



By email:
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Date: 3rd February 2022

Dear Cost Assessment team,

Assessing base costs at PR24 – Wessex Water response

Thank you for opportunity to respond to the consultation on assessing base costs at PR24. It is positive to see that the consultation reflects company proposals put forward to date. Hopefully, this signals that PR24 can be a more collaborative approach to the requirements of the industry in both the next five years and the long term.

The consultation raises several important issues (the cost-service relationship, assessing sustainable levels of capital maintenance, consistent reporting to support comparable benchmarking), which cannot be solved overnight or in isolation. We set out in our response some suggestions for a potential direction of travel on these issues.

The consultation focuses on principles and proposals. Reflecting this, our comments are, at times, high level. The real test will be what the models look like in practice and what the mechanisms deliver in terms of outcomes. We look forward to seeing worked and practical examples to understand what this might mean for PR24.

Much of the discussion that the consultation prompts stems from 'what base buys'. This includes, but is not limited to, whether base "*has bought service performance improvements*" and, more generally:

- (i) the relationship between base costs and service quality and environmental performance; and
- (ii) concerns about future capital maintenance costs associated with past enhancements and capital maintenance funding being below the long-term sustainable level.

Our concerns on this are heightened by the need to achieve greater resilience and make progress towards net zero, as well as the role of cost adjustments and the lack of clarity on how enhancement will be considered. This is further complicated by a concern we have regarding consistency in interpretation and reporting of the data that underpins cost assessment.

Getting right the question of what base buys, not only in principle but also in practice going forwards, is critical. This will enable discussion on a number of other issues linked to the 'what base buys' question, such as how capital maintenance will be assessed and the treatment of enhancement opex.

We would welcome clarity on whether an enhancement cost assessment consultation should be expected ahead of the draft methodology as well as coverage on other important topics, such as productivity and RPEs, which impact on base heavily but are omitted from this consultation. This



would enable a more coherent understanding of the direction of travel for cost assessment in the round.

An area we think requires more attention than provided in the consultation is the alignment between cost incentive rates and medium-term benchmarks. Reflecting on PR19, Ofwat (and the CMA) made known that the cost allowances derived from historical benchmarking do not need to accurately capture a company's expenditure requirements in the next five-year period provided they represent a reasonable allowance over the medium to long term. However, in practice cost-sharing rates do not provide for the recovery of long-term average costs. Ofwat's approach to cost incentives has prevented any over- or under-spend against allowances that is due to timing issues from evening out over time. This is due to asymmetric sharing rates and limited attention to the case for stability in incentive rates from one price control period to the next.

Finally, we have serious concerns about greater separation of benchmarking and efficiency challenges between bioresources and wastewater network plus. For cost assessment to be coherent, and for an appropriate efficiency challenge to be set in the round across price controls, further work and transparency is required to make sure that costs, deliverability, financeability and risk marry up at an appointed company level. This will mitigate any risk that by disaggregating efficiency modelling we set an overall impossible frontier, along with keeping the link between cost and service in focus.

I hope you find this response helpful and would welcome further discussions on any of these points as we look to work collaboratively to deliver a progressive framework for PR24.

Regards,

A handwritten signature in dark ink, appearing to read 'Matt Greenfield', with a long, horizontal flourish extending to the right.

Matt Greenfield

Director of Regulation

Our response to the consultation questions

Cost-service relationship

21. Do you agree with the high-level approach to determine 'what base buys'? Can you define any additional analysis or information that could support this process?

Ofwat's proposed approach to cost-service is not consistent with an outcomes based framework. The focus on inputs and outputs creates short-term incentives misaligned to long-term objectives and obligations.

In the instance that Ofwat does not embrace an outcome-based framework for PR24, our comments on the cost-service, input-output proposals, as a steppingstone to full outcome-based regulation are set out below.

Summary

The question of what base buys needs to distinguish between what base bought for PR19 and what base can / should buy for PR24. It also needs to distinguish between what base buys and what the econometric benchmarking models buy, as for PR19 the two were not the same (e.g. the botex modelled costs included elements of enhancement). This is exacerbated by data concerns and legacy regulatory definitions which need unwinding to support like-for-like cost assessment at PR24 and going forwards. We suggest data cleansing of the base / enhancement buckets is a useful and important starting point.

What (true) base buys

RAG reporting requirements set out that base buys current service level to customers and the environment.

These costs are regressed as a model input against a basket of cost drivers to give a predicted allowance of what base buys. The PR19 models regressed historical data, therefore base bought the level of service in the most recent past / start of the AMP. However, as the models did not account for differences in performance levels as a driver of differences in costs between companies, the PR19 models implicitly bought some level of industry average service¹. Any delta to industry average performance had to be justified via enhancements or the cost adjustment process.

We support the ambition to make the cost-service relationship more explicit in cost assessment going forwards.

Enhancement should buy a new / step-change level of service performance as per the RAGs.

What base buys in practice

In practice, regulatory intervention has led to companies reporting costs across the base-enhancement boundary that are not reflective of where the money was actually spent or for what purpose (maintaining current or improving service).

The PR19 determinations required companies to report costs in the base vs enhancement bucket that their allowances determined, rather than reflecting whether they are genuinely base or enhancement. As a result, some costs reported in the Annual Performance Report (APR) as base

¹ We note this is not quite so simple as past enhancements are likely to have skewed this

are in fact enhancements. Leakage is a prime example of this for us. Inversely, companies may have reported enhancement spend even if it was not allowed at Final Determinations.

Left unaddressed, this:

- 1) makes historical APR base cost data as an input to econometric models muddled by cost-allocation and definition issues leading to non-comparable benchmarking. It makes 'what base can / should buy for PR24' messy;
- 2) creates a self-fulfilling false cycle that base "*has bought service performance improvements*". It cannot; this is the role of enhancements. We expand on this below; and
- 3) creates an incoherent approach across base and non-base costs and over AMPs (see our response to question 1).

Additionally, where companies accepted PR19 final determinations, it does not necessarily follow that they agreed with the principle that their base costs fund their current targets. This should not be assumed the starting point for any analysis around what levels of service base costs buys.

We recommend that additional analysis be undertaken (by Ofwat with the support of companies) to unpick this to provide a truer picture of both the base cost-service relationship and the enhancement cost-service relationship.

Added to this, there is a difference between 'what the predicted costs of the PR19 model allowed for in practice' and 'what base buys definitionally' because the PR19 modelled costs included elements of capital enhancement, thereby compounding the self-fulfilling cycle mentioned above. Ofwat needs to be clearer in its terminology and definitions.

Base does not buy service performance improvement

The consultation states, "*efficient companies will continue to improve performance over the long term from base expenditure*" (p. 64).

RAG definitions set out that base does not buy service improvement.

Current and past enhancements, correctly reported, typically require ongoing running costs (opex) and ongoing capital maintenance to sustain the new higher level of base service. Observed relationships of both base expenditure and performance increasing over time could be picking up this 'enhancement run-off' effect.

Visible improvements in service, may have nothing at all to do with the currently incurred base expenditure. There will often be a lag, potentially of multiple years, between investment and visible service improvement. Therefore, it is not necessarily true that there is an immediate link between base expenditure and service.

Productivity gains achieved by companies offer a plausible explanation to the observation that base buys service performance improvement. This would appear to solve the productivity mystery cited in the paper, whereby we are yet to see evidence of the industry making productivity gains.

Going forwards, we would welcome greater transparency around what efficiency and productivity challenges are being set, both implicit and explicit, and what the overall level of stretch is.

Ofwat's proposed approach and assumptions to what base buys

PR24 efforts to account for the cost-service relationship need to be company-specific to account for the fact that:

- *Companies are at different starting points* – each company is at a different level of performance depending on decisions made over 30+ years, as seen for example in the wide range of output on numbers of mains repairs and sewer collapses against the common PCs in PR19. Past enhancements have impacted current performance levels across companies and therefore the starting point of what base buys will differ by company and there is therefore little comparability. This is also a relevant consideration to the Long-Term Delivery Scenarios. In addition, some companies will over-perform their PR19 targets, whilst others under-perform.
- *Different marginal costs* – for some performance measures, future incremental service improvement (enhancement) will be more costly than past incremental service improvements due to diminishing returns of marginal costs and this depends on each company’s starting point. We disagree with the linear trajectory that Figure 6.3 of the consultation implies, both between companies and over time. It cannot be assumed that, for all PCs, historical marginal costs can be maintained through productivity offsetting diminishing returns. It is not the case that, year on year, companies can get more efficient or that technology always creates efficiencies, as in practice there are many factors involved.
- *Cost reflectivity* – The starting point should be what has been delivered from base in order to provide company-specific alignment of costs and what is delivered for those costs. This differs by company and by PC (regardless of whether common or bespoke).
- *Reporting is inconsistent* – the allocation of cost to performance improvements varies from company to company, e.g. with regard to allocations where a given enhancement can improve multiple PCs.

Given that (true) base buys current service and historical marginal costs may not reflect future marginal costs, the determination of Y0 performance can simply be forecast using an update of company-level forecasts for the of end of PR19 performance (start of PR24). We have concerns about the proposal to extrapolate a trend from base given the context of company spend on past enhancements impacting performance (see the first bullet above) and companies responding to short term incentives.

We agree with the need to review the performance level funded by base at each price review as a re-calibration mechanism within a longer-term framework. We disagree with the need to account for technology change unless Ofwat is not applying the usual frontier shift, as otherwise this would be double counting.

Additional analysis and information

1) *Base-enhancement reporting*

An Ofwat and industry led collaborative review of cost allocations across base and enhancement is required to unwind the regulatory intervention and promote consistent reporting between companies and to the RAGs in order to support like-for-like benchmarking of those costs. We would expect this consistency review to focus on the make-up of base (opex, enhancement opex, capital maintenance) and enhancements.

Supporting this, we would welcome clarity of definitions and retrospective recognition of the costs for enhancing performance.

In addition, there is a need to consider inconsistencies in cost allocation in the reporting of costs and benefits, for example marginal costs, relating to PCs.

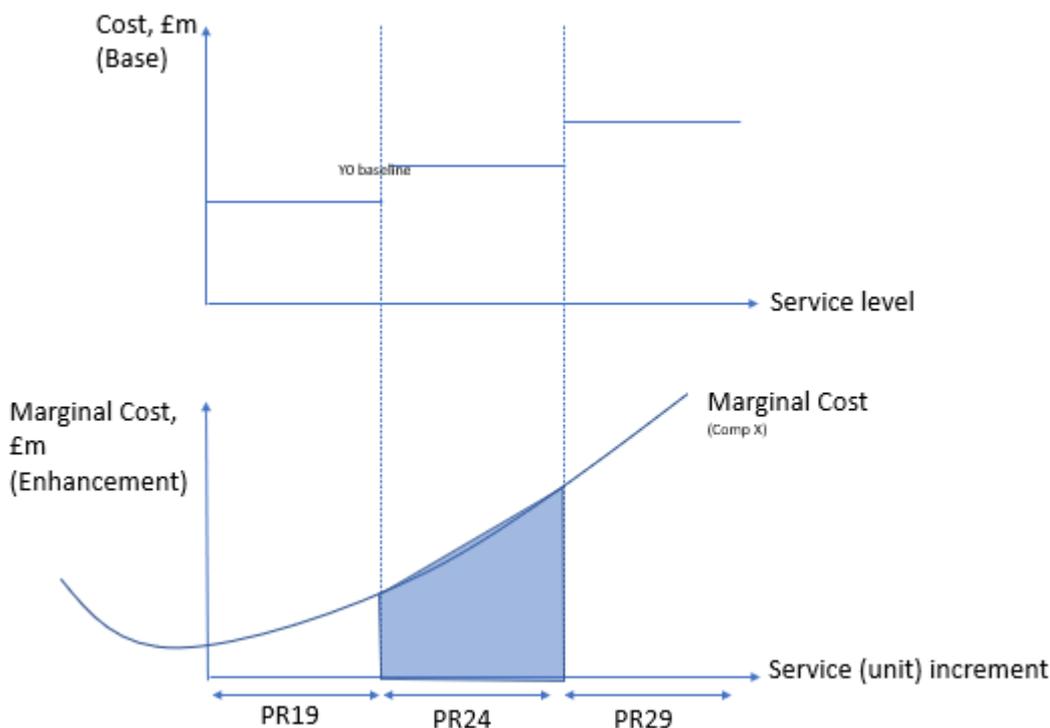
2) *Coherent treatment of quality / performance across catch-up and frontier-shift*

To ensure coherence of the cost assessment framework with regard to quality or service performance, the ambition to account for the cost-service relationship of industry benchmarked costs must also be accounted for in any frontier shift / productivity challenge that is applied to those benchmarked costs.

Productivity based measures from EU KLEMS datasets do not adequately account for quality improvement of outputs. To be coherent and consistent, quality adjusted productivity measures will be required.

A diagrammatic illustration

The diagram below serves as a summary of what base buys at a company level for a particular performance metric; namely base buys current service, enhancements buy service improvement (often at a marginal cost higher than in the past, holding productivity constant) and base expenditure thus increases in order to maintain that new higher level of base service.



Finally, what base buys and what the PR19 botex models allowed for are not the same due to the inclusion of some enhancements in the botex models. To support coherence and reduce ambiguity it would be worthwhile to align what base buys and what a botex model buys for PR24.

22. Do you consider it would be feasible to assess the ‘efficient’ baseline performance level for each company for individual PCs such as leakage and PCC through econometric modelling? Are there any other PCs where you consider this could feasibly be attempted?

As discussed in our response to question 21, given that (true) base buys current service and historical marginal costs may not reflect future marginal costs, the determination of Y0 performance can simply be forecast using an update of company-level forecasts for the end of PR19 performance (start of PR24). On this basis, we do not think econometric models are needed or desirable to achieve this.

However, we welcome the acknowledgement that differing companies will have differing levels of efficient service, driven by exogenous factors.

We have some concerns in running two sets of econometric models alongside one another, one set to determine baseline costs and another to determine baseline performance, without any alignment between what level of costs buys what level of service. We do not think running two sets of econometric models in isolated parallel will account for the cost-service link. Company level forecasts of what base buys in terms of current service, as per our alternative proposals, would provide this linkage.

Based on our alternative proposals, the determination of Y0 performance (start of PR24 / end of PR19) could therefore be attempted for a suite of PCs for all companies. For the approach to remain proportionate at this stage, we suggest the priority selection of metrics mirror those which are most aligned to an outcome-based regulatory framework. Mirroring our response to the ‘PR24 and beyond’ consultation, we think there should be a 1:1 relationship between outcomes and the metrics used to assess these – see below.

Outcome	Metric
Safe water supply	Water compliance risk index
Reliable water supply	Supply interruptions per property
An effective sewerage system	Sewer flooding
Great customer experience	C-MeX
Affordable bills	Proportion of customers with bills >5% of disposable income
Net zero carbon	Carbon dioxide equivalent emissions
Sustainable abstraction	Compliance with abstraction licences
Good environmental water quality	WFD – Nitrogen quality
	WFD – Phosphate quality
	Pollution incidents
Increased biodiversity	Biodiversity score (gain)

23. The need to collect further granular data to elucidate the cost-service relationship was highlighted by companies in response to our PR24 May consultation. Can you propose any data it would be proportionate to collect to support the high-level approach outlined in this chapter?

For each PC, cost data is required at the level of granularity that will enable understanding of what performance level base expenditure has bought and similarly what performance improvement enhancement expenditure has bought in the past.

We envisage that cost data on opex, capital maintenance, enhancement opex and enhancement capex for each PC would be helpful. This would inform an improved allocation of costs across base models and the proposed adjustment mechanism, whether the latter takes the form of an enhancement or ODI. We anticipate at minimum historical cost information of this form is needed for the econometric models (assuming they are backward looking). This information capture could build upon what is currently required in the APR Table 6D for leakage.

In addition, company-level forecast marginal cost information and the corresponding increment of service performance improvement will be required to calculate the adjustments where a company's commitment to performance improvement differs to the current service level. By definition, this would be enhancement only. We set out what this adjustment could look like in our response to question 25.

Where additional data is to be collected, we think that more comparable and complete, shorter-term data will be more advantageous in setting true efficient cost allowances than longer-term poorer data. When using these econometric models, it is much more useful to have more sets of independent observations (companies) than longer time series. This is consistent with our response to question 6.

24. What are your views on attempting to use of a composite variable to investigate the cost-service relationship, in the context of the methodological issues and complexities we outlined?

Reflecting our responses to questions 21-23 in which we set out that Y0 baseline performance can be determined by developing an updated company-level forecast of performance at the end of PR19 (start of PR24), we do not think econometric models are needed or desirable to achieve this. As such, the question of whether such econometric models are run at a PC level or using a basket of PCs in a composite variable becomes irrelevant.

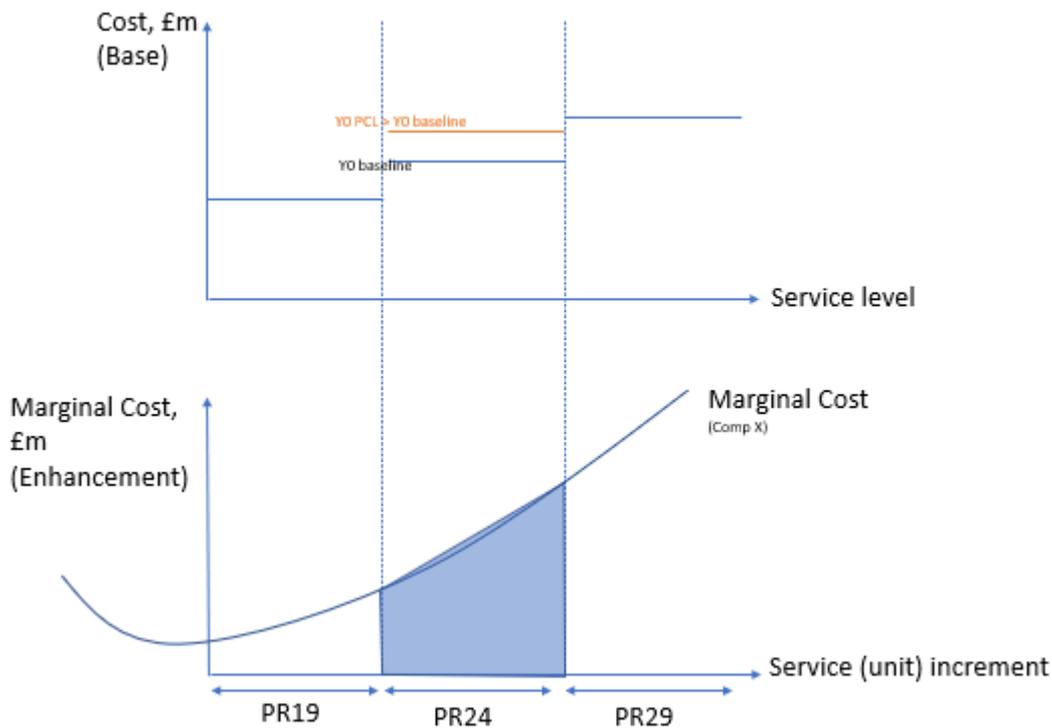
If our alternative proposals are not taken forward, we would be cautious of the use of composite variables because:

- Bundling multiple performance measures into a single variable makes interpreting the causality of coefficient difficult. For example, assuming the composite variable is on the right-hand side and is being explained by a set of cost drivers in a log-log model, e.g. what should a 1% increase in cost driver X imply for performance? Which component measure(s) of performance are improving and by how much?
- Composite variables were tried at PR19 with limited success. We need to be mindful of the PR19 lessons and while worth revisiting, need to remain focused on the key questions that PR24 cost assessment should address.

25. Do you have any proposals for how to make adjustments where a performance commitment level differs from that expected to be delivered from base costs?

We propose that adjustments for where a performance commitment level differs to that expected to be delivered from base costs (i.e. an enhancement adjustment) are assessed using a shallow or deep dive based on company specific marginal cost data. The extra scrutiny would determine both the enhancement adjustment but also the increase in base (enhancement opex and capital maintenance) required to maintain that higher level of performance at the new higher base level.

We build upon the prior illustration below to demonstrate the implications of the adjustment in terms of funding and performance over a multi-control, longer-term setting. Our initial thinking is that the adjustment could be calculated as the forecast marginal cost(s) multiplied by the delta in performance above baseline.



In addition, our review of the consultation has prompted the following considerations:

Incentives

There is a need to ensure that there is not a double provision of allowances for above baseline performance from the enhancement and ODI reward framework. We think that the adjustments would best take the form of an enhancement adjustment because:

- It will make it clearer what base buys at PR29;
- It would provide timing alignment between the enhancement investment and the impact on performance; and
- It provides greater funding and methodological certainty.

Funding of enhancement allowances

If enhancement adjustment allowances for service improvement are made through this proposed cost-service adjustment mechanism, it is not clear how enhancement allowances for service improvement will be assessed where this is not explicitly covered by a current PC (fully or in part) or not defined by a PC at all. For example, not all service improvements delivered by enhancements are explicitly aligned to PCs, such as enhancement allowances provided for odour at PR19.

Scope

In our view, the proposed framework is not very flexible or adaptive to changes in commitments, e.g. over multiple AMPs and the longer-term. This needs further consideration such that the framework can align with the longer-term needs of the sector.

This approach may not be readily applicable to all areas of service, specifically areas that are coming under a new level of scrutiny, such as operational carbon emissions. These areas will need separate, specific consideration.

Capital maintenance and asset health

19. Do you agree with the different elements / approaches to introducing more of a 'forward-look' into our approach to assessing capital maintenance expenditure? Are there other elements / approaches we could consider?

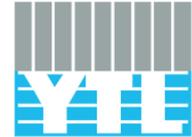
Capital maintenance requirements

There are ever increasing pressures on capital maintenance. Significant enhancement investment in the early 2000's has increased our asset stock; these assets are now requiring increasing maintenance. Coupled with increasing customer expectations, performance targets, and requirements set out in the DWMP and WRMP, this results in potentially significant additional maintenance requirements. These are some of the key reasons why the future is different to the past. Change is more a question of when and how fast, not if. More regard to how much has changed since PR19 was determined is needed. For example:

Assets created under previous enhancements require capital maintenance. Between 2005 and 2015 there was significant investment and growth of the industry's asset base. This can be seen through the real growth in the RCV over this period (2009 to 2020 the industry RCV grew by 17% in real terms). Company RCV run off rates suggest an average asset life of c20 years. This means that a lot of these assets will be ready for replacement – this is maintenance that companies have not had to incur before and will have to incur over the coming years.

Incentives push companies to short term solutions. We are nervous that the improvement in asset related performance commitments the consultation sets out in Fig 5.1-5.3 is a symptom of skewed investment planning in the long-term to meet regulatory incentives and obligations in the short term as companies make trade-offs with other (non-incentivised) investments. This is damaging to the long-term health of assets and the network and creates a view of capital maintenance requirements and allowances below the long-term sustainable level. This is a significant risk. From a resilience perspective this risk of 'too little too late' will have negative and wide-reaching impacts unless incentives are re-calibrated over the longer term.

Asset lives are getting shorter. Technology of all forms has typically resulted in replacing long-life assets with short-life assets, often of no more than 5 years. Therefore, the volume of assets requiring replacement each AMP is increasing, which is adding to the capital maintenance burden. We often do not have a choice, and this leads to increased cost (not efficiency) across the sector, and a significant additional capital maintenance cost in total as this was not an asset that we previously needed to replace at any material frequency.



Forward look

Reflecting the above context, we agree with the principle of introducing a more forward-look into the assessment of capital maintenance. We think a forward-look element to opex could also be of merit, to reflect that current and past enhancements not only require ongoing capital maintenance but also ongoing running costs (see our response to question 21). Using backwards looking panel data in econometric models cannot easily capture these additional requirements going forwards. Additionally, business plan incentives and the form of the cost assessment models generate perverse pressure for companies to submit low cost plans in the guise of “efficiency” that do nothing but perpetuate this problem as discussed above.

Ofwat's proposals for capturing a forward-look

Ofwat set out four proposals for how a forward-look element could be introduced into cost assessment. We are not sure that any of these could achieve the desired outcome, however ‘proof of the pudding’ could be in the testing.

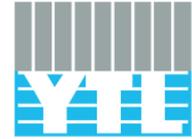
We set out our thinking on the use of forecast data in the benchmarking models in response to question 6. We would welcome further discussion and clarity around how Ofwat envisages the forward look catch-up challenge could work, e.g., given the risks of using forecast data as we set out in our response to question 6. Inclusion of a lagged enhancement variable as a driver of ongoing capital maintenance and enhancement opex requirements in the benchmarking models would capture the expenditure interactions we discuss in our response to question 21. However, we expect this would not be amenable to Ofwat for the pseudo-guarantee of future allowances this might prescribe. More plausibly, inclusion of a time trend variable may be a better candidate to capture this effect and we discuss this in more detail in our response to question 11. Separate capital maintenance modelling would lose the line of sight from enhancement allowances and assessment and therefore we do not think separate assessment is a sensible avenue to pursue, noting historical trade-offs.

An alternative approach?

This cannot be solved overnight or in isolation. A useful starting point for Ofwat and the industry to answer together is the question of what base buys in cost assessment and unwind the legacy effects of regulatory reporting issues blurring the base / enhancement split, to shed light on capital maintenance. A more in the round consideration of capital maintenance requirements, to recognise the ‘enhancement run-off’ of past and current enhancements is important.

We would encourage Ofwat to strongly consider the required capital maintenance of the industry over time, past and future, as indicated by the RCV run-off (see above) and how this compares to what base has bought and what base could / should buy for PR24, in particular with regard to capital maintenance. It suggests to us a significant under-funding of capital maintenance over time (perpetuated by the business plan incentives and previous approaches to cost assessment modelling).

Some simple asset-level analysis of asset lives and market replacement costs across companies could provide a useful cross-check on any modelling that is done in this area. For example, if we have 2000 sewerage pumping stations, with 20-year asset lives and typical (market sourced) replacement cost of £xk this can provide a rule of thumb to compare the modelling against. While this may not be appropriate for all assets, it could be produced for most significant ones.



Correcting the short-term perverse incentive properties in favour of a more long-term alternative will more closely align the risk and return properties. This could be coupled with better understanding of companies' asset risks which we discuss in more detail in our response to question 20.

20. Do you have any comments on the proposed long list of asset health measures in Table 5, particularly in relation to their suitability and how feasible they are to collect? Please include any reporting or definition changes you would like us to consider and provide suggestions for other measures not included in this list.²

We are not clear on why Ofwat is seeking to collect this information and would welcome clarity on this. It is not clear if and how this will be used for cost assessment, company monitoring and / or some alternative regulatory application.

It is the responsibility of each company to manage its asset stock in the best way it can, to maintain efficiency. Any additional information should materially add value to the company or the regulatory process and not detract from our long-term stewardship role. Some of the measures proposed are still in their infancy and used by individual companies. Further understanding and assessment of these measures would be needed before they could be adopted as reportable measures.

It is difficult to comment on the suitability of metrics at this time. We provide the below high-level comments for consideration and would welcome the opportunity to provide further feedback when proposals are refined.

Are we targeting the right thing?

We disagree with the targeting of asset-related performance commitments. Instead, these should focus on the services that customers care about (the outcomes).

We are concerned that collecting a host of asset-related metrics is not targeting the right thing, because:

- *This will reinforce the targeting of inputs and outputs, not outcomes.* Targeting both the means and the end will only make worse the perverse incentive properties we set out in our response to question 19. Correctly targeting and incentivising companies to deliver true outcomes means assets are managed in the best way possible to deliver those outcomes.
- *It reduces the levers we can use to implement the asset strategies needed to meet regulatory outcomes.* Different companies have different risks and different asset strategies to manage this. Collecting and reporting on a suite of common asset measures to create a one-size fits all monitoring / assessment framework will not identify the true and underlying risks. This is likely to be inefficient, create perverse incentives and may not encourage the best uptake of innovations. Ultimately this could make a company less efficient with no material benefit.
- *They may not be good or true indicators of asset health, e.g. activity done does not necessarily indicate a 'healthy' asset or a 'healthy' network.* In many cases, it may be more efficient to let an asset run to failure, if that failure would have no detrimental impact on the service customers receive. Each asset will have its own asset maintenance approach, based on not just its importance but also the criticality of the site overall. These are complex

² The UKWIR Future Asset Planning project has developed a draft list of asset health measures which companies are encouraged to consider when providing feedback.

site-specific factors, and we do not see how including this level of asset-based information and reporting can materially help. Rather we expect it will only hinder the efficient tactical and strategic management of the assets in achieving long-term service outcomes.

- *It may create unnecessary complexity.* Even with very visible and well-understood measures such as pollutions and supply interruptions it has taken many years to get a standard definition, commonly applied. Seeking consistency in asset health measures will add more layers of technology, management and analysis to a business which will have evolved its own systems, processes and analytics to manage its own asset stock.

Will the proposed asset metrics do the job?

Whilst we accept that it is reasonable to want greater visibility on how companies operate regarding asset management, asset health and asset risk, we are not sure that collecting the level and mix of metrics proposed in the consultation will help. We are doubtful that the type of metrics suggested in Table 5.2 can provide this information, given the size and complexity of companies and the differences in their circumstances and operating models. Arguably, these metrics act as a distraction from the underlying risks and, if collected and reported, might give a false sense of security.

In our view, collecting data to support the observation that resources may be targeted to meet short term incentives and performance whilst letting other areas deteriorate is not the solution. The aim should be to address the current perverse incentives and develop a more long-term risk-based understanding of asset health and capital maintenance requirements.

We would welcome consideration of alternative approaches that would give early warning where risks of failures to outcomes are emerging or increasing and to understand how this ties in to the required level of sustainable capital maintenance. Our initial thinking is that this could be addressed through assurance of risks, e.g., once in a price control audit and review process of companies' individual asset management / health frameworks and network risk registers to understand the key risks, both short term and long term, rather than through mechanistic short term performance commitments.

Finally, we consider that any proposed approach should consider the network and system level health and efficiency. Purely considering asset-level data may give a different and misleading picture when aggregated to this level.

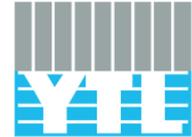
Cost adjustment claims

14. Do you agree that the cost adjustment claim process at PR24 should be separated between base (wholesale and residential retail) and enhancement claims?

The role of cost adjustments

The consultation acknowledges that differences between modelled costs from the econometric benchmarking and actual costs are not simply a reflection of relative (in)efficiency. However, this is not really addressed. It should be made clear in cost assessment, determinations and publications that a company's actual costs might deviate from cost benchmarks derived from econometric modelling due to a number of factors besides genuine (in)efficiencies. These include but are not limited to:

- *Modelling limitations.* Models are a tool to help understand the real world, they are not a perfect simulation but rather a simplification to help understand key relationships. As



such models have limitations, they cannot capture the full range of underlying cost drivers and they cannot perfectly quantify the relationships between these and companies' efficient expenditure requirements;

- *Differences in the timing of investment* between companies can create distinct differences in the profiling of one company's requirements in the next period compared to others;
- *Differences in attitudes to and appetite for risk* in the context of uncertainty can likewise cause deviations from a modelled predicted costs (e.g. which may affect decisions on how much to spend now to avoid risk of higher costs in the future); and
- *Data quality issues.*

Cost adjustments reflect a commitment to transparency from all parties that models are not perfect and therefore, especially with the combination of a more symmetrical framework, should not be subject to a materiality threshold (net or gross of any implicit allowance inferred).

Claims for benchmarked modelled costs and claims for non-benchmarked costs

It is difficult to provide a view on the structure of the cost adjustment process before the process for how cost allowances will be determined is known. However, we think it would be helpful to make changes from the approach, process, and set of gates used for PR19.

The most useful split would be between adjustments to be applied to cost estimates derived from cross-industry benchmarking, for example to take account of cost drivers not captured in the benchmarking models; and shallow / deep dives which consider the overall case for Ofwat allowing price control funding for a proposed enhancement and non-benchmarkable costs (e.g. needs case, customer support, efficient costs etc). For reasons set out in our response to question 21 (that the PR19 benchmarking models accounted for more than just base costs due to the inclusion of elements of enhancement), this would not be quite aligned to the base / enhancement separation of claims that this question seeks responses on, but rather a benchmarked and non-benchmarked split.

PR19 cost adjustment claims relating to benchmarked and non-benchmarked costs were assessed using a common set of gates but in practice were quite different and involve different questions. The adjustments considered under claims relating to benchmarked costs may apply to base cost modelling but potentially also aspects of enhancements for which benchmarking is used, but which do not involve the full set of questions/considerations as under the deep dives of non-benchmarked costs discussed above.

Where a claim may have cost elements which bridge both benchmarked and non-benchmarked costs, a single claim would be sensible and avoid duplication.

Good signposting, guidance and transparency regarding cost adjustments and the calculation of implicit allowances, in particular, is important. Early sight and transparency of both the benchmarking models and the approach to non-benchmarked costs is also important.

Symmetry

We agree with the general principle of a process for making symmetrical adjustments. This reflects our above view that not everything can be included in a model, and that therefore cost adjustments could be upwards or downwards.

The apparently high thresholds or high evidential bar applied to cost adjustment claims in the past has reflected the reality that these tended to be asymmetrical – acting to increase allowances for

the company whose claim is accepted with no offsetting reductions. In light of that, a different gate structure may be appropriate for clearly symmetric adjustments; where they arise due to limitations in the modelling we question the need for explicit customer support for example.

There does not seem a good rationale for a bias against off-modelling adjustments for factors not captured by the main base cost models. The process should be much more open to allowing adjustments where one-sided adjustments are replaced by symmetrical adjustments, and any explicit or implicit materiality thresholds can be removed. In a context where benchmarking is used to determine £billions of expenditure allowances, symmetrical cost adjustments provide a way to improve the extent to which the allowances reflect underlying cost drivers, relative to the outputs of simple econometric models. The test for their inclusion should focus on whether these are likely to improve or worsen the overall quality of benchmarks produced across the industry. More off-modelling adjustments should be seen as a sign of success for PR24, demonstrating more sophisticated cost benchmarks. Cost-adjustments to performance different to baseline could be a good example of this.

Symmetrical adjustments will not always be appropriate however – this will depend on the nature of the claim. In some cases, the logic for a claim increasing allowances for one or more companies would not imply a need to reduce allowances for others. Where such claims are relevant to only one or a few companies', by definition, data collation will not be cross-sector (and might be difficult to obtain and report consistently). On the basis that models are not perfect, it would be unreasonable not to consider a company-specific claim on the grounds that only company-specific data might exist. The application of symmetry on non-benchmarked / enhancement costs might be difficult for those same reasons.

15. What base cost adjustment claims (wholesale and residential retail) would you consider submitting if the PR19 base cost models were used to assess efficient costs at PR24?

As per our response to question 14, it is difficult to comment on what claims we might consider without sight of the rest of the price review methodology including, for example, associated performance commitments and methods of cost assessment to which any adjustments may apply. To reiterate, early sight and transparency of both the benchmarking models and the approach to non-benchmarked costs is therefore important.

Beyond the adjustment claims that we did make at PR19, and at a high level, there may be a need to prepare a claim for capital maintenance, large schemes, bespoke circumstances, step-changes in performance, and cost-service depending on how these are approached for PR24, reflecting the largely principles-based discussion on these topics in this consultation. Please see our responses to questions 19-20 and 20-21 respectively.

16. What additional cross-sector data should be collected to support the submission of the claims indicated in response to the previous question? Please describe and explain the rationale behind the additional data that you consider should be collected and provide a draft definition.

As per our response to question 14 and 15, it is difficult to assess what data will be needed when both the models and then cost adjustments need to be considered first. As both are still moving parts, pre-empting data requirements will involve a lot of guesswork. Our preference is to collect data that is fit for purpose, once there is transparency of the models and claims, rather than collecting a lot of data upfront that becomes redundant in use and format.

On a practical level, collecting cross-sector data on cost adjustment claims, which might only be relevant to one / a few companies, is inappropriate. It should be recognised that not all claims will / can be symmetrical.

17. How can the cost adjustment claim guidance be enhanced to improve the quality of cost adjustment claim submissions?

As set out in our response to question 14, good signposting, guidance and transparency regarding cost adjustments and the calculation of implicit allowances, in particular, is important. Early sight and transparency of both the benchmarking models and the approach to non-benchmarked costs is also important to facilitate this.

We agree with the industry comments raised in the CAWG discussion on this topic (11th November 2021).

18. Would an early cost adjustment claim submission be welcome at PR24?

An early submission may be of help if we have sufficiently early sight of the models (as proposed) and receive feedback in advance of the Business Plan submission. This would support submission of claims that are relevant and more aligned to expectations and evidence base requirements. At PR19, companies were required to prepare claims blind to the models against which the adjustment may or may not be applicable. This would be of help in resourcing PR24 submissions.

Principles of PR24 base cost assessment

1. Do you agree with our principles of base cost assessment?

The consultation is largely one of principles, theoretical approaches and criteria (e.g., see figure 2.1 and table 3.2). We acknowledge this is a sensible starting point along with the PR19 approach, however the ‘proof of pudding’ will be in the practice of what the models and mechanisms deliver in terms of outcomes. The principles and criteria have not had sufficient scrutiny or testing in practice to be relied on absolutely and exhaustively at this stage. We would welcome worked examples, e.g., using historical data in order to envisage what this might look like for PR24.

Reflecting this, in the interests of prioritisation and proportionality, we have not sought to review and critique in detail the principles and criteria.

Simplicity

The PR14 models, with interacting variables and unintuitive coefficients, provided a useful lesson learnt that less can be better. However, simplicity for simplicity’s sake is not helpful either. In practice, we would caution against the use of simplicity as a principle to inform decision making at PR24. We do not think sensible proposals for improvement should be dismissed on the grounds that they are not sufficiently simple. Aspects of the PR19 framework were more complicated than PR14 and this may be true and appropriate for PR24. What is more important is the need to be clear and transparent about methodology and not deviate from this when it comes to application without due regard. We note the United Utilities proposed principles set out in the consultation do not refer to simplicity and we suggest this be a consideration but not a decision-making principle.

Econometric models cannot capture everything. With this in mind, Ofwat should be more open to cost adjustments and in light of the symmetry proposals put forward, this would support removing the materiality threshold as we set out in our response to question 14.

It would be helpful if a 'stretching but achievable cost efficiency challenge' was defined and quantified.

We think that it is important to look at the overall stretch of the efficiency challenge at an appointed company level, considering both costs and services. This will mitigate any risk that by disaggregating efficiency modelling we set an overall impossible frontier, along with keeping the link between cost and service in focus.

Endogeneity and perverse incentives

The consultation makes the point that, *"including variables in models that in the short term (e.g., performance) could generate perverse incentives"* (section 2.3). The risk of perverse incentives warrants further scrutiny. For instance, including variables that are under a relatively high degree of management control in regression models applied to historical data does not automatically create any material risk of perverse incentives. How significant any risk may be will depend, in particular, on how cost benchmarks for each company are calculated in light of the historical models. For example, there might be limited risks if the forecasts for 2025-30 for such variables were made on an industry-wide basis (or some other external basis). In some cases, the inclusion of those variables in the historical modelling might act as control variables, improving the accuracy of estimated coefficients on other variables in the modelling. This is not to say that endogenous variables should be included, simply that the case against them on incentives grounds has been over-simplified and exaggerated.

Robust econometric cost models

A cornerstone of robust econometric models is stability. Running sensitivities on model stability when a year or company is removed is a key check. We highlight in our response the importance of data quality and consistency as a further cornerstone of developing good models that generate meaningful outcomes.

Coherence

We fully support the principle of coherence (principle 6) for base cost assessment. However, the issue of deep-rooted incoherence between base costs vs. enhancement costs needs to be recognised. These concern, for instance: the legacy definitions of base costs versus enhancement costs; whether these definitions are fit for purpose for PR24; and whether the overall approach to cost assessment is coherent across base and non-base costs and over time (not just one AMP). We expand on these further in our response to question 21.

We would encourage that coherence be applied not just within the different building blocks of cost assessment but also with the building blocks of the regulatory framework more generally, in particular the alignment to outcomes, incentives and risk. Coherence between government and regulatory policy objectives (including those beyond Ofwat) and funding to deliver those policy objectives is also crucial.

For cost assessment to be coherent and for an appropriate efficiency challenge to be set in the round across price controls (noting the proposed separation of bioresources), further work and transparency is required to make sure that costs, deliverability, financeability and risk marry up at an appointed company level.

2. Do you consider any important principles are missing?

Quality and assurance. This embodies two considerations. First the need to ensure quality and consistent reporting in order to derive meaningful benchmarks via like for like comparison.

Second the need for assurance, cross checks and sense checks. Companies provide assurance of the model inputs (e.g. via APR / BPDT reporting), so too should the models and outputs that determine company allowances along with appropriate levels of checks.

We would welcome the publication of self-assessment of end models against principles to give greater visibility on this.

Approach to wholesale base cost modelling at PR24

Scope of wholesale modelled base costs

3. Do you consider the scope of wholesale modelled base costs should be amended at PR24? If so, please explain how the potential amendment/s to wholesale modelled base costs can be justified based on our proposed assessment framework.

There needs to be clarity on what base funds, if and how what base funds differs to what a botex econometric model funded for PR19. Please see our response to question 21.

Scope of PR19 Wholesale Botex models

Noting the above, we provide comment on the PR19 Botex models, in acknowledgement that they do not only model base expenditure but also include elements of enhancement. As per our response to question 21, we recommend alignment between what is defined as base and what is modelled as base.

With regard to the scope of the PR19 wholesale modelled base costs set out in Table 3.1 of the consultation, we recommend removal of the enhancement elements of new developments from the wholesale water models and the enhancement elements of new development and growth, growth at sewage treatment works, and reduced flooding risk for properties from the wastewater models. These enhancements are inherently lumpy, and this reflects our agreement with Anglian Water's proposals of the division of standard and strategic growth (see below).

We would not be averse to the removal of all elements of enhancement from the botex models for separate assessment as a means of providing the above alignment between what is defined as base and what is modelled as base. The terms 'botex models' and 'base models' are used interchangeably, which adds to this ambiguity.

Scope of PR24 Wholesale Base models

With regard to Table 3.2 of the consultation (proposed criteria for adjusting the scope of wholesale modelled base costs at PR24), we make the following comments:

Criterion 1 – This criterion seems sensible, providing there are robust processes to assess new costs, including for example new opex and capital maintenance costs as a result of enhancement needed to sustain a new higher level of current service.

Criterion 2 – This criterion provides acknowledgement that there is no such thing as a perfect, all-encompassing model. With this in mind, we set out our views on the role of cost adjustments in our

responses to questions 14-18. The cost-service relationship is a good example of where we see this criterion applying.

Criterion 5 – We would welcome further clarity on this criterion. If costs are largely outside company control, does this mean the exclusion would necessarily take the form of pass-through?

Where separate assessment / exclusion is proposed, we would welcome further information on what this is in order to have a better view of what cost assessment for PR24 might look like overall.

Our reading of Table 3.2 is that econometric models are the default and only if a cost cannot be reasonably assessed within the models, should it be assessed separately. In principle, some costs might readily lend themselves to a non-econometric method of assessment as default.

Growth

Providing sufficient and efficient allowances for growth is important to ensure sustainability of our services and performance levels to new customers without detriment to existing customers. Strategic growth must be assessed in the context of the company, network configuration and capacity at a local level and other inter-related drivers of expenditure; none of which readily lends itself to sector level quantitative benchmarking as a single method of cost assessment.

Building on our above comments to Table 3.1. (see above), we generally agree there should be different cost assessment treatment for standard and strategic growth. It seems reasonable for routine 'standard' growth to be modelled equal to the marginal cost of delivery within a base model as long as cost allocations are accurate and consistent.

Given what base buys (see our response to question 21), as we are required to serve a growing population, we would expect base expenditure to increase as we have to extend that same level of service to new customers. Therefore, inclusion of routine activities would not cause us concern.

The determination of allowances for strategic growth needs to be at a local level. Site-specific shallow dives could be a candidate approach for this. Given the localised level at which network capacity and strategic growth-related expenditure need to be assessed, neither historical growth rates nor historical scheme costs are a good predictor of future requirements. The use of forecast data would appear more appropriate here.

Forward looking strategic-growth cost assessment should be aligned to local authority planning information, not extrapolation of ONS population data mapped to incumbent supply areas, as the former provides the best alignment between the policy requirements of central government and implementation costs of water companies to meet those requirements. The funding provision needs to recognise the policy and regulatory requirements that may come from other government departments and agencies as part of a coherent cost assessment approach as set out in our response to question 1.

We are supportive of the consistency reviews Anglian Water proposes in Table 3.3 and see our response to question 4 as complementary to this.

Page 25 of the consultation invites companies to explain if/how the removal of growth-related costs from the wholesale base cost models can be justified based on the proposed criteria set out in Table 3.2. We set out above that the inclusion of routine new connection activities within botex models seems sensible. With regard to strategic-growth costs, definitionally these are not base, they are enhancement. The costs, as site-specific, have not been incurred in the past and are inherently lumpy and therefore are likely to vary across companies and over time. The site-specific

nature of such spend means identification of a suitable cost-driver to capture this, without growth requirements getting 'lost in a company-level average' suggests to us that separate assessment along the lines of what we set out above is more fit for purpose.

Data concerns

We are not aware if the APR changes set out on p.24 of the consultation have improved reporting consistency. The role of forecast data may need to be considered here, both to reflect the forward look nature of growth-related expenditure requirements but also the potential non-comparability of data reported pre and post 2020-21.

We note the ambition to collect similar data to the recent developer services data request through the APR. We have concerns regarding the use of data from other parties beyond incumbents to inform our expenditure allowances. If this is to be used, we suggest it be sourced direct as part of a market information request to NAVs and SLPs which have their own audit and assurance requirements, rather than the APR processes that govern incumbents as the collation and quality of this data is beyond our management control.

Pre-modelling adjustments

As with all areas of cost assessment and the PR24 methodology, including those proposed in Table 3.4, we expect clear upfront methods and clarity on what and how is to be funded ex-ante.

Enhancement opex - With regard to enhancement opex, it makes sense for this to be modelled in base as it becomes part of a company's ongoing running costs to deliver the new level of service performance, in the same way as capital maintenance. Jointly, enhancement opex and new capital maintenance requirements can be considered 'enhancement run-off', i.e., the incremental level of base needed compared to the past due to the increased expenditure requirements needed to maintain a new, higher level of steady state service performance. We provide further detail in our response to question 21.

Part of the consistency exercise that is thus needed to ensure clarity on the base-enhancement boundary for the purposes of modelling, thus relates to enhancement opex. We expand on this in our response to question 21 also.

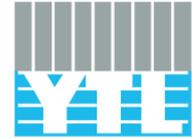
Atypical expenditure - With regard to atypical expenditure, these items could vary greatly. We think that these need to be assessed against the criteria proposed in the consultation to see if they should be included or not.

4. Would you recommend collecting additional data in relation to growth expenditure (cost and/or cost driver data) to improve cost assessment at PR24? If so, what additional data would you recommend collecting? Please provide definitions alongside suggested data additions.

We think the data proposals made by Anglian Water are sensible.

For strategic growth (as set out in our response to question 3) we envisage the likely method of assessment will be site-specific shallow dives in the absence of econometric methods being able to generate sensible outcomes. Therefore, the data requested must be fit for purpose for the intended use.

Data for waste treatment growth schemes



Reflecting our experience of PR19, we would suggest STW size band specific data and costs along with additional granularity on any changes in Dry Weather Flow (DWF) for:

All growth-related expenditure - At some sites, meeting growth requirements also leads to other unavoidable costs associated with regulatory obligations. For some waste treatment sites, meeting growth requirements also requires an increase in the (DWF) permit for the site. The EA quality permit conditions at that site are also tightened pro-rata to ensure no net change in pollution load discharged from that site. Where the tightened quality permits cannot be met by the site's existing process capability, additional expenditure is needed to ensure compliance. Due consideration of the additional costs incurred is required in the cost assessment framework such that they are not mis-labelled as inefficiency if compared to other sites where there is no change to the permit quality conditions.

All drivers of investment, not just growth. In assessing growth-related costs, it is important that the unit cost of the growth element only for schemes and investments where there are other cost drivers at play are recognised. For example, some sites will have both growth and quality, e.g., WINEP, investment drivers. Consistency is key to ensure comparability if a benchmarking method of cost assessment is used for PR24 such that costs and unit costs are not inadvertently skewed, e.g., due to differences in interpretation or allocation of costs where multiple drivers interact.

Cost allowances need to reflect a long-term efficient view to providing future capacity this may be providing more capacity in places than is immediately required to minimise future visits and utilise economies of scope in delivery.

Sample period selection

- 5. Do you agree that we should utilise the full historical data series available to develop the wholesale base cost models at PR24 (from 2011-12 onwards) unless there is clear justification for using a reduced time series (eg structural break that cannot be addressed through other remedies)?**

If PR24 retains a 5-year outlook, we would question the relevance of using the full data series. The further back you look, the less relevant and definitionally comparable the past is to the future. We would not say 2011/12 is comparable to 2029/30. Linked to this, cost drivers that were important in 2011/12 may now be relatively less important – if new cost drivers / explanatory variables are to be introduced, others may naturally reduce in significance.

We are nervous of the proposals to backcast data, both in this and the bioresources consultation and to retrospectively adjust historical data with assumptions due to the inevitable inconsistencies that even a 'best endeavours' approach could deliver. We would be more supportive of a shorter, more consistent time series data set and recommend the industry and Ofwat work together to review the consistency of cost and cost driver reporting. This builds on our proposals set out in our response to question 21. Breadth of the panel data set, i.e., number of companies, is far more of a constraining factor than length. Quality over quantity should, at a principle level, deliver better and more meaningful modelling outcomes.

We do not see why the default should be to utilise the full historical data series, any more so than the default should be to use the most recent past data (e.g. what will be 19/20-23/24). Changes in the bioresources cost boundary due to changes in cost allocation guidance may support a shorter, more recent time period to support consistent and coherent cost assessment. As cost allocations will also impact wholesale wastewater, the same time series considerations discussed in our bioresources consultation response will also apply.

6. Should we consider including business plan forecasts in our wholesale base cost models at PR24?

The use of forecast data is the most direct way to include a forward-looking element into wholesale base cost assessment (e.g. growth, capital maintenance and service performance improvement, changes in delivery approach). However, we share the caution set out in the consultation towards the use of business plan forecasts. Over many years, we have seen quite a large difference between cost forecasts that many regulated companies put in their business plans and the outturn costs that are recorded as part of regulatory reporting; this is a significant risk.

The difference between setting a company's cost allowances on the basis of benchmarking of the historical costs incurred by other companies and setting these on the basis of benchmarking of other companies' forecasts needs to be recognised. Forecasts can have a perverse interaction with the business plan assessment / incentives, rather than be good reflection of actual costs in a future period.

Finally, the future is uncertain; the COVID-19 pandemic provides evidence of this. Forecasting the cost impact of such 'unknown unknowns' is even more uncertain. The inclusion of forecasts in base / botex econometric models, where companies may have taken very different assumptions to forward-looking costs is therefore likely to generate a less like-for-like benchmark than benchmarking using historical data.

Target modelling suite

7. Do you agree with our proposed target wholesale base cost modelling suite at PR24?

We think the proposed modelling suite set out in Figure 3.2 of the consultation seems reasonable. We note however that 'proof of the pudding' will be in the testing. Re-running and testing the models on the most recent outturn data would be a sensible starting point.

We see there is also value in modelling wholesale wastewater in totality as a cross check on the cost allocation changes / improvements being made in bioresources and wastewater.

In terms of consistency and coherence across the cost assessment framework, if bioresources allowances are set based on a total cost model, and allowances for all other price controls are set on some form of botex models plus enhancement dives, recognition needs to be given to the fact that the efficiency challenge works across all price controls. Costs, deliverability, financeability and risk must marry up in the round if efficiency challenges are set separately.

8. Do you consider it would be worthwhile attempting to develop wholesale wastewater network plus models for PR24? If so, do you propose any potential wastewater network plus cost model specifications to consider?

In principle this seems reasonable.

Cost drivers and explanatory variables

9. Do you think we should reconsider the inclusion of APH in the wholesale water base cost models at PR24? If so, should it be a substitute for, or additional to, booster pumping stations per length of mains?

We do not think that considering the inclusion of APH in the wholesale wastewater models is a priority area compared to other aspects of cost assessment which should be looked at (e.g., cost-service link, enhancement, etc). We note the ongoing work of the APH task and finish group;

however, we are mindful that any data recommendations that come out of the project will likely only be able to impact data quality and consistency going forwards. Retrospective restatement and backcasting of APH data will suffer the same difficulties as we set out in our response to question 5. The alternative of running models on a time-series riddled with definitional step changes is equally not appealing. This may present a constraint on whether APH can reasonably be included in the PR24 models and/or whether a longer historical time series is appropriate.

10. Should we consider replacing the existing 'load treated in size band 6' variable with 'load treated in band 8 and above' in the relevant wholesale wastewater base cost models?

We think that an understanding of the engineering / asset management principles should inform decisions like this. If there is evidence that it is in fact those treatment works that see a reduction in cost due to economies of scale, then we would support this (or an equivalent driver to capture these phenomena). However, care needs to be taken for any other explanatory power that this variable could be picking up and we would suggest fully testing both scenarios before any decision is made.

11. Please provide detailed proposals for any additional / alternative cost drivers and explanatory variables we should consider at PR24, including clearly defined data requirements that would need to be collected from companies.

Reflecting our response to Q10, the size of water treatment works variable to capture the economies of scale on the supply side should be considered where this is underpinned by engineering evidence.

We do not think the proposals on regional wages and capital stock / price of capital are worth pursuing. Inclusion of regional wages in models has been tried and tested before with no success.

A time-trend variable may be worth further investigation. It could capture the additional costs that arise from past enhancement expenditure as referred to in our response to question 21. We note, differences in the timing of investment between companies, and within the price control cycle might make a time trend difficult to interpret, however it might be worth testing. It should also be noted that a time trend will pick up any ongoing productivity efficiency and so care would need to be taken not to double count this.

Model estimation method

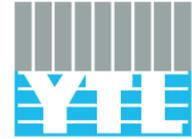
12. Do you agree that we should maintain the use of random effects to estimate our wholesale base cost models at PR24?

We think it is worth considering running the models using OLS and RE as a modelling sensitivity.

Model selection process

13. Do you agree with our proposed model selection process?

The importance of raw data analysis and cleansing (consistency of cost reporting and allocation) is key. Looking at raw data trends over time and between companies, identifying and interrogating anomalies and understanding the data should be prioritised. The validity of modelled relationships is only as good as the data that goes in. This step should not be rushed, over-looked or undervalued. We highlight a number of data issues and concerns throughout this consultation (base vs enhancement costs, allocation of costs across service measures, etc.) which will need substantive review ahead of considering models.



We agree with the model selection bullet points set out in the consultation on p.36 (correct sign, diagnostics etc.). There is a need to place some sort of weight, order of assessment (e.g. staged gates) to apply at model selection stage, otherwise this could be open to cherry picking models based on loose assessment criteria. Where possible, the criteria should include quantitative elements to improve transparency in application of the criteria and tests and avoid trade-offs and the potential for cherry picking, e.g. model fails if R-squared is less than 80%.

We would emphasise, in particular, that a key criterion for model selection is to test model robustness to sensitivities of removing one company and one year as set out in our response to question 1.

Residential retail cost assessment

26. Do you have any comments regarding our proposal to ask companies to separate out the part of their provision of bad debt costs to do with Covid-19 that was made outside of their standard methodology in the PR24 business plan tables?

Separating the impact of Covid-19 from the base level of bad debt provision would appear to make sense. Covid-19 resulted in material changes to the level of provision most companies made and would therefore distort individual years under review. It is also anticipated that, over time, these increased provisions would be released and therefore a separate line would enable a more meaningful comparison.

27. What guidance would aid companies to provide appropriate data related to the provision of bad debt costs to do with Covid-19?

Each company will have its own calculation and method for arriving at the impact of Covid-19 on its bad debt provision. Therefore, keeping the data requirements and guidance as simple as possible would seem to be the most appropriate approach. It should not be necessary for each company to explain the rationale for its calculation as this will have been agreed with its auditors and be consistent with IFRS9. Instead, simply identifying the values within the overall provision and disclosing them is preferred.