high. ✓✓✓

Impact on customer (developer) bills	The impact on developer customer bills is unclear. Inclusion in the price control risks distorting the market in two opposing ways, ie either a) incentivising incumbent water companies not to compete with self-lay providers and new appointees. This could lead to greater market shares for these companies, but higher prices faced by developers and other developer services customers Or b) the risk of cost cross-subsidisation, leading charges being set too low. This may reduce the ability of self lay providers and new appointees from competing with incumbents, reducing the benefits of competition (eg more choice; better service quality). ✓	Removal of competitive market segments from the price control would allow market prices to accurately reflect all information available to all interested parties, which increases transparency for developer services stakeholders. Increased efficiency and innovation resulting from competition within these market segments, may lead to lower prices that developers and other developer services customers would benefit from. But there may be short-term price increases if incumbent water companies are not currently setting cost reflective charges. ✓✓	Unclear as it depends on how the price control is designed. But any price limits applied through the price control would need to be sufficiently stretching to drive efficiencies and lower customer bills, whilst ensuring self-lay providers and new appointees can compete effectively with incumbent companies. A new price control for developer services may create substantial uncertainty due to the complexity of implementation and the number of unknowns. ✓	Backstop regulation for market segments with limited competition alongside deregulation of competitive market segments, would allow market prices to accurately reflect all information available to all interested parties, which increases transparency for developer services stakeholders. Increased efficiency and innovation resulting from competition may lead to lower prices that developers and other new connection customers would benefit from. But there may be short-term price increases if incumbent water companies are not currently setting cost reflective charges. ✓✓✓
Impact on companies	The developer services revenue adjustment (DSRA) mechanism protects companies from volume and market share risk. But companies must manage unit cost risk and work mix risk themselves. ✓✓	For market segments that are excluded from the price control, incumbent companies will be able to recover efficient costs if they set cost reflective charges. Cost recovery risk associated with market segments that remain in the network plus control would depend on the regulatory approach.	Unclear as it depends on how the price control is designed, which we have not explored because of the additional regulatory burden this would create. ✓	Incumbent water companies will be able to recover efficient costs if they set cost reflective charges. For the market segments that are subject to backstop regulation, we will make sure that water companies are able to set cost reflective charges. ✓✓✓

		✓✓		
Impact on other stakeholders	We must ensure our approach to regulating developer services supports the UK government's ambitions to sustainably increase housing supply, and supports economic development in Wales.	We must ensure our approach to regulating developer services supports the UK government's ambitions to sustainably increase housing supply, and to supports economic development in Wales.	We must ensure our approach to regulating developer services supports the UK government's ambitions to sustainably increase housing supply, and supports economic development in Wales.	We must ensure our approach to regulating developer services supports the UK government's ambitions to sustainably increase housing supply, and supports economic development in Wales.
Practicality of implementation	This option would maintain a complex system of regulation, that could distort the market. Cost assessment and designing reconciliation mechanism(s) are particularly challenging. ✓✓	Cost assessment for market segments that remain in the price review would be challenging and complex to carry out. The need for revenue reconciliation mechanisms would also need to be considered. We would need to progress with two regulatory approaches, which would inevitably increase resources required to implement. ✓	A separate developer services price control would be challenging to implement. There would be greater emphasis on accurate developer services cost assessment because the option to assess developer services costs with base costs would not be available. We would need to work out how to deal with cost over or under recovery as this cannot be offset by water customer bills. ✓	Removing all market segments from the price control would substantially reduce regulatory complexity and burden. The need for challenging cost assessment and reconciliation mechanisms is removed. But there may be a need for closer monitoring of the developer services market and new connection charges in the short term, increasing regulatory burden. ✓✓

2.2 Bioresources

With the right conditions, bioresources activities could help to create greater economic and environmental value. A well-functioning bioresources market could help achieve this. The scale of potential benefits of the bioresources market can be demonstrated through the estimated benefits of the proposals we made at PR19. In our 2017 impact assessment we estimated that the potential benefit of these changes would be between £400m and £1,400m over 30 years.[2] These estimates related just to the benefits in terms of operating costs and so do not include the benefits from more efficient capital expenditure.

We published our 'Review of the Market' in May 2021.[3] We found that there are barriers preventing the bioresources market from reaching its full potential and achieving the benefits we envisaged at PR19. We identified the following issues with our PR19 approach to assessing bioresources costs.

- Companies' costs and revenues were determined through a regulatory process which is likely to be less customer-oriented and less efficient than a market-based one – a further consequence is that it could distort competition between sewerage companies and the wider waste sector.
- Enhancement and base costs are assessed through two different processes which could create potential distortions.
- The way the 'building-blocks' approach was implemented could create an 'in-house bias' for new investment and so inhibit the market. This is because undertaking investment in-house triggers a relatively large increase in RCV whereas a long-term contract is likely to be classed as base costs.

Details of the packages of options for funding companies' bioresources activities that are considered below can be found in Appendix 4 – Bioresources control.

We have decided to take a transitional approach. This means implementing the 'partially reformed option' at PR24 with the intention of implementing the 'fully reformed option' at PR29. This will give the sector time to develop better data and to adjust to the new proposals. We will take steps to ensure we can implement our 'fully reformed approach' at PR29. We will continue to work with the sector to ensure appropriate data is available.

[2] Net present value over 30 years in 2015-16 prices, rounded. Source: 'Delivering Water 2020: Our methodology for the 2019 price review Appendix 14: Approach to impact assessment', 13 December 2017. Page 5.
[3] Ofwat, 'Review of the bioresources market - consultation', May 2021.

For the avoidance of doubt, at PR24 investment will not receive the same regulatory protection as pre-2020 investment. If we implement the 'fully reformed approach' as planned at PR29 then this would expose investment from 2020 onwards to an ex-post efficiency challenge.

As shown below, the 'partially reformed' approach would not, on its own, best achieve many of our objectives as well as the 'fully reformed approach'. However, it is not practical to implement that at this time. Nevertheless, part of the additional benefits from the 'fully reformed approach' can still be achieved over the 2025 to 2030 period, even if implementation is delayed until PR29. This is because if we implement the 'fully reformed approach' as planned at PR29 then this will expose investment made from 2020 onwards to an ex-post efficiency challenge.

<table>
<tr><th></th><th>Option 1: Retain the PR19 approach</th><th>Option 2: Partially reformed market-based approach</th><th>Option 3: Fully reformed market-based approach</th></tr>
<tr><td>Increasing focus on the long term</td><td>We would expect companies to focus on the long-term under this option. This is because other aspects of our approach, such as requiring companies to set their five-year business plan in the context of a 25-year long-term delivery strategy, would still apply.

✓✓</td><td colspan="2">Compared to option 1, a separate efficiency challenge for bioresources, potentially using forecast costs in our cost assessment and delivering a sludge strategy together with greater incentives to deliver a better outcome over time could lead to a greater focus on meeting long run efficiency goals.

✓✓✓</td></tr>
<tr><td>Delivering greater environmental and social value</td><td>Bioresources can stimulate a circular economy because, for example, it can be used to create renewable energy and the spreading of sludge to land sequesters carbon and acts as a fertiliser used for farming. Bioresources can therefore play a role in helping to</td><td>Compared to option 1, a more market-based approach can improve the productive, allocative and dynamic efficiency of companies' bioresources activities.

A more market-based approach can create environmental value. Examples</td><td>Compared to option 2, a fully reformed approach would provide even more of the benefits of a market-based approach as set out in option 2 as it further promotes market activity.

✓✓✓</td></tr>
</table>

	meet the government's 2050 net zero target. In this option we would take steps to promote the delivery of greater environment and social value as part of our methodology. For example, we are introducing a common performance commitment to reduce carbon emissions. And we will provide appropriate funding to companies to deliver the required WINEP/NEP drivers. ✓	are as follows. A company can send sludge to be treated by another company, which may be able to generate renewable energy from it more effectively. A company could allow sludge to be treated by another company's treatment centre if this is nearer. This would reduce emissions from transport. ✓✓	
Reflecting a clearer understanding of customers and communities	We would still expect companies to have a clear understanding of customers and communities in option 1. For example, water companies would have to work with local farmers to dispose of their sludge effectively. ✓✓	A market-based approach can improve the efficiency of sewerage companies. Customer interests are likely to be best protected by promoting the role of markets in relation to bioresources activities. Importantly, being open to a wider set of options allows different approaches to be considered - such as sludge being treated by a different company which might be better placed to manage any impact on the community. A partially reformed market-based approach can further help to achieve this by promoting market activity. ✓✓✓	Compared to option 2, a fully reformed market-based approach would provide even more of the benefits as set out under option 2 as it further promotes market activity. ✓✓✓

Driving improvements through efficiency and innovation	The PR19 approach drives improvements in efficiency and innovation. However, we identified issues with this approach in our review of the bioresources market.[4] ✓	This option would address some of the issues identified in our review of the bioresources market. It would therefore go some way to promoting the use of markets. A separate efficiency challenge for bioresources activities would allow a more targeted assessment of costs. Bringing more costs into our econometric cost benchmarking models would reduce potential distortions created by taking different approaches for different categories of cost and come closer to a market process where costs are reflected in the service's price. We will also consider including forecast costs in our models. These could allow us to set a more appropriate level of funding. An average revenue control is more akin to a gate price. This could help to reveal relative levels of costs between companies and so facilitate market activity. ✓✓	This option would address the issues identified in our review of the bioresources market. It would therefore promote the use of markets even more than option 2. This builds on the benefits of option 2 as follows. Including a wider set of costs into our econometric cost benchmarking models (such as financing costs and more enhancement costs) would reduce potential distortions created by taking different approaches for different categories of cost and come even closer to a market process where costs are reflected in the service's price. Moving away from the PR19 building blocks approach and providing a similar level of regulatory protection for different categories of cost, reduces any 'in-house bias' for new investment. ✓✓✓

[4] Ofwat, 'Review of the bioresources market- consultation', May 2021

<table>
<tr><td>Impact on Customer Bills</td><td>Annual costs to customers for a typical household customer from bioresources ranges from £13 to over £32[5].

In this option, we would still be able to challenge companies' costs effectively to benefit customers. However, as discussed above, we would not drive efficiency and innovation as much as other options. This would limit the benefits that can be passed on to customers.

✓✓</td><td colspan="2">Customers' interests would be best protected by promoting the role of markets in relation to bioresources activities. Much of the improvements in driving improvements through efficiency and innovation as described above would be ultimately passed through to customers through lower bills.

✓✓✓</td></tr>
<tr><td>Impact on Companies</td><td>There is no direct additional cost to companies. (Although the absence of options 2 or 3, may result in forgone market opportunities.)

✓✓</td><td>Companies can benefit from market opportunities as companies can keep the benefits of cost outperformance within a regulatory period.

Backcasting of companies' costs to facilitate a separate efficiency challenge creates some administrative burden and data issues, but the sector has already taken steps to address this.

Volume risk would increase.

There would be no risk of asset stranding. There would be no significant impact on cost risk or the cost of capital. Our example modelling presented in</td><td>Companies can benefit from market opportunities as companies can keep the benefits of cost outperformance within a regulatory period.

As option 2, although there would be an added administrative cost in the short-term to companies to implement this approach.

Our view of the potential impact of this scenario was discussed in more detail in our draft methodology.[7]

The example modelling presented in our September supplement suggests that, over the 2025 to 2030 period at least, it could lead to a different set of companies being found to be relatively efficient or</td></tr>
</table>

[5] Figures are real terms (17/18 FYA CPIH) based on our PR19 determinations.
[7] Ofwat, 'Appendix 4 - Bioresources control ' July 2022. In particular, sections 3.3.10 and 3.3.11.

		September provides evidence to support this.[6] ✓✓	inefficient. That is, potential winners and losers. ✓✓
Impact on Other Stakeholders	There would be no additional impact on other stakeholders; neither positive, nor negative. ✓	There would be potential benefits to new entrants and the supply chain by promoting the role of markets in relation to bioresources activities. ✓✓	
Practicality of Implementation	It would be easy to implement and requires no additional action to be taken. ✓✓✓	Similar to option 1. The changes involved in this approach are practical to implement. There may be a benefit in assessing growth enhancement costs within our econometric cost benchmarking models as this avoids the complexity in assessing these costs separately. ✓✓✓	A key change would be using depreciation data instead of capex data. Depreciation data has the benefit of being smoother. But there are several complex implementation issues still to consider. We need to improve the data and models to implement this approach which will take time. Implementing our proposed approach to providing a different level of regulatory protection for pre-2020 RCV adds complexity. ✓

[6] Ofwat, 'Bioresources control: supplementary document', September 2022.

2.3 Direct procurement for customers

We have considered three options for our direct procurement for customers (DPC) policy at PR24:

- **Option 1 – retain the PR19 approach**, a voluntary approach to using DPC for separable projects above a size threshold calculated by uplifting the PR19 threshold of £100m whole life totex for inflation.
- **Option 2 – DPC by default above £100m,** for discrete projects above a size threshold, calculated by uplifting the PR19 threshold of £100m whole life totex for inflation.
- **Option 3 - DPC by default above £200m,** for discrete projects above a size threshold of £200m whole life totex, while reserving the right to consider DPC for projects below this size threshold.

'DPC by default' means that in companies' PR24 business plans DPC will apply by default as the delivery route for all discrete projects over the relevant size threshold. Companies will be required to undertake a robust value for money assessment before the project is delivered through DPC.

Details of the options considered were set out in our draft methodology.[8] We have decided on Option 3 and our full reasoning is set out in Appendix 5 – Direct procurement for customers.

	Option 1: Voluntary approach to DPC above £100m	**Option 2: DPC by default above £100m**	**Option 3: DPC by default above £200m (Our preferred option)**
Increasing focus on the long term	The introduction of DPC at PR19 has already delivered benefits by making companies think more about the costs of larger projects, often delivered across AMPs, and how best to deliver them.[9] If we retained the	Under our DPC by default policy companies will be required to systematically consider the costs and appropriate delivery route for larger projects, improving long-term visibility.	As in option 2, under DPC by default companies will be required to systematically consider the costs and appropriate delivery route for larger projects, improving long-term visibility.

[8] Ofwat, 'Appendix 5 – Direct procurement for customers', July 2022
[9] Ofwat, 'PR24 and beyond: Our reflections on lessons learnt from PR19', December 2020, p. 82.

	policy from PR19, some companies would continue to do this on a voluntary basis. ✓	✓✓	✓✓
Delivering greater environmental and social value	In line with Ofwat's public value principles, companies and the CAP should consider whether there are ways of maximising social and environmental value in the way that the DPC project is delivered. ✓✓	As in option 1, social and environmental value should be maximised through delivery of the DPC project. ✓✓	
Reflecting a clearer understanding of customers and communities	Planned enhancements need to reflect the expectations of customers and communities. ✓✓	Customer and wider engagement would be the same as option 1. ✓✓	
Driving improvements through efficiency and innovation	Some scope for innovation as well as lower capital, operational and financing costs where companies choose to deliver projects via DPC. However, with a voluntary approach we would expect fewer projects to be delivered via DPC. ✓	Our DPC by default policy is likely to lead to more projects being delivered through DPC than Option 1, and therefore greater innovation and cost savings. Although in general, we expect the scope for innovation and cost savings to be lower for smaller projects. ✓✓	Our DPC by default policy is likely to lead to more projects being delivered through DPC than Option 1. In general, the scope for innovation and cost savings is likely to be greatest for larger DPC schemes. ✓✓✓
impact on customer bills	Where companies choose to deliver projects via DPC the anticipated cost savings will be passed through directly to customers through a reduction in bills. ✓	Our DPC by default policy is likely to lead to more projects being delivered through DPC than Option 1, and therefore a greater reduction in customer bills. ✓✓	Our DPC by default policy is likely to lead to more projects being delivered through DPC than Option 1. In general, the scope for cost savings is likely to be greatest for larger DPC schemes. The most reliable information we have from 'pathfinder projects' suggests that the net benefits (ie benefits less costs) for DPC projects above £200m may be in the range of 6 to 40 per cent of totex. ✓✓✓

Impact on companies	Companies incur cost of running the DPC procurement process and managing the ongoing contract with the CAP. As with other efficiently incurred costs, these will be reflected in totex allowances for PR24. ✓✓	As in option 1, DPC costs are included in totex allowances for PR24. Under option 2, companies would be required to assess a larger number of schemes for DPC. ✓	As in option 1, DPC costs are included in totex allowances for PR24. At PR19, companies raised the issue of proportionality in their feedback on DPC.[10] Under option 3, companies will be required to assess fewer schemes for DPC, focused on larger schemes where the benefits are likely to be greatest. ✓✓
Impact on other stakeholders	Ofwat incur costs overseeing the process of DPC procurement. We have developed guidance to help keep the costs of DPC down by providing a standardised approach across the industry. ✓✓	Likely to lead to more projects being delivered through DPC than Option 1. Even with a standardised approach, extra Ofwat resource may be required to support the development of DPC projects. ✓	As in option 2, extra Ofwat resource may be required to support more DPC projects. ✓
Practicality of implementation	With a voluntary approach we would expect fewer projects to be delivered via DPC, making it easier to implement.[11] ✓✓✓	Our DPC by default policy is likely to lead to more projects being delivered through DPC than Option 1, making it more challenging to implement. ✓	Our DPC by default policy is likely to lead to more projects being delivered through DPC than Option 1. However, by increasing the size threshold, this option ensures proportionality in the schemes that are progressed via DPC. ✓✓

[10] Ofwat, 'PR24 and beyond: Our reflections on lessons learnt from PR19', December 2020, p. 82.
[11] Ofwat, 'PR24 and beyond: Our reflections on lessons learnt from PR19', December 2020, p. 82.

2.4 Reflecting an understanding of customers and communities

Details of the options considered below can be found in Chapter 4 of our PR24 final methodology and Appendix 6 – Your water, your say. At PR19 each company decided what/how customer engagement should be done, with a Customer Challenge Group checking quality and providing assurance.

We are implementing Option 2 as part of our overall PR24 final methodology.

	Option 1: Retain the PR19 approach	Option 2: Collaborative customer research, setting standards, Your Water, Your Say sessions (Our preferred option)
Increasing focus on the long term	PR19 policy set an expectation that companies include long-term issues in their customer engagement activities. Research approaches adopted by companies were of variable quality, with examples of no research on long-term issues. ✓✓	Our standards set out expectations on how research can be done meaningfully. We acknowledge that it is difficult to engage customers meaningfully on long-term issues. Guidance developed for affordability and acceptability testing of business plans enables companies to seek customer's views on how and when key outcomes should be delivered. Your Water, Your Say sessions will allow customers and environmental stakeholders to challenge companies on outcomes that are important to them over the long-term. ✓✓
Delivering greater environmental and social value	PR19 policy set an expectation that environmental and customer-focused stakeholders are involved in companies' customer challenge arrangements. ✓✓	The Ofwat/CCW centralised research on customer priorities included environmental outcomes. Environmental and consumer experts are included in the governance arrangements for collaborative customer research. Our standards set out expectations for how companies engage with customers on environmental issues. Your Water, Your Say sessions provide an opportunity for us to hear directly from wider stakeholders.

		✓✓
Reflecting a clearer understanding of customers and communities	PR19 policy set an expectation that customers views would inform the shape of companies' business plans. However, there were problems with the quality, consistency, assurance and use of evidence of customers' views provided by companies. ✓✓	We/CCW have implemented centralised and standardised customer research projects in order that results are more reliable and more likely to inform our decisions (for example, research into customers' priorities, ODI rates research and affordability and acceptability research). We are providing guidance for companies to follow on affordability and acceptability testing so that the research approach is consistent across the sector and the results can be compared across companies. Our standards set expectations that companies engage with the full diversity of their customer base, including vulnerable customers. Your Water, Your Say sessions provide an opportunity for all customers and wider stakeholders to challenge companies' plans in an open forum,for companies to act upon the challenges presented (or explain why they have not done so), and for us to understand outstanding challenges. Planning for the Your Water, Your Say sessions is taking account of the need to make the sessions accessible to the full diversity of customers, communities and wider stakeholders. ✓✓✓
Driving improvements through efficiency and innovation	Costs related to companies' customer engagement plans make up only a tiny proportion of overall company costs. PR19 policy set an expectation that companies would innovate customer engagement approaches, and drive efficiency through sharing best practice. However, although there were examples of innovation, there were also issues with the quality and consistency of the customer research across the sector. ✓✓	As for PR19, company expenditure on customer engagement is a very small proportion of overall costs. However, we expect them to be smaller at PR24. Centralised research projects are achieving cost efficiencies due to development of the research approach once, for all 17 companies. The development of the ODI rates research approach has cost £128,000, shared equally between CCW and Ofwat, arguably saving £1m - £2m in development costs that would be distributed across all 17 companies if they each incurred the cost of developing a company-specific approach. The cost of company-level fieldwork is reduced due to adopting a single procurement exercise (versus a possible 17 separate exercises).

		The development of the affordability and acceptability research approach has cost less than £100,000, shared equally between CCW and Ofwat, alleviating the total cost of 17 companies developing individual approaches to the research. ✓✓✓
:Impact on Customer Bills	Our PR19 methodology set an expectation that companies' business plans would be built on a comprehensive understanding of customers' needs, preferences and priorities aligned with an understanding of customers' views on the acceptability and affordability of bills. Companies reshaped business plans to make the final version 'affordable' when tested with customers. In the main, companies submitted business plans, and associated bills, that had been tested with customers, but we noted inconsistencies in approach meaning that results were not properly comparable across the sector. ✓✓	Our confidence in research results is increasing, meaning that our determinations (and therefore customers' bills) better reflect customers' stated preferences. By working with CCW to create guidance for affordability and acceptability testing of business plans we are ensuring that the overall quality of this element of research is consistent across companies, and the results comparable. Companies' PR24 plans will reflect a good understanding of the affordability of their proposed water bills. Our understanding of the affordability of companies PR24 plans will be improved versus PR19. The collaborative approach to research is achieving actual costs savings at company level. Ofwat's role in organising the centralised research is expected to increase spending on staff and consultancy for financial years 2021-22 and 2022-23 by (est.) £450k. We expect that our application of standards will increase the 'value for money' of customer engagement projects, and our use of research findings. ✓✓✓
Impact on Companies	At PR19, companies, in general, embraced the opportunity to engage with customers and wider stakeholders as they developed their business plans. We do not have a record of costs assigned to customer engagement activities but companies have told us that in some cases there were significant. We have some concerns about the quality of engagement/research resulting in poor value for money in spending revenue from customers' bills. ✓✓	Development of research approaches to inform ODI rates and affordability/acceptability testing has reduced company effort and related costs. This is offset by company participation in governance arrangements for the collaborative research and related ad hoc meetings or correspondence. Implementation of Your Water, Your Say sessions will involve companies allowing some time to prepare for, deliver and follow up each session – although we understand that preparation will be similar to that needed for affordability and acceptability testing of business plans. We consider this additional cost overhead to be

		smaller than the benefit of us hearing more directly from customers, communities and environmental stakeholders. ✓✓
Impact on Other Stakeholders	Implementation of the PR19 customer engagement policy had limited impact on direct costs for other stakeholders. Some national stakeholders did not have sufficient resource available to be part of each company's customer challenge arrangements. ✓	The collaborative approach to customer research is enabling key stakeholders to influence research activities for all companies at the same time, reducing (but not eliminating) their need to engage with 17 companies in parallel. We specifically acknowledge the strength of Ofwat/CCW's collaborative research joint working arrangements and the financial and staff resource commitment contributed by CCW. Companies are able to determine customer challenge and assurance arrangements: this may mean that some national stakeholders need to align with arrangements that are different for each company. However, we expect that local stakeholders are considered as the nature of arrangements are determined. We intend that Your Water, Your Say sessions are accessible to local and national stakeholders, providing an efficient and open forum through which they can pose challenges to companies. Ofwat and CCW are working jointly on development and delivery of these sessions. ✓✓
Practicality of Implementation	Implementation of the PR19 customer engagement policy was the responsibility of companies. We supported the customer challenge groups (CCGs) through organisation of regular meetings with the CCG chairs. Our assessment of customer engagement evidence submitted with companies business plans, which should have been generated in accordance with our principles of customer engagement, revealed mixed quality standards and inconsistent application of research findings. Inconsistent styles of submissions, from companies and CCGs, increased the difficulty of comparison of customer engagement evidence.	The collaborative customer research programme has required Ofwat and CCW to dedicate staff and financial resources as well as company involvement. We are learning from others that have conducted engagement similar to Your Water, Your Say sessions eg Ofgem's open hearings. We consider that the benefit of hearing more directly from customers, communities and environmental stakeholders to be greater than the effort and cost involved to develop and run Your Water, Your Say sessions. ✓✓

	✓	

2.5 Collaborative approach in Wales

We have summarised the impact of different ways of engaging with Welsh Stakeholders, in a Welsh context that accounts for the specific circumstances of Wales.

- **Option 1 – Retain the PR19 approach.** Engagement is as per PR19.
- **Option 2 – Collaborative approach in Wales through Wales PR24 Forum.** This enables key stakeholders in Wales to come together to express their views on priorities and the high-level outcomes which water companies in Wales should be seeking to achieve through a Wales PR24 Forum.

Our preferred option is option 2.

	Option 1:Retain the PR19 approach	Option 2: Collaborative approach in Wales mobilised through a Wales PR24 Forum ('the Forum'). (Our preferred option)
Increasing focus on the long term	Our understanding of the long-term focus in Wales would be through a wider engagement strategy and working with Welsh stakeholders on our PR24 policy on adaptive planning and long-term delivery strategies. This could be using the various fora existing in Wales. We would demonstrate our alignment with the Welsh Government's Strategic Policy Statement in relation to the long term and the legislative and as relevant policy frameworks and operating environment in Wales.	The collaborative approach enables key stakeholders in Wales to express their views on priorities and the high-level outcomes which the water sector should be seeking to achieve in the long-term to help shape the companies' long-term delivery strategies. It provides all stakeholders with a clearer understanding of the long-term priorities for Wales. This reflects the Wellbeing of Future Generations (Wales) Act 2015 which requires public bodies listed in the Act to plan for the long term, consider outcomes that deliver for the environment, the economy and society. It also focuses on meaningful, engagement and collaboration.

	Given the focus in PR24 on the long-term delivery strategies in Wales, using just an engagement strategy may not provide the best way to understand stakeholders' views on priorities for Wales in the long term. Collaboration may be more limited without an agreed specific collaborative approach, and/or a specific Wales PR24 Forum. These bring together environmental and customer stakeholders and have an explicit purpose and terms of reference. ✓	Success of the collaborative approach depends on the Forum members: Mobilising early so that it can provide early input into companies' long-term delivery strategies. Having an agreed clear timetable and approach to be able to reach the strategic steers for the Welsh water companies. Giving due consideration on customers' affordability constraints and how long-term outcomes can be phased accordingly across AMPs. ✓✓✓
Delivering greater environmental and social value	We would engage with Welsh stakeholders as part of a wider engagement strategy. This would include the legislative landscape and policy approaches in Wales in respect of river water quality, net zero, and catchment and nature-based solutions. ✓✓	By encouraging an integrated approach to developing long-term strategies and outcomes, we aim to achieve better results for the environment, society and customers of the Welsh water companies. This will include us having a better understanding of the differences in approach e.g., on river water quality and biodiversity. The outputs of the collaborative approach, as well as what is learnt from wider stakeholder and customer engagement, should then be used by the water companies to help develop their business plans and long-term delivery strategies. Ofwat will gain a deeper understanding of environmental and social value in Wales more generally. ✓✓
Reflecting a clearer understanding of	We would rely on the Welsh water companies' customer research, our own research and proposed open challenge sessions for the Welsh water companies. Welsh stakeholders may not have the same opportunity to understand or challenge companies on their interpretation of their customer engagement results as it they were members of a specifically formed Forum.	The collaborative approach would allow early sight of the companies' customer engagement to help the Forum take them into account when providing their strategic steers to the companies for their long-term delivery strategies and business plans. The Forum will enable transparency of stakeholder views together with a collaborative approach to exploring a shared outcome

customers and communities	✓✓	The benefits above depend on early sight of the results of the companies' customer engagement. This is so that the Forum can hear and take this into account, when giving the strategic steers to the Welsh water companies. ✓✓✓
Driving improvements through efficiency and innovation	Ofwat would rely on its building blocks approach of outcomes, costs, and risk and return and associated incentive, which with its wider tool kit supports better outcomes for customers, communities and the environment, including affordability. ✓✓	The key stakeholders will use the Welsh water companies' broad cost estimates for the proposed package of outcomes that they hope to deliver in the future AMP periods to consider the balance between outcomes, stakeholder priorities and affordability. As part of this the Forum will look to encourage companies to find innovative ways of providing solutions. ✓✓
Impact on Customer Bills	Ofwat would reply on its regulatory tools and incentives to push the whole sector forward to deliver good outcomes at prices customers can afford. ✓✓	This enables a collaborative approach for Welsh stakeholders to provide views on the appropriate balance of outcomes and other considerations (such as cost). Also, on the phasing of the long-term outcomes across the Asset Management Periods (or AMPs). ✓✓✓
Impact on Companies	There may be less regulatory burden on the companies in respect of not having to provide information to the Forum. But they may have to repeat the same engagement with different stakeholders. ✓✓	Companies are expected to provide information to the Forum. However, the collaborative approach provides a more efficient way for companies to engage with the key stakeholders in a collaborative environment. Promotes more transparency and legitimacy. ✓✓✓
Impact on Other Stakeholders	Key stakeholders would engage with each other but would not have the benefit of connecting with other key stakeholders and regulators in one place with specific terms of reference and a common purpose. ✓✓	Key stakeholders in Wales benefit from connecting with each other in one place in a more structured way with agreed terms of reference . ✓✓✓

Practicality of Implementation	Resourced as part of a wider engagement strategy and Head of Wales using existing fora where possible. This may be less efficient and would not provide the ability for key stakeholders to come together with a common objective. ✓✓	Stakeholders have committed to their roles as Forum members under the Terms of Reference. A Forum will bring a more structured and planned way for key Welsh stakeholders to collaborate for the common purpose of providing a strategic steer to feed into the Welsh water companies' business plans and long-term delivery strategies. Ofwat teams will benefit from being able to reach key Welsh stakeholders in one place on arranged meeting dates. ✓✓

2.6 Performance commitments

This impact assessment considers three options for the composition of the suite of performance commitments (PCs) at PR24. We have broadly considered three options, although additional details relating to the options considered can be found in Chapter 5 and Appendix 7 – Performance commitments of the PR24 final methodology. The three options are:

- **Option 1: Retain the same approach as PR19**. Under this option companies would retain the same number of common performance commitments and be able to propose a large number of bespoke performance commitments. There would be a mixture of financial and non-financial incentives for the performance commitments;
- **Option 2: Focus on common performance commitments**. We would increase the number of performance commitments that are common to all companies, alongside a limited number of bespoke performance commitments that meet the criteria outlined within Chapter 5 and Appendix 7 of the final methodology. This would lead to an overall reduction in the number of performance commitments. All performance commitments would have financial incentives; and
- **Option 3: Standardisation and flexibility**. Increasing the number of common performance commitments in line with option 2, as well as allowing companies to propose as many bespoke performance commitments as they had at PR19. All common performance

commitments would be financial and there would be a mixture of financial and non-financial incentives for bespoke performance commitments.

	Option 1: Retain the PR19 approach	Option 2: Focus on common performance commitments (Our preferred option)	Option 3: Standardisation and flexibility
Increasing focus on the long term	Common PCs featured asset health performance commitments, which increased focus on the long term. However, as bespoke performance commitments can change from one price control to another, including whether they are financial or not, having large numbers of bespoke performance commitments reduces long-term certainty for companies. ✓✓	The focus on key common outcomes which are likely to endure across price controls, with meaningful financial incentives attached to them, increases long term certainty for companies and encourages investment with the long term in mind. The inclusion of asset health performance commitments also directly increases long-term focus on network capability. The increased number of common performance commitments also means we are better able to benchmark progress against the UK and Welsh Governments' strategic objectives and long-term ambitions. ✓✓✓	As per option 2. However, there is a risk that a larger number of bespoke performance commitments, which may or may not be financial, or included at all in future price control periods, dilutes focus on key long-term outcomes and can affect company behaviour over the long term. ✓✓
Delivering greater environmental and social value	Low coverage of environmental issues through common performance commitments, instead they are mainly covered through bespoke performance commitments. This would result in a lack of comparability and benchmarking, and a greater chance of misspecification, which is likely to lead to poorer outcomes for the environment and less value for money. Reputational performance commitments and lower value financial performance	Implementation of suite of common environmental performance commitments would encompass areas previously covered by bespoke performance commitments. This highlights key areas of importance in England and Wales such as river water quality, net zero greenhouse gas emissions, biodiversity and storm overflows. Improved comparability and benchmarking between companies would lead to better outcomes for the environment and improved value for money. Use of wider tools outside of the price review to incentivise further outcomes for areas where significant additional funding is not required and	As per option 2. However, large numbers of bespoke performance commitments are likely duplicate or overlap existing common performance commitments, resulting in little additional value for the environment and society, alongside lack of comparability and poorer outcomes. Proposed bespoke performance commitments may be better suited to using price control deliverables (PCDs) to track the underlying investment required, as they may represent outputs rather than outcomes.

	commitments may have less impact on company behaviour. ✓	where performance is very difficult to specify in advance for a five-year period through a fixed measure, such as for vulnerability and affordability. ✓✓✓	Reputational performance commitments and lower value financial performance commitments may have less impact on company behaviour. ✓✓
Reflecting a clearer understanding of customers and communities	Areas of importance to customers would be included within a smaller set of common performance commitments, but additional areas of significance identified through customer research would be covered by bespoke performance commitments. Large numbers of performance commitments and reduced comparability of bespoke performance commitments would reduce transparency for customers around company performance. This increases the chance that performance commitments would be mis-specified and not truly reflect customer priorities. ✓✓	Some companies suggested that common performance commitments do not fully represent what customers want and there is a reliance on performance commitment levels to reflect individual company capacity for improvement. Customer research does not support this view, demonstrating instead that our broader package of common performance commitments encompasses the issues of importance to customers. Additional bespoke performance commitments enable specific areas of local importance to be addressed, where they do not overlap with existing performance commitments. ✓✓	The areas of most significance to customers are addressed through the broader package of common performance commitments. Companies would use additional scope for bespoke performance commitments in areas that they consider are of local importance to customers. This is likely to result in duplication or overlap between bespoke and common performance commitments, where metrics are measured in different ways, resulting in no benefit to customers and risks them paying twice for the same results. Increased number of performance commitments and reduced comparability of bespoke performance commitments would reduce transparency for customers around company performance and risk misspecification. ✓✓
Driving improvements through efficiency and innovation	Common performance commitments mean that customers and regulators can be sure the performance commitment levels are stretching, but it is harder to assess the level of stretch for bespoke performance commitments, and there is greater risk that they are mis-specified This may distort company focus. Lower financial or reputational incentives may provide less motivation for more efficient practices or the use of innovative techniques.	Having the majority of performance commitments as common makes it easier for regulators and customers to assess levels of stretch and to compare company performance. It also helps ensure performance commitments and their associated incentives are well-specified. This would encourage companies to drive improvements. Bespoke performance commitments can drive performance in areas where improvement is required or where there are additional customer benefits. Tools outside of the price control such as licence conditions and charging rules, may be better placed	As per option 2 for common performance commitments. However, in addition the large number of bespoke performance commitments that potentially overlap may reduce focus on key outcomes, and there is a greater risk that they are mis-specified. Lower or non-financial performance commitments may be seen as a lesser priority in the price review process and may provide less motivation for the use of more efficient practices or innovative techniques.

	✓✓	to deliver innovation for areas not covered by performance commitments, such as affordability and vulnerability. ✓✓✓	✓✓
Impact on Customer Bills	Where it is difficult to set stretching performance commitment levels due to a lack of comparability on bespoke performance commitments, there is more likelihood that companies outperform, resulting in higher bills for customers. ✓✓	More common measures should lead to more stretching but achievable performance commitment levels due to more comparable information. There is more likely to be a balance between company outperformance and underperformance, so that bills reflect the service that customers receive. ✓✓✓	As per option 2 for common performance commitments. However, it is difficult to set stretching performance commitment levels for increased number of bespoke performance commitments due to lack of comparability and so it is more likely that companies outperform, resulting in higher bills for customers. An increased number of performance commitments also increases the risk of poorly calibrated incentive rates due to duplication, which could result in bills not reflecting the service that customers receive. ✓✓
Impact on Companies	Little to no additional cost, relative to PR19, on the assumption that performance commitments remain the same. New bespoke performance commitments could result in more variable outperformance or underperformance. Risk that misunderstandings between company and the regulator on bespoke performance commitments could lead to unexpected outcomes. Potential loss of credibility with customers, given limited comparability of environmental performance commitments. ✓✓	Most common performance commitments are either from PR19 or replace previous bespoke performance commitments for most companies. Additional information required around standardised environmental measures, but more streamlined data requirements and comparable research, alongside fewer bespoke performance commitments should lead to cost savings. ✓✓✓	Most common performance commitments are either from PR19 or replace previous bespoke performance commitments for most companies. Additional information required around environmental measures. Greater costs from having to complete both new requirements from more common performance commitments and provide wide ranging information on unknown number of newly proposed bespoke performance commitments as well. ✓

Impact on Other Stakeholders	Difficult for stakeholders to compare performance across companies in large number of areas. It also reduces the ability for stakeholders to understand and feed into long term plans. ✓	Common performance commitments make it easier for stakeholders to compare performance across companies. This increases ability for stakeholders to understand and feed into long term plans. Stakeholders may have to engage with wider tools outside of the price review relating to outcomes not measured by performance commitments. ✓✓✓	Mostly as per option 2, but risk that larger number of bespoke performance commitments means it is difficult for stakeholders to understand performance across companies especially if these overlap and duplicate common performance commitments. ✓✓
Practicality of Implementation	Fewer common performance commitments mean that there is less scope for common research and benchmarking, which is not possible for bespoke PCs. More scope for asymmetry of information. Greater overall number of and divergence between performance commitments requires more extensive price control and in-period determinations process. ✓✓	More common performance commitments mean that there is more scope for common research and benchmarking. Bespoke performance commitments limited in number and in areas of local significance or underperformance. ✓✓✓	Numerous performance commitments (common and bespoke) for each company would require provision of additional data and present potential for difficulties in setting performance commitment levels for bespoke performance commitments due to lack of performance information. Greater overall number of and divergence between performance commitments requires a more extensive price control and in-period determinations process. Additional resources required. ✓

2.7 Outcome delivery incentives

We present two summary tables for our approach to outcome delivery incentives at PR24, details of which can be found in Appendix 8 – Outcome delivery incentives:

- incentivising performance improvements; and
- managing outcomes risk.

Incentivising performance improvements

This impact assessment summary table considers three options for PR24:

- **Option 1: the PR19 approach**. We would set standard incentive rates for each performance commitment based on 50% of marginal benefits, with underperformance rates including a marginal cost element. Outperformance payments and rates would not be symmetrical by default, with companies generally facing higher underperformance rates. Companies would be able to propose enhanced incentives on certain performance commitments – including thresholds, rates, caps and collars – and we would assess their proposals.
- **Option 2: stronger incentives (our preferred option)**. We would set standard incentive rates for each performance commitments based on 70% of marginal benefits as a starting point, and vary this based on a range of factors. The majority of performance commitments would have outperformance and underperformance payments, with symmetrical outperformance and underperformance rates by default. We would expand enhanced incentives to all companies for six performance commitments, set on a streamlined and consistent basis. We would only set caps on leakage and per capita consumption.
- **Option 3: a simplified approach**. We would set standard symmetrical incentive rates for each performance commitment based on a share of marginal benefits that aligns with each company's cost sharing rates. We would remove enhanced incentives from the price review.

	Option 1: Retain the PR19 approach	Option 2: Stronger incentives (Our preferred option)	Option 3: A simplified approach
Increasing focus on the long term	Asset health-related performance commitments would encourage some focus on resilience and performance in the long term, but they are unlikely to have outperformance payments which would reduce the scope for improvements. ✓	Companies are more likely to invest in long-term performance improvements as we have confirmed our intention to maintain our broad approach to incentivising outcomes at PR29. We would also set outperformance payments, and stronger incentive rates, on asset health-related performance commitments compared to Option 1 due to symmetrical payments and rates on these performance commitments.	Asset health-related performance commitments would encourage some long-term improvements, with greater improvements than Option 1 possible due to outperformance payments available for these performance commitments. ✓✓

		✓✓✓	
Delivering greater environmental and social value	Likely to create similar environmental value as at PR19, although less than Option 2 if environmental performance commitments have relatively low incentive rates and fewer have enhanced incentives. ✓✓	Stronger incentives should lead to greater improvements, including for environmental performance commitments with enhanced incentives. ✓✓✓	Relatively weak incentives on environmental performance commitments, with lower rates than Option 2, although more scope for outperformance payments than Option 1. No enhanced incentives unlikely to lead to as significant improvements as other options. ✓
Reflecting a clearer understanding of customers and communities	More directly reflects customer views by generally not setting incentive rates higher than marginal benefit estimates (allowing for cost sharing) but may not sufficiently incentivise companies to meet their performance commitment levels, which may be what customers and stakeholders expect. ✓	While we would set incentive rates that are higher than marginal benefits (allowing for cost sharing), this provides stronger incentives on companies to meet their performance commitment levels, reflecting customer and stakeholder expectations, and helps reflect wider benefits associated with outperformance. While symmetrical rates may not reflect customers' expectations, we want to ensure that customer views are focused on aspects of the price review where they can be involved in a meaningful way. ✓✓	Same with impacts as Option 1, but with symmetrical rates as under Option 2. ✓
Driving improvements through efficiency and innovation	Companies may be under-incentivised to pursue performance improvements, as outperformance rates are lower than underperformance rates, even though in many cases there are no diminishing marginal benefits. Moreover, companies with high cost sharing rates that are not reflected in their ODI rates will also be under incentivised to improve. While enhanced incentives would be available for some companies, fewer companies with	Higher standard incentives rates should lead to increased management focus on performance and help to stimulate innovation and stretch. Enhanced incentives for all companies on key performance commitments are more likely to drive innovation in the water sector. If the knowledge behind enhanced performance is effectively shared, the customers of all companies are also more likely to benefit.	Companies may have lower incentives to pursue performance improvements, particularly if they have relatively high cost sharing. No enhanced incentives for any company may be insufficient to encourage greater innovation in the water sector. ✓

	enhanced incentives may be insufficient to encourage greater innovation in the water sector. ✓✓	✓✓✓	
Impact on customer bills	Customers' bills would reduce if companies underperform, although less of a reduction than under Option 2. Customers' bills would also rise if companies outperform, but not by as much as under Option 2. Fewer companies with enhanced incentives would mean higher bills are less likely over the 2025-30 period. ✓✓✓	Customers may pay more for outperformance than Options 1 and 3 in the short term – at most up to a 20% rise if a company outperforms all of its enhanced incentives. Customers' bills would reduce if companies underperform – by more than under Options 1 and 3. Customers' bills would also rise if companies outperform – by more than under Options 1 and 3. ✓✓	Customers likely to pay less for outperformance than Options 1 and 2 in the short term, but will be compensated less for underperformance than Option 2. No companies with enhanced incentives would mean higher bills are less likely over the 2025-30 period. ✓✓✓
Impact on companies	Companies' returns would reflect performance (although limited by risk mechanisms – see below). Companies are less likely to pursue improvements if they do not face symmetrical payments and rates. Companies would need to provide detailed proposals for enhanced incentives. ✓✓	Companies are more likely to face stronger incentives, with poor performers having greater underperformance payments and stronger performances having greater outperformance payments (although limited by risk mechanisms – see below). Symmetrical payments and rates, and outperformance-only enhanced incentives, should lead to more upside potential and a more positive skew in companies' outcomes package. Fewer information requirements for companies relating to enhanced incentives. ✓✓✓	Companies' returns would reflect performance but with more potential upside and a more positive skew due to symmetric rates compared to Option 1. Companies may face relatively weak incentives, with narrower ranges compared to Option 2. Heavily reduced information requirements from companies, but potentially less influence over their determinations. ✓✓
Impact on other stakeholders	Limited transparency for other stakeholders. ✓	Other stakeholders could provide views on benefit sharing factors, which aids transparency.	Limited transparency for other stakeholders. ✓

		✓✓	
Practicality of implementation	Significant complexity to review company proposals and set standard and enhanced incentive rates, including marginal cost estimates within standard incentive rates. ✓	Reduced complexity by removing the marginal cost element of the PR19 incentive rate formula and setting symmetrical rates. Setting enhanced incentives on a consistent and streamlined basis would significantly reduce their complexity. ✓✓	Not being able to vary the benefit sharing factor for standard incentive rates and removing enhanced incentives substantially simplifies the price review framework. ✓✓✓

Managing outcomes risk

This impact assessment summary table considers two options for our approach to managing outcomes risk at PR24:

- **Option 1: the PR19 approach**. We would set an aggregate sharing mechanism on outperformance payments only, that equally shares incentives payments above a threshold. We would also set caps and collars on individual performance commitments that we consider are financially material or uncertain to limit the financial impacts on customers and companies. We would primarily base the levels of caps and collars on companies' and our probability estimates for each performance commitment.
- **Option 2: Two-sided aggregate sharing mechanisms and targeted caps and collars (our preferred option)**. We would set a two-sided aggregate sharing mechanism that shares net incentive payments between customers and companies beyond certain thresholds. This would be supported by the targeted use of caps and collars on individual performance commitments. We would base the levels of caps and collars using a top-down approach linked to expected returns on regulatory equity for each performance commitment.

	Option 1: Retain the PR19 approach	Option 2: Two-sided aggregate sharing mechanisms and targeted caps and collars (Our preferred option)
Increasing focus on the long term	n/a	n/a

Delivering greater environmental and social value	Caps and collars reduce companies' incentives to improve their performance, even if there are benefits for customers and the environment, reducing the environmental and social value that is likely to be created. ✓	A targeted approach to caps and collars reduces the distortion on companies' incentives to improve their performance, potentially leading to greater environmental and social value. Using an aggregate sharing mechanism strikes a balance between both 'hard' aggregate caps or collars, and unlimited exposure at less protective sharing rates, to ensure there remains some incentive on companies to manage the impacts of very high or very low performance. ✓✓
Reflecting a clearer understanding of customers and communities	Caps and collars reduce incentives on companies, which means they are unlikely to improve outcomes in line with customer valuations when they hit the cap or collar. Companies seek the views of customers on whether performance commitments should have caps and collars, although the research may not provide meaningful insights. ✓	Companies are more likely to improve outcomes in line with customer and stakeholder valuations. Customers would no longer be asked about whether performance commitments should have caps and collars. ✓✓
Driving improvements through efficiency and innovation	Caps and collars can distort company behaviour and dull incentives on companies to improve their performance through efficiency and innovation. Once a collar is reached, customers receive a deteriorating level of service and despite this no longer receive underperformance payments. Without collars, we estimate customers could have received a higher level of service equivalent to an additional £132m in forgone underperformance payments over 2020-22. Similarly, once a cap is reached, companies have no incentive to continue improving even if there are clear benefits. Without caps, we estimate forgone outperformance payments to companies of around £19m over 2020-22, as well as unrealised levels of service. The aggregate outperformance sharing mechanism can limit the scope for further improvements once the threshold is reached, though we expect this to be set such that it is unlikely to be triggered frequently. ✓✓	Setting caps and collars on a targeted basis should sharpen incentives to drive improvements in performance and maintain companies focus on efficiency and innovation when caps/collars would have been triggered under PR19 approach. We can used revealed performance to set more stretching performance commitment levels in future price reviews. The aggregate sharing mechanism can limit the scope for further improvements once the outperformance threshold is reached, though this may be unlikely to be triggered since it is set at a relatively high level. However, new aggregate underperformance protection for companies may encourage them to take more risks and innovate. ✓✓✓

Impact on customer bills	The one-sided aggregate outperformance sharing mechanism would help to reduce bill impacts at the level of the outcomes package. Residential customers would start to share in net outperformance payments equivalent to around £19 per year (or 6% of an average combined bill). However, only 50% of payments above the threshold are shared rather than 90% at the secondary threshold under Option 2. Caps and collars protect customers from outperformance payments that are higher than expected and help to reduce bill volatility caused by individual performance commitments. ✓✓	The two-sided aggregate sharing mechanism would help to reduce bill impacts at the level of the outcomes package. The primary threshold should ensure residential customers start to share in net outperformance payments equivalent to around £19 per year (or 6% of an average combined bill) with stronger protections beyond the secondary threshold equivalent to around 10% of an average combined bill. However, compared to Option 1, customers would receive relatively lower reductions in the case of very high underperformance payments because they would be shared with companies. ✓✓
Impact on companies	Companies receive protections from collars but their opportunities for outperformance payments are limited by caps. Significant resource requirement for companies to develop proposals. ✓	Companies may be exposed to more risk on individual performance commitments than Option 1, but they will also be protected through targeted collars on some performance commitments, and the new aggregate sharing mechanism provides some protection against high levels of underperformance. A simplified approach to selecting and setting caps, collars and sharing mechanisms would likely reduce the resource requirements for companies. ✓✓
Impact on other stakeholders	n/a	n/a
Practicality of implementation	Setting the scope and levels of caps and collars would be complex, particularly if it was based on companies' proposals, customer evidence and a range of probability estimates. Significant resource requirement for companies to develop proposals and us to assess them. ✓	Using a targeted approach to caps and collars, as well as a top-down approach to setting their levels, would simplify our overall framework and would likely reduce the resource requirements for companies and us. ✓✓

2.8 Incentivising efficient net zero investment

This impact assessment explores the options considered to incentivise efficient net zero investment at PR24. More details of the options and the final methodology approach can be found in Appendix 9 – Setting expenditure allowances.

We considered several options to incentivise an efficient long-term transition to net zero for the draft methodology. This was supported by advice from Frontier Economics on options to incentivise efficient net zero investment.[12] Frontier Economics identified three main options to incentivise and fund net zero improvements. These ranged from an adapted PR19 toolkit for net zero to all expenditure allocated via a full bidding competition, with a hybrid approach where some expenditure was allocated across all companies to reach a common level of performance and the remainder subject to a bidding competition. As a result of stakeholder feedback on the draft methodology and further work we have undertaken reviewing reported greenhouse gas emission data, we have taken key aspects of the Frontier options and merged them to create a net zero challenge for PR24. Therefore, the two options that we undertake an impact assessment for are summarised below:

- **Option 1 – Adapted PR19 toolkit**: Builds on the approach taken at PR19 for the delivery of other outcomes and applies them to net zero.
- **Option 2 – PR19 toolkit with net zero challenge:** Maintains the robust assessment of enhancement costs with scope for companies to request enhancement expenditure where the primary driver is to reduce operational GHG emissions with allowances prioritised on those companies making stretching improvements through base and having efficient proposals.

Option 2, the PR19 toolkit with net zero challenge aligns with our PR24 final methodology approach of prioritising enhancement greenhouse gas (GHG) emission reduction investment on a competitive basis.

	Option 1: Adapted PR19 toolkit	**Option 2: PR19 toolkit with net zero challenge (Our preferred option)**
Increasing focus on the long term	This option assumes we apply the available PR19 toolkit to net zero. This would comprise of using a performance commitment on operational greenhouse gas (GHG) emissions together with	This option introduces an industry wide bidding approach which allows companies with stretching reductions through base and more efficient abatement unit costs to go faster and further. The reductions

[12] Frontier Economics, 'Incentivising net zero – a report for Ofwat', July 2022.

	Outcome Delivery Incentives (ODIs) with companies able to request net zero enhancement investment. There is a risk that company specific enhancement requests will not reveal enough robust cost and performance data for cross industry learning, resulting in short term inefficiencies. Over the long term this means that companies may not be able to propose efficient reductions at PR29 or be able to expand the GHG emission scopes being addressed. ✓✓	funded through the bidding competition would be factored into performance commitment levels. This approach has potential to encourage better short and long-term results. The bidding process will better reveal scheme costs and benefits for all companies, allowing better and more efficient options to be identified. It will also give us better costs data for the next price control period so we can more confidently challenge companies on efficiency of costs. Requiring bids to be linked to activities already being monitored drives increased monitoring of emissions to improve reporting over the long term. ✓✓✓
Delivering greater environmental and social value	Companies will still be funded and incentivised to achieve GHG emission reductions on a glidepath to net zero through enhancement funding and performance commitments. Most GHG emission reductions are expected through base activities or delivery of standard enhancements that represent long term best value. Delivery of improvements as a secondary benefit to other activities will enable the delivery of wider benefits and synergies to deliver efficiencies. ✓✓	The net zero challenge will not substantially increase the delivery of greater social and environmental value over the PR19 toolkit. However, it has the potential to deliver greater environmental and social value over the long term as greater reductions can be delivered at lower cost. As with option 1 we expect most GHG emission reductions through base activities or delivery of standard enhancements which should represent long term best value. Delivery of improvements as a secondary benefit to other activities will enable the delivery of wider benefits and synergies to deliver efficiencies. ✓✓✓
Reflecting a clearer understanding of customers and communities	The UK government's strategic policy statement expects water companies to contribute to net zero by 2050. The Welsh Government expects that water companies develop clear, robust plans for how they plan to achieve net zero. This approach would allow enhancement investment working in parallel with performance commitments and ODIs to reduce GHG emissions to achieve these targets. Companies should reflect customer priorities when setting their performance commitment levels for PR24. ✓✓	The UK government's strategic policy statement expects water companies to contribute to net zero by 2050. The Welsh Government expects that water companies develop clear, robust plans for how they plan to achieve net zero. This approach would allow companies to bid for net zero specific funding through the net zero challenge working in parallel with performance commitments and ODIs to reduce GHG emissions to achieve these targets. Companies should reflect customer priorities when setting their performance commitment levels for PR24. ✓✓

Driving improvements through efficiency and innovation	Company specific enhancement investments would be funded using our estimate of efficient unit costs (benchmarked using company submissions). This approach will not necessarily reveal the most efficient schemes or robust abatement unit cost data. Enhancement funding would be limited by company proposals and lead to an efficient rate set at our view of efficient unit costs (limited by company proposals). There is an increased risk that this unit rate is not appropriate for the investments that are needed. ✓	The net zero challenge increases productive efficiency helping establish efficient costs where it is more difficult to benchmark due to uncertainties around costs (and benefits). Companies will reveal more cost and benefit data up front and reduces the risk of inflated programme costs as those schemes or programmes that are above the efficient rate are unlikely to be funded. The approach encourages dynamic efficiency by allowing industry leaders to move first and share learnings with industry. We would prioritise funding to those companies with the most efficient bids who would receive more funding than those that are more expensive which means that there is the potential to deliver more reductions at a lower cost than the standard PR19 toolkit approach. ✓✓
Impact on customer bills	Customer bills will be influenced by the amount of enhancement requested and funded at efficient unit rate and companies' performance against the performance commitment. Over the long-term efficient unit costs and amount of enhancement funding will be influenced by the limited data revealed under this option. ✓✓	Customer bills will be influenced by the amount of enhancement requested below the efficient unit rate and companies' performance against the performance commitment. There is the potential for some companies to secure more investment in this area than others depending on the comparative assessment. However, those companies investing less this period are likely to require more for later periods with the resultant balancing of customer bill impacts over the long term. Over the long-term efficient unit costs and amount of enhancement funding will be influenced by the volume of data revealed under this option. This is likely to result in a smaller impact on bills over the long term as we use the competition to reveal the lower costs. ✓✓✓
Impact on companies	Companies would submit enhancement requests and propose performance commitment levels as with other enhancement activities. ✓✓	This requires specific net zero enhancement investments to be identified and proposed at a scheme/programme level. Although this requires different data to be presented than option 1 it is not considered to be materially more or more difficult. ✓✓

Impact on other stakeholders	No material impact to other stakeholders from this option of incentivising efficient net zero investment. n/a	
Practicality of implementation	Relatively easy option to implement as this approach builds on the approach taken at PR19 for delivery of other outcomes and applies them to net zero. This is simple from a regulatory implementation perspective as it applies the current tools to a new investment area. ✓✓	There is a shift in regulatory focus including the application of the enhancement assessment criteria. The main focus is on the efficiency of investments and investment prioritisation criteria at a company level (eg stretching reductions through base). However, this is a different focus rather than a material increase in complexity or burden of implementation. ✓✓

2.9 Full indexation of the RCV by CPIH

We set out our decision to fully transition indexation of the RCV by CPIH from 1 April 2025 in Chapter 7 of the final methodology. This will complete the transition started at PR19 where we indexed 50% of the opening RCV as at 1 April 2020 by RPI and the remaining 50% by CPIH, with all new RCV accrued since then indexed by CPIH. At a sector level, our PR19 determinations will result in around 60% of the RCV indexed by CPIH on 31 March 2025, however the exact splits vary by company depending on factors including rates of RCV run-off and levels of RCV growth.

Our impact assessment table sets out the two key options we have considered:

- **Option 1 – retaining a blend of RPI and CPIH indexation.** This would continue the transition started at PR19, with the RPI-linked RCV run down over time and all new RCV indexed by CPIH.
- **Option 2 – transitioning the RCV to full indexation by CPIH from 1 April 2025.**

Consistent with the application of our policies in setting a price determination, our assessment is carried out on the basis of the notional capital structure. It is possible that companies will need to manage the effects of a full transition under their actual financial structures, taking account of their financing position which will reflect their own financing choices. However, by 2025, companies will have had nearly a decade to plan for the effects of a full transition, suggesting that companies should be reasonably placed to manage any residual effects of a full transition at PR24.

We consider that a full transition would provide benefits over the blended approach.

	Option 1: Continue to index the RCV by a blend of RPI and CPIH	**Option 2: Index the whole of the RCV by CPIH from 2025 onwards (Our preferred option)**
Increasing focus on the long term	n/a	
Delivering greater environmental and social value	n/a	
Reflecting a clearer understanding of customers and communities	RPI has been found to be a flawed measure which tends to overstate consumer inflation and does not command legitimacy with customers.[13] CPIH is the ONS' preferred measure of consumer inflation. Maintaining a blend of RPI and CPIH-linked RCV would remedy this somewhat, but not so quickly or comprehensively as a switch to 100% indexation of the RCV to CPIH. ✓	RPI has been found to be a flawed measure which tends to overstate consumer inflation and does not command legitimacy with customers. CPIH is the ONS' preferred measure of consumer inflation. This proposal would secure the most rapid transition to CPIH indexation and so would be more aligned with customer interests. ✓✓✓
Driving improvements through efficiency and innovation	n/a	
Impact on Customer Bills	Slower transition to CPIH indexation reduces bill pressures in the near term, at the expense of higher bills in the longer term compared to the full indexation	At the fastest transition to CPIH indexation there is bill pressure in the near term, however this unwinds in the longer term.

[13] Paul Johnson, UK Consumer Price Statistics: A Review, January 2015.

	option. These effects have impacts that are neutral over the long term (when using our allowed return on capital as a discount rate), but a slower transition means customers contributing less in the short term, and future generations of customers contributing more. -	We consider that this approach supports intergenerational fairness as it better reflects inflation as experienced by customers over time, recognising that RPI is a flawed measure of inflation. Our indicative modelling set out in Appendix 10 of our draft methodology showed that over a 5 year period, the impact of the full indexation option would lead to an impact of between -£2 and +£12 per year on the average household bill, with the average across the companies of around £4 or 1% of customer bills. However these impacts would unwind over time, resulting in a lower average household bill for future customers. -
Impact on Companies (on the basis of a notional capital structure)	We assume a share of index-linked debt in the notional structure – this stood at 33% RPI-linked debt for PR19. A mismatch between the measure of inflation used to accrete index-linked debt and the RCV it corresponds to can in principle lead to impacts that a company will need to manage. This type of mismatch is not novel however – the notional company is already exposed to this in respect of an inflation-indexed RCV and fixed rate debt (which is not indexed) – and companies can take advantage of a developing market (and pent up demand) for CPI-linked issuance. Impacts may be lowest where some RPI-linked debt remains in place and the RCV remains linked to RPI. Whether the impact is positive or negative for companies depends critically on whether the size of the wedge between RPI and CPIH is lower or higher than the long-term assumption of 0.9% we use in setting an allowed return.	We assume a share of index-linked debt in the notional structure – this stood at 33% RPI-linked debt for PR19. A mismatch between the measure of inflation used to accrete index-linked debt and the RCV it corresponds to can in principle lead to impacts that a company will need to manage. This type of mismatch is not novel however – the notional company is already exposed to this in respect of an inflation-indexed RCV and fixed rate debt (which is not indexed) – and companies can take advantage of a developing market (and pent up demand) for CPI-linked issuance. Impacts may be greatest where some RPI-linked debt remains in place and the RCV has fully transitioned to CPIH. Whether the impact is positive or negative for companies depends critically on whether the size of the wedge between RPI and CPIH is lower or higher than the long-term assumption of 0.9% we use in setting an allowed return. For PR24 we propose to retain a

	✓	proportion of index-linked debt in the notional balance sheet for our assessment of financeability; any residual impacts can be assessed as part of the financeability assessment. ✓
Impact on Other Stakeholders	n/a	
Practicality of Implementation	No material effort is required – this option would represent a continuation of PR19 'business-as-usual'. However significant complexity remains from retaining two measures of indexation of the RCV, and retention of the RPI-CPIH wedge reconciliation model. ✓	Policy is relatively simple to implement and allows significant benefits in terms of reducing complexity of the modelling suite and retiring the RPI-CPIH wedge adjustment model. It will allow a clearer understanding of the RCV and allow simplification of price reviews and the financial model upon which our determinations are based. It also improves the in-period assessments as it doesn't require a complex model build in order to provide RCV updates annually. ✓✓✓

2.10 RCV run-off

We set out the approach we expect companies to take in setting RCV run off rates in Chapter 8 of our final methodology and Appendix 10 – Aligning risk and return. RCV run-off represents a significant element of allowed revenue and therefore customer bills. At PR19, for example, RCV run-off allowances represented circa one third of the average customer bill.

We set out that companies should set out their RCV run-off rates within a framework that considers intertemporal fairness, affordability, our guidance on setting upper limits and financeability.

Our policy approach and guidance on upper limits for PR24 has drawn on evidence from PR19 where average annual RCV run-off rates for the water companies at PR19 final determinations ranged from 3.7% to 7.1%. The upper end of the range results in the amortisation of opening RCV by approximately 30% over a five year period. This may mean that current customers are paying more than their fair share for past investments and, if sustained, could result in a significant real terms reduction in RCV over price control periods, with potential detrimental impacts to the ability of a company to withstand cost shocks and maintain financial resilience.

The table sets out the three key options we have considered:

- **Option 1 – maintain the PR19 approach.**
- **Option 2 – set narrow bands of acceptable run-off, which we proposed in the draft methodology.**
- **Option 3 – apply the framework set out above, with tighter guidance on upper limits of acceptable run-off rates for each wholesale control.**

We consider that Option 3 provides benefits over the other approaches. Taking account of expected expenditure and considerations of customer affordability, we would not expect companies to propose RCV run-off rates that are higher than those allowed at PR19 or that are above the guidance set out in Chapter 8.

	Option 1: Retain the PR19 approach	Option 2: Set narrow bands	Option 3: Apply framework (Our preferred option)
Increasing focus on the long term	At PR19, average annual RCV run-off rates for the water companies at final determinations ranged from 3.7% to 7.1%, and were above levels implied by average remaining asset lives. The upper end of the range equates to the amortisation of opening RCV by approximately 30% over a period of five years. Such levels of amortisation may not be sustainable over a number of	This may have the effect of reducing RCV run-off rates in circumstances where excessive levels of run-off may not be sustainable in the long term. Setting narrow bands by reference to average remain asset lives may be more constraining than application of a framework assessment. ✓✓	The framework we have set out includes a focus on intertemporal fairness such that the RCV is allocated fairly to each generation of customers in a way that represents how previous investment will provide services to the customers. We consider run-off rates should be explained by reference to average remaining asset lives that can be derived from published 2021-22 accounts to be a

	price reviews as it could result in a significant real terms reduction to the RCV, with potential detrimental impacts to the ability of a company to withstand cost shocks and maintain financial resilience. There may be reasons why it may be appropriate to set RCV run-off rates lower than that implied by average remaining asset lives. For example, where there is an increasing population, a larger number of customers will benefit from the use of the current asset base in the future (subject to capacity constraints of the existing asset base) and such considerations may not be captured under this option. ✓		reasonable starting point. Companies will be required to provide compelling evidence in support of run-off rates that are higher than those implied by such calculations, taking account of the framework and our guidance on acceptable upper limits. We consider the framework protects customers from excessive RCV run-off rates whilst providing flexibility for companies to match their particular circumstances. ✓✓✓
Delivering greater environmental and social value	n/a		
Reflecting a clearer understanding of customers and communities	PAYG and RCV run-off rates should balance the recovery of costs between different generations of customers. A continuation of the approach at PR19 may result in some current customers paying too little or too much. But in the case of RCV run-off, evidence from PR19 suggests customers could be paying more than is reasonable in the short term, taking account of considerations of inter-temporal fairness. ✓	Setting narrow bands could reduce RCV run-off rates, and have consequential impacts on customer bills in the short and the long term compared with the PR19 approach. However, setting narrow bands on its own, may not capture all relevant considerations for an assessment of reasonable run-off rates. ✓✓	Our framework for setting RCV run off rates takes account of intertemporal fairness and affordability for customers. RCV run-off represents a significant element of allowed revenue and therefore customer bills. Companies will need to provide evidence that they have considered the impact of their proposals on current and future customers. They should also provide evidence of customer views on the chosen bill profile incorporating both the PAYG and RCV run-off proposals. ✓✓✓

Driving improvements through efficiency and innovation	n/a		
Impact on Customer Bills	At PR19, RCV run-off allowances represented circa one third of the average customer bill. The approach to setting RCV run-off rates at PR19 allowed companies discretion in the rates they set, our analysis since PR19 observes that RCV run-off rates are above rates implied by remaining average asset lives and high rates of RCV amortisation in some instances. Continuing this approach at PR24 may lead to some customers paying a disproportionate amount for the services they receive in the short term. ✓	Early indications of the potential scale of the investment programme in 2025-30 suggest that companies are expected to face substantial investment needs at PR24 and beyond. Such programmes may lead to significant pressures on bills for customers of some water companies at PR24 and it is important that RCV run-off rates are considered carefully in this context. We expect RCV run-off rates will vary by company due to the range of RCV run-off rates applied at PR19, the difference in mix of assets across companies, and financeability considerations. The average RCV run-off rates for each wholesale control at PR19 and the average depreciation rates derived from companies' accounts for the year ended 31 March 2022 are set out in the table below. Setting expectations for RCV run-off by reference to narrow bands, this may incentivise some companies to increase run-off rates above current levels, potentially to the detriment of intertemporal fairness, short term customer affordability and long term resilience. ✓✓	Early indications of the potential scale of the investment programme in 2025-30 suggest that companies are expected to face substantial investment needs at PR24 and beyond. Such programmes may lead to significant pressures on bills for customers of some water companies at PR24 and it is important that RCV run-off rates are considered carefully in this context. We expect RCV run-off rates will vary by company due to the range of RCV run-off rates applied at PR19, the difference in mix of assets across companies, and financeability considerations. The average RCV run-off rates for each wholesale control at PR19 and the average depreciation rates derived from companies' accounts for the year ended 31 March 2022 are set out in the table below. Overall, we consider there are benefits from applying a framework that provides guidance on acceptable upper limits of run-off, drawing from evidence of PR19, and which requires companies to explain proposals in the context of intertemporal fairness, affordability, and financeability will produce fair and sustainable RCV run-off rates for customers and companies. ✓✓✓
Impact on Companies	RCV run-off rates, and PAYG rates, set the speed at which companies can recover their allowed costs. The cost	The extent to which each company would be impacted in the short term would be dependent on whether narrow	The extent to which each company would be impacted in the short term would be dependent on whether the upper limited in

	recovery rates do not impact on the overall return by companies in the long run, as the allowed return ensures that cost recovery is net present value neutral over time. However, high rates of RCV run-off run the risk of companies running down the RCV at the potential expense of future financial resilience. Assuming companies retained the same RCV run-off rates as at PR19 there could be an impact on long term financial resilience for some companies. -	bands reflect reasonable rates of cost recovery for each company. However cost recovery rates do not impact on the overall return by companies in the long run, as the allowed return ensures cost recovery is net present value neutral over the long term. -	the guidance element of the framework reflect reasonable rates of cost recovery for each company. However cost recovery rates do not impact on the overall return by companies in the long run, as the allowed return ensures cost recovery is net present value neutral over the long term. -
Impact on Other Stakeholders	n/a		
Practicality of Implementation	We do not consider there are any practical barriers for companies to implement the approach for PR24. However the absence of a clear framework by which companies should set out proposals in business plans creates challenges for our assessment. ✓	We do not consider there are any practical barriers for companies to implement the approach for PR24. Relevant information to estimate narrow bands is available in annual performance reports. ✓✓	We do not consider there are any practical barriers for companies to implement the approach for PR24. Relevant information to estimate average asset lives is available in annual performance reports. However implementation of a clear framework provides clarity to companies on expectations, and the framework by which our assessment will be made. ✓✓✓

Table: Average RCV run-off rates at PR19 for each wholesale control and implied depreciation rates based on average asset lives

	Water Resources	Water Network plus	Wastewater network plus	Bioresources
Average RCV run-off rates	5.00%	4.64%	4.50%	7.81%
Average implied deprecation rates	3.54%	3.66%	3.43%	7.75%

Source: PR19 final determinations (before adjustments, such as for further transition to CPIH and financeability) and Ofwat analysis of company annual performance reports for the year ended 31 March 2022.

2.11 Notional gearing

We set out our decision to set notional gearing for PR24 at 55% in Chapter 7 of the final methodology. In Appendix 10 – Aligning risk and return we set out our decision within the context of the framework we said we would use in the draft methodology.

The gearing level set for PR24 is five percentage points lower than the notional level set at PR19. In carrying out our assessment of impacts, we have considered our decision against the level set at PR19. We also considered an option proposed by two companies in response to the draft methodology that suggested that if we were to reduce notional gearing, a reduction of 2.5 percentage points (to 57.5%) should be the maximum reduction. We consider that such an adjustment would provide some of the benefits described in option 2 below over an approach that retained the PR19 gearing levels. However, the benefits would not be so great as setting notional gearing at 55%.

Based on evidence of changes in gearing levels seen under actual financing structures and evidence of changes in notional gearing levels by regulators from one determination to another, we consider a five percentage point reduction in gearing, compared with PR19 to be reasonable and achievable for a company with the notional capital structure. Furthermore, we consider the gearing reduction is readily achievable for an efficient company with the notional company ahead of 2025, taking account of the benefits of high inflation for equity in the current regulatory period. As such the notional company would not be required to raise additional equity ahead of 2025.

	Option 1: Maintain PR19 notional gearing of 60%	Option 2: Notional gearing at 55% (Our preferred option)
Increasing focus on the long term	We set out in our framework that notional gearing needs to reflect the scale and nature of investment needs, along with incentivising efficient financing choices, taking account of appropriate benchmarks and evidence, and allowing us to set incentive based price controls that is in the best interests of current and future customers. Early indications of the potential scale of the investment programme in 2025-30 suggest that companies are expected to face substantial investment needs at PR24 and beyond. The gearing level set in our determinations is an important signal for companies under their actual structures, including the need for equity to play a role in financing investment. While maintaining gearing at the PR19 level would be below the gearing level of many companies under their actual structures, we note that some companies have not delivered the levels of investment set at PR19, and so retaining notional gearing at 60% may not be the most appropriate signal to companies and stakeholders more broadly to ensure companies are able to deliver the significant, increased investment expected to be delivered at PR24 and beyond. ✓	To deliver the significant investment programmes for customers and the environment, it is necessary for companies to maintain sufficient equity to ensure the capacity of companies to borrow efficiently over the period. The increased equity buffer that is introduced with a reduction to notional gearing levels will strengthen the financial resilience of the notional company and strengthen the ability of the notionally structured company to raise debt in both the context of the short and the long term. This will help to ensure that a company with the notional structure will be in a position to fund its commitments to customers, communities and the environment over the long term. Academic studies suggest that an increase in gearing levels can lead to a significant decrease in net investment. This was referenced by Economic Insight in 'A report for Heathrow Airport Limited'.[14] ✓✓✓
Delivering greater environmental and social value	While maintaining notional gearing at 60% is closer to the current gearing levels maintained by most water companies, we do not consider our decision should be driven by current financing structures companies as they are unlikely to factor in the full societal costs into financing decisions or reflect needs of the PR24 period.	A reduction to notional gearing compared with PR19 is helps to ensure the notional capital structure is resilient to a more uncertain future and that it remains resilient in the context of the revenue that is at risk as a result of service performance. We consider there are benefits to adopting a lower notional gearing level at PR24, as it helps to ensure a company with the notional capital structure has the capacity to continue to raise finance efficiently to enable it to deliver the expected programme of investment while remaining resilient to shocks.

[14] Economic Insight, 'Need for gearing recovery, A report for Heathrow Airport Limited', March 2021

	Maintaining gearing at the PR19 level may not reflect the need for equity investors to support the increased investment expected to be delivered at PR24 and beyond. ✓	Changes in notional gearing acts as a signalling mechanism to companies about the relative level of risk, investment requirements and the external environment at PR24. It can signal to companies a need to consider if their own capital structure will deliver long term financial resilience. ✓✓✓
Reflecting a clearer understanding of customers and communities	For the effective operation of an incentive based regime, it is important that investors are engaged and a strong incentive based regime is aligned with delivering that objective. The decision at PR19 to adopt a notional gearing level of 60% recognised this principle. Our experience of regulating companies with thin equity structures suggests sufficient equity needs to be at risk for the incentive based regime to operate effectively and to minimise the risk that investors pressurise companies to cut costs or delay investment which may impact customers. ✓✓	A decision to reduce the notional gearing level compared with PR19 recognises the continued need to ensure the interests of companies and investors are aligned with those of customers, such that equity investors are engaged with the incentive regime. The reduction in notional gearing compared with PR19 recognises the need to ensure the regulatory regime encourages companies to deliver stretching performance improvements through the use of powerful incentives. The increased equity buffer also recognises the cost to companies of penalties and restoration following regulatory enforcement, where they have been applied have increased over time. ✓✓✓
Driving improvements through efficiency and innovation	n/a	
Impact on Customer Bills	No impact compared with the PR19 approach. ✓	The notional capital structure underpins the allowed return on capital and our financeability assessment. In theory, the weighted average cost of capital is unaffected by changes to the level of debt and equity. However, as we fund historical debt through our embedded debt allowance, in practice a reduction in notional gearing results in a slightly lower allowed return. A higher equity buffer with a 55% gearing also reduces the risk of customers having to bear any additional future costs arising from equity constrained company deferring spending or shareholders being unable to bear consequence of performance failures and associated ODI penalties. ✓

Impact on Companies	Maintaining notional gearing at PR19 levels does not reflect the reduction in gearing that the notional company is able to achieve during 2020-25, or the reduction in gearing levels seen in companies more broadly. European equities have shown a reduction in gearing levels of around seven percentage points between 2018 and 2021. [15] We have seen most water companies reduce gearing between 2020 and 2022, with average gearing across the sector reducing by 4.4 percentage points from 70.6% at 31 March 2020 to 66.2% at 31 March 2022. ✓	Signalling our decision for notional gearing now provides companies with the opportunity to revisit and align their structures with the notional level ahead of PR24 should they wish to do so. We consider a reduction in gearing of circa five percentage points compared with PR19 is achievable for an efficient company with the notional company ahead of 2025, taking account of the benefits of high inflation for equity in the current regulatory period. Based on the quarterly forecast for CPI inflation in the Monetary Policy Committee's August report, we estimate that the notional company could reduce gearing by up to seven percentage points between 2022 and 2025 (see Table 1). This does not take account of reductions to gearing that companies have been able to achieve between 2020 and 2022. We also note that we have increased or reduced notional gearing by amount of 2.5% to 5.0% at previous price reviews, and companies have previously managed consequences without issue. Therefore, we consider there is no need to provide an additional allowance for equity issuance costs to reduce notional gearing ahead of 2025. ✓✓✓
Impact on Other Stakeholders	n/a	
Practicality of Implementation	We do not consider there are any practical barriers to implement notional gearing at 60% for PR24. ✓	We do not consider there are any practical barriers to implement notional gearing at 55% for PR24. ✓

Table 1. Illustrative impact of forecast inflation on notional gearing between 1 March 2022 and 2025

	Mar-22	Mar-23	Mar-24	Mar-25
RCV	100	113.6	119.1	120.9

[15] Based on data from 'Damodaran Online, 'Current and archived data, Debt ratio trade off variables by industry', European series. Total European stocks excluding financials has reduced from 32.98% in 2018 to 25.69% in 2021.

Fixed rate debt	40.2	40.2	40.2	40.2
Index linked debt	19.8	22.8	24.0	24.5
Revenue benefit on fixed rate debt	0.00	2.9	0.6	-0.3
Gearing	60%	55%	54%	53%

2.12 Long-term delivery strategies

This impact assessment considers three options:

1. **Option 1 – retaining the same approach as PR19**, where companies publish long-term frameworks for some areas of the business, such as water resources, and we assess enhancement proposals with reference to the business plan only;

- **Option 2 – high level strategies**, introducing a similar approach to the strategic direction statements (SDSs) we required at PR09;[16] and
- **Option 3 – introducing long-term delivery strategies**, with more detailed guidance than at PR09, and requiring the use of adaptive planning and scenario testing, including some common scenarios. This approach is set out in detail in our final guidance.[17]

	Option 1: Retain the PR19 approach	Option 2: High-level strategies	Option 3: Long-term delivery strategies (Our preferred option)
Increasing focus on the long term	At PR19, there were concerns that companies are not sufficiently focused on the long term.[18] This is particularly important given the long-term challenges	Companies would produce long-term strategies that cover all areas of the business. However, experience at PR09 suggests a lack of standardisation, comparability and data would	Companies would develop long-term strategies according to our guidance, using adaptive planning and a range of scenarios, in line with UK Government

[16] The SDSs are described in Ofwat, 'Strategic direction statements' and Ofwat, 'Setting price limits for 2010-15: Framework and approach', March 2008, p. 9.
[17] Ofwat, 'Final guidance on long-term delivery strategies', April 2022.
[18] Ofwat, 'PR24 and beyond: Our reflections on lessons learnt from PR19', December 2020, p. 58.

	at PR24. If we did nothing, we would require companies to provide evidence to demonstrate that their enhancement proposals represented long-term best value, but we could not assess how this investment would support a holistic long-term strategy. ✓	likely make it difficult to meaningfully take them into account in our price review decisions.[19] ✓✓	guidance on long-term climate adaptation, and the UK and Welsh governments' SPSs.[20] This would help us take the strategies into account in our decisions and show that funded activities are likely to deliver long-term best value in a wide range of scenarios. It would also focus companies on the specific activities that may be required to meet long-term outcomes. ✓✓✓
Delivering greater environmental and social value	It would be unclear what companies' strategies are for meeting a number of key long-term environmental and social outcomes, including affordability, and therefore more difficult to establish whether the business plan is likely to maximise wider value in achieving them. ✓	Companies would set out how they intend to meet environmental and social outcomes at a high level, but it would be difficult to meaningfully assess strategies that use different methodologies, definitions and scenarios. ✓✓	Strategies would clearly set out what key investments are likely to be required to meet environmental and social outcomes, in a wide range of plausible, comparable future scenarios. This would help improve decisions to deliver these outcomes in a way that maximises value for customers, communities and the environment. ✓✓✓
Reflecting a clearer understanding of customers and communities	We would continue to expect companies to engage with customers on long-term issues, but without reference to a long-term strategy. ✓	Companies would engage with customers on their long-term strategies. But the high-level nature of the strategies may preclude meaningful engagement around issues such as phasing of key activities. ✓✓	Companies would engage with customers on their strategies, including the long-term ambition and phasing of key activities. As highlighted by CCW, there are challenges in obtaining meaningful views on long-term preferences, but these can be at least partially alleviated through good research design.[21]

[19] As set out in Ofwat, 'PR24 and beyond: Creating tomorrow, together', May 2021, p. 35.
[20] UK Government, 'Accounting for the Effects of Climate Change: Supplementary Green Book Guidance', November 2020; Defra, 'The government's strategic priorities for Ofwat', March 2022; Welsh government, 'Strategic Priorities and Objectives Statement to Ofwat issued under section 2B of the Water Industry Act 1991', December 2022, pp. 2, 8.
[21] CCW, Blue Marble, 'Engaging water customers for better consumer and business outcomes', April 2020, p. 5.

			✓✓
Driving improvements through efficiency and innovation	We would assess whether proposals represent best value in the long term, but it would be more difficult to do so without a full, consistent assessment of future uncertainties. ✓	As in option 1, without a consistent adaptive planning framework, it would be more difficult to consider how far proposed activities are likely to support the efficient delivery of long-term outcomes. ✓	Adaptive planning can help to deliver long-term outcomes as efficiently as possible, given the information available at the time, as recognised in UK Government guidance.[22] It can also help identify areas in which to target innovation and open up options for the future. ✓✓✓
Impact on Customer Bills	Increased risk that activities are delivered which do not provide long-term best value, increasing customer bills over the long term. We would have relatively little indication at PR24 of the long-term prospects for customer bills. ✓	Continued risk, given difficulty of taking strategies into account, that activities are delivered which do not provide long-term best value. With lack of common guidance, any long-term bill forecasts may use inconsistent methodologies and evidence. ✓	May require additional company resource and expenditure. However, as recognised above, adaptive planning can help reduce bills over the long term, compared to doing nothing. Long-term bill forecasts derived from a common methodology can also inform decisions around supporting affordability issues for current and future generations. ✓✓
Impact on Companies	Companies would still need to provide evidence that enhancement proposals represent long-term best value, but without referring to a separate strategy. They would also continue to develop a number of strategic planning frameworks. ✓✓	Increase in regulatory burden compared to option 1, although many companies already produce public-facing, high-level strategies as well as strategic planning frameworks. ✓	Increased regulatory and data burden compared to options 1 and 2. However, a number of pre-existing processes will feed into the strategies, and strategies can drive a more consistent approach across these different processes. Any extra burden may reduce at future price reviews as strategies are updated rather than fully rewritten.

[22] UK Government, 'Accounting for the Effects of Climate Change: Supplementary Green Book Guidance', November 2020, pp. 4, 18.

			✓✓
Impact on Other Stakeholders	Not clear to stakeholders how company business plans fit into a long-term context, making evaluation of submissions more difficult. ✓	Lack of standardisation of long-term strategies may reduce ability of stakeholders to meaningfully contribute and engage. ✓	Requirement to use adaptive planning would align with UK and Welsh Governments' SPSs and would provide extra transparency to stakeholders.[23] Potential increase in documentation for stakeholders to review, which can make engagement with the price review process more difficult, but we expect companies to engage with stakeholders to develop the strategy in advance of submission. Development of policy requires additional stakeholder input. ✓✓
Practicality of implementation	Easiest option to implement, as we would continue with the approach at PR19. ✓✓✓	Would be easier to implement at first than option 3, as there would be no need to establish common scenarios and only high-level guidance would need to be developed. However, as established at PR09, meaningfully factoring the strategies into our price review decisions presents issues given lack of consistency and detail. ✓✓	Adaptive planning is largely new to the sector, and will require culture change at all levels of the business. Some requirements, such as a core adaptive pathway and common scenarios, would need to be integrated into WRMPs and DWMPs, which are already in development for PR24. Need for collaborative development of common scenarios further impacts this timescale. However, this can be achieved before draft plans are published. We expect to continue to evolve the approach for PR29 and beyond. ✓✓

[23] Defra, 'The government's strategic priorities for Ofwat', March 2022; Welsh government, 'Strategic Priorities and Objectives Statement to Ofwat issued under section 2B of the Water Industry Act 1991', July 2022, p. 2.

2.13 Quality and ambition assessment (QAA)

We have considered the impact of different ways of encouraging quality and ambitious plans. These include:

- **Option 1 – retain the PR19 approach**;[24]
- **Option 2 – more focussed assessment, no change to incentives.** This involves a more focused assessment by excluding the PR19 extra stage of assessment called the initial assessment of plans (IAP), which was in addition to draft and final determinations;
- **Option 3 – no change to assessment approach with stronger incentives;** and
- **Option 4 – conducting a more focused assessment as well as increasing incentives**.[25]

Our preferred option is option 4. More details are set out in Appendix 11 – Quality and ambition assessment.

	Option 1: Retain PR19 approach	Option 2: Focused assessment, but no change to incentives	Option 3: Stronger incentives, but no change to assessment	Option 4: Focussed assessment, and stronger incentives (Our preferred option)
Increasing focus on the long term	While the PR19 IAP considered long-term elements, such as companies' plans to secure long-term resilience, it did not have as much of an explicit focus on the long term as at PR24.	The QAA will encourage companies to set their plan in the context of a quality long-term delivery strategy and demonstrate ambition in understanding customers' long-term priorities. However, strength of incentives may be	Stronger incentives encourage companies to produce a quality and ambitious plan and stretch themselves further. However, QAA does not include an explicit focus on the long term, so risk that	An increased focus on the long term within the QAA and strengthening the incentives for a quality and ambitious plan encourages companies to increase their focus on this ambition.

[24] See Ofwat, 'Delivering Water 2020: Our final methodology for the 2019 price review', December 2017, pp. 233-248.
[25] Details of our final methodology policies in this area are set out in chapter 11 and appendix 12 of our PR24 final methodology.

	✓	insufficient to encourage companies to produce a quality and ambitious plan. ✓✓	companies will not take sufficient account of this in their plans. ✓	✓✓✓
Delivering greater environmental and social value	The PR19 IAP delivered greater environmental and social value than previous reviews, for example through encouraging financial outperformance benefit sharing mechanisms. However, compared to PR24, there was limited emphasis on delivering best value solutions and enhancing affordability. ✓	At PR24, our assessment will encourage companies to share benefits of outperformance, deliver best value solutions and enhance affordability. However, PR19 incentives may not be strong enough to encourage companies to go the extra mile. ✓✓	Stronger incentives encourage companies to deliver more environmental and social value in some areas, but there would remain insufficient emphasis on best value and enhancing affordability. ✓	Including greater focus on environmental and social value in the QAA and offering stronger incentives for companies to do so encourages companies to increase their focus on this ambition. ✓✓✓
Reflecting a clearer understanding of customers and communities	PR19 IAP encouraged companies to demonstrate they had used high quality, ambitious and innovative approaches to understand and reflect a clearer understanding of customers and communities in their plans. ✓✓	There will be a reduced focus on customer research in the QAA given the use of collaborative research, across companies. However, we will expect companies to reflect a clearer understanding of customers and communities using the outputs of the centralised research; demonstrate they have met our minimum standards for bespoke research; and encourage innovation to understand the priorities of future customers. ✓✓	Companies may incur strong penalties if they fall short of our minimum expectations for customer engagement. They can also be eligible for significant rewards if they meaningfully engage with customers around affordability concerns. This provides greater incentives to meet our expectations and go further enhance affordability overall. ✓✓	By combining options 2 and 3, the QAA creates strong incentives for companies to take a targeted, focused and effective approach to reflecting customer and wider stakeholder preferences and priorities. ✓✓
Driving improvements through efficiency and innovation	PR19 IAP encouraged companies to drive improvements through efficiency and innovation. ✓✓	The QAA will encourage companies to produce plans that support them to transform their performance, focused on being more efficient. However, under this option, incentives may not be strong enough to encourage the level of	Stronger incentives encourage companies to prepare ambitious plans that significantly push forward the sector's efficiency.	The QAA provides strong incentives to drive improvements through better efficiency. Other tools more clearly encourage innovation.

		ambition we want to see in this area. We will primarily use other tools, such as the innovation fund, cost sharing and enhanced ODIs, to drive improvements through innovation. ✓✓	✓✓✓	✓✓✓
Impact on Customer Bills	At PR19, companies with the best business plans received rewards which cost their customers around £1 per year on average. The information provided by the best plans reduced bills for all customers by revealing efficient costs. Companies with poorer plans received less favourable cost sharing rates and may return money to customers in 2025 depending on their outturn costs performance. ✓✓	A more focused QAA has no direct impact on customers' bills, but indirectly might reduce costs due to greater focus resulting in better business plans. ✓✓	Stronger incentives encourage companies to reveal efficient costs and better service. The information in the best plans will benefit all customers. Our top categorisation may impact customer bills by up to £4 per year on average.[26] This is more than offset by the benefits delivered by comparable incentives at PR19. Companies with poorer plans will return up to £2 per year to customers on average, and more if they outperform cost allowances. ✓✓✓	This option offers the same benefits as option 3. However, in addition, a more focused QAA will better encourage companies to target their plans at what customers and wider stakeholders want, meaning customers receive more value for the bills they pay. ✓✓✓
Impact on Companies	The scope of the IAP at PR19 was wide and included a number of areas that did not directly contribute to our determinations. This wider scope required more resources for companies to prepare plans. ✓	The QAA is more targeted than the IAP, allowing for some areas to be better addressed outside of the price review process. We are also reducing the number of submissions that companies need to make by removing the IAP stage of the process. Companies have greater clarity and guidance on our expectations for quality business plans and understanding of ambition in relation to service levels and costs.	Stronger incentives expose companies to greater risk and reward. Companies whose plans significantly push forward the performance of the sector can therefore expect to receive greater rewards than at PR19. However, without a more focused assessment approach, the process would still require more company resources.	Combining options 2 and 3 helps to reduce the burden on companies, increases clarity over our expectations, and offers significant rewards to companies who submit quality and ambitious plans. ✓✓✓

26 Dependent on movements in base cost allowances and the allowed return.

		✓✓	✓✓	
Impact on Other Stakeholders	Assessment of business plans has little impact on other stakeholders. -			
Practicality of implementation	Broad scope of assessment plus a separate IAP stage required significant resources. ✓	More targeted assessment and process than PR19 increases practicality. ✓✓	No practical change from PR19. ✓	More targeted assessment and process than PR19 increases practicality. ✓✓

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We regulate the water sector in England and Wales.

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