

Annex 3 – Severn Trent’s response to Ofwat’s consultation on its draft methodology for PR24

This annex covers our points on Ofwat’s consultation on its draft methodology for PR24 that do not fit into the Ofwat spreadsheet response template (annex 2).

This annex covers two issues:

1. The approach to cost assessment and the need to make sure that econometric models are appropriately specified; and
2. Additional comments on the proposed approach to GHG reductions.

1.0 The approach to cost assessment and the need to make sure that econometric models are appropriately specified

We consider that the fundamental premise of setting efficient expenditure allowances should be to ensure that companies are able to meet their statutory requirements and deliver good quality resilient services to customers and the environment at a cost that is fair. Making sure that cost allowances are fair and requirements / service commitments are deliverable requires that the chosen regulatory cost assessment approach is correctly specified such that legitimate costs are accounted for, and that efficiency challenges are reasonable and justifiable, rather than just stretching without basis.

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Using econometric cost models to challenge companies to be efficient, whilst allowing for required drivers of cost outside of companies control, has been tested and refined across two price reviews. We remain of the view that this is an appropriate platform to identify efficient expenditure requirements – provided they are complemented by other regulatory assessments where econometric analysis is less well suited.

We support the need to retain separate approaches for unmodelled base costs away from econometric modelling. However, we note the proposal to remove the enhanced cost sharing rate that was applied to variations in outturn abstraction and discharge licence costs. We suggest that these costs remain subject to a level of change and are fundamentally outside of our control. Therefore, the level of protection afforded by the enhanced sharing rate would remain appropriate. We also note that non s185 costs are likely to remain uncertain and material in our area due to the ongoing HS2 development. Therefore, it is appropriate to keep them outside of econometric modelling and some form of bespoke review or adjustment may be appropriate.

Whilst we accept the premise for using econometric models, we stress that it is critical that the way in which they are developed and used must remain aligned with their underpinning economic and engineering bases. Given the sensitivity of econometric model outputs, there is a risk that a spurious or inappropriate view of efficiency is revealed if the underpinning economic and engineering assumptions are poor or not valid. Based on the information provided in chapter 6 and appendix 9 of

the PR24 draft methodology, we make four fundamental observations on the approach to econometric modelling that has been set out:

- **Ensuring model residuals are randomly distributed and appropriately account for observed changes in costs across the data panel** – It is sensible to use the PR19 models as a starting position. However, when reviewing the models (updated to 2020/21), patterns in the model residuals can be seen. This is particularly noticeable for water distribution and water wholesale models. This is a major concern for the validity of random effects models where errors should be independently and identically distributed (IID). There are a range of potential remedies that should be considered.
- **Developing richer models where engineering or economic logic supports rather than over emphasis on model parsimony** – There is a risk of ‘overfitting’ models particularly when using relatively small data series. This was a key driver for developing ‘sensibly simple’ models at PR19. However, this approach is likely driving a counteracting risk of omitted variables. With an increasing data panel length, there is a case to develop richer models where engineering or economic logic supports the inclusion of additional or more complex explanatory drivers. We consider that this will provide more protection against inaccurate efficiency benchmarks compared to triangulating multiple simplistic models that do not adequately account for fundamental cost drivers.
- **Setting out a clear basis for the efficiency challenges used, particularly if using forecast costs and drivers when constructing models** – The calculation and use of efficiency challenges should be driven by the quality of the models being used and reflect true efficiency as opposed to underspending and/or poor service delivery. This linkage should be explicitly set out to minimise the risk of inappropriate efficiency challenges being applied. This is particularly relevant if forecast costs and cost drivers are to be included. Inclusion of forecasts will also increase the level of uncertainty in the model coefficients. Consequently, we think that forecasts should not be used if possible. However, if they are included, they should be acknowledged in efficiency challenge calculations. Consideration should also be given to making sure that companies are not disadvantaged where material variances between forecasts and cost outturns materially skew model outputs.
- **Following a transparent and consultative approach to developing the final PR24 cost models and allowing sufficient opportunity to develop adjustment claims after models are confirmed** – We welcome the opportunity share our thinking on how to improve models ahead of the spring cost modelling consultation. We have identified a series of areas where the predictive power of econometric models can be improved. We look forward to being able to set out the basis for these improvements when contributing to the cost modelling consultation. We also hope that the outputs of the consultation will allow for a more informed cost adjustment claim consultation in summer 2023.

These observations are set out and explored in more detail in a separate document titled “Severn Trent cost assessment response” that we are sending to Ofwat alongside our response.

2.0 Additional comments on the proposed approach to GHG reductions

Do you agree with our proposal to have separate operational greenhouse gas emissions performance commitments for water and wastewater, which are based on a normalised measure?

Do you agree with our view on what performance commitments should be set using common or company specific performance commitment levels?

Do you agree with our proposed approach to setting performance commitment levels at PR24?

We fully support the ambition set out in the PR24 methodology and earlier Net Zero position paper to tackle greenhouse gas emissions and drive the sector to decarbonise in a timely manner. We are supportive of your proposal "... to make additional funding available to the most efficient companies, to allow them to go further, faster, to reduce emissions"¹ as we recognise that as a sector, companies are at different stages and facing different challenges on their net zero journey and therefore for the sector to stay on or ahead of the trajectory required to limit warming to 1.5°C some companies will need to decarbonise earlier.

We are in support of having a common Performance Commitment (PC) on operational greenhouse emissions but do have some reservations about the current proposed methodology which are outlined below.

2.1 Scope of Operational Greenhouse Gas performance commitment

It is crucial that operational carbon is defined clearly up front in setting a performance commitment and that all companies are clear on which scopes and categories are included within this. However, we should be careful not to preclude activities which might represent genuine and efficient ways to reduce UK carbon emissions and we should be prepared to revisit this in a transparent and robust way as technologies and accounting evolves over time.

The draft methodology says that the Regulatory Accounting Guidelines (RAGs) will be used to define the PC but we feel this leaves room for ambiguity between companies² and it would be better to align reporting with the Greenhouse Gas (GHG) Protocol terminology.

We suggest that the operational carbon definition should include:

- all scope 1 emissions, (allowing for rebaselining and improved measurement over time);
- all scope 2 emissions on a market basis, with the source of electricity clearly and transparently reported; and
- some categories of scope 3 emissions directly tied with our operations. We suggest this should include business travel, transmission and distribution emissions and well to tank emissions.

¹ Page 5 <https://www.ofwat.gov.uk/publication/delivering-uk-government-priorities-for-the-english-water-sector-through-our-2024-price-review-draft-methodology/>

² For example, in 3.2.2 of Appendix 7 it suggests that all Scope 3 emissions would be included within the Operational PC but this deviates from the existing definition in the RAG. We would interpret this to be Categories 1-15 except for Categories 1 and 2 which would be captured under the embedded emissions PC but the current terminology does not make this clear and goes far beyond what is currently captured in the Carbon Accounting Workbook (CAW).

The definition should also allow the potential for credible ‘netting’ via genuine carbon reductions and carbon removals which are not double counted – including exported renewable energy for which the associated certificate is not sold. This would allow a wide remit for credible activity and therefore makes it more likely that companies pursue efficient solutions. A cap on the maximum potential reductions allowed via offsetting mechanisms would allow the carbon hierarchy to be valued within this commitment, whilst allowing companies to seek efficient solutions where these are credible.

We believe this additional detail would allow better benchmarking between companies and improved alignment with national and international reporting standards going forward reducing the reporting burden on companies.

2.2 Measurement of operational emissions

Ensuring an accurate way of measuring emissions throughout the PR24 period is essential. We agree that the Carbon Accounting Workbook (CAW) should be used, but it needs to be recognised that the CAW is routinely updated reflecting the fact that reporting is evolving at an international, national and industry level, and this should be welcomed as the updates improve the accuracy of the measurement.

We think the standards should be reviewed every year and updates agreed across the industry and with the regulator. This can be done transparently and with reference to the international GHG reporting methodologies – primarily the International GHG protocol. A good example of this is carbon capture and storage, which is recognised by UK Government as necessary to enable the net zero transition. Water companies have a potential use for carbon capture and storage technology on biogas-fired combined heat and power engines. These currently result in biogenic carbon emissions which, if captured and stored, could represent an efficient reduction of total carbon emissions from the global balance. This type of technology, along with nature-based solutions, could even move companies into a carbon negative position over the long term if widely deployed. Current carbon accounting does not include for this type of benefit but future updates are likely to include it. An annual review process would enable the most up to date view of efficient action to achieve net zero to be included in our delivery plans.

Making updates to the definition will then require rebaselining of the targets. The CAW has the capability to report performance using both current year and past year emissions factors to allow for comparisons in performance due to changes in emissions factors. We would propose that this functionality could be extended to allow for reporting using the emissions factors and boundaries that were correct at the time of setting the PC alongside an emissions value using the current years emissions factors and latest best practise of boundaries and inclusions. This would allow for companies to disaggregate performance variance due to interventions within their control and those due to methodology changes, it would also allow better transparency for tracking true performance against Government reduction targets whilst minimising the reporting burden associated with re-baselining.

We understand the benefits a normalised metric for GHG performance might bring with regards to accounting for seasonal variances in production levels and tracking company decarbonisation over time, however we don't believe it appropriate for benchmarking between companies due to differences in geography and catchment characteristics, technology types and regional demand variations and a normalised measure isn't necessarily a good proxy of emissions drivers. Waste flow to full treatment bears little relation to load or energy demand for example. We do see the benefit in

separating water and wastewater intensity metrics as the drivers and decarbonisation opportunities are different, especially with regards to process emissions but have similar concerns in using these metrics for comparing performance between companies and being used to track delivery. Our preference for setting the PC would be a percentage reduction in absolute (non-normalised) terms to be delivered over the AMP which would ensure that the sector is achieving performance in line with the required reduction trajectory.

We would welcome measurement based on location-based emissions to enable transparent and fair comparison between companies. This would also pre-empt any potential changes to the use of REGOs that could occur within the PR24 period. However, we do see a place for market-based reporting, as set out in 3.1.8 of the Net Zero Technology Review. Market based solutions for Scope 2, especially in the short term, do have a role to play and should be allowed to contribute to net zero performance due to being a no regrets and lower cost solution in the interim while the UK transitions to a low carbon grid.

2.3 Approach to embedded emissions and scope 3 carbon reductions

It is not possible to achieve Net Zero until all Scopes have been decarbonised and any residual emissions abated. We therefore believe that the scope of reporting should be expanded to cover all Scope 3 emissions. Whilst embedded emissions, (those in Category 1 Purchased Goods and Services and Category 2 Capital Goods as defined in the RAGs) represent most of our Scope 3 emissions and where focus should be, there are opportunities to decarbonise other areas of Scope 3 for the water sector and current reporting would not capture this, such as those emissions associated with upstream and downstream transportation, waste disposal and biosolids to land. In addition, whole life cycle emissions are important as they will enable a full picture of any potential trade-offs or increases in Scope 3 as a result of investing to reduce Scope 1 and 2 emissions and to better understand if funded Scope 1 and 2 reduction investments in AMP8 are pushing the requirement for further Scope 3 reduction investment into future AMP's. Long term incentivisation of Scope 3 and embedded emissions will be necessary to keep reductions in line with government targets.

Even though reporting of embedded emissions is still relatively immature, and the flexibility and variability in how Scope 3 emissions are currently reported mean that a common performance commitment for embedded greenhouse gas emissions is not proposed, we think we should still measure and report on it during AMP8 in order to be better placed for target setting and formal reporting in AMP9. We think Ofwat has an important role of driving this consistency, which will either require updates to the CAW or the development of another tool that measures embedded emissions, which needs to be approved in a similar way to the CAW. We have a role to play in developing this, but consistency across the sector is vital.