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Ofwat Water Determinations

Competition and Markets Authority

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Dear Mr Meek

Water sector price determinations – Provisional findings: September 2020

I write to you on behalf of the Institution of Civil Engineers (ICE) to submit its views on the CMA's provisional redeterminations published on 29th September 2020. These views have been informed through consultation and feedback from ICE's Water; and Management Expert Panels.

ICE recognises that Ofwat's framework for the 5-year Price Reviews is reviewed, revised, consulted on, and published at the start of each review process. Although this response makes some general comments on the CMA's provisional findings of Ofwat's final determination that has been undertaken within that framework, its main purpose is to re-emphasise the need for revisiting the approach to asset maintenance for future Price Reviews: references to relevant and recent ICE documentation on asset maintenance are given at the end of this response.

ICE is primarily focused on civil engineering assets which are long life. Generally, they perform well, delivering outcomes for society and the environment over the long-term. Although deterioration may be slow, assets can fail catastrophically thus jeopardising system resilience; appropriate monitoring and maintenance is therefore required. In the water sector such assets include impounding reservoirs, pipelines, treatment works, and the sewerage system. Much of the existing infrastructure was designed and built decades if not a century ago to different design standards which may no longer be appropriate for recent changes in the severity and frequency of extreme climatic conditions and changes in societal expectations. Despite the addition of new assets, the overall age of water company assets is increasing with associated deterioration in condition and impacts on serviceability. In addition, our infrastructure needs to meet both societies changing expectation in supporting the attainment of the UN sustainability goal, whilst also adapting to changing climatic conditions. This means that targeted monitoring and more maintenance is required to maintain, let alone to improve system resilience. The frequency and severity of interruptions to water supply and failures of the sewerage system may be greater on older assets, but the risks to newer assets should not be overlooked. For example it has been found that some of the innovative materials introduced in the 1960s and 1970s, such as pvc pipes and unlined ductile iron pipes with lower capital costs, have aged faster with greater risk of bursts than conventional materials such as lined cast iron pipes.

ICE is therefore pleased to see that CMA has recognised the importance of resilience as a crucial element of water sector infrastructure and has provided additional funding, albeit limited, to allow for more resilient networks as well as enabling the companies to achieve substantial reductions in leakage (CMA Summary of provisional findings report: Section 2(b)).

However, ICE considers that disproportionate emphasis has been placed on the assessment of econometric models based on historical costs and that little weight has been given to future requirements based on engineering assessments of asset health, condition, and serviceability.

ICE is pleased to see CMA's acknowledgment of the argument that "…. Ofwat's cost assessment is backward looking." (Provisional findings report: Section "Is capital maintenance addressed appropriately?", para 4.181) and CMA's suggestion "…to enhance its analysis with a forward-looking element that will assist in triangulating results from its econometric modelling of historic costs."

ICE is concerned that there has been overreliance on econometric models to assess the capital maintenance needs of assets which have a working life of many decades. Whilst the models do reflect the relative quantity of each company's assets they do not incorporate sufficient consideration of the assets' ability to continue to deliver a service to the customer (Performance) nor predict intervention points (Investment needs) to maintain the service. These assets now have a presumed working life which exceeds their original design lives and the period over which there is reliable data. As such, there is a growing concern that the sector is heading for increased asset failure (in both number, frequency, and consequence) as the projected working life of assets lengthens. The industry has a historic tendency of reducing capital maintenance expenditure (often badging it as efficiency) to meet the constraints of the funding, as calculated using the econometric models, rather than the long-term investment needs of the assets. The consequences of such reductions may not be seen for many years, if not decades after the original decision-makers and owners have taken their rewards. This ultimately adversely impacts the customer in terms of both service and bills, although ICE recognises that it is challenging to establish the correct balance of costs for current and future bill payers.

Future Price Reviews should look to incorporate the following, along with the issues identified above:

- The outputs of econometric modelling should be interpreted with engineering judgement aimed to ensure that the water sector's multi-generational assets remain fit for purpose into the future;
- The requirements for capital maintenance must be forward looking not backward looking;
- The treatment of Infrastructure Renewals Expenditure (IRE) solely as an operating cost funded by current customers should be reviewed;
- Consideration is given to splitting the price controls for maintenance from enhancement, with the former for a much longer period (25 years) linked to outputs and with only minor adjustments every 5 years;
- "Best-value" considerations, rather than "Least-cost" should be the basis for the appraisal of alternative infrastructure options; and
- Use of best practice asset management approaches from all infrastructure sector.

ICE has released a policy paper, published in May 2020, examining how the defined regulatory periods governing utilities can be made more flexible and strategic to effectively plan and deliver the UK's core economic infrastructure networks.

As you are aware almost half of the UK's infrastructure, chiefly water and energy, is financed and delivered by the private sector, and paid for by consumers, under the Regulated Asset Base (RAB) model. This regulatory model has generated significant investment and improved performance over the past decades but is increasingly facing new demand drivers. These include achieving net-zero greenhouse gas emissions, adapting and becoming more resilient to climate change and extreme weather events, contributing to efforts to address the nation's shortage of housing, as well as rapid advances in technology that have the potential to transform infrastructure networks.

At the ICE we see the long-term challenges as:

- adapting our assets to climate change (extremes of temperature, rising sea levels, more frequent flood events, etc)
- social change, e.g. changes in demography and the way we interact with our infrastructure
- economic challenges as it becomes increasingly difficult to fund maintenance in a period of stunted economic growth
- shortages of critical skills e.g. in older technologies, to effectively maintain older assets
- political aspects of infrastructure provision, e.g. failure to recognise and effectively respond to increasing demand for rail and airport capacity

- new uses of technology, both as a burden to our assets but also as an opportunity to improve their stewardship
- lack of knowledge of our assets through ineffective data capture and knowledge management.

ICE would welcome the opportunity to participate in the consultations on Ofwat's methodology for PR24 in the early stages when the thinking is being developed.

Yours sincerely

[redacted]

Eur Ing David Hirst CEng FICE

Chair, ICE Management Expert Panel

Relevant ICE policy and guidance papers relating to regulation and asset management

- Aligning long-term government policy and the regulation of utility companies: ICE, May 2020 https://www.ice.org.uk/news-and-insight/policy/aligning-policy-with-regulation-of-utilities

- Guiding Principles of Asset Management: Realising a World Class Infrastructure: ICE November 2019 - This document gives a brief overview of the six guiding principles of Asset Management https://www.ice.org.uk/knowledge-and-resources/best-practice/realising-a-world-class-infrastructure

- Leveraging the relationship between Building Information Modelling (BIM) & Asset Management: ICE, October 2013 - This paper explains the mutually-supportive relationship between BIM and Asset Management. https://www.ice.org.uk/knowledge-and-resources/best-practice/relationship-between-bim-and-asset-management

- Asset Management Policy; ICE November 2012 - This paper sets out ICE's position on the issues facing the management of the UK's infrastructure assets. https://www.ice.org.uk/knowledge-and-resources/best-practice/asset-management-policy