

# YORKSHIRE WATER TOTEX RORE RISK

## Updated analysis for Draft Determination Representations

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Insight

### 1. Introduction

To support the development of Yorkshire Water's (Yorkshire) PR19 Business Plan, we undertook an analysis of the RORE risk relating to the company's totex performance (using Monte Carlo modelling). This was both to help the company understand likely risk exposure, but also to develop the outputs necessary to populate Data Table App26.

As part of its representations on Ofwat's Draft Determination (DD), Yorkshire is submitting revised totex numbers. As such, the company asked us to update our RORE risk analysis. This short note briefly explains our approach and results.

### 2. Our approach

In our original totex RORE risk modelling, we undertook our own analysis relating to the risk of totex over / under spend relating to: (i) efficiency performance; and (ii) real price effects. For each we estimated triangular probability distributions to reflect the relevant risks. In relation to efficiency performance, these were defined based on the 'spread' of potential efficiency savings the company could make, as implied by our own cost assessment modelling work for Yorkshire. For real price effects, we similarly used the 'range' of potential input price inflation values identified from our work for Yorkshire to define the distribution.

Our risk analysis was supplemented by Yorkshire's own 'bottom-up' estimates for various additional risks. These included risks associated with changes in: (a) household demand; (b) energy consumption; (c) mains bursts; (d) business rates; and (e) costs to recover service.

Having defined the relevant probability distributions for each 'risk factor' we used Monte Carlo modelling to calculate the overall totex risk in £m, as required in App26. This is to reflect the fact that the probability of being at the 'extremes' on multiple risk factors simultaneously is unlikely.

### 3. Our update

Since IAP, we understand that Yorkshire has further revised its overall proposed totex spend, reducing this by circa £350m. We have therefore updated our analysis of totex RORE risk to reflect this.

Our approach has been guided by the company's rationale and evidence relating to its revised totex numbers. Specifically, our understanding is that Yorkshire has not fundamentally changed its views on achievable cost efficiencies since its Plan was resubmitted at IAP. That is to say, the company considers that the Plan was robust and well-evidenced and that, specifically in relation to cost efficiency, it had set a target that it considered reflected the P50, based on a notionally efficient firm.

With the above in mind, we consider that the appropriate 'update' to the RORE risk analysis is, therefore, to assume that the company's prior totex numbers continue to represent its best view of the P50 (and indeed, Yorkshire has advised us that this is the case). Hence, by lowering totex further in its DD representations:

- the 'most likely' outcome is an overspend over PR19 equal to the c. £350m reduction; and consequently
- the company is taking on additional downside risk.

For clarity, this does not imply that the Plan is not deliverable with £350m less totex (and that question is not within the scope of our work). Rather, it simply means that, as with any risk analysis, there is a 'spread' of possible outcomes. Ergo, some plausible outcomes may include instances in which the Plan is deliverable with this additional totex reduction (albeit, this would require 'stretch' performance). However, logically, as the company's previous view of totex efficiency remains its central case, clearly in the majority of cases, the company would now expect an 'overspend' on totex.

Reflecting the above, in updating our analysis, we held the company's prior view of the P50 constant, and 'shifted' the probability distributions for totex efficiency to the downside in proportion to Yorkshire's proposed totex reduction.

The results of our updated analysis are shown in the table overleaf.

Table 1: Key results for table App26 (£m 2017/18 prices)

	2020 / 21	2021 / 22	2022 / 23	2023 / 24	2024 / 25	Total over AMP	Av over AMP
<b>Water resources</b>							
Water resources totex impact - <b>high</b> RoRE case	£1.2	£2.9	£2.4	£2.5	£2.8	£11.9	£2.4
Water resources totex impact - <b>low</b> RoRE case	-£11.9	-£10.3	-£12.8	-£11.7	-£8.4	-£55.1	-£11.0
<b>Water network plus</b>							
Water network plus totex impact - <b>high</b> RoRE case	£15.5	£38.0	£37.0	£36.0	£37.7	£164.2	£32.8
Water network plus totex impact - <b>low</b> RoRE case	-£65.0	-£69.7	-£76.4	-£71.1	-£69.0	-£351.2	-£70.2
<b>Wastewater network plus</b>							
Wastewater network plus totex impact - <b>high</b> RoRE case	£27.2	£25.5	£36.1	£14.9	£13.3	£116.9	£23.4
Wastewater network plus totex impact - <b>low</b> RoRE case	-£130.5	-£139.7	-£112.8	-£92.8	-£66.5	-£542.3	-£108.5
<b>Bioresources</b>							
Bioresources totex impact - <b>high</b> RoRE case	£2.7	£4.8	£3.3	£2.9	£3.8	£17.6	£3.5
Bioresources totex impact - <b>low</b> RoRE case	-£16.3	-£15.9	-£15.2	-£16.9	-£14.1	-£78.5	-£15.7

Source: Economic Insight analysis

In total, the revised analysis implies a material downside RORE skew for the company in relation to totex performance. We find the overall upside (P90) to be 1.1% RORE, with a downside of -3.6% RORE (P10) – based on a 50% sharing rate (17/18 prices) or 1.2% and -3.9% (nominal). This is a logical result on the basis that:

- Yorkshire considered its prior submission to represent its ‘best view’ of achievable totex spend, taking into account efficiency and other relevant risk factors;
- accordingly, our previous totex risk analysis for the company implied a ‘symmetrical’ balance of risk in relation to totex performance;
- the company has now, however, reduced its proposed totex by c. £350m, but this is not on the basis that it has identified additional efficiencies that it can ‘most likely’ achieve; hence
- by materially lowering proposed totex, whilst maintaining its existing view on achievable efficiencies, Yorkshire is proposing to take on additional downside risk.

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