



South Staffs Water

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CMA, via email to waterPR24references@cma.gov.uk

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Dear CMA,

We welcome the opportunity to comment on the CMA working paper published 18 December 2025. In the limited time available we have reviewed the working paper itself plus taken an overview of the code provided using internal resources only. As a water only company we have only reviewed the models for wholesale water, we do not make any comment on wastewater models. We focus our comments on the key changes that the CMA has undertaken in these revised models and also on the remaining limitations as we see them.

Addressing multicollinearity has weakened the Lasso approach further:

It is positive that the CMA recognised its initial models suffered from multicollinearity, particularly around the non-intuitive simultaneous selection of various combinations of density drivers. Combining the density drivers into a single composite driver initially sounds a sensible approach, however doing so is conflicting with the stated aims of Lasso – which is meant to allow the software to select the most appropriate drivers. By combining density drivers into a pre-built composite upfront, the choices then available to Lasso are even more restricted.

We commented in our first response that Lasso is intended as a tool for large data sets, and that the water sector is currently underserved by reliable, sensible cost drivers. The interventions here reduce the choices available to Lasso yet further. This is the reason that Ofwat's triangulation approach was better, as it enabled the use of all three density drivers in different models, the results of which were then triangulated. What is the value of retaining the Lasso approach here, given such a small number of available cost drivers to select from and the top-down restriction of choice presented to the tool to utilise?

Failure to consider alternative cost drivers, and fundamental flaws with boosters per length of main:

The CMA has not attempted to take a fresh perspective on the choice of cost drivers, given that it started with Ofwat's models and then supplemented with a very small number of other drivers related to appellant companies' cost adjustment claims. There are other potential cost drivers available that have not been considered. Given the stated aims of Lasso, this would have given an opportunity to widen the choice of cost drivers considerably and select, or at least examine, others that also had explanatory power but which in the past have been dismissed.

A very good example of this is the boosters per length of main variable. Across PR24, we provided a wealth of evidence as to why this driver was not measuring the company-wide impact of topography, but was in fact measuring a combination of network complexity and population density. We have supported the exploration of the alternative driver of pumping station capacity, which was also raised again by Anglian Water in its appeal. Ofwat has, over time, failed to engage with this option for reasons unknown, and also it has been ignored by the CMA in these latest appeals despite suggestion by an appellant. The Lasso approach would have been an opportunity to test cost drivers such as these (and numerous others) alongside an examination of the economic rationale, which is a missed opportunity.

We attach an appendix presenting the key evidence against boosters per length of main, and providing links to our previous submissions as part of PR24 on this issue.

The CMAs approach to energy input prices is inappropriate:

The inclusion of an energy index directly within the modelled cost drivers is fundamentally flawed, primarily because the link to actual company energy costs is lagged. Many companies are on multi-year energy contracts with significant hedging. In our case, the majority of our contract was fixed until March 2025 (the end of AMP7), and therefore we were protected from the short-term volatility in AMP7 but remain exposed to the actual market prices on contract expiry and renewal, which remain substantially higher than in our previous fixed contract. This means that we experience the input price pressure later, not in period, and the model cannot therefore detect a direct genuine correlation between costs and the energy index, because this had not materialised in the modelled period. Ofwat's approach of a post modelling adjustment correctly reflected this real-world circumstance and protected customers by means of a true up linked to the future index. The CMA's models do not sufficiently recognise the cost pressure because the spike in the index already happens in AMP7, is inappropriately correlated to modelled costs, and then the index forecast flattens or reduces over AMP8

leading to a lower cost projection in AMP8, rather than reflecting the lagged step-increase in power costs resulting from contract renewal.

Note also that the industry costs in general are exhibiting an above inflation trend over time. Clearly energy prices and general inflation has consequential effects to the rest of the economy including in the construction and utilities sectors, and as CPIH inflation is a general basket this may not be truly representative of this sector specifically.

Additionally, our sector has increasing demands placed on it for enhancement from base costs and performance improvement from base costs. Hence the water sector's base cost trend is greater than inflation overall i.e. we are subject to a general real time trend of increasing expenditure. As we and others previously argued, it is likely that the energy index is in fact latching on to the more generalised time trend of the sector, rather than specifically to energy. This has been demonstrated by some appellants in their responses such as the Anglian/Oxera work demonstrating that the energy index can be replaced with alternative inflationary indices which also get selected by the Lasso process. This demonstrates two things:

1. That the real empirical rationale for the expenditure time trends has not been analysed or understood during the CMAs work, and therefore the models likely omit other variables that could explain and capture these effects; and
2. That the real-world timing and impacts of the energy cost spikes has not been properly evaluated or funded, and the energy index is acting as a proxy for other time trend factors.

Conclusion:

Whilst some of the statistical performance issues have been addressed, overall we do not think the revised models move the CMA or industry forward in terms of explanatory power.

The very limited number of cost drivers evaluated and made available to the Lasso process for selection is worse than Ofwat's process, whereby it consulted with the sector but ultimately settled on only a handful of very similar cost drivers albeit used in triangulated fashion. The CMA have settled on just a single model (for water), with the new energy index cost driver which is actually representing a wider time trend of increasing sector costs, without implementing a post modelling approach which allows for the real energy cost impact in AMP8.

The overall approach has moved the industry away from the Cunliffe recommendations to rely less on econometric modelling but instead take account of companies' real-world circumstances. Real company comparative efficiency is less transparent and less accurate in these models due to these flaws.

Appendix 1: further evidence against boosters per length of main cost driver

The information presented here is intended to support the case against the use of the boosters per length of mains cost driver as a topography driver. This information formed part of our PR24 cost adjustment claim for topography, which Ofwat rejected. The full document can be found on our website at the link below, although the key points have been highlighted in this appendix.

<https://www.south-staffs-water.co.uk/media/rahovxwv/ssc19d-ssc-topography-cost-adjustment-claim-june-2023.pdf>

We remain of the view that the regulatory empirical understanding of topography and its impact on energy costs and capital maintenance is insufficient and is hindering a genuine evaluation and development of analysis in this area, leading to poor decisions and outcomes for the sector including on misleading comparative cost modelling.

Figure 1: a real-world example of two operational sites, vastly different in scale, operating, and maintenance costs - yet treated equally by the boosters per length of main cost driver:



Images above show Hampton Loade's high lift pump hall at 12 MW of installed pumping capacity, and a small distribution booster of 30 kW capacity. Both of these sites would be treated equally in the booster stations per length of main variable, counting as one site each, which is clearly not reflective of the power costs nor the capital maintenance requirements.

Figure 2: chart showing there is no correlation between average pumping head and boosters per length of main – if both were measures of topography we should see a strong correlation between them:

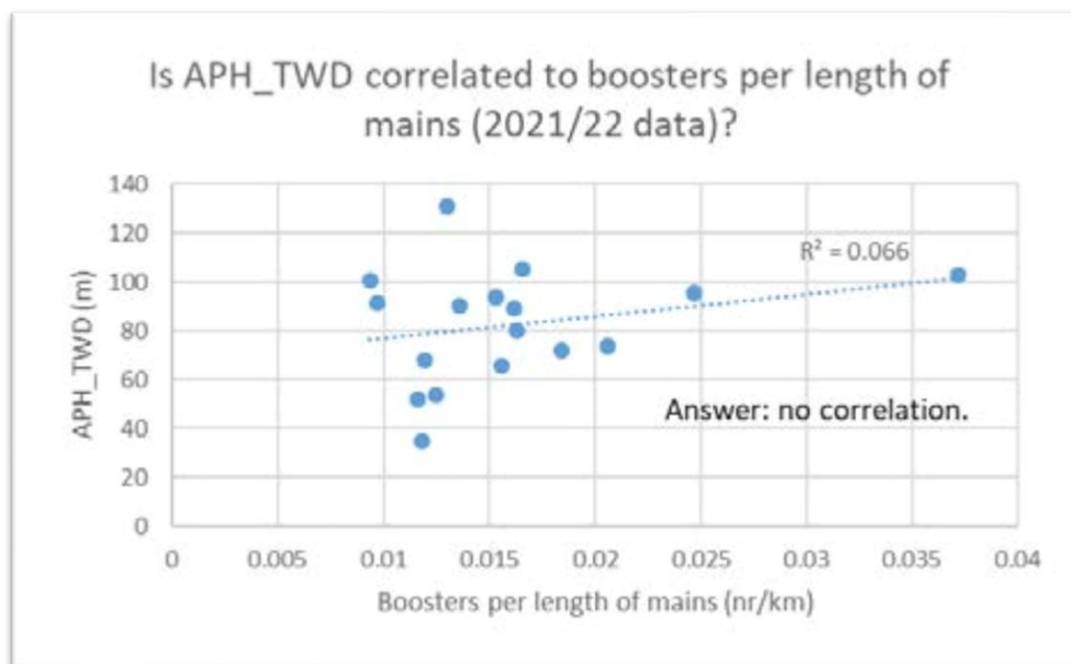


Figure 3: chart showing a much better correlation between average pumping head and installed pump capacity – empirically this makes sense, pumping higher volumes of water to higher elevations requires larger pumping plant:

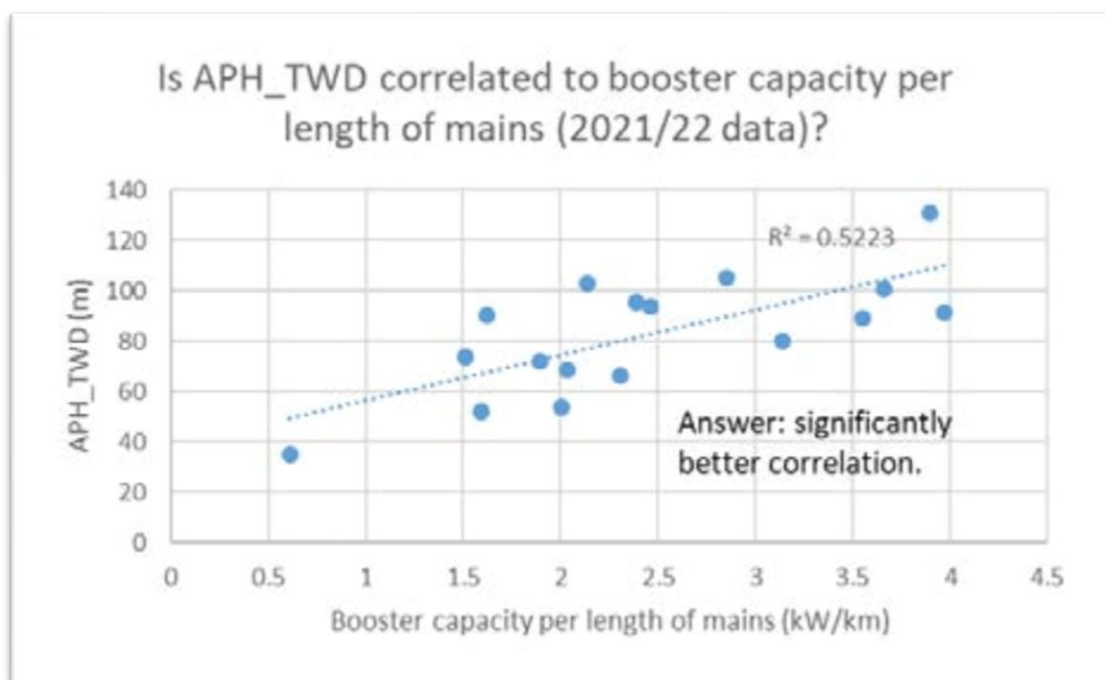


Figure 4: charts showing correlations of boosters per length of mains to the three population density drivers – showing that the measure is at least partially detecting the density relationship which is already covered by dedicated density cost drivers. A higher number of boosters per length of mains is associated with lower density areas, which makes empirical sense as smaller volumes of water often need to be ‘repumped’ to more distant areas of the network (primarily rural). No data has been collected on the size distribution of pumping facilities, which is a missed opportunity to understand the asset base further and utilise this knowledge to improve the explanatory power of the models.

