



South Staffs Water

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By email: PR24@ofwat.gov.uk

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Dear Ofwat,

Assessing base costs at PR24

We welcome the consultation on assessing base costs at PR24, setting out pre-draft-methodology thinking on the direction of travel of this important price review theme.

We are pleased to note that the consultation is broadly in alignment with the discussions held regularly through 2021 at the Cost Assessment Working Group, which we have participated in. We think that working collaboratively, the sector, Ofwat, and other stakeholders can achieve the most well rounded outcome for customers. We look forward to further collaboration going forward.

We agree with Ofwat that the cost assessment process provides a largely independent means of determining the cost efficiency of companies' plans. However we would like Ofwat to ensure that where justifiable cost explanatory factors exist, that they are fairly taken into account. In such a complex system as water supply, we should acknowledge that some data may never be as good as we wish it to be but nevertheless we should do the best we can with it to inform a reliable and fair cost assessment process. From our previous cost modelling challenges and our engagement with the Cost Assessment Working Group, it will not be a surprise to Ofwat that we see average pumping head as a significant cost driver and we cover this in our response below. We also see a place for supplementary models, either as part of cost adjustment claims or standalone, as useful additions to provide extra information on other significant variables.

Please refer to the remainder of this document for our more detailed thoughts on the consultation, and we look forward to further engagement as the price review progresses.

Yours sincerely

Caroline Cooper
Strategy and Regulation Director

Assessing base costs at PR24

South Staffs Water and Cambridge Water consultation response

Principles of PR24 base cost assessment

1. Do you agree with our principles of base cost assessment?
2. Do you consider any important principles are missing?

Our views on the six principles are as follows:

Consistent with engineering, operational and economic rationale

We believe it is crucial that models are rooted in the real engineering, operational and economic factors that drive water companies' costs and reflect differences between them. This is why we believe average pumping head to be a crucial cost driver that must be included, and we cover this further in our response to question 9.

Sensibly simple and transparent

Yes we agree with this and are supportive of the form of the models that has been used at PR19 and proposed now for PR24. Cost assessment models cannot be perfect and so they should be used as tool to help assess costs, not be the absolute answer.

Focus on exogenous cost drivers

Whilst we agree that most cost drivers are exogenous, we also believe that there are some legitimate cost drivers that are endogenous and these can also have strong explanatory power when modelled. It is important to examine these because if they are genuine costs driven by a real need, even though they are endogenous, then not including them could result in an incorrect view of efficiency either for a specific company or more broadly.

Robust econometric cost models

We agree that models should have robustness, however statistical perfection should not take precedence over engineering, operational and economic rationale. No model is perfect, and so we encourage Ofwat to use a wider range of models either as sense checks, or to determine the explanatory power of specific alternative variables. We believe this is the most appropriate way of getting a rounded view of costs and to fairly reflect a wider range of cost drivers than included in the core model set.

Set a stretching but achievable cost efficiency challenge

Ofwat will be aware that there are two components to the efficiency challenge, the first is the historic or 'catch up' challenge, which derives from the modelling process, and the second is the future productivity challenge, which is a top down adjustment. With the modelled 'catch up' challenge, the most important factor is ensuring that missing cost drivers are not being assumed to be inefficiency, this is why the first principle is so important and why additional supplementary models should be used to sense check other, perhaps more endogenous, cost drivers.

Coherent cost assessment approach

We agree that cost assessment is a core part of the price review and links in with outcomes and risk and return themes. We acknowledge these links are important, but they are also complex and we encourage pragmatism in dealing with these areas where statistical models alone cannot be perfect.

Approach to wholesale base cost modelling

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.

We think the scope of costs is correct, the only area of concern is new development and growth costs which we cover in question 4 below.

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.

Whilst we still believe it would be more robust to separate out and separately model new development and growth costs, we do acknowledge that the data and required level of confidence is not yet available. If growth is to be included in base models, we would strongly support supplementary analysis to act as sanity checks and triangulation. Areas to deep dive might be strategic reinforcement, differences in ground type (for example made and unmade), connection costs across regions, and new connection forecasts amongst others.

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)?

Yes, we agree that the full data set should be utilised. It may be in future that enough data is collected in a consistent enough format that time effects can be observed however with currently around 10 years of data against assets which have lives of well over 100 years, the data set represents only a small snapshot of this lifecycle. Using a shorter data set at present would risk introducing short term volatility in companies' expenditure profiles into the model set.

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

We agree that there are pro's and con's to including company forecasts. Overall our view is that it is most important to get the core set of models right first, with the right cost drivers as we have discussed in our response to questions 9 and 11 further in this document. Then, the future being different is at least partly covered by using reliable cost driver forecasts. We would also caution that future costs projections are at company discretion so like with performance commitment forecasts, there is a risk that projections could be unrealistic, either to the too-high side or the too-low side.

However we recognise there could be a place for building models, or at least benchmarking historic models, using future forecast costs where there are material step changes in those costs, for example in scopes being materially different from the past. This may apply more to enhancement cost themes than base cost themes.

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

We agree with the principles that have been used to construct the suite, subject to the points we raise in our response to questions 1 and 2 earlier in this response.

We broadly agree with the five models used for wholesale water and we think their level of disaggregation is appropriate.

As Ofwat is already aware, we do not agree with the number of booster pumping stations as the topography cost driver. This does not have engineering legitimacy and so does not align with Ofwat's first principle. We cover this further in our response to question 9 below.

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?

We do not have any comments to make on wastewater models.

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 have a strong view that average pumping head should be included. We believe all parties agree that there is a very strong engineering rationale behind the APH cost driver as it exogenously represents the pumping energy required to move water between supply assets and customers given the topography of a region and legacy location of assets and customers. It therefore fully supports Ofwat's first and third principles of cost modelling.

We understand there is no dispute on the rationale for the APH variable and so if it is not included, then it is clear that un-modelled factors would be present within the efficiency rankings and cost allowances generated by the models. If not included in base models then we would consider an industry symmetrical adjustment to be justified and we would likely be including a cost adjustment claim in our business plan. It is clear in our data that we incur additional pumping energy costs because of our relatively high regional topography and so it is essential that due weight is given to this factor in Ofwat's price review process.

Whilst we recognise Ofwat's concern about current data quality, and welcome the industry review that is being conducted, our analysis shows that the existing data is still robust enough to be used. With consultancy support, we have developed models using APH and found them to be fully robust using the existing industry data available. We are happy to share this information with Ofwat to help model development and give confidence to the cost driver.

We also believe that the water treatment APH value could be discarded. From an engineering perspective; abstraction, raw water transport and treated water distribution APH values all directly relate to topography, whereas water treatment APH does not. There is no topography element to a water treatment process - we believe water treatment APH is instead acting as a proxy for treatment complexity which is already covered by the specific water treatment complexity cost drivers. Therefore we consider there is a strong case for utilising APH excluding water treatment going forward, which would also alleviate some data quality concerns as water treatment APH is the area where the most underlying data assumptions have to be made.

As Ofwat will be aware from our involvement at the Cost Assessment Working Group, we believe that the number of booster pumping stations is not representing topography because it does not set up a first principles engineering relationship with pumping energy requirements, given that the variable does not account for asset capacity, delivery pressure or asset utilisation, as APH implicitly does. Our analysis has shown little correlation between the number of booster pumping stations per km and power utilisation. Instead, we think that booster pumping stations is acting as a significant proxy for capital maintenance costs as, beyond the main scale driver, there was no other cost driver specifically to represent variation in this. It is plausible that a cost driver measuring the number of assets could be acting as a capital maintenance proxy. We do not think that the number of booster pumping stations should be used to represent topography alongside APH, but it may be viable to include it to represent maintenance. We address the case for cost drivers covering maintenance activity in our response to question 11.

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 do not have any comments to make on wastewater models.

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.

We believe that currently there are some significant cost areas not covered by cost drivers, or not being recognised as the right cost driver:

- a) Average pumping head – we have responded in detail on this in question 9.
- b) Infrastructure renewals – a significant cost, subject to justifiable differences in activity levels between companies beyond the direct scale effects, yet which is not modelled. We understand it is significantly endogenous, but nevertheless it is a material factor in explaining differences in costs between companies. Given the focus on asset health going forward, we think this should be examined either within the base models or as a supplementary analysis for possible symmetrical adjustments.
- c) Above ground base capital maintenance – we strongly believe that the existing booster pumping stations variable is acting as a proxy for capital maintenance in some form, as we have explained in our response to question 9. It would be of value to the modelling process to critically examine and formally recognise this – because cost drivers should have a clear purpose and legitimacy, as required by Ofwat's first cost modelling principle. If there is a place for a capital maintenance cost driver, then Ofwat can consider whether the number of booster pumping stations is suitable or an alternative can be sought. Our view is that there are likely to be legitimate justifiable differences between companies on their capital maintenance activity levels beyond the direct scale effects, and therefore it is worth examining this either as part of the core model set or as a supplementary analysis for possible symmetrical adjustments.

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

We agree.

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

We agree with the model selection principles as well as Ofwat's six core principles and we think they are aligned. We agree that statistical properties are not the only factor that should be considered and that some cost drivers, where there is a clear rationale, should be included even if they don't necessarily meet all of the statistical tests. Models cannot be perfect given the complexity of the water sector's costs and we support a pragmatic approach to modelling for this reason, including the use of supplementary models as we have indicated in our response to question 11.

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?

Yes we would support this. The deep dive approach for enhancement costs at PR19 was in itself a form of assessment and so we would welcome this continuing, as enhancement costs are difficult to model because of considerable differences between companies' circumstances. It makes sense that enhancement costs in and of themselves should be independently justifiable as they are more scheme specific.

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 indicated in our response to questions 9 and 11, we consider that the PR19 models did not appropriately cover average pumping head. The engineering rationale is clear and we believe agreed by all parties, therefore it is essential that this cost driver is accounted for. We are likely to submit a cost adjustment claim if the models exclude this driver.

We also consider there is scope for further examination of maintenance drivers. In our response to question 11 we have mentioned infrastructure renewals and above ground capital maintenance. We recognise that expenditure on these activities is significantly within company control at least in the short and medium term however we do not think that this alone justifies that the cost drivers should be excluded from models, and thus considered to be implicit inefficiency. If the level of activity is justifiable, and unit costs are efficient, then the activity itself is legitimate and should be accounted for. We would consider cost adjustment claims as a viable mechanism for reflecting differences in maintenance activity if it is considered not appropriate to include these cost drivers in the core model set. With a focus on asset health going forward, we would consider this the right thing to do to ensure we have the right level of cost allowance in the future to meet our asset health commitments.

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.

We consider the existing data on average pumping head is sufficient and robust enough to be used in models. The ongoing APH review we hope will add confidence to this.

There is also already existing data on infrastructure renewals rates, sufficient to build an overview picture of differences in activity across the sector. However above ground capital

maintenance drivers may be more difficult given the wide scope of assets involved and the company specific needs. At the moment we do not have any suggestions for additional data however it may be sufficient to continue to utilise an asset count variable (such as the number of booster pumping stations) for this purpose.

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

We are in broad agreement with the overall analysis set out by Ofwat in the consultation. We would support rationalisation of the assessment gateways, as the need gate with evidence is the most important with the others far less so. We also welcome more guidance on the implicit allowance as it's an area that could be improved through Ofwat and companies having a clear set of principles for calculating it.

On symmetrical adjustments we are in broad agreement with the principles that Ofwat has set out with some caveats.

Ideally, the goal should be not to have any symmetrical adjustments in the first place, because by their nature symmetrical adjustments reflect industry wide cost driver differences and therefore ideally should be included as a variable in the base model suite after proper consultation. The examples we gave in our response to question 11 are all variables that could be included in core models and which would therefore not require a cost claim or symmetrical adjustment.

Where Ofwat allows a symmetrical adjustment from a cost claim, then the rationale should be clear and ideally the variable used for the adjustment should be tested in econometric models also. We also believe companies should have the opportunity to review and challenge a symmetrical adjustment that is applied following a cost adjustment claim. This is because other companies may not agree with the data or rationale that the claiming company has used, or may not agree with Ofwat's rationale for the adjustment being symmetrical.

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

Yes, we think that early submissions worked well at PR19 giving companies more time to put forward key aspects of plans. Given the symmetrical adjustment principle, we would encourage the process be two-way early on – so that Ofwat and companies can have constructive discussions on their own claims, possible symmetrical adjustments being considered, allowing for improvement across the board.

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 and asset health is a vital component of our business plans and we support an openness from Ofwat to proper consideration of investment step changes in the future.

Primarily we consider the most appropriate mechanisms to fund future capital maintenance programmes are enabled by having the right cost drivers either in the models or able to be supplemented to the models either in a cost adjustment claim or by having some additional

supporting models to the core set. We raised this in our response to question 11. In this way, most future capital maintenance needs are driven from the cost driver forecasts, which can be assessed for need and legitimacy as part of the price review process. However, we can see on page 54 of the consultation that Ofwat is against including capital maintenance drivers directly in the models. As per our response to question 9, our view is that the number of booster pumping stations is already acting as a capital maintenance driver. We believe there is place for using capital maintenance driver variables appropriately. If Ofwat is against including them in the core suite, then using a combination of supplementary models and cost adjustment claims would appear appropriate.

We would also ask Ofwat to clarify its PR24 accounting position on carbon investment to attain net zero. We would see activity above and beyond the natural reduction rate (the natural rate being the pace at which the general economy is reducing carbon) as an enhancement cost rather than a base cost. This is in alignment with the definition of enhancement costs. Therefore these additional costs, both capex and opex, would be put forward in our plan under a carbon reduction enhancement theme, which we would of course expect to be deep-dived. We would not expect to make a cost claim on base costs but only the natural reduction rate should be included in base. We would certainly expect to see enhancement funding where the carbon reduction is being accelerated beyond the natural market rate.

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.

We also eagerly await the publication of the UKWIR Future Asset Planning report. A number of projects attempting to determine additional asset health indicators have been carried out in the past and it has historically been difficult to determine effective forward looking asset health indicators.

As regards the list in the consultation, we have the following views:

- Condition grades – subject to highly qualitative and potentially subjective processes, and very time consuming to collect. Condition observations on specific assets in themselves are very useful in targeting expenditure, however grades are not so useful as an overall number representing the condition of all of the asset stock simply because all of the asset stock cannot be continually assessed in order to derive a robust grade.
- Maintenance activity – these appear to us to be representing operational factors rather than asset health directly. The underlying assumption is that more work is undertaken on poor health assets, but these relationships are indirect. Our experience with the unplanned maintenance work orders serviceability indicator used in the past showed that it was more driven by resource availability and operational pressures than asset health. We believe that the current performance commitment for unplanned outage is a far better metric than these ones, because it directly reflects asset downtime.
- Asset and service performance – it is because of difficulties in measuring asset health that we have accepted in recent price reviews that service measures, such as supply interruptions, burst mains, CRI and unplanned outage, can be used as proxies for asset health. These measures capture the impact today of today's asset health, they cannot capture asset risk. Overall we would recognise that service measures can still have a place in monitoring the impact of asset health over time however we would point out that

performance in these service measures represents a combination of both asset health, resilience and operational factors, so they are not purely asset health measures.

- Aggregated and asset risk measures – the difficulty here again will be the amount of observations that need to be collected to derive an aggregated metric or risk score, and the processes to collect this are likely to be different for different companies.

Unfortunately we cannot offer an easy answer to the problem of how to measure asset health. Asset health is intrinsically wrapped up with service performance, operational (both internal and external), and resilience factors.

In justifying maintenance expenditure, both internally and in our business plans, we use a range of risk based and condition based observations. Observations and evidence are critical to justifying investment, but we cannot see an easy way of aggregating this information up into a top level metric. It is not viable to granularly measure the health of all of our assets all of the time – there are triggers which occur in practice which then cause further investigation and observations to occur on an asset by asset basis in order to justify any further monitoring or intervention.

If Ofwat is seeking a holistic and complete view of the state of asset health, then in our view this comprises multiple hierarchical levels of data. Starting with service performance, we identify any problems and trends. In parallel, we identify risks on our asset register. We may then measure some sub-indicators, but not for all assets, only those where risks or service performance issues have been identified, and these may be asset specific. We may collect observations, maybe in the form of continual data, or maybe in the form of a one off survey or condition report. Then we may monitor, plan and intervene either operationally or via capital investment.

We do not believe this business as usual process, embedded in our whole operations and covering such a wide asset base, can be mirrored by measuring a handful of sub-indicators. Our processes are designed to manage risks and deal with condition issues as they become known, and it is the quality of this process that is key to sustainable asset health.

Cost-service link

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?

We welcome that Ofwat is open to considering the cost service relationship, and recognise that companies have raised this issue consistently over time. It has not been an area we have specifically been concerned about primarily because we recognise the complexity in trying to do so. We welcome that Ofwat recognises the difficulty in this area and commits to taking a pragmatic approach.

Our main concern is how to determine 'what base buys', as historic investment delivery is not homogenous across companies. One company may have historically focussed on leakage for example, because of external water scarcity drivers, whereas another company may have focussed on resilience, capital maintenance, customer service, or any number of other areas either in enhancement or base.

We consider the process could work where common standards have been in place in the past, for example legislative standards such as water quality, health and safety or the environment. However these areas are not significant drivers of cost differences between companies due to

their homogenous nature, and so may be immaterial to cost assessment. Areas such as leakage, interruptions, asset health and more have all had mixed policy attention, funding, focus by companies and regulators over time and so the starting points are not homogenous.

We also do not agree with the assertion that efficient companies should be able to deliver all of their PR19 performance commitments. These targets were stretching in order to challenge companies to drive service forward – it is not a given that these can all be achieved and Ofwat's use of the efficiency term in a far broader sense than just referring to cost, is misleading.

With particular regard to PCC, we disagree with Ofwat's assertion that the 2024 target should form the starting point for AMP8. PCC has been subject to material external factors that have altered the baseline for this measure. We have provided further views on PCC as part of our outcomes consultation response.

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?

We would support investigating econometric modelling, however this is not something we have yet tried ourselves so we are not in a position to speculate on the feasibility of the approach. We therefore think more exploration of this could occur in conjunction with the Cost Assessment Working Group. Whatever approach is used, we consider that pragmatism is key – a significant degree of common sense and judgement will be required to be layered on top of whatever model is utilised to ensure deliverable outcomes.

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?

We do not have any suggestions at present.

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?

We do not support the use of a composite variable, as the cost-service link is a very new idea for PR24 and the level of pragmatism required in assessing this alongside cost allowances, in our view requires as much transparency as possible which a composite variable may not provide.

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?

Again, our view is that as this idea is so new, we strongly encourage a pragmatic approach and significant layers of judgement to be incorporated.

Early sight of the 'what base buys' performance levels is crucial to developing aligned business plans and for our Board to understand any gap between current and expected performance levels arising from this work.

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?

We understand the rationale for this suggestion and support the principle. We want to highlight that going forward, as well as lingering Covid bad debt issues, our customers are increasingly likely to have further cost of living pressures. At this stage it is difficult to estimate how this may impact our revenue collection however there are certainly growing risks in this area.

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

At this time we do not have any suggestions to make on what additional guidance would be helpful – we suggest a working group meeting on the topic would be useful to expose the issues.