Reference
Cadent Third Party Response to the Water PR24 Redeterminations Provisional Determinations

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Cadent
Your Gas Network

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Dear Water PR24 Reference team,

Water PR24 Redeterminations – Provisional Determinations

I am writing on behalf of Cadent in response to the Competition and Markets Authority (CMA) invitation to provide views on its water PR24 Provisional Determinations for the five disputing companies to Ofwat's PR24 price control Final Determinations, covering the period 1 April 2025 to 31 March 2030.

Cadent owns and operates four of the eight gas distribution networks (GDNs) in Great Britain. As the CMA will be aware, we are regulated by Ofgem under the RIIO price control framework and are currently going through the RIIO-3 price control setting process covering the period (1 April 2026 to 31 March 2031). The price control framework we are regulated by is set and operated in a very similar way to that developed by Ofwat and being set at PR24, with many key issues being shared as they commonly affect regional utility networks. We are now making a further submission to the CMA as due to this, any decisions reached by the CMA in redetermining PR24, signalled at Provisional Determinations, could impact regulatory decisions made for RIIO-3 and subsequent future gas distribution price controls.

We have reviewed the CMA Provisional Determinations and have specific comments on provisional decisions made by the CMA on Ofwat's assessment of water company costs, which could be relevant to the setting of future gas distribution price controls. Specifcially, we wanted to draw attention to key decisions made in respect of:

- **The CMA's provisional decision to reduce the Frontier Shift target from 1% to 0.7% per annum.** We support the CMA's provisional decision to lower the Frontier Shift target from 1% per annum. However, we still consider that a target of 0.7% applied uniformly across the forthcoming regulatory period is too high as:
    - the CMA has chosen to set its target at the upper end of the disputing companies' range of potential targets without sufficient justification, and as their analysis of water company productivity relative to the wider economy does not account for the element of company productivity gains driven by 'catch-up efficiency'. The productivity improvements that any network makes over a price control period will be a combination of the extent to which they are able to improve to catch up to the efficiency level of the frontier network ('catch-up efficiency') and the extent to which productivity improves at the frontier level of efficiency ('frontier shift').[1] Looking to historical water company productivity improvements is likely to lead to an overestimate of 'frontier shift' as some of the improvement will be the result of 'catch-up'; and
    - a 0.7% target applied uniformly across the period does not reflect the profile of future productivity growth from the Bank of England or the OBR's forecasts and

[1] Frontier Shift representing productivity gains that even the most efficient network should be able to achieve.

places undue weight on the OBR's forecast for 2027 onwards, which the OBR itself accepts is highly uncertain.

Based on these observations we show the level of challenge that should be applied for Final Determinations by the CMA should be significantly lower, and around 0.5% per annum (if applied uniformly over the period).

In the Appendix to this letter, we summarise our detailed analysis on the appropriate level to set the Frontier Shift target at to substantiate these views.

- **The CMA's recognition of regional wages and density measures within their econometric models for setting our allowances.** As noted in our previous third party submission to the CMA water PR24 redeterminations, we accept that the inclusion of density drivers in econometric modelling by Ofwat can help to control for the unique cost pressures facing utilities operating in densely populated areas like London. However, wage pressures impacting utilities operating in the South East of England are also important to recognise in setting allowances. In this regard we support the CMA in accounting for regional wage differences explicitly in its cost assessment. In addition, in line with our previous submission we also support the CMA's use of density variables within models to capture the relationship between the density of an operating region of a utility and the efficient level of costs. This includes allowing the model to select the appropriate shape of the relationship between density and costs, rather than using unevidenced a priori assumptions of the expected shape to guide modelling choices or, as justification to reject use of a density model.

For the avoidance of doubt, the enclosed evidence and documents referenced in the Appendix to this letter are all publicly available (some in redacted form), with relevant references detailed below.

We consent to our submission being published and would be happy to assist further, should the CMA have any questions regarding our submission.

Yours faithfully

[redacted]

By email

Appendix: Our assessment of the CMA's Provisional Decision to set the Frontier Shift at 0.7% per annum.

Ofwat's application of a Frontier Shift target for water and wastewater companies is equivalent to Ofgem's application of the Ongoing Efficiency challenge to energy network companies, including GDNs. Both are intended to capture the improvement in productivity over time that companies can achieve, including the company which Ofwat or Ofgem estimate to be most efficient.

As set out in our original third party submission to the CMA, and most recently in our response to Ofgem's Draft Determinations for RIIO-3, we consider that sector regulators (including Ofwat and Ofgem) have systematically and consistently set unjustified Frontier Shift/Ongoing Efficiency targets well in excess of productivity performance supported by historical and forecast evidence on the rate of productivity improvement in the economy.[2] The result being to reduce companies' expenditure allowances erroneously beyond cost reductions that even the most efficient networks can achieve. As such, we support the CMA's provisional decision to lower the Frontier Shift target from 1% per annum (as per Ofwat's PR24 Final Determination), which was clearly not supported by the economic evidence at hand. However, we still consider that a target of 0.7% applied uniformly across the forthcoming regulatory period is too high considering the current economic environment and two issues with the CMA's approach.

Issue 1: The CMA has chosen to set its target at the upper end of the disputing companies' range of potential targets without justification and their analysis of water company productivity does not account for the portion of gains driven by 'catch up efficiency'

As we showed in our RIIO-3 Business Plan[3] and in our subsequent RIIO-3 Draft Determinations Response,[4] a bottom-up calculation of Frontier Shift in comparable sectors using the EU KLEMS dataset suggests a range from 0.2-0.8% per annum, with a midpoint of 0.5% for gas networks. Similar analysis undertaken by Economic Insight, on behalf of the disputing water companies suggested a range of 0.3-0.7% per annum. Therefore, the CMA's provisional determination decision of 0.7%, whilst lower than Ofwat's assumption remains at the very top of benchmarked ranges. The CMA's provisional determination, however, does not offer any explanation why a value at the top of this range is reasonable to assume for water companies over the upcoming price control period.

We acknowledge that in reaching its provisional determination, the CMA has taken a step back from the bottom-up approach to calculating OE targets typically deployed by companies and regulators. The CMA's approach, instead, focussed on answering two questions:

- First, *how comparable is the water sector to the rest of the economy in terms of productivity changes, and has it also been affected by low productivity growth since the Global Financial Crisis (GFC)?*
- Second, *what are the forecasts for productivity growth in the economy as a whole and for the water sector?*

To answer the first question, the CMA has estimated productivity changes for water companies between 2013 and 2024 using base cost model data. To do this, the CMA has used both its own base cost models and Ofwat's base cost models to estimate Total Factor Productivity (TFP) based on water and wastewater companies' historical costs, as per the approach used in the EU KLEMS dataset. The CMA finds that average productivity growth has been close to zero in most years, in line with the EU KLEMS estimate of GO TFP for the benchmark sectors for the 2009 to 2019 period.

However, the CMA's approach fails to acknowledge that some of the estimated productivity gains in the water industry will in fact be driven by '*catch-up efficiency*', not Frontier Shift. This means that even the CMA's finding of close to zero productivity growth is likely to be over-estimated. In fact, the water sector may have in reality exhibited negative productivity growth, potentially as a result of underinvestment in the sector. Since the CMA in its provisional determination has failed to acknowledge that some of its estimated productivity growth relates to catch-up productivity, it is not correct to conclude that there are "*no convincing reasons to expect productivity growth in the water sector to diverge substantially from the wider economy*".[5]

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[2] Cadent (2025), Cadent RIIO-3 Draft Determination Response: Overview Document, Response to question OVQ19, see here: https://riio3.cadentgas.com/documents/cadent-riio-3-draft-determination-response_overview-document.pdf

[3] Cadent (2024), RIIO-GD3 Business Plan. Cost Assessment Appendix, Section 6, see here: https://riio3.cadentgas.com/documents/appendix_03.pdf

[4] Cadent (2025), Cadent RIIO-3 Draft Determination Response: Overview Document, Response to question OVQ19, see here: https://riio3.cadentgas.com/documents/cadent-riio-3-draft-determination-response_overview-document.pdf

[5] CMA (2025), Water PR24 References, Provisional Determinations, Vol. 1, para. 4.173

Issue 2: The CMA's 0.7% target does not reflect the profile of future productivity growth from the Bank of England or the OBR's forecasts and places undue weight on the OBR's forecast for 2027 onwards, which the OBR itself accepts is highly uncertain.

Notwithstanding our points above, following the CMA's conclusion to its first question it then presents forecasts of productivity growth for the UK economy by the Bank of England and the Office for Budget Responsibility (OBR) as set out in Table 1 below:

Table 1: Forecasts of UK productivity growth

	2025	2026	2027	2028	2029
OBR	0.30%	0.90%	1.10%	1.20%	1.30%
Bank of England	0.27%	0.27%	0.27%		
Average	0.29%	0.59%	0.69%	1.20%	1.30%

Source: CMA, PR24 Provisional Determinations, para 4.161 – 4.161

It is important to note that the OBR caveats its forecast, noting the significant uncertainty around forecasting productivity, and that "*successive past forecasts for trend productivity have proven to be too optimistic*"[6].

Based on the CMA's conclusion to its first question and these forecasts, the CMA concludes that its provisional decision is to set the frontier shift at 0.7% per annum.

Whilst we agree that there are merits in the CMA's general approach and consideration of forecasts of wider UK productivity growth in setting the frontier shift target, we believe there are three issues with the conclusions the CMA reaches in its provisional determinations:

1. By failing to disentangle catch-up efficiency from Frontier Shift efficiency, the CMA has incorrectly ruled out the possibility that the water sector is less productive than the wider UK economy (as set out above).
2. Regardless of this, the CMA has collected evidence to show that productivity growth in the next three of years is expected to be lower than in four or five years and still opted to set a *constant* Frontier Shift efficiency target over the PR24 period. As a result, the Frontier Shift efficiency target in the initial years of the period is too high. As a result of compounding over the period, this then means the Frontier Shift efficiency target in the later years of the period is therefore also too high.
3. The CMA has put undue weight on the OBR's forecast for 2027 onwards, which the OBR itself acknowledges suffers from significant uncertainty and a track record of overstating the outlook for productivity growth in the economy.

We illustrate the second issue, in Table 2 below to show for a fictional network that setting a flat target of 0.7% per annum results in lower allowances than having a profiled target that rises over time, but averages to the same value across a 5-year control period.

Table 2: Illustrative example of Frontier Shift compounding

Year	**0**	**1**	**2**	**3**	**4**	**5**	**Total**
Scenario 1: Flat, annual OE target of 0.7%							
Headline OE Target		0.7%	0.7%	0.7%	0.7%	0.7%	
Compounded OE Index	1.000	0.993	0.986	0.979	0.972	0.965	
Allowed Expenditure (Excl. OE)		100	100	100	100	100	500.00
Allowed Expenditure (Less OE)		99.30	98.60	97.91	97.23	96.55	**489.60**
Scenario 2: Profiled OE target rising over time, averaging 0.7%							
Headline OE Target		0.1%	0.4%	0.7%	1.0%	1.3%	
Compounded OE Index	1.000	0.999	0.995	0.988	0.978	0.965	
Allowed Expenditure (Excl. OE)		100	100	100	100	100	500.00
Allowed Expenditure (Less OE)		99.90	99.50	98.80	97.82	96.54	**492.56**
Difference							
Allowed Expenditure (Less OE)		0.60	0.90	0.89	0.59	0.00	**2.97**

Source: Cadent analysis

[6] OBR (2025), Economic and fiscal outlook – March 2025, p28, Box 2.1

As shown in this example due to this compounding issue, allowances set for the fictional network are lower in total than they *should* be, reflecting the actual predicted path of productivity gains.

Therefore, regardless of resolving the first issue highlighted above, we think the CMA should consider two improvements to its provisional determination approach:

1. using the shape of the OBR forecast to inform a per annum Frontier Shift target which increases over time; and
2. using only the first three years of the OBR forecast, which can be averaged with the Bank of England forecast and disregarding OBR estimates from 2028 to 2029 given the significant uncertainty noted by the OBR over these forecasts in the longer term (and the detrimental consequences of setting a target that is too high).

As shown in Table 3 below, based on a fictional network, the CMA's provisional determination approach of 0.7 per cent, per annum results in expenditure allowances post-OE of £489.60 (assuming pre-OE allowances of £100 per annum, or £500 in total). Comparatively, taking the average of the OBR and Bank of England forecasts over the five years results in expenditure allowances post-OE of £490.58. Further, if the CMA were to take the average of the two forecasts over the first three years only and then assume the same value in year 4 and 5 as in year 3, given the high degree of uncertainty associated with the last two years of the OBR's forecast, the expenditure allowances post-OE would be £492.19. If the CMA were to set a flat target over the period equivalent to this, this would equate to a target of approximately 0.52% per annum, significantly less that the provisional determination 0.7% per annum.[7]

Table 3: Comparison of CMA PD Approach, Cadent Proposed Improved Approach, and Cadent Business Plan Submission

Year	0	1	2	3	4	5	Total
Scenario 1: Flat, annual OE target of 0.7% (CMA PD)							
Headline OE Target		0.70%	0.70%	0.70%	0.70%	0.70%	
Compounded OE Index	1.000	0.993	0.986	0.979	0.972	0.965	
Allowed Expenditure (Excl. OE)		100	100	100	100	100	500.00
Allowed Expenditure (Less OE)		99.30	98.60	97.91	97.23	96.55	**489.60**
Scenario 2: Average of OBR and Bank of England Forecast over five years							
Headline OE Target		0.29%	0.59%	0.69%	1.20%	1.30%	
Compounded OE Index	1.000	0.997	0.991	0.985	0.973	0.960	
Allowed Expenditure (Excl. OE)		100	100	100	100	100	500.00
Allowed Expenditure (Less OE)		99.72	99.13	98.45	97.27	96.01	**490.58**
Scenario 3: Average of OBR and Bank of England Forecast over three years, then constant							
Headline OE Target		0.29%	0.59%	0.69%	0.69%	0.69%	
Compounded OE Index	1.000	0.997	0.991	0.985	0.978	0.971	
Allowed Expenditure (Excl. OE)		100	100	100	100	100	500.00
Allowed Expenditure (Less OE)		99.72	99.13	98.45	97.78	97.11	**492.19**

Source: Cadent analysis

Whilst the example above, and impacts derived, are based on a fictional network, their magnitude indicates a material effect on allowances set for disputing companies. Therefore, we propose that, if the CMA is to rely on forecast data to set the OE target, which we agree has merit, then it should (i) consider that the OE target will start low and increase over time, and (ii) consider the reliability of the OBR's forecast for the last two years of the period, given that recent economic productivity has been close to zero for a number of years, and the OBR has itself noted limitations of this longer-term prediction. Based on our analysis this would then mean setting a Frontier Shift target well below 0.7%, and much more closer to a level of 0.5% per annum (if applied uniformly).

[7] This calculation assumes the fictional network has flat expenditure over the upcoming period.