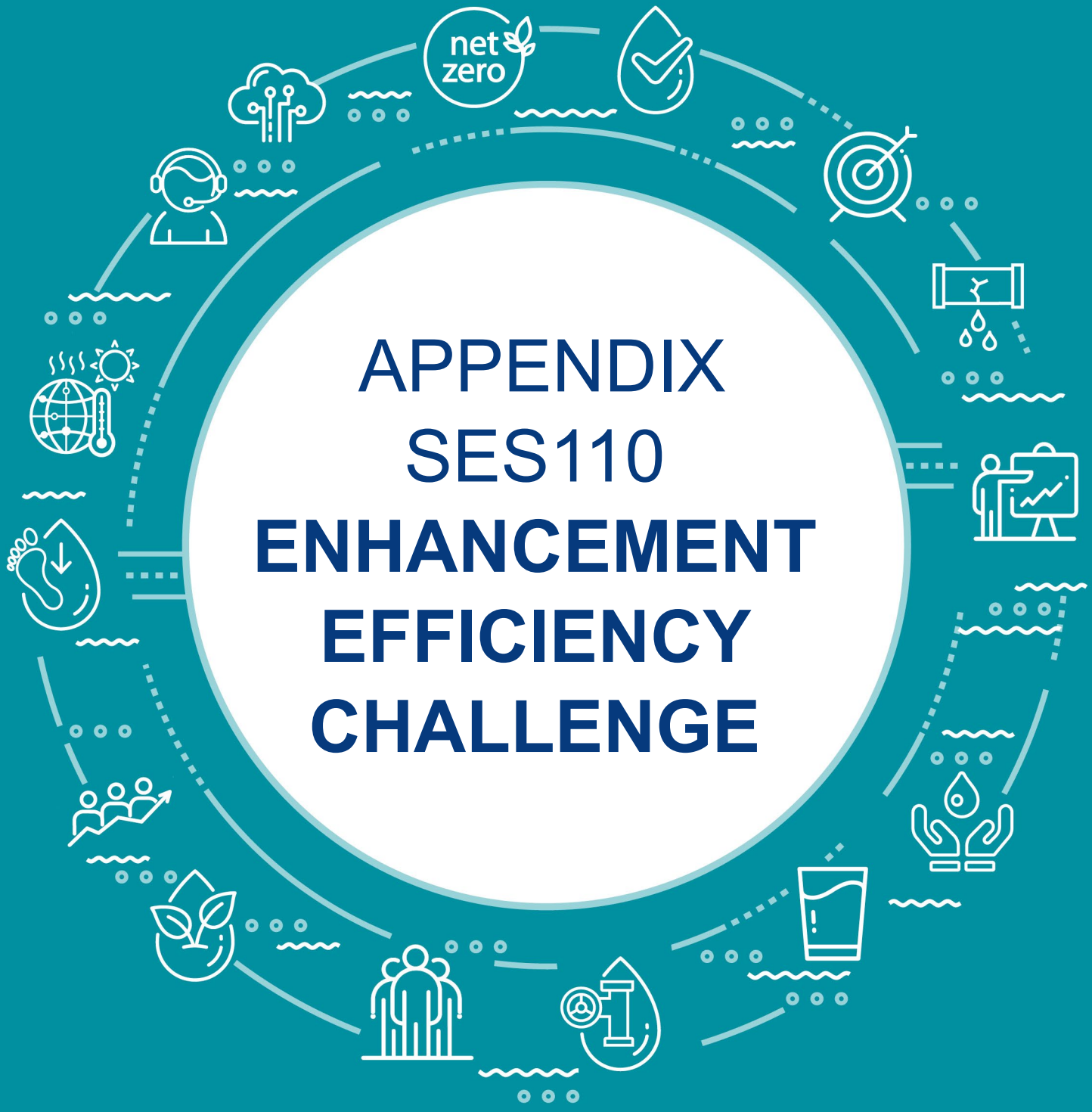
ses WATER



APPENDIX SES110 ENHANCEMENT EFFICIENCY CHALLENGE

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APPENDIX SES110: ENHANCEMENT EFFICIENCY CHALLENGE

A. Introduction

1. This short representation relates to the 'shallow dive' efficiency challenge applied to enhancement proposals that have not been benchmarked and fall below Ofwat's materiality threshold for a 'deep dive' assessment.
2. For some enhancement proposals, Ofwat has benchmarked the efficiency of our cost estimates against other companies' estimates and have determined the overall efficiency gap to be 26%. This percentage has been used as the basis for determining the 'shallow dive' efficiency adjustment, which is applied to enhancement costs that were not benchmarked. We further note that Ofwat has imposed a cap on this shallow dive efficiency adjustment limiting it to a maximum of 20%.
3. We recognise that the approach Ofwat has taken is a common lever within the regulatory toolkit. This is to encourage companies to submit efficient costs within their business plans and to ensure that Ofwat can determine efficient costs for cost lines that cannot be benchmarked. However, in using this lever, Ofwat is making two very strong assumptions:
   (a) Firstly, that the benchmarked modelled costs for the enhancement lines are subject to little uncertainty (i.e. they have strong internal validity); and,
   (b) Secondly, that the efficiency of benchmarked cost estimates is reflective of the efficiency of non-benchmarked cost estimates (i.e. they have strong external validity).
4. We demonstrate through this representation that the benchmark models for enhancements have limited internal validity, and as acknowledged by Ofwat itself, less internal validity than the base cost benchmark models. We also demonstrate that the benchmark models have limited external validity, as acknowledged by Ofwat in its PR19 determinations.
5. As such, we request that Ofwat avoid an unduly simplistic application of the shallow dive efficiency challenge and instead, use a lower cap than the current proposed 20% cap. We anticipate that the magnitude of this efficiency challenge will naturally decrease following our representations that provide further evidence of the efficiency of our enhancement cost estimates. Despite this expectation, we believe that a lower cap of 10% on the shallow dive efficiency adjustment would be more appropriate, in line with the cap used by Ofwat in PR19.[1]
6. The remainder of this appendix is structured as follows:
   (a) Section B elaborates on why Ofwat's enhancement models have insufficient *internal* validity to warrant a pass-through efficiency challenge to other enhancement areas, through the shallow-dive efficiency adjustment;
   (b) Section C elaborates on why the enhancement models have limited *external* validity and so, warrants a lower cap to the efficiency challenge;
   (c) Section D outlines our recommended changes to Ofwat's approach; and
   (d) Section E explains how the efficiency adjustment proposed by Ofwat creates a perverse incentive in companies that could lead them to not delivering enhancements that have associated Price Control Deliverable (PCD) obligations.

B. Uncertainty associated with the enhancement cost benchmarking

7. Ofwat's approach to benchmarking enhancement costs is based on a mix of econometric benchmarking models and industry median unit cost benchmarks. This approach has been used to determine efficient cost allowances for several enhancement areas, where Ofwat has deemed the area is suitable for benchmarking. By comparing requested expenditure to the benchmarks,

[1] Ofwat (2019), *PR19 final determinations – Securing cost efficiency technical appendix,* available at Ofwat website.

Ofwat has calculated company efficiency scores for each enhancement area based on the residual between requested expenditure and modelled costs.

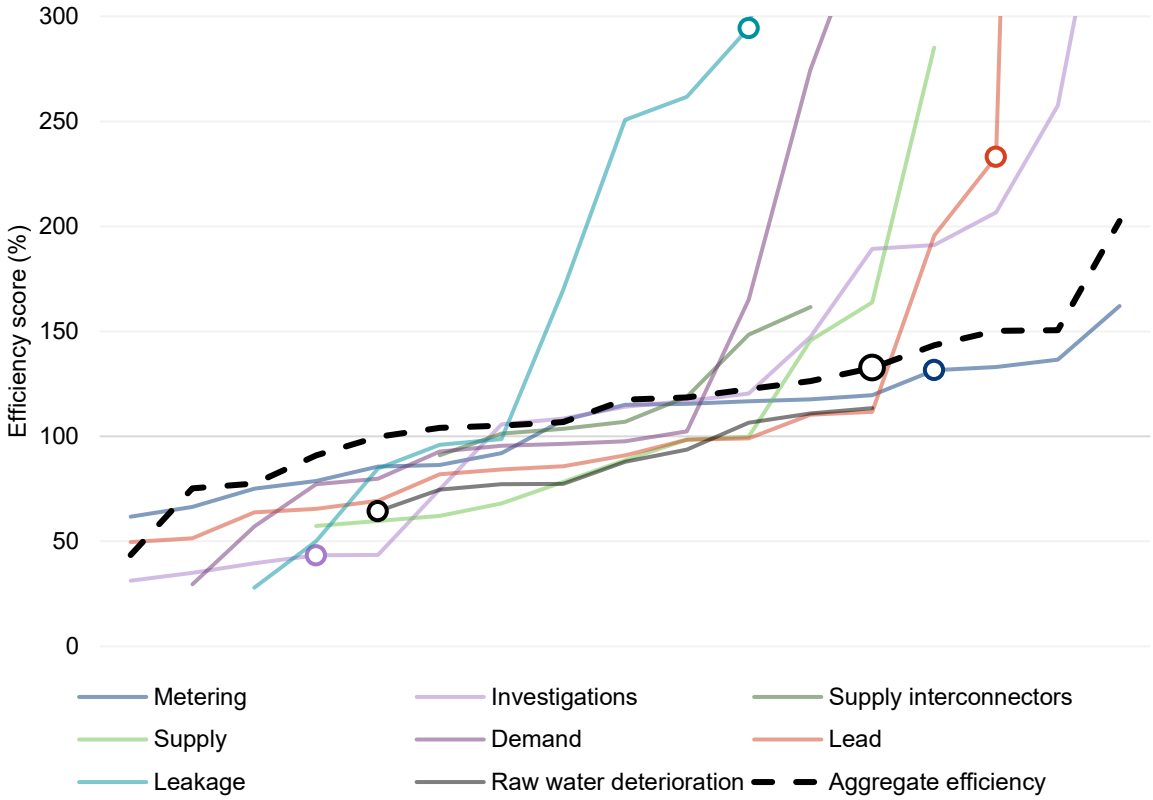
8. Ofwat has then aggregated the efficiency score for each company, based on the enhancement areas that have been subject to benchmarking, to determine an overall level of 'inefficiency' within company cost estimates.

9. We consider Ofwat's assumption, that the aggregate efficiency score fully represents company inefficiency, is an implausible one in the context of how Ofwat has approached the benchmarking of these costs.

   - The benchmarking approaches used by Ofwat are inherently uncertain, owing to their simplicity. For the most part, Ofwat has used simple unit cost models, or econometric models with one or two cost drivers. This inevitably excludes other relevant and non-controllable factors that may affect costs, which mean that the efficiency scores also capture factors other than efficiency.
   - The variation in efficiency scores are too large to be explained by differences in company efficiency alone. The inspection of the range in efficiency scores between the lowest cost and highest cost companies, suggests that the residuals relative to the benchmarks cannot be fully explained by differences in company efficiency alone.

10. In Figure 1 below, we show the variation in efficiency scores for each of the benchmarked enhancement areas, and our efficiency score for the areas where we proposed enhancement cases.

Figure 1: Ofwat's estimated efficiency scores for all benchmarked enhancement areas and the aggregate efficiency score range for all companies (with the dots representing SES Water)



Source: SES analysis of PR24 draft determination data

11. We can see from the figure that the efficiency scores range widely (with some of the highest scores left out of the figure for presentational purposes). For example, metering ranges from 62% to 162%, while for WINEP investigations the range is 377%. The upside of the range is extremely high for many areas, such as leakage (28%-1062%), lead (50%-1198%) and demand (30%-

718%). While these ranges are partly explained by significant outliers in the efficiency scores, the existence of the outliers suggest that there remains considerable statistical noise in the efficiency scores.

12. In contrast, Ofwat's estimated range of efficiency scores for wholesale water base costs is significantly narrower, as seen in Figure 2 below, with scores ranging from 77% to 149%.

Figure 2: Ofwat's estimated base efficiency scores for wholesale water for all companies (with the dot representing SES Water)

Source: SES analysis of PR24 draft determination data

13. The wider spread of efficiency scores in enhancement areas shows the substantial uncertainty in the modelled cost estimates. In particular, the spread of efficiency scores for enhancement areas is significantly wider than can be plausibly explained by differences in efficiency. In other words, the models have limited internal validity. While we recognise the reason why the benchmarking approaches have been used to set enhancement cost allowances, we do not consider them sufficiently robust to draw inferences around the overall efficiency of our Business Plan.

14. While some uncertainty can be reasonably accepted when setting the allowances for modelled costs, the uncertainty is exacerbated when these estimates are applied to non-benchmarked costs. This is described in the following section.

C. Benchmarked costs reflecting efficiency of non-benchmarked costs

15. We believe the assumption that the efficiency in non-benchmarked costs is reflective of efficiency in benchmarked costs to be a flawed one. More importantly, it results in a disallowance of costs that is not proportionate. Our main reasons are as follows:

    (a) Ofwat's benchmarking approach does not account for the tangible improvements in the outcomes we are delivering without any enhancement spending – such as in demand reduction;

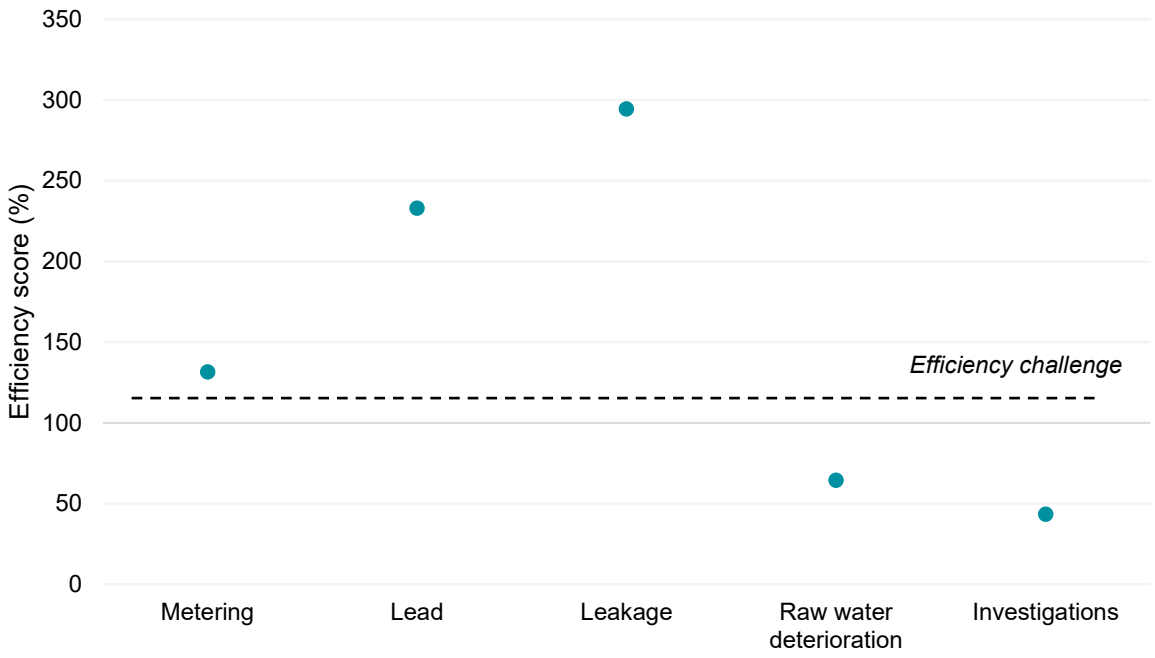
    (b) There is little evidence to suggest that our efficiency scores in the benchmarked schemes reflect our efficiency in non-benchmarked schemes;

    (c) Ofwat has sometimes rejected alternative, more direct, approaches for determining the efficiency challenge due to wide variations in residuals, without recognising that the same weaknesses are present in Ofwat's chosen approach; and

    (d) Ofwat is already applying an on-going efficiency adjustment that is equivalent to roughly 5% of submitted costs. A further 20% 'catch-up' challenge results in an excessive disallowance of costs.

16. As Ofwat's approach to determining efficiency is limited to the areas for which companies have requested enhancement expenditure, it does not account for any improvements delivered without additional spending. In doing so, Ofwat is only using one relevant metric for the efficiency of the overall plan at the expense of all others. For example, we are proposing to deliver tangible improvements in demand reduction purely from base spending, whereas many companies have sought enhancement funding to deliver similar outcomes for customers. By not accounting for this, Ofwat is misrepresenting our overall efficiency.
17. More broadly, Ofwat's approach relies on the assumption that the overall efficiency present in benchmarked costs reflects of the efficiency in non-benchmarked costs. This is an arbitrary assumption, and one that Ofwat has not provided a logic for, nor any evidence for. Given the variety of enhancement areas, in terms of types of activity, scale of investment, and uncertainty around cost estimates, there's little logical rationale for why the level of efficiency within cost estimates would be similar for benchmarked and non-benchmarked costs.
18. As an example, we present in Figure 3 below, the range in our efficiency scores for the enhancement areas that have been benchmarked.

Figure 3: Efficiency challenge applied to non-benchmarked costs and the efficiency scores for benchmarked costs for SES Water



Source: SES analysis of PR24 draft determination data

19. The figure shows that under Ofwat's modelling, our enhancement cost estimates range from being twice as efficient as the benchmark to three times as inefficient. The figure indicates that there is no consistency in the efficiency of our modelled cost estimates, and that assuming such efficiency estimates reflect the efficiency of our non-benchmarked cost estimates is arbitrary. While aggregating the efficiency scores will inevitably reduce this variation, it does not improve the external validity of the efficiency score.
20. Additionally, Ofwat has provided little reasoning for why it has chosen to adopt the shallow dive efficiency assumption – nor why it is better than alternative approaches. For certain enhancement areas (e.g., eels and fish screens and the Water Framework Directive) Ofwat considered an alternative approach of using unit cost benchmarks for different actions/activities funded through the allowances. This approach was not adopted because of the large range of benchmarks, indicating that the approach was not sufficiently robust to set allowances. We consider that an approach based on within-area benchmarks, while resulting in large ranges, can hold internal validity. Ofwat's chosen approach is neither robust nor externally valid.

D. Our proposed approach

21. Given the uncertainty around Ofwat's benchmarking approaches, and the underlying assumptions that are unlikely to hold, we believe that the efficiency challenge should be applied cautiously. As such, we recommend a cap of 10%, which we consider to be more proportionate than Ofwat's draft cap of 20%.

22. This would be in line with Ofwat's approach at PR19 final determinations when it capped its efficiency challenges at 10%:

> *"We recognise that the company-specific efficiency factor is an imperfect indicator of the inefficiency of proposed enhancement costs. We therefore cap the challenge at 10%. We accept that this may understate the efficiency challenge for an inefficient company, but consider that we need to set this against the risk of excessive disallowance of costs."*[2]

23. It is important to note that Ofwat's efficiency challenge at PR19 was set based on the base cost efficiency score, and not the enhancement efficiency scores. Given the enhancement models have lower internal validity than the base cost models, it would be more appropriate to apply a cautious and proportionate adjustment.

24. The issues with the efficiency scores that Ofwat is relying on can also be seen when comparing how many companies are subject to a cap. At the PR19 final determinations, only two companies were subject to the maximum cap of 10% (for water wholesale totex), whereas seven companies are currently subject to the 20% cap in Ofwat's draft determinations, with an additional two companies being within three percentage points from it.

25. A 10% cap is more proportionate and would also decrease the risk of perverse incentives, which are discussed in the following section.

E. Perverse incentives created through application of efficiency challenge

26. The application of the 20% efficiency challenge has the potential to lead to perverse incentives in enhancement areas.

27. As the approach to setting the efficiency challenge fails to reflect the efficiency of individual enhancement areas, there is a risk that the resulting allowance is lower than the cost of undertaking the funded activities.

28. As a result, companies may have the perverse incentive to not deliver the enhancements, even if the enhancement is subject to a PCD. In such cases, the non-delivery payment rate is less than the cost of delivering the enhancement.

[2] Ofwat (2019), *PR19 final determinations – Securing cost efficiency technical appendix*. Available at Ofwat website.