![Affinity Water logo]

CostAssessment@ofwat.gsi.gov.uk.
Ofwat, Centre City Tower
7 Hill Street
Birmingham
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4th May 2018

RE: **Cost Assessment for PR19 consultation response, Affinity Water**

Dear Ofwat

We welcome the early publication of econometric models and the opportunity to comment and shape their further development. It is clear that Ofwat has considered an impressive range of candidate models, reflecting the different priorities of companies in our industry. This is a difficult process for Ofwat to manage because of the wide range of priorities that companies have for cost assessment, and we recognise the difficult job that Ofwat has in coming to final conclusions. We feel that this process has been very well handled, right from the early involvement of the Cost Assessment Working Group to this consultation, and would like to record our appreciation of Ofwat's efforts.

Level of aggregation

We observe that the more aggregated models seem to work better statistically, and suggest that the use of such models will avoid issues that might be created by accounting allocation issues, which we believe remain an issue, particularly within the network plus services, where the accounting boundaries have been subjected to less attention than the boundary between resources and network plus. We welcome the apparent emphasis on botex rather than totex, as we believe that capital enhancement expenditure requirements do not lend themselves to regression modelling. We note the inclusion of two water enhancement expenditure models, and we welcome this. However, we also note the need to develop a fuller range of such models.

Particularly important to us, is the need to model costs associated with sustainability reductions imposed by the Environment Agency (i.e. requirements to stop abstracting water from certain ground sources). Such reductions have significant financial consequences. The most significant of these costs are the resulting enhancement capex to provide sufficient infrastructure to ensure that we are still able to carry out our statutory duties to supply secure water supplies to our customers in a resilient manner. It should be noted that there also opex costs associated with such reductions, usually in the form of pumping costs required to bring water into an area from an alternate source. We also have a particular capital requirement (the Sundon conditioning works) which results from sustainability reductions. We have included this in our early submission of special factors, and recognise that this may be suitable for a DPC project.

Scale Variables

In general across its models, Ofwat have used the number of connected properties or the length of mains as scale variables. A significant drawback of these scale variables is that they do not distinguish differences in the volume of water delivered to end customers' properties. Everything else being equal,

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it would be right to expect companies that deliver higher volumes of water to require higher expenditure.

The volume of water delivered varies principally with occupancy, so if models are to use the number of connected properties or mains length as scale drivers, they should also contain a suitable explanatory variable to explain the costs arising from differences in average occupancy.

Suitable variables could include:

- Average population per billed property
- Usage - water delivered per property

Water Treatment / Treatment complexity

We think that water treatment complexity is best modelled through variables that compare the proportions of water treated at the different WTW bands. To us, the percentage of borehole water seems too simplistic a representation and it does not reflect the circumstances of companies like ours, that need to deploy complex processes to combat difficult ground water conditions and bring treated water to the standards required. We think there is evidence to support this view since in the treatment models, the R-squared values and p-values are generally better in the models using water treated in different WTW bands than for the % of borehole water.

In some models Ofwat has used the percentage of water treated to levels 3-6 and some companies have also designed models that use the percentage of water treated to levels 4 and above. Level 4 and above variables would distinguish better between companies that have moderately complex processes, and those that must employ the most complex water treatment techniques.

We have proposed this as a special factor for Affinity Water in our early cost adjustment claims submission of 3rd May. We have done this because this is a significant cost driver for Affinity Water and the selection of models consulted upon suggests some doubt about it as an explanatory factor. However, we think it is a significant cost driver for all companies and should therefore ideally be an explanatory factor rather than an adjustment

Regional Wages

We believe that the datasets BM3010CAW, BM3011CAW, W3030CAW, W3031CAW are unreliable because they show counter intuitive results that the highest employment costs per Full Time Equivalent (FTE) appear in the northeast and northwest of the country. Some of the lowest costs per FTE are in companies operating in the southeast and around London.

In addition, for some companies, these datasets show that the costs per FTE for indirect employment costs are identical to those for direct labour. In another case, the cost per FTE in resources is identical to the cost per employee in network plus. This shows that those companies have made simplifying assumptions of uniformity of cost per employee across the categories. The different approaches to production of the data by companies undermines the comparability of the information. The counter intuitive results in these data series would help explain why these variables have not been shown to have explanatory power in models to date.

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For these reasons we believe that the SOC1 and SOC2 data series, which are built from more authoritative ONS statistics are more objective measures of regional wage variation. In cost estimation models they will reflect the effects not only on employment costs, but also on how suppliers to the industry build local labour market conditions into their prices for bought in services.

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Bad debt models

Across the models the Equifax variable, HHs with default (%) Eq_lpcf62) appears to us to be the variable that most closely measures the propensity to default. It seems to do so directly, where the various deprivation measures and credit risk scores seem to be proxies for the probability of default. There is evidence in the models to prefer this variable as there are higher R-squared values and p-values on the deprivation variables in models ORDC1 and ORDC3 compared to the others.

The models proposed by Ofwat and most companies do not generally include transience variables. We think transience is a significant driver of bad debt costs and to a lesser extent, non-bad debt costs and so should be included within models, or if that is not possible, as a special cost factor.

We are somewhat concerned with the low R-squared values for "retail other models", and wonder if these low explanatory power models are capable of being aggregated with the better performing bad debt models to produce a reliable overall retail cost estimate. The low explanatory power of the "retail other' models do not offer a justification for moving from the average cost to serve approach for these costs.

Use of the models

About 17% of our botex costs are unmodelled because they represent non-controllable costs, such as rates and abstraction charges. If the models are to be used to set efficiency targets, the targets should be calibrated so that they apply only to the controllable 'modelled' costs.

We think that in applying the models' results, Ofwat should take into account statistical uncertainty in the models. Model residuals are likely to capture measurement errors, differences in company cost allocation approaches, random noise and the presence of omitted variables as well as differences in efficiency. We think this means that only a proportion of model residuals can be thought of as representing efficiency differences.

We also believe that Ofwat should ensure that if the models are used to set a benchmark leading comparator company, then the benchmark company should be of sufficient size to be reflective of the industry nationwide. If the leading benchmark were too small a company, the risk increases that the benchmark reflects local operating circumstances unique to the small company, not capable of replication by the other companies in the industry.

We are concerned about these effects In combination with the very optimistic assumptions that Ofwat and KPMG seem to be making about the potential gains that companies might make in AMP7 as a result of the introduction of the totex regime (final report yet to be published). In this context, it seems there is a real danger of Ofwat substantially underestimating the expenditure that the industry will

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require in AMP7 in order to healthily maintain the essential service which the industry provides to the UK public.

Please let me know if anything in this submission requires clarification.

Yours sincerely,

Tim Charlesworth
Head of Economic Regulation
Affinity Water

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