Appendix 7

Cadent
Your Gas Network

Finance Appendix

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Supporting reports

Set out below are reports including high level summaries that we reference in our plan and this Appendix. Some of the reports have been commissioned solely by Cadent, some jointly with the other gas distribution networks ("GDNs") and others more widely through the Energy Networks Association ("ENA").

Ref	Author	Title	Date	Commissioned by	Confidential
FA1	**Oxera**	**Cost of equity for RIIO-GD3**	Nov 2024	GDNs	No
	Recent empirical data relating specifically to the gas industry in Europe and the USA suggests that Ofgem should set the RIIO-GD3 beta at the top end or slightly above the Ofgem Sector specific methodology decision (SSMD) range. As a result of the higher beta evidence, along with the review of other Capital Asset Pricing Model (CAPM) inputs, the data indicates the cost of equity ("CoE") range should be higher than RIIO-2. Asymmetric risks such as asset stranding are not fully mitigated by the proposed regulatory package; aiming up within the proposed CoE range is an appropriate mechanism for Ofgem to use towards providing a compensation for these risks.			
FA2	**Oxera**	**Gas distribution networks' dividends in RIIO-GD3**	Dec 2024	GDNs	No
	The implication of accelerated depreciation of RAV and dividend yields needs to be considered in tandem with market evidence over current dividend yields. Empirical evidence confirms that Ofgem's working assumption of a 3% dividend yield assumption for gas networks is insufficient. Trends in dividend payments between European gas and electricity networks have started to diverge given the level of growth rates are different, so Ofgem should differentiate the dividend policies of gas and electricity networks.			
FA3	**Oxera**	**RIIO-3 cost of equity – CAPM parameters**	Nov 2024	ENA	No
	When calibrating the CAPM risk-free rate, it is important to recognise the "convenience premium" that holds down the observed yields on government bonds. Estimates of UK stock market returns are approximately 7% (CPIH real). The RIIO-3 TMR should be set above this historical benchmark given the current higher-for-longer interest rate outlook. The beta comparator set for Ofgem's RIIO-3 electricity and gas network price controls should include Pennon Group, as a pure-play regulated water business, and European regulated energy networks. The empirical evidence points to a starting asset beta range of 0.35 to 0.40.			
FA4	**Oxera**	**Review of the regulatory regimes and business mixes for relevant European comparators to strengthen the use of European beta data**	Nov 2024	ENA	No
	The risk factors relating to the regulatory process and the design of the regulatory regime for energy networks are similar across the British, Italian and Spanish regimes. As such, it would be considered appropriate for Ofgem to include the five European networks in its comparator sample.			
FA5	**Frontier**	**Updated cost of equity cross-check evidence**	Nov 2024	ENA	No
	Cross-checks to the yields on hybrid bonds show that the required return on energy equity must be no lower than 5.8% (CPIH real). Additional cross-checks, taking account of infrastructure fund IRRs, market-to-asset ratios, and past profitability, could be said to support a return on equity of up to 8% (CPIH real).			

Ref	Author	Title	Date	Commissioned by	Confidential
FA6	**KPMG**	**The impact of refinancing on Cadent's cost of debt**	Nov 2018	Cadent	Yes
	Cadent benefits from lower coupons on its existing debt due to the timing of the refinancing following separation from National Grid. The majority of the costs associated with refinancing were incurred upfront, so an estimated all in cost of debt has been calculated for inclusion in sector calibration.				
FA7	**Nera**	**Additional Cost of Borrowing for the RIIO-3 Price Control**	Feb 2024	ENA	No
	Nera estimate for all energy networks, an additional cost of borrowing of 57bps p.a. for RIIO-3, with a range of 54 to 59 bps, compared to Ofgem's RIIO-2 allowance of 25 bps.				
FA8	**Nera**	**Impact of GDNs' Reduced Debt Tenor on Additional Cost of Borrowing at RIIO-3**	Mar 2024	GDNs	No
	Nera estimate for GDNs, a higher additional cost of borrowing of 67 bps p.a., assuming GDNs issue debt with tenor of around 10-years as per current market evidence. This is driven by investors' preference for shorter tenor debt given increasing risks around the future role of gas networks.				
FA9	**KPMG**	**Credit Rating Agencies' perception of Risk for Gas Distribution Networks (GDNs) under RIIO-3 and beyond**	Mar 2024	GDNs	Yes
	Expect rating agencies to "see through" any cashflow benefits that result from revenue acceleration measures and as such target metrics will likely increase.				
FA10	**KPMG**	**Debt Market Analysis: Gas Distribution Networks and UK Regulated comparators**	Mar 2024	GDNs	Yes
	Market evidence shows some key messages: • The cost of debt in the gas distribution sector is increasing both in public and private markets, • There is now a discernible difference between the relative cost of debt faced by gas and electricity networks, and • Tenors on new debt issuance in the gas distribution sector are shortening and are now lower than in comparable sectors such as electricity and water.				
FA11	**Oxera**	**Risks and Investability of the GB Gas Distribution Sector**	Mar 2024	GDNs	No
	Assessment of areas of risk that gas distribution networks (GDNs) are likely to face in the RIIO-3 price control period and beyond, with demand for natural gas expected to fall as the energy system goes through the transition process towards the delivery of net zero. The pace of this transition is unclear, resulting in uncertainty around future demand and the corresponding asset stranding risk.				
FA12	**KPMG**	**Assessment of Financeability and Investability in GD3**	Dec 2024	Cadent	Yes
	Assessment of areas of risk that gas distribution networks (GDNs) are likely to face in the RIIO-3 price control period and beyond, with demand for natural gas expected to fall as the energy system goes through the transition process towards the delivery of net zero. The pace of this transition is unclear, resulting in uncertainty around future demand and the corresponding asset stranding risk.				

Figure 1: Supporting reports

Subsequent to the submission of this Business plan, we welcome continued engagement with Ofgem on these technical reports.

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1. Key messages

Topic	Key Message	Reference	Evidence
RAV Depreciation and capitalisation rates	We do not believe further acceleration of the RAV recovery is required at this point given the uncertainty over future pathways for decarbonisation. If Ofgem were to pursue acceleration of depreciation, then they should apply option 4. Without a clear and unambiguous commitment from Ofgem and the Government on RAV and revenue recovery, there will be an investor perception that the allowed revenues that we are entitled to recover may be at risk. We propose natural capitalisation rates i.e. 100% capitalisation rate on repex and capex	Chapter 2	N/a
Returns on equity	Our central estimate for the required return to equity is no lower than 6.3% (CPIH real) based on current market evidence but could increase in light of continued evolving rates and risk. Cross checks should be applied and importantly the risk premium between the cost of debt and the cost of equity should be observed to ensure the calibration of the allowed equity return remains investable.	Chapter 3	FA1 FA3 FA4 FA5
Returns on Debt	Our view is that based on the gas sector, the average cost of debt for RIIO-3 is 3.2% (CPIH real) including 0.4% of additional borrowing costs. The transition to semi-nominal WACC should include 30% of the notional company remaining with inflation linked debt. The iBoxx utilities index remains appropriate to use, however, the trailing average applied should reduce from 14 years to 10 years and an uplift of 0.4% to reflect the sector costs.	Chapter 4	FA7 FA8 FA9 FA10
Gearing	A notional company gearing of 60% remains appropriate.	Chapter 6	N/a
Investability	We welcome the addition of investability into the framework. It is critical that • Investors receive a fair return ensuring an appropriate beta estimate and a cost of debt funding adjustment that reflects the evolving higher risk level of the sector. Estimates for market returns should align to the current rates environment. • Ensuring confidence to the market through a commitment to RAV recovery • A fair dividend policy enabling recovery of previously invested capital, and • Importantly a price control package that is a fair bet enabling investors the opportunity to earn the allowed return.	Chapter 3	FA11
Dividend yield and equity issuance	A dividend yield of 6% is appropriate based on external benchmarks. The concept of “return of previously invested capital” needs to be included in the framework to ensure gearing is maintained at targeted level. We do not expect to be issuing equity in RIIO-3, but seek to ensure the fair remuneration for the retained equity,	Chapter 3	FA2

Topic	Key Message	Reference	Evidence
Financeability	The notional company appears to deliver target investment grade credit levels, however, there remains significant uncertainty over how rating agencies will measure credit risk in light of the proposed revenue acceleration. Our actual company benefits from the mitigation put in place by shareholders through refinancing debt in 2016/17 as part of the separation from National Grid. Financeability to equity relies on appropriate calibration of the framework to ensure it is a fair bet for investors to be able to earn an appropriately calibrated allowed return.	Chapter 6	FA6, FA12
Longer term investability	In any scenario, consumer bills could increase to a level that is not sustainable should consumer numbers reduce as the UK moves towards the governments net zero target. This creates an asymmetric revenue recovery risk which is presenting in costs increasing in the debt capital markets above energy sector benchmarks and longer term risks as a result of a lower equity buffer.	Chapter 5	FA7

Figure 2: Key messages

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2. Accelerated Depreciation & Asset capitalisation

In this section we detail:

1 Our views on Regulatory Asset Value (RAV) accelerated depreciation
2 Our views on capitalisation rates

2.1. Our views on accelerated depreciation

Without a clear and unambiguous commitment from Ofgem and the Government on RAV and revenue recovery, there will be an investor perception that the allowed revenues that we are entitled to recover may be at risk. This cannot be fully mitigated through accelerated depreciation. The notion of investability is key to retention of capital and attraction of new debt and equity into our sector.

Our gas networks will be required to support a resilient energy infrastructure and enable a smooth transition to a lower carbon economy for decades to come. It is essential that any change in RAV depreciation policy does not have unintended consequences such as it could create the very real risk of discouraging network investment, reducing innovation and undermining investor confidence to provide long-term capital, in addition to adversely impacting company financeability and investability, none of which are in the interests of both current and future consumers.

We believe with the uncertainty over future pathways for decarbonisation, the extent to which assets will be repurposed and the significant time that the UK will continue to be reliant on the gas networks, Ofgem do not need to make any urgent change to the RAV depreciation policy but should keep this under review. Further evidence to consider could include the government's Heat decision policy due in 2026.

The existing sum of digits method of depreciation, which by definition front loads the depreciation of the RAV closer to when the initial investments take place, already reflects a desire to bring capital recovery earlier and charges more to existing consumers over future consumers.

If Ofgem were to pursue acceleration of depreciation, then they should apply option 4 which accelerates depreciation on new RAV additions only, for a period commensurate with delivering net zero in 2050. We believe this is fairest to both current and future consumers in light of the uncertainty over the speed at which gas usage may change and the essential role that the gas networks will play for decades to come in any future energy pathway.

2.2. Ofgem's accelerated depreciation options

Ofgem have proposed four accelerated depreciation options which all embed a 'hard' assumption that new RAV additions must be zero by 2050, aligned to the UK government net zero commitment, but there are scenarios, including those published by Future Energy Scenarios (FES) where this is not needed. Therefore adopting one of Ofgem's four options risks over-prioritising future consumer bills at the expense of current consumers. It is important to recognise scenario uncertainty.

Ofgem set out four criteria to assess the proposed accelerated depreciation options. We have reviewed the four options with consideration to these criteria, but financeability is not a reason to choose between depreciation policy options – it should be a minimum test for any policy that is chosen. So long as this test is met, financeability does not provide a reason to prefer any of the four options relative to each other. Consumers have a clear interest in bills but there is also an interest in the issues caused by perceived stranding risk and/or financeability issues given the potential impact on the provision and cost of capital. Assuming investability is a given for any policy, the trade-off should be between current and future consumer interests, with the main focus on balancing long-term bill risk against short-term bill increases.

Option	Current consumer bills	Future consumer bills	Investors' perception of asset stranding risk	Conclusion
Option 1 – 2050 sum of digits – All assets	Higher RAV depreciation, leading to higher bills relative to RIIO-2	Lower bills if 2050 target not achieved or energy transition targets changed	Helps reduce, but not remove the entire risk of asset stranding Government guarantee/backstop would significantly reduce risk	Risk of current consumers paying significantly higher bills than future consumers if energy transition slower than expected
Option 2 – 2050 sum of digits with accelerator – All assets	Potentially highest bill impact to current consumers out of the 4 options If accelerator factor set too high initially and consumer numbers do not fall as per Future Energy Scenarios (FES), challenge on intergenerational fairness as current consumers would pay more	Application of an accelerator factor could result in material tariff volatility from one price control to the next If accelerator factor set too high initially, future consumers will benefit With accelerator factor, ability to set figure below 1 to slow down level of depreciation	Could help reduce risk further than option 1, but still does not remove the entire risk of asset stranding	As per conclusion on option 1, but with the inclusion of an accelerator factor, care needs to be taken over how this is calculated as it could result in material consumer bill volatility from one price control to the next.
Option 3 – 2050 straight line with accelerator – All assets	An accelerator factor of less than 1 would lead to lower current consumer bills. However, as per Ofgem's SSMD, with an accelerator factor, this option could lead to higher RAV depreciation than Option 1	Application of an accelerator factor could result in material tariff volatility from one price control to the next With consumer numbers forecast to reduce, applying straight line risks consumers who remain on gas receiving significant bill increases as the same amount of depreciation is shared across fewer consumers.	Higher risk of asset stranding due to expectation of higher proportion of vulnerable consumers towards 2050	Moving to a straight line depreciation profile does not align with reducing consumer numbers nor current policy of front loading depreciation of the RAV closer to when the initial investments take place. Should government policy move towards incorporating hybrid solutions for example Hybrid boilers, as part of a future energy mix, this could become more viable.
Option 4 – 2050 sum of digits – New assets only	Lowest impact on current consumers, who are already facing higher utility costs across all sectors.	Higher bills if energy transition is completed by 2050 without any public policy changes.	Same concerns as all other options but in addition, a higher asset stranding risk of existing RAV.	Lowest current consumer bill impact reflecting level of uncertainty over future energy scenarios.

Figure 3: Review of Ofgem's Four accelerated depreciation options

Whilst we do not believe any further acceleration of depreciaton is required for RIIO-3, of the four policy options Ofgem set out in the SSMD, we believe option 4 is most closely aligned to our consumers' interests, with

accelerated depreciation on new assets on a reducing sum of digits basis, as this results in the lowest increase to consumer bills over RIIO-3 in light of the uncertainty over future energy pathways for decarbonisation. The other three Ofgem options could result in significant increase to current consumers and could create an unnecessary intergeneration imbalance.

Appling policy option 4 would result in the following:

1. **Lowest increase to consumer bills in RIIO-3**. Bills will already increase with macroeconomic changes including inflation and higher interest rates. In addition, Ofgem have changed the cost of debt methodology which will also increase bills in the RIIO-3 period. Applying a further significant increase on consumer bills in a period where other utility bills are rising, we believe will not be in the interest of consumers. Given the uncertainty over the future, it is much more difficult to assess the impact on consumer bills in the long term.
2. **A RAV balance at 2050 aligns with our view that the gas networks will be required to support a resilient energy infrastructure for decades to come**, enabling a smooth transition to a lower carbon economy. As such, any significant change in RAV depreciation or asset capitalisation policy would be inappropriate, as it would create the very real risk of discouraging network investment, reducing innovation and undermining investor confidence to provide long-term capital, in addition to adversely impacting company financeability and investability. Our network could be repurposed to transport clean gases in the future and so the RAV recovery could be shared across those future consumers. Under option 4, by 2050 11% of the opening RAV balance at the start of RIIO-3 will be retained.
3. **Time to develop and set the framework to ensure investor recovery of current RAV and how repurposing rules and additional decommissioning costs should be recovered**. However, these issues will need a lot of careful development and we propose Ofgem take the necessary time to explore and develop these against a range of potential cases of consumer led or strategically planned energy transitions. We also recognise that aspects of this framework would not fall within Ofgem's sole remit, and we advocate for cross sector and government engagement on the issue.
4. **Time to review other developments for example the planned heat policy decision**, observing the levels of heat pump uptake and disconnections to the gas grid as well as reviewing relevant evidence from other nations to make a more informed decision on the future of the gas network.

Consumer bills are a significant consideration in our Business Plan, the graph below illustrates the depreciation element of the bill under Option 2 with an accelerator factor of 1, Ofgem's business planning base case and option 4, our preferred option and this shows how option 4 has the lowest impact on consumer bills.

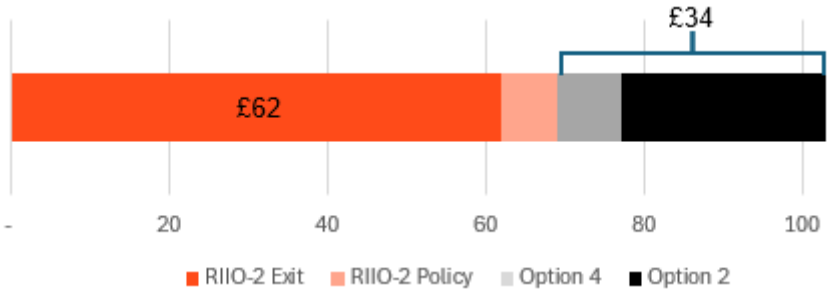

Figure 4: Impact of depreciation on consumer bills

2.3. Acceleration factor

Under a number of Ofgem's accelerated depreciation options, Ofgem have proposed the application of an acceleration factor which is applied to the calculated depreciation amount for that period to accelerate/decelerate payments as required.

The application of an acceleration factor (which is to be updated at each price control) introduces new uncertainty, risk and volatility to revenue profiles and therefore consumer bills. Ofgem has in the past considered this sort of volatility to be against consumers' interests.

However, we understand an acceleration factor could provide flexibility in adjusting RAV depreciation reflecting consumer transition, rather than simply fixing the level of accelerated depreciation, but in the absence of a clear methodology for calculating the acceleration factor, this could increase perception of regulatory discretion and risk. Therefore, we would welcome further engagement with Ofgem around how an acceleration factor would be calibrated, to ensure the functionality achieves the desired intention without compromising stable consumer bills.

2.4. Our views on capitalisation rates

For RIIO-3 Cadent propose natural capitalisation rates i.e. 100% capitalisation rate on repex and capex. This should be averaged over the price control period to allow for phasing differences in the timing of spend and allowances, consistent with the methodology applied in RIIO-2. We do not believe any changes should be made to capitalisation rates at the same time as changing depreciation policy given the interlinkages of both in the recovery of the RAV. Changing capitalisation rates away from natural rates for example, reducing rates would result in more fast money or faster recovery of RAV investment spend which is already being proposed through changes to the depreciation policy. Flexibility should be retained through the revenue modelling to ensure costs covered via uncertainty mechanisms have appropriate capitalisation rates reflecting the spend characteristics.

2.5. Revenue profile

Given the significant uncertainty over future energy scenarios, in order to maintain intergenerational fairness, we do not believe now is the right time to make adjustment to asset lives and therefore revenues.

We do not propose any alterations to the profile of revenue during the RIIO-3 price control. We comment above on capitalisation rates and depreciation policy which are the traditional approaches to managing revenue profiling.

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3. Cost of Equity

In this section we detail:

1 An overview of investability & our approach to setting of Cost of Equity
2 Our views on the inputs to the capital asset pricing model (CAPM)
3 Our CAPM calculation and choice of point estimate
4 Cross checks
5 Dividend policy & dividend yield for comparable companies
6 Equity issuance policy

3.1. Overview on investability

It is in all stakeholders' interests that the RIIO-GD3 review produces an 'investable' package of obligations, revenues and returns. This is of particular importance to consumers who rely on us to be able to attract and retain the capital required to deliver the investment required for a safe and resilient network. The consumer interest of setting an appropriate WACC to ensure investability is outlined in various academic literature and the CMA[1] has also considered this in their recent determinations.

By "investable" we mean we are able to attract a pool of debt and equity investors out there who, at any given point in time, knowing the alternative investment opportunities that are available to them, would actively choose to retain their capital and continue to invest their capital in the regulatory asset identified in the regulator's notional balance sheet given the returns and cashflows that are being offered to them.

The return that we are able to offer to investors is not the only factor that will determine whether we remain attractive to equity providers. But it is a key factor that investors will look at. Along with the other gas networks, we have therefore commissioned expert reports on range of technical topics that would help us identify what a reasonable return looks like in today's financial market conditions and reflects the risks that investors see in gas distribution networks as compared to other sectors of the economy, as summarised in the "Supporting reports" section at the start of this appendix.

In FA11, Oxera provide their expert views on what Investability in the gas distribution sector requires with attention to the following:

- An appropriate return to equity including an equity beta based on a sample of companies that reflect gas specific forward looking risks, given the evolving risk landscape. We provide details of listed European gas sector beta data that should be included.
- Ofgem should ensure that the available returns reflect the macro-economic environment prevalent at the time of the price control, showing flexibility to amend assumptions on Risk Free Rate and Market Returns so the overall returns cross check appropriately to industry analysis.
- We welcome Ofgem noting that it is not in consumers' interests for investors to face the risk of stranded assets. We believe more time and policy development is needed across government and Ofgem to ensure a fair and equitable transition to net zero.
- The funding for debt costs must index accurately to the quantum, tenor and interest rates that are achievable. The funding for new debt should consider the diverging costs between sectors and the benchmark indices used.
- Ofgem should consider not just a fair return on capital but also how the return of capital is reflected in the allowed dividend yield.
- An overall price control financial package that is a fair bet to investors – consistent tightening of price controls has led to investor caution over the ability to generate the allowed return and reduces the pool

[1] CMA final report on water determinations from 2021, para 9.1268

of potential investors into the sector. As expected for RIIO-2, the allowed totex was below required levels set out in business plans and this has led to a Return on Regulated Equity ("RoRE") below the baseline allowed. Over time this will prevent new capital becoming attracted to the sector.

3.2. The required return to equity

Our assessment, after reviewing this evidence, is that the required return for the RIIO-3 period is currently no lower than **6.3%** (in real terms, after accounting for CPIH inflation). This is higher than the current RIIO-GD2 return:

- in part because there has been a shift in the last 2-3 years from historically low interest rates to a higher-for-longer interest rate outlook (which is still evolving as we write this plan); and
- in part because the risks facing GDNs' are evolving and being priced in. Where previously gas networks might have been seen as a conventional network utility business, offering predictable cashflows and a high degree of certainty around the return of and on investor capital, anyone investing today in a gas network will be aware that a consensus is yet to be forged around the long-term role of different energy types, and hence the long-term role of our business in the country's energy mix. This unavoidably makes GDNs appear more risky than was the case just a few years ago and also more risky than electricity and water companies that have enduring natural monopolies.

For these reasons, the required RIIO-GD3 if higher than Ofgem's mid-point as summarised in the chart below::

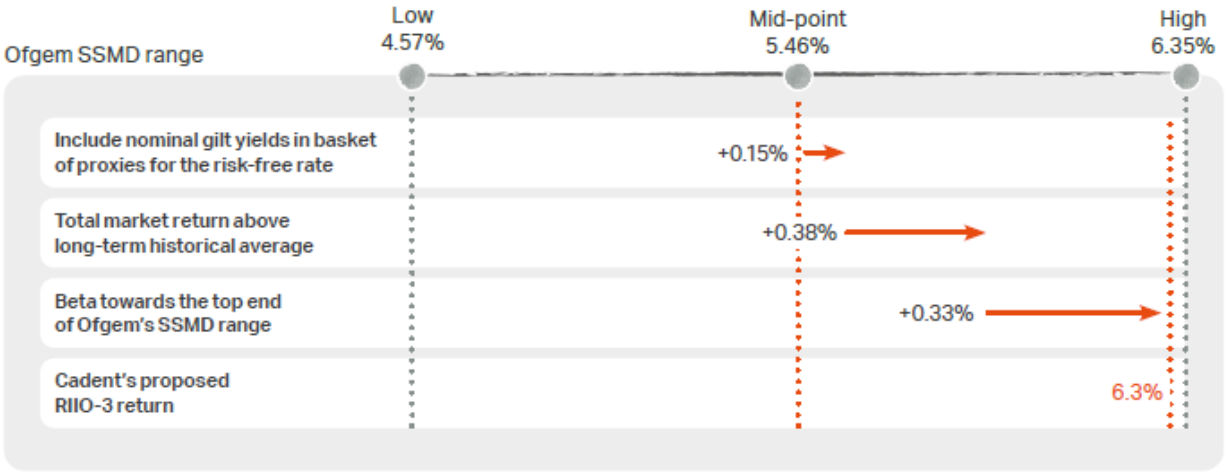

Figure 5: Our proposed returns vs Ofgem's SSMD range

The detailed support that we have assembled for our proposed level of return is summarised in the remainder of this appendix with the substantive detail in the supporting reports provided.

We note upfront that it may be necessary to update this evidence, and the conclusions that we draw from it, next year in light of the path of interest rates and further insights into the perceptions that investors have of GDN riskiness.

3.2. Approach

We have used the capital asset pricing model (CAPM) to estimate the returns required by providers of equity capital. CAPM states that the cost of equity can be calculated by reference to the return that investors can obtain by investing in a risk-free asset, the return that they expect to earn if they put their money in a diversified portfolio of stocks, and a firm-specific measure of risk, β, i.e.:

$$Cost\ of\ equity = risk\text{-}free\ rate + \beta\, x\ (\ total\ market\ return - risk\text{-}free\ rate\ )$$

3.3. Risk Free Rate

Ofgem's SSMD proposed that the RIIO-3 risk-free rate should be set in line with the yield on a 20-year index-linked gilt, plus an adjustment for the RPI-CPIH inflation wedge.

Ofgem's selection of a single proxy for the riskless asset, and hence a single reading of the risk-free rate, stands in contrast to the approach adopted by the CMA, the CAA and the NI Utility Regulator in recent price control decisions.[2] These other regulators have been taking the view that there is a "specialness" to index-linked gilts that make yields a potentially unreliable indicator of the risk-free returns that are available to typical investor. As a consequence, the CMA, the CAA and the NI Utility Regulator have each advocated estimating the risk-free rate using a basket of instruments, rather than place sole weight on a reading from the index-linked gilt market.

In Cadent's assessment, this remains a key issue for Ofgem to consider as it prepares its RIIO-3 price controls. The table below shows that index-linked gilts continue to produce a very different reading for the risk-free rate in comparison to other admissible proxies for the riskless asset.

	Nominal	RPI real	CPIH real equivalent
Index-linked gilts, 20Y	-	1.13%	1.24%
Nominal gilts, 20Y	4.44%	-	2.39%
AAA non-government bonds, 10+Y	4.49%	-	2.45%
AAA non-government bonds, 10-15Y	4.25%	-	2.21%

Figure 6: Risk-free rate measures, September 2024

Note: the conversion from RPI real to CPIH real yields uses Ofgem's SSMD RPI-CPIH wedge of 0.11%. Nominal bond yields have been converted to CPIH real using a long-term 2% per annum CPIH inflation assumption.

Ofgem acknowledged this matter in its SSMC and SSMD, but ultimately concluded that it had not been presented with sufficient evidence that gilt prices include any sort of "convenience yield". We consider that this conclusion was based on a faulty methodology. Specifically, Ofgem focused its attention in its SSMD on comparisons of the yields on AAA non-government bonds versus the yield on government gilts of the same maturity. However, the final three rows of figure 6 show that the differential between yields on bonds of these types is not the primary issue. The key question for Ofgem when calibrating the risk-free rate is: how to interpret the large differential between yields on index-linked gilts – i.e. the measure that Ofgem is actually proposing to use in its RIIO-3 framework – versus the yields on other zero-beta or near-zero-beta gilt market and non-gilt instruments.

The ENA commissioned Oxera to give further consideration to this matter following the publication of the SSMD. Oxera's report (FA2) identifies that there is evidence of a persistent "convenience yield" affecting the pricing of gilts, provided that one makes appropriate allowance for default and liquidity premia (NB: unlike Ofgem, Oxera does not remove liquidity premia from the yields on AAA non-government bonds on the grounds that a low liquidity premium is an integral part of what makes gilts "special"). Oxera's proposed estimate of the "convenience yield" embedded in nominal rates is 27 basis points.

We think that recent work produced independently by First Economics, outside of the RIIO process, also offers a helpful perspective on this matter. First Economics has drawn attention in a number of its recent papers[3] to the unusual profile of so-called 'break-even' inflation – i.e. the difference between index-linked and nominal gilts. As at September 2024, the differential between the yield on a 20-year index-linked gilt and a 20-year conventional gilt stood at 3.4%. This differential is too big to be explained by estimates of expected inflation or an inflation-risk premium, given the impending alignment of RPI and CPIH inflation from 2030. Similarly, First Economics

[2] NB: the CAA's 2023 decision for Heathrow Airport and the NI Utility Regulator's 2024 decision for Northern Ireland Electricity were issued after the publication of the UKRN guidance on the methodology for setting the cost of capital.
[3] First Economics (2024), PR24 and RIIO-3: the cost of equity capital; and First Economics (2022), The risk-free rate

identifies that the shape of the instantaneous forward inflation curve bears no resemblance to any credible projections of the future path of economy-wide inflation. Both these factors suggest prima facie that something unusual is happening in the gilt market, with index-linked gilts promising a much lower return than ought to be expected relative to conventional gilts and consensus inflation expectations.

Given both the theoretical and the empirical evidence that has been tabled by a growing number of experts in a range of different settings, we agree with Oxera's and First Economics' conclusions that regulators should not be relying exclusively on index-linked gilts as the sole measure of the risk-free rate and should instead calculate the risk-free rate by reference to a wider basket of proxies for the riskless asset. We note that such an approach is explicitly permitted under the UKRN's 2023 cost of capital guidance.[4] The final paragraph on p.14 of the guidance states that:

> … regulators agree that nearly any risk-free proxy stripped of accurately measured risk premia should give a value close to the 'true' risk-free rate. In principle this suggests that evidence from these proxies could provide a useful sense check in times of ILG market volatility or to help define the range within which the point estimate for the risk-free rate should be drawn.

Our proposed basket for RIIO-GD3 comprises the yields on:

- 20-year index-linked gilts, plus an adjustment for the RPI-CPIH wedge; and
- 20-year conventional gilts, converted to CPIH real.

This composition has the advantage of simplicity. It also acknowledges the concerns that Ofgem and other regulators have expressed about the special feature of some AAA non-government bonds.

We propose that the conversions from RPI real to CPIH real and from nominal to CPIH real, respectively, should be based on the OBR's latest economic forecasts.

As at September 2024, our proposed estimate of the CAPM risk-free rate of return is calculated as a 50:50 weighted average of the figures from the final column of the first two rows of figure 6. **This gives a risk-free rate of 1.82%.**

3.4. Total Market Return (TMR)

The TMR term within the CAPM formula needs to be calibrated to match the returns that investors expect to obtain in the coming years by holding a diversified portfolio of stocks and shares. Unfortunately, investor expectations cannot be observed directly from market data. Instead, Ofgem must infer what is a reasonable benchmark via indirect means.

Ofgem's preferred approach in recent reviews, in common with that of other regulators, has been to look at the returns that investors have historically taken from stock market investments, reasoning that past performance acts as a useful guide to the returns investors can reasonably expect in the future. Ofgem explains in its SSMD that, having reviewed the relevant data and after considering how best to calculate average annual returns, its preferred benchmark from its analysis of stock market data going all the way back to 1900 is 6.97%. However, Ofgem also states that it may be appropriate to make a downward adjustment of up to 0.5% from this point estimate to allow for the possibility that investors enjoyed unusually good 'luck' during the 20th century. Its proposed range for the TMR is therefore 6.5% to 7.0%.

The ENA asked Oxera (FA3) to review Ofgem's calculations, focusing first and foremost on the accuracy of Ofgem's reading of historical data and the need for a downward adjustment. Oxera's work broadly corroborates Ofgem's estimate of historical out-turn returns and, hence, the top end of Ofgem's range. However, Oxera finds that decomposing equity returns into its various components requires a large degree of judgement on which components are indeed repeatable, particularly as regards the extent to which the values observed are linked to good or bad luck. As such, Oxera does not support Ofgem's proposed downward adjustment.

[3] UKRN (2023), UKRN guidance on the methodology for setting the cost of capital

Oxera's position is consistent with the conclusion that other experts have reached after looking at this matter. During August 2024, two separate independent studies by KPMG[5] and Kairos Economics[6] examined both the Fama French and the decomposition methods of inferring unconditional expectations of the real return on equity from historical data and found weak and no evidence, respectively, that ex post returns in the UK have exceeded investors' ex ante expectations. This supports the conclusion that ex post returns provide the best available benchmark for returns going forward, without the need for any form of downward adjustment.

We therefore agree with Oxera's view that historical ex ante estimates of returns should not be included in Ofgem's RIIO-3 calculations.

A separate question we have considered is whether there is a need to depart from a purely historical benchmark when calibrating the returns that today's investors expect from their stock market portfolios. This is an important question to ask following the sharp increase in interest rates that occurred in 2022 and 2023. In its RIIO-2 review, Ofgem was concerned that the low interest rates that had emerged before and during covid might mean that expected returns across all asset classes had moved below long-term historical benchmarks. It responded to the marked change in the economic outlook by making a series of adjustments to its cost of capital methodology, including a c.170 basis points reduction in the value of the TMR from its RIIO-GD1 decision to the RIIO-GD2 decision.[7] Interest rates have subsequently increased by around 4 percentage points since 2020, making it reasonable to think that at least some of those adjustments ought to be reversed now that there is a distinctly 'higher-for-longer' outlook for interest rates, supported by sustained higher rates over the last few years, are current forecasts of rates to remain high.

An upward adjustment to the TMR would recognise the reality of the financial markets that our business operates in. Our equity investors, and investors of equity across the world more generally, can choose to put their money into a wide range of possible investments. It stands to reason that when interest rates are increasing across the economy investors will find it easier to make good returns and that regulated infrastructure will likewise have to increase the returns on offer to investors in order to retain and attract capital. Conversely, if there is no recognition of an upward movement in the TMR, our returns will start to look unattractive relative the returns that investors can earn elsewhere, impeding our ability to retain and attract equity capital.

Oxera's proposal (FA3) is that the TMR for the RIIO-3 period should be set up to 0.5% above the estimate of long-run historical returns. Our assessment is that an adjustment of this magnitude is consistent with the current 'higher-for-longer' interest rate outlook. It is also consistent with the scale of the change in the TMR between the RIIO-GD1 and RIIO-GD2 review, bearing in mind that some of the downward reduction that there was in the RIIO-GD2 review was due to the availability of better data on historical real returns rather than a direct response to the interest rate cycle.

Our proposed range for the TMR is therefore 7.0% to 7.5%.

3.5. Beta

The beta term in the CAPM formula ensures that the allowed cost of equity is tuned to the risk that an investor takes on when one chooses to invest in a particular company with a particular profile of risk. Ofgem would ideally calculate the RIIO-GD3 beta by looking at the covariance in movements in GDN share prices and movements in value of the stock market as whole. However, none of Britain's GDNs are listed on the stock market, making direct empirical calculation of betas impossible. In the absence of primary market data, the next best alternative that Ofgem has is to look at listed businesses that look like they have a similar risk profile to the GDNs and to infer what a GDN's beta might be based on the empirical estimates of these companies' betas.

Ofgem focuses on three main comparator types in its SSMD:

[5] KPMG (2024), Estimating the cost of equity for PR24.
[6] Kairos Economics (2024), A review of Ofwat's total market return at PR24.
[7] The TMR in Ofgem's 2012 RIIO-GD1 decision was 7.25% in RPI real terms. The TMR in Ofgem's RIIO-GD2 decision was 6.5% in CPIH real terms.

- National Grid, as a UK-listed owner of electricity network businesses that are regulated by Ofgem under a RIIO framework;
- two listed water companies, Severn Trent and United Utilities, that are regulated by Ofwat under price control arrangements that bear some similarities to RIIO; and
- five listed European electricity and gas networks.

After reviewing share price data going back over a period of ten years, Ofgem said in its SSMD that its estimate of the GDNs asset beta, based on comparator beta evidence, falls in the range 0.30 and 0.40.

The key takeaway is how difficult it has been for Ofgem to find UK based comparator companies that present investors with similar risks experienced by Britain's GDNs (albeit we note further work on UK networks such as Pennon could be completed as this was excluded from the dataset. Oxera comment on this in their report (FA4) for the ENA). In the short term – i.e. within the next five-year regulatory period – variations in GDN returns will be driven by out- and under-performance against the RIIO-GD3 price control assumptions. But in the longer term – i.e. looking beyond five years – our businesses face unique uncertainties about the future role of gas in the UK's energy mix, thereby creating as yet unaddressed risks around the recovery of past and current investments.

Along with the other GDNs, we asked Oxera to consider if there is any way of getting a better fix on a GDN-specific beta. Oxera suggested (FA1) two possible extensions to Ofgem's SSMD comparator set, which entail making use of:

- European regulators' recent determinations of gas companies' beta values; and
- empirical beta estimates for US listed gas network companies.

Oxera finds that this additional data gives support to Ofgem's assessment that the lower end of the RIIO-GD3 beta range should be no lower than 0.30, but extends the plausible upper end of Ofgem's SSMD range to 0.50. Oxera's recommendation is that the international comparator data should be read as suggesting that a typical gas network's asset beta most likely sits somewhere in a narrowed-down range of somewhere between 0.40 and 0.44.

We recognise that Oxera's assessment needs to be put alongside the other comparator evidence given the data is for gas networks domiciled overseas. At the same time, however, we also think that the gas-only international data is telling us something meaningful about the greater risk that investors are seeing in gas industry investments. We therefore read Oxera's additional work as pointing at a beta estimate no lower than the top end of Ofgem's published SSMD range.

We use a range of 0.35 to 0.40 in the calculations that follow.

3.6. CAPM calculation and choice of point estimate

Figure 7 brings our estimates of the risk-free rate, the TMR and beta into an estimate of the overall cost of equity.

	Ofgem SSMD low	Ofgem SSMD high	Cadent low	Cadent high	Cadent Mid
Gearing	60%	60%	60%	60%	
Risk-free rate	1.18%	1.18%	1.82%	1.82%	
TMR	6.5%	7.0%	7.00%	7.50%	
Asset beta	0.30	0.40	0.35	0.40	
Debt beta	0.075	0.075	0.075	0.075	
Equity beta	0.64	0.89	0.76	0.89	
Cost of equity	**4.57%**	**6.35%**	**5.8%**	**6.9%**	**6.3%**

Figure 7: Cost of equity calculations

The final three columns of the table shows that our calculated range sits above Ofgem's SSMD range, and particularly calls into question Ofgem's positioning of the lower bound estimate. This is a consequence of our use of:

- a risk-free rate that takes reference from nominal gilt yields, as well as Ofgem's preferred index-linked gilt measure;
- a TMR that is set slightly above long-term historical stock market returns, consistent with the current 'higher-for-longer' outlook for interest rates.
- a beta range that gives considerable weight to evidence that investors view regulated gas industry assets as being more risky than regulated electricity and water companies.

The mid-point of our calculated range is **6.3%**. We view this as the best available estimate of the returns that Ofgem should be building into our RIIO-GD3 allowed revenues.

We note that our preferred point estimate lies within the range that Ofgem has said can be justified by the available evidence it had assembled for its SSMD. As such, one possible alternative way of interpreting our estimate of the cost of equity is that we have 'aimed up' within Ofgem's range. This is consistent with the approach that Ofwat has taken in its ongoing review of water and wastewater companies' price controls. Ofwat stated in its July 2024 draft determination that:[8]

> We use a point estimate from the upper end of our Capital Asset Pricing Model (CAPM) range to support investment and investor confidence

We consider that this rationale applies just as readily to gas networks as it does to the businesses that Ofwat is regulating. Given the investment requirements over RIIO-GD3, the risk and responsibilities we are managing on a day-to-day basis, will be at least as great in the RIIO-GD3 period compared to the RIIO-GD2 period, even before taking account of the long-term challenges that the industry is facing. It is therefore vital that the gas network industry, as a sector, remains an attractive home to continue to retain equity capital and that we have the ability to access equity financing if/when our business needs shareholder support. The evidence set out in the preceding sections shows clearly that is not something that we will achieve if Ofgem seeks to squeeze returns by picking from anywhere but the upper end of its SSMD range.

[8] Ofwat PR24 Draft Determinations: : Aligning risk and return

3.7. Cross-checks

We can cross-check our calculation of the cost of equity in a number of ways. The below chart shows the difference between the allowed return to equity and GDN cost of debt over time showing compression:

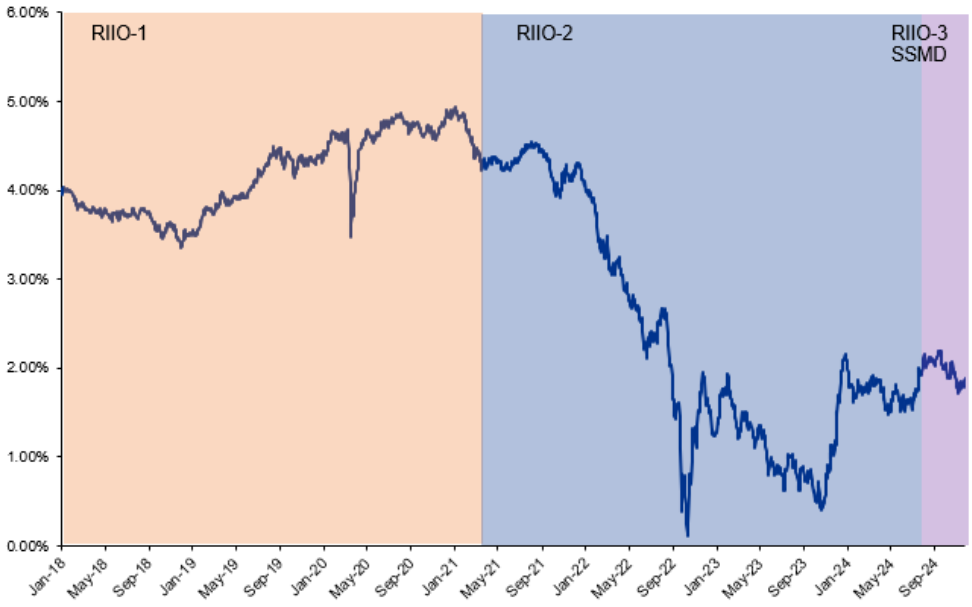

Figure 8: Allowed return to equity and GDN cost of debt spread

The other simplest, cross-check is to compare the yields that investors can obtain by putting their money into government bonds and/or into corporate bonds with investment-grade credit quality. As at September 2024, the benchmarking is as follows.

	Nominal
Yield on 20Y government bonds	4.6%
Yields on 10+ year A corporate bonds	5.4%
Yields on 10+ year BBB corporate bonds	5.9%
Our proposed RIIO-GD3 return	8.4% ^

Figure 9: Available returns (nominal), September 2024

Note: ^ We have converted our estimate from CPIH real to nominal using a 2% per annum inflation assumption.

The table below shows that our proposed return is approximately 380 basis points above prevailing government bond yields and 250 basis points above prevailing BBB investment-grade bond rates. We think this is a logical positioning given the additional expenditure risk, performance risk and financing risk that shareholders take as the providers of 'at-risk' capital to our business.

We further note that the equity premia relative to observable benchmarks are significantly lower than the premia that were factored into Ofgem's original RIIO-GD2 decision. This provides additional high-level corroboration that our proposed return is not set in an unreasonable place.

	Ofgem RIIO-GD2 projected return	Cadent RIIO-GD3 proposed return
vs 20Y government bonds	+580 basis points	+380 basis points
vs 10+ year A bonds	+470 basis points	+300 basis points
vs 10+ year BBB bonds	+440 basis points	+250 basis points

Figure 10: Comparisons of available returns

Note: At the time of Ofgem's RIIO-GD2 decision, 20-year gilt rates, 10+ year A yields and 10+ BBB yields were 0.9%, 1.9% and 2.2% respectively. This compares to Ofgem's RIIO-GD2 return of 4.55% CPIH real or ~6.65% in nominal terms.

The ENA commissioned Frontier Economics (FA5) to produce a number of more detailed cross-checks. These checks include:

- comparisons to the returns that an investor can obtain by investing in hybrid bonds;
- comparisons to the returns that an investor can obtain by investing in infrastructure funds;
- evidence from UK regulated firms' market-to-asset ratios; and
- an application of the asset-risk premium vs debt-risk premium (ARP-DRP) framework devised by Oxera; and
- evidence from companies' actual profitability.

The results of Frontier Economics' work are summarised in figure 11 below.

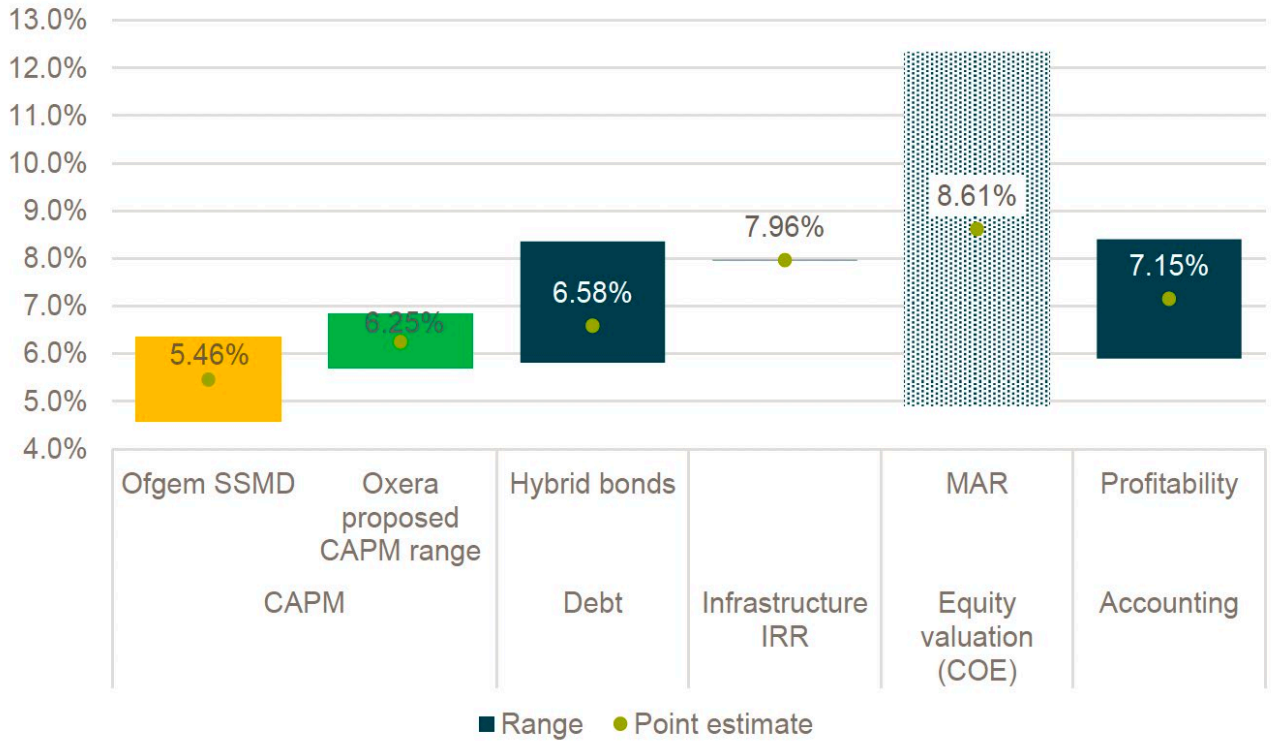

Figure 11: Frontier cross-checks summary

The chart shows that all of the cited cross-checks are currently pointing to a rate of return that is at the upper end or above Ofgem's SSMD range.

We consider that the first of the cross-checks – Frontier Economics' analysis of the returns that investors can obtain by buying utility company hybrid bonds – adds a particularly valuable perspective on the returns that investors need to persuade them to invest money as equity in regulated networks. Just as the return on equity must be higher than the return on debt, the return on equity should also logically be higher than the yield on hybrid instruments with both debt-like and equity-like characteristics. Frontier Economics identifies that hybrid

bonds across a wide sample of utility companies typically trade at yields that are 100-200 basis points above the yields on debt. This extends the earlier benchmarking as follows.

	Cadent RIIO-GD3 proposed return
vs hybrid utility bonds	+125 basis points

Figure 12: Hybrid bonds available returns

We take this as further corroboration that our proposed return is positioned in broadly the correct place.

There are further alternative cross checks, such as multi-factor models, which could provide additional insights which we may explore and we will share any helpful findings.

3.8. Conclusion on Cost of Equity

Our final assessment in part depends on the risk and returns within the overall package at Final Determinations and how interest rates move over the coming months. As such our view is the return should be no lower than **6.3%** (CPIH, real) but could be higher based on trend in interest rates which is still evolving at the time we write this plan. We view aiming up within the proposed cost of equity range as an appropriate mechanism for Ofgem to use to deliver an appropriate risk and return balance and take into account residual risk asymmetries. This is in consumers interests to ensure that the package is investable, and able to deliver on the capital investment and output commitments we have made in this plan.

3.9. Dividend policy

Our dividend policy is to have an appropriate distribution after having considered the forward committed cash requirements of the business to support our investment programmes and managing an appropriate level of gearing, as well as considering wider macroeconomic factors and the broader performance of the business relative to a range of stakeholder metrics including regulatory and consumer performance.

This policy ensures that we take into account wider macro-economic factors, such as the uncertainty created by the COVID-19 pandemic when we had the flexibility not to pay a dividend in the year to March 2021. This policy is welcomed by rating agencies and as such supports low-cost debt funding to the benefit of consumers supporting our strong financing performance.

When considering the dividends paid, we don't just look at a single year but rather we consider the historical levels over a period of time as well as a forward assessment. This analysis showed that over the last 4 years, we have paid dividends that are equivalent to 4.5% return on regulated equity. This was below the amount allowed through the price control setting process for an equivalent period.

Broader considerations

Our policy is based on our belief that in order to deliver successful outcomes, there should be a balanced approach to meet the requirements of all our stakeholders. This means:

- consumers benefitting from value for money and better services;
- supporting households through the shareholder funded Cadent Foundation;
- enhancing the environment in which we operate;
- employees being rewarded for their hard work; and
- our investors earning a reasonable return on the equity they have invested in the business. This investment is critical for ensuring the efficient and economic operation of our network today and the investment requirements of the future.

We share outperformance with our consumers through delivering efficiencies that result in comparatively lower bills; with our employees through responsible incentive-based bonuses; and with investors through sustainable dividends and return of capital. And we've been able to do this while delivering on our environmental targets, maintaining appropriate gearing and delivering strong financial resilience.

The Board also reviews the company's performance around employees, and executive pay. As noted above, Executive pay disclosures are significantly enhanced relative to sector standards supported by a strong remuneration committee that targets societal benefits such as performance on consumer and sustainability measures alongside financial metrics. We also have transparent and low risk policies in relation to how we interact with the tax authorities.

The Board seek positive assurance from the Executive Committee that all activities conducted by the organisation are compliant with all of our licence requirements. Our internal assurance teams ensure an independent review to ensure that all requirements are met.

Dividend yields

We note that Ofgem has set a working assumption of a 3% dividend yield, but when reviewing listed UK regulated utilities over the prior decade, there is a range of 3.5%-7.0% with a midpoint of 5.0%, which indicates the 3% dividend yield is inadequate and does not align with investor expectations in the current higher-for-longer environment, and therefore should be increased in RIIO-3.

Further, Oxera (FA2) reviewed a sample of European energy networks and the data indicates that the dividend yield has been consistently higher for gas than for electricity networks and the gap has widened in recent years, with 5.4-7.8% for the gas networks and of 4.2-4.8% for the electricity networks during the period 2018–23. This data also supports the relationship between slowing asset growth and increasing dividend yields which gas networks are experiencing relative to electricity networks.

These data points support a dividend yield of around 6% for GDNs as being reasonable, in light of higher risks within the gas industry and changes in macroeconomics relative to RIIO-2. We have therefore applied a dividend assumption of 6% in the Business Plan Financial Model (BPFM).

As noted in chapter 2 Ofgem have also proposed to accelerate depreciation of RAV. Any increased cash flow from the potential introduction of accelerated depreciation would also tend to have a depressing impact on gearing and, in order to maintain constant levels of gearing, the return of RAV should be used to repay both debt and equity, therefore dividends would need to increase accordingly. The purpose of any introduction of accelerated depreciation would be to return capital to shareholders, which implies higher levels of dividends being distributed. This would result in a higher dividend yield, which would be misleading as this would be a return of equity rather a return on equity and therefore these figures should be reported separately.

3.10. Equity issuance policy

As there is a cost to consumers in raising additional equity this option is only considered when alternative means of funding are considered inappropriate. Other options include management of annual cashflows and restricting dividends where appropriate.

We see no immediate need to attract new equity. We note in chapter 5 the impact of low equity returns on the sustainability of attracting and retaining equity finance.

4. Cost of Debt

In this section we will detail:

1. An overview of our considerations to setting the Cost of Debt allowance
2. Our view on the indexation of sector costs
3. Refreshed evidence on the additional borrowing costs
4. Our consideration to the transition to a semi-nominal WACC

4.1. Overview

To be an investable plan, we must be able to attract new debt capital into the sector to deliver on our capital programme. It is in consumers interests that networks are appropriately funded to ensure this investment can be sourced at efficient levels. We set out below our views on how to ensure the cost of debt funding mechanism can support the funding required for RIIO-GD3.

Following the success of the indexation of the allowed cost of debt in the prior RIIO periods, we support the proposal to continue this mechanism being applied to the notional company to calculate the allowed cost of debt into RIIO-3. We encourage the allowed cost of debt mechanism to reflect a fair debt cost, which is calibrated against the sector actual interest costs and forward-looking risks to these costs in light of energy transition uncertainties.

This section outlines our consideration of the components that constitute the Cost of Debt allowance, and the sector calibration of the allowance. Initial analysis points to the need for the trailing average to shorten to 10 years in light of evolving sector costs and the tenor of debt that is deliverable efficiently in the sector. Analysis points to the need to uplift the 10 Year trailing average of the iBoxx Utilities 10+ index by 40 basis points to match the sector costs. Additional borrowing costs are also required to be funded and our report from Nera (FA7 & FA8) points to the requirement to uplift the Ofgem working assumption of 0.25%.

When setting the allowed return on debt, the calibration is fundamental to ensuring the financeability of network companies. At the point of submitting this plan, a rigorous calibration process has not been possible due to pending decisions on RAV depreciation and capital expenditure. In their working assumptions, Ofgem uses a CPIH real cost of debt with an additional borrowing cost of 0.25% to cover the additional costs related to raising debt and related risk management in financial markets.

4.2. Indexation of sector costs

We agree that indexation of allowed cost of debt in line with market interest rates is appropriate and remain supportive of Ofgem's approach of setting the cost of debt based on sector-level expectations for a notional company.

Ofgem has indicated that in setting the length of the trailing average of the iBoxx utilities 10+ index, they will select the appropriate tenor based on the calibration exercise and sensitivities of this to changes in market interest rates. Our analysis suggests that Ofgem's working assumption for the allowed cost of debt is not going to match the sector average interest costs.

We provide the following observations for our plan and that will inform the continued discussion required through to the Final Determination:

- **Defining the sector** to benchmark notional company costs to: We support Ofgem's plan to assess sector actual cost of debt based on the Gas Distribution and Gas Transmission company cost projections. The networks have shared evidence of how investors have diverging views across sectors and are pricing the risk for the gas sector assets higher than the electricity sector. We welcome that

Ofgem will include in the sector costs an adjustment to reflect the impact on Cadent's cost of debt of the separation from National Grid in 2016/17 as noted in our KPMG report (FA6).

- **Indexation of the sector costs**: Ofgem must set an indexation mechanism that reflects changing costs over time. This requires two judgements (a) the pricing of new debt linked to an assumed external index; and (b) the assumed amount and tenor of debt being raised (linked to investment and RAV depreciation policies). Ofgem are yet to finalise the methodology for this but our views for the purposes of this plan are that:

  (a) **Choice of index**: The iBoxx Utilities 10+ index does not fully reflect the sector costs, with evidence submitted alongside this plan from KPMG as part of their Financeability and Investability assessment, indicating that bonds issued by the gas sector underperform the iBoxx Utilities 10+ index by c.30bps currently. In order to fairly compensate for this, we expect a premium will need to be applied during calibration akin to Ofgem's approach taken for RIIO-ED2.

  (b) **Financing Tenor:** The tenor of the trailing average impacts how much we are funded for historic interest rates versus market levels during RIIO-3. This needs to be calibrated to expected tenors that can be delivered efficiently in the market and based on evidence provided by a debt investor survey submitted following our SSMC response, our own experience and evidence from KPMG's Financeability and Investability assessment, a 10-year tenor is deliverable efficiently. As such, over a 5 year price control; indicatively 50% of embedded debt will be repriced in the notional company. This is similar to our actual company where we see c. £3.3bn of debt maturities under the base case. Given the current elevated interest rates, interest costs will be higher in RIIO-3. Should the RIIO-2 assumption of 14 years be maintained, we will be significantly underfunded. This is discussed in the financeability section below.

Our analysis indicates that sector actual debt costs will underperform the 10-year trailing average through RIIO-3, and the calibration exercise will show an uplift is required. The analysis that underpins this assessment uses the same methodology as Ofgem to determine the forward rate for new debt and is therefore subject to market variability at the time that the calibration assessment is undertaken. This is also based on a three-year historic view of the iBoxx spread to determine future debt costs. Given the evidence submitted that demonstrates a divergence of gas specific financing risks and therefore credit spreads into the period, we do not see this as an appropriate method to forecast interest costs for the gas sector in the RIIO-3 period and the mechanism should reflect forward looking risks. This could be achieved by applying caution in assessing the required uplift, to reflect sector debt costs given the impact of market variability on the assessment and the divergence of the gas sector from the iBoxx utilities 10+ index. Our analysis suggests a premium of 40bps is appropriate to reflect the underperformance and the expected continued divergence of sector bonds against the index.

4.3. Additional borrowing costs

Ofgem has previously acknowledged that the trailing iBoxx index does not fully reflect all costs incurred when networks raise debt. In RIIO-2, Ofgem determined the appropriate allowance for efficient additional costs of borrowing was 25bps. For RIIO-3, we support the continuation of an allowance in addition to the trailing iBoxx index but at a higher level of 41.5bps.

The majority of the increase reflects the shortening in the average tenor of debt, which as previously set out, is in response to a lower level of investor appetite for long term gas risk (FA10). The shorter tenor means that fixed costs are spread over fewer years and as such the annualised amount is higher. Nera (FA7 & FA8) was commissioned to update the sector costs and issuance analysis and our conclusion, that an increased allowance for additional borrowing costs is required, has been based on this analysis and our position is outlined in the table below.

Basis Points	RIIO-2	RIIO-3 (Cadent proposal)	Comment
Transaction costs	6	8.5	Shorter amortisation period due to shorter debt tenor
Liquidity/ RCF costs	4	4	Aligned to RIIO-2
Cost of carry	10	19	Increased cost of carry evidence provided by Nera report (+2bps) and shorter amortisation period due to shorter debt tenor (+7bps)
CPIH premium	5	5	Aligned to RIIO-2
New issue premium	0	5	Refreshed evidence provided by Nera report
Additional Borrowing Cost	**25**	**41.5**	

Figure 13: Additional borrowing costs

The table below summarises our position for the Cost of Debt allowance (including additional borrowing costs) into RIIO-3, noting the difference between Ofgem's plan assumption will be partly due to timing of when the market data was provided:

Real (CPIH adjusted)	2026/ 27	2027/ 28	2028/ 29	2029/ 30	2030/21	RIIO-3 average
Ofgem plan assumption	2.69%	2.85%	2.91%	2.98%	3.10%	2.90%
Cadent position*	2.69%	2.92%	3.21%	3.50%	3.84%	3.23%

Figure 14: Cost of Debt allowance

*Market data for forecast dated 20th September 2024

4.4. Transition to semi-nominal WACC

Ofgem has decided to move to a semi-notional WACC to address what it sees as a risk of winners and losers where actual inflation outturns above or below the long run average. This is a technical area discussed in detail in the Sector Specific Methodology Consultation. Our view is that this change is acceptable on the basis that the notional company maintains some index linked debt within its portfolio to manage inflation risks and financeability. We are aligned with the requirement that c.30% of the debt book should be in inflation format for an efficient network, however, believe this can be more efficiently delivered through the inclusion of derivatives which are not currently funded through the regulations, and as such outside of the calibration process.

Our assumptions for the cost of capital provide a better outcome for consumers as they provide greater resilience, are internally consistent with the framework as we understand it today, and reduce risk.

5. Our Financeabilty Assessment

In this section we detail:

1 Our approach to assessing financeability
2 Consideration of financeability of both debt and equity
3 Financial Risk considerations

5.1. Our approach to assessing financeability

We assess the financeability of our Plan with debt costs based on the notional company, actual company and actual adjusted for mitigations put in place by shareholders . It is critical that notional financeability tests are meaningful and robust as a cross-check on the calibration of the RIIO-3 package. The implied financial headroom will need to be consistent with the risks to which the business is exposed. A notional company's inability to pass such tests, post any reasonable mitigations available, would indicate that the allowed returns set by the regulator are not commensurate with the risks that the efficient licensee is exposed to.

Whilst the focus of the financeability assessment, as a check to the price control financial package, is on the notional company, licensees are required to provide assurance that they are financeable on both a notional and actual basis. Companies remain responsible for their financing decisions and choice of actual capital structure, with the risks associated with these decisions remaining with shareholders.

Cadent benefits from a low cost of debt compared to the sector average as our debt was raised and refinanced largely in a single financial year when interest rates were low. As a result, we outperform the 10-14 year trailing average iBoxx index used by Ofgem for allowance setting in RIIO-2. To achieve this comparative low cost of debt, sizeable one-off cash costs were incurred in FY16/17. The refinancing included a part-novation and part-repayment of relatively expensive existing debt as well as raising of new debt at lower rates. There were significant costs associated with this process to enable a new financing structure to be put in place. As a result of the refinancing, Cadent now pays materially lower coupons on its existing debt, which do not reflect the all-in economic costs incurred to enable this. We also present results for the Actual company where the true economic cost (all-in cost) of debt is reflected, this is described as the 'Actual company adjusted for financing'

The financeability needs to be assessed 'in the round' in order to capture its multi-dimensional nature. In practice this means that the assessment needs to cover (1) all sources of capital that the company would use to raise finance; (2) both short-term and longer time horizons to ensure that a short-term focus does not create risk in the long run; and (3) consider the liquidity position of the company to overcome unexpected cash shortfalls or downside shocks. Financeability analysis over multiple time horizons is key, as large capital investment in the short term delivers outcomes for consumers over the long term. This requires longer term capital solutions with capital providers needing to take a long-term perspective.

Financeability assessment cannot be solely focused on debt metrics. Sufficient coverage implied by financial ratios for debt cannot on their own be assumed to imply that returns on equity will be adequate. We agree with Ofgem's view that 'financeability should refer to the licence holder being able to finance activities that are the subject of obligations imposed under relevant legislation and hence is applicable to both equity and debt'.

Similar to Ofgem and investors, credit rating agencies (CRAs) are trying to understand the impact on financial and business risks of different scenarios. They also look to Ofgem to provide direction in terms of a reasonable scenario to base their assessments on. We commissioned KPMG (FA9) to interview the three main rating agencies about their assessment. Importantly, stability and consistency of regulation along with a view that the RAV is fully recoverable through strong regulatory support underpins this assessment. We welcome Ofgem's commitment to this and agree with Ofgem (as noted in paragraph 8.37 of the RIIO-3 SSMC Finance Annex) that it could undermine regulatory stability and likely not in consumer interests for asset stranding risks to reside with investors. CRAs are expecting an evolution of demand and will revise target metrics based on this change to

business risk and changes to the regulatory framework. This transition will need to be included in the financeability assessment.

With significant changes proposed in RIIO-3 arising from accelerated depreciation and a semi-nominal WACC, there is uncertainty over how rating agencies will treat the accelerated cashflows. A reasonable assumption would be for rating agencies to see through these changes i.e. neutralise the impact and we have included a recalculated credit rating through estimating adjustments to the thresholds, otherwise the results from the financeability assessment using current thresholds would provide misleading conclusions. The adjustments to the thresholds have been estimated based on the differentials exhibited between Ofgem's base case notional company and a RIIO-2 status quo notional company. However, a further assessment of financeability should be conducted once more clarity is provided by credit rating agencies on their positions.

5.2. Approach to the Financeability assessment of Debt

A company's ability to raise debt finance at a reasonable cost depends on its ability to remain financially healthy and maintain solid investment-grade credit rating. The rating represents forward-looking judgements from the rating agencies about the creditworthiness and credit risk of an issuer (or a security) and determines a utility company's access to debt capital markets.

A solid investment-grade credit rating in particular is necessary for the company to be able to comfortably meet its liabilities and be able to access financial markets and liquidity even in tougher macro-economic conditions. A key aspect of the financeability test relative to debt investors is therefore the review of the projected levels of key financial ratios against threshold levels that are consistent with the target credit rating and a 'stable' rating outlook.

The target credit rating we have adopted for RIIO-3 for the notional company is Baa1/BBB+, two notches above the minimum investment-grade rating. A number of factors inform the choice of the target credit rating and the underlying trade-offs:

- Targeting a solid investment-grade credit rating provides companies with the financial headroom and flexibility to manage challenges and risks of RIIO-3 (and beyond) and deal with downside shocks (leading to a downgrade from the target rating).
- The benchmarks and the weighting of the proposed indices to be adopted by Ofgem in setting the allowed cost of debt, imply a solid investment-grade credit rating. Ofgem set the cost of new debt using an average of the iBoxx 'A' and 'BBB' rated GBP non-financials indices for bonds with ten years or more to maturity. The combination of the 'A' and 'BBB' indices suggests a rating of Baa1/BBB+ or A3/A-. In order to achieve the regulator's allowance, companies need to ensure that they can maintain the key financial ratios at levels commensurate with this implied rating.
- The financeability test is in part designed to check that the notional company is able to achieve the credit rating of the index used to set the cost of debt allowance. Where this is not the case, cost of debt allowance set by the regulator underestimates the cost of debt achievable in practice for an efficient licensee and the allowed returns based on the regulator's financing assumptions are not consistent with the cost of capital.
- Historical precedence indicates a long-term investor preference for a solid investment-grade credit rating of Baa1/ BBB+ or higher in UK regulation. The target credit rating of Baa1/BBB+ is at the lower end of the historical precedence.
- Currently Moody's does not differentiate between rating thresholds for electricity and gas networks. If this is re-assessed in the future due to the increasingly different risks associated with the two sectors, this could result in a tightening of thresholds for the gas sector and an associated decrease in headroom.

It is critical that the financeability assessment is undertaken on the market-based tests that reflect the approach taken by the rating agencies as their assessments are key in determining whether or not the companies meet their licence requirements in this regard.

Credit rating methodologies are based on a number of constituent sub-factors – quantitative and qualitative – which are holistically assessed to determine the overall creditworthiness of regulated companies. Qualitative

factors are more significant than quantitative factors (based on key credit metrics). Qualitative factors carry 60% weighting of the overall rating for Moody's. Stability of regulatory regimes will play a major role in rating agencies' overall assessment. In our analysis we have focused mainly on the quantitative factors (40% weighting) due to the subjective nature of the qualitative factors.

40%	**Regulatory Environment and Asset Ownership Model**	
	15%	Stability and Predictability of Regulatory Regime
	5%	Asset Ownership Model
	15%	Cost and Investment Recovery (Ability and Timeliness)
	5%	Revenue risk
10%	**Scale and Complexity of Capital Program**	
10%	**Financial Policy**	
40%	**Leverage and Coverage**	
	10%	AICR
	12.5%	Net Debt / RAV
	12.5%	FFO / Net Debt
	5%	RCF / Net Debt

Figure 15: Moody's sub-factors

We explain the four credit metrics used by Moody's below:

- AICR is a cash flow-based measure used by Moody's. It measures how well real returns generated by a company cover its net cash interest payable.
- Net Debt/RAV is commonly used in regulated networks where RAV serves as a proxy for the long-term average enterprise value of a regulated business.
- FFO / Net Debt is a dynamic leverage measure to assess cash flow in comparison to its indebtedness. A higher level of FFO / net debt may not be a sign of financial strength when it is driven by a higher level of regulatory depreciation.
- RCF/Net Debt is an indicator for financial leverage as well as an indicator of the strength of a network's cash flow after dividend payments are made and this ratio can also provide insight into the network companies' financial policies.

The Moody's simulated rating is not necessarily applied mechanistically and it is likely that the relevant rating agency will override the grid-implied rating based on the importance they apply to certain key credit metrics. Moody's grid-implied rating is likely to be constrained to the rating indicated by the level of its preferred key metric – Adjusted Interest Coverage Ratio ('AICR'). We have also applied judgement in the qualitative factors in light of how actual GDNs are being rated. Therefore we have applied a methodology which takes the Business Plan Financial Model (BPFM) AICR outputs and tests them against the adjusted thresholds.

Ofgem has also modified the credit rating condition to require companies to maintain more than one investment grade rating to improve financial resilience. Other credit rating agencies place more weight on different metrics to Moody's and should therefore also be taken into account. For example, S&P place more consideration to FFO/net debt.

The overall credit rating is based on the current financial metrics and qualitative factors. The qualitative factors, which primarily reflect the characteristics of the regulatory regime, will change in RIIO-3 with Ofgem indicating changes to cost of debt and accelerated depreciation, as such any conclusions on financeability are subject to change in the key parameters of the Final Determination to be proposed by Ofgem in 2025 relative to the

working assumptions. To account for the expected changes to the financial metrics and qualitative factors, we have analysed the impact based on the differentials exhibited between Ofgem's base case notional company and a RIIO-2 status quo notional company and completed a synthetic change to the thresholds applied in the rating calculations.

5.3. Approach to the Financeability assessment of Equity

Equity financeability is focused on the availability and sustainability of returns for equity investors and is intended by Ofgem to act as a cross-check to ensure that the regulator's cost of equity assessment is robust and hence sufficient for the equity financeability of the notional company.

Our ownership structure, where the ultimate equity is held by a relatively small consortium of specialist infrastructure investors and sovereign wealth funds, ensures that we have very direct and regular engagement with our shareholders.

Investors in UK infrastructure are by their very nature long-term holders. Investors typically comprise pension funds, sovereign wealth funds, insurance companies and infrastructure investment funds (who in turn may have pension funds as their ultimate investors). This is reflected in the mix of ultimate investors in Cadent. The underlying sources of capital for these investors are the savings and retirement vehicles which typically seek out stable and predictable income streams with moderate to low levels of risk.

5.4. Longer term financeability

As part of our financeability assessment, we have not only reviewed RIIO-3 but also considered whether there are any longer term financeability implications. There are a number of potential pathways to decarbonisation, all of which could impact financeability differently.

- **Management of demand risk and transition:** Our plan does not assume any significant decline in consumer numbers or demand during RIIO-GD3. However, it is not possible to consider the financeability and investability of the company without taking into account the longer-term dynamics of the sector related to decarbonation, the transition to net-zero and associated pathway of the consumer base. As noted, there are concerns that bill levels implied under Ofgem's acceleration depreciation could create incentives that lead to a negative spiral of higher bills on those that can least afford to pay. The assessment of financeability therefore considers these long-term dynamics, including consumer bill levels and the viability of debt and equity funding.
- **Protections for investment recovery:** The RAV model is predicated on the long-term full recovery of investment. Any perception that this may not be the case, whether grounded or ungrounded, could significantly impact investability and deter investors from retaining equity in the sector. The risk to investors is asymmetric, where they have no possibility of over-recovering income, but could be exposed to some risk of under-recovery in the absence of appropriate policies. This risk is not currently priced into the regulatory framework. The RAV recovery framework should consider depreciation policy as well as government intervention and wider socialisation of costs currently attributed to gas consumers. Further, consideration towards the scale of consumer bills is paramount. The graph below reflects our element of consumer bills up to 2050 assuming FES holistic scenario consumer numbers, which illustrates challenges with long term affordability which implies financeability challenges, before factoring in inflation, costs associated with disconnections and decommissioning costs.

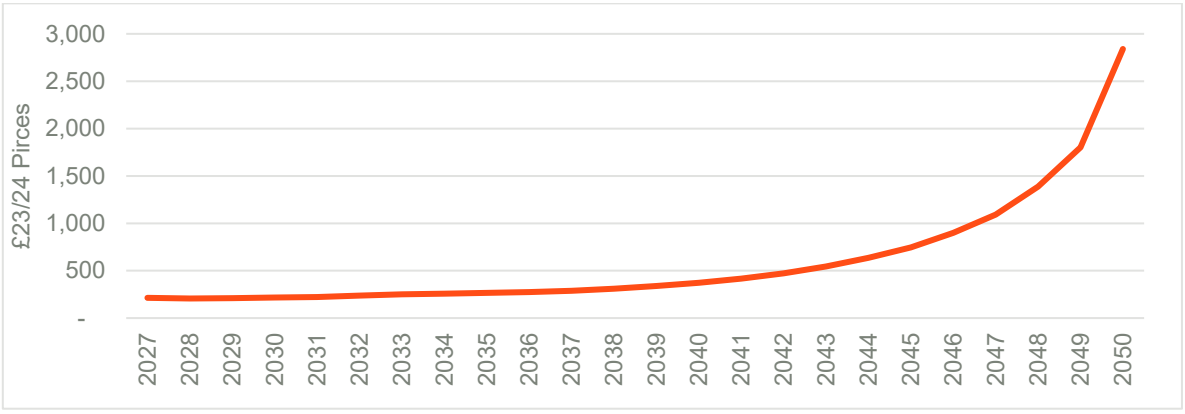

Figure 16: Domestic bills £23/24 prices under holistic transition

- **Sufficient investor return:** RAV balances may decline or growth rates reduce (in real terms) following completion of the Repex work to deliver the Iron Mains Replacement Programme, and as a result of Ofgem's acceleration deprecation proposals. A regulatory framework which remunerates equity based on an asset heavy business model may no longer be appropriate where the asset base declines, but totex remains more stable (and therefore totex risk remains largely unchanged). Operational risk exposure will not decrease, even as the asset base does, meaning a lack of change to the model could significantly reduce the equity buffer. Additionally, it is crucial in this context to differentiate between return of capital through depreciation and return on capital. The sector is only investable if both factors are appropriately calibrated.
- **Funding of disconnection and decommissioning costs:** GDNs face potentially significant disconnection costs should consumers transition away from the network in line with certain future energy scenarios. In addition to this, end-of-network or repurposing costs may require significant resources to deliver at an indeterminate point in time. Our RIIO-GD3 business plan does not contain any decommissioning costs, in line with Ofgem's guidance. It may be necessary to consider alternative funding mechanisms based on a declining-asset base, as opposed to the RIIO framework which relies on asset growth. It is crucial to avoid circumstances where the expected costs for decommissioning have no credible route to financial recovery of these costs.

5.5. Financial Risk Management and mitigation considerations

We operate an Enterprise Risk Management process which assesses operational and financial risks relative to the risk appetite set by the Board of Directors. We report on the effectiveness of controls to manage these risks regularly through to the Audit and Risk Committee. From a financial risk management perspective we focus on our controls relative to liquidity, credit, market and financial management risks.

Risk	Risk management	RIIO-3 trend
Liquidity risk is the risk that we do not have sufficient funds to meet the obligations or commitments resulting from its business operations or associated with its financial instruments, as they fall due.	• A prudent level of liquid assets and committed funding facilities consistent with the Board approved treasury policy. • The Board is responsible for monitoring the policies, setting limits on the maturity of liquidity and deposit funding balances and taking any action as appropriate. • Access to Revolving Credit Facilities (RCFs) from our relationship banking group for drawings of up to £500m by Cadent Gas Ltd. With a further undrawn RCF facility of £200m being available from the immediate parent company Quadgas Midco Limited.	The level of liquidity remains strong and well in excess of minimum requirements.

Credit risk is the risk that financial loss arises from the failure of a consumer or counterparty to meet its obligations under a contract as they fall due. Credit risk arises principally from trade finance and treasury activities.	• Dedicated standards, policies and procedures are in place to control and monitor credit risk. • Creditworthiness of each of our 47 principal shippers (direct consumers) is closely monitored in line with industry wide parameters. • Exposure to shipper credit losses mitigated in most cases by the protection given by the Uniform Network Code (the industry governance contract). • The Code requires consumer to pay monthly and to provide security for their transportation services minimising the risk of payment default. In addition, the 'Supplier of Last Resort' (SoLR) process ensures future revenues are not impacted. • In line with our treasury policies, our counterparty credit exposure is monitored daily against the counterparty credit limits. Counterparty credit ratings and market conditions are reviewed continually with limits being revised and utilisation adjusted, if appropriate.	The drivers of credit risk remain unchanged. Consumer credit remains concentrated on the same large shippers where protections exist via industry code. The level of treasury related credit risk on financial investments remains largely unchanged with investment subject to minimum credit rating criteria.
Market risk is the risk that future cash flows of a financial instrument, or the fair value of a financial instrument, will fluctuate because of changes in market prices. Market prices include foreign exchange rates, interest rates, inflation, equity and commodity prices. The main types of market risk to which we are exposed are interest rate and inflation risk. We have no significant transactional foreign exchange or equity exposure. We are exposed to short term commodity price volatility, particularly gas prices	• The Board reviews and approves policies for managing market risks on an annual basis. The Board also approves all new hedging instruments. • The management of market risk is undertaken by reference to risk limits, approved by the Chief Financial Officer or Director of Treasury under delegated authority from the Board. • We borrow in the major global debt markets at fixed, index-linked and floating rates of interest. Volatility associated with these markets is managed using derivatives, where appropriate, to generate the desired exposure. • The debt book is now c.30% inflation hedged (post use of derivatives) which provides strong protection to downside inflation risk. • Cadent does not take long term market risk in relation to gas prices. In the short term, there is exposure, however, regulatory mechanisms are in place to ensure recovery of costs driven by changes in market prices over time. • Cadent is exposed to the risk of commodity price movements where volatility impacts real input costs to our investment programme. Regulatory mechanisms are in place with the ambition to mitigate this volatility.	The external economic landscape remains volatile and while inflation levels have reduced. Expectations are for interest rates to follow suit, there are still economic and geopolitical uncertainties.
Financial management risk is the risk that we could be exposed to loss,	• We operate a comprehensive financial controls framework across the business that	The stable nature of the regulatory business,

fraud or inefficiency if there are weaknesses in our day-to-day financial management controls.	seeks to identify and mitigate the risk of loss, fraud or misstatement of our financial performance. • We undertake cyclical reviews of the controls over our key financial processes to ensure that they remain relevant, fit for purpose and are operating as expected. • Dedicated 2nd and 3rd line resources undertake assurance activities over the controls framework to provide confidence in its ongoing operation.	alongside focus on a robust controls framework supports a stable environment.

Figure 17: Financial Risks

Whilst our plan is robust, we outline potential mitigations to our risks and financeability below:

Risk	Risk mitigation
Restriction of dividend	The notional company working assumption is to fix a dividend yield of 3%. Sustained disruption to a steady dividend yield or resetting the dividend yield to a lower level will impact this class of investors who rely on a steady stream of cash flow. The resultant impact on the cost of equity will lead to higher bills for both current and future consumers.
Equity injection	The premium paid to refinance the debt at segmentation has the effect of a dividend holiday for equity so a form of equity injection has already been made to provide us with the sector-leading cost of debt and related financial resilience.
Refinancing of expensive debt (using equity injection or dividend restriction)	As noted above, at significant cost to equity, expensive debt was refinanced and replaced with low cost debt at the point of separation from National Grid. We have a sector-leading financial profile. In 2016, there was an equity support estimated at £842m to enable refinancing of our higher cost of debt, taking advantage of the prevalent lower cost of debt.
Adjust capitalisation rates	We have revisited and decided to maintain the current policy in the interests of intergenerational fairness. We have assumed all investment spend (capex and repex) is slow money and all operating costs are funded via fast money.
Adjust depreciation rates	Our view is that currently there is no need to rapidly accelerate depreciation rates in the interests of intergenerational balance. As government policy and pathways become clearer, this can be reassessed.
Adjust notional gearing	We have maintained the notional gearing at the level of Ofgem's working assumption of 60%. Our analysis shows that the allowed return must be no lower than 6.3% (CPIH) to ensure a resilient financial profile at 60% gearing. Results of modelling on different gearing scenarios are presented in section 6.6.

Figure 18: Potential risk mitigations

6. Stress Testing

In this section we detail:

1 Approach to stress testing
2 Key definitions and assumptions included within our stress tests
3 Stress test outcomes
4 Board assurance over financeability

6.1. Approach to stress testing

We have undertaken a number of “stress test” scenarios on the financeability of the notional and actual company as requested by Ofgem. We also present results for the Actual company where the true economic cost (all-in cost) of debt is reflected, this is described as the ‘Actual company adjusted for financing’.

Other than 2 stress tests applied over gearing (see 6.6), we have not presented any additional stress tests over and above those required by Ofgem. Whilst we performed rigorous stress testing for a number of downside case scenarios for the notional company, actual company and actual company adjusted for financing, the results do not differ significantly from those presented. This includes running stress tests using Option 4 accelerated depreciation, which still demonstrated that our plan is financeable.

Our outputs primarily focus on the Moody’s ratings. We have cross checked these to the implied S&P rating and note they are comparable. Further details provided in the KPMG report in FA12.

6.2. Definitions and key assumptions

It is unclear how the rating agencies will adapt their methodology for RIIO-3. However, some degree of adjustment is expected given the substantial changes in the regulatory framework which has the impact of significantly accelerated cashflows (accelerated depreciation and the move to a semi nominal WACC). For the purpose of assessing Financeability for RIIO-3, we have therefore adjusted the thresholds for the credit rating metrics to neutralise the impact of the cashflows. We have done this by calculating the difference between the notional company ratios under the RIIO-3 base case and the status quo, and applying the implied impact to the thresholds for the actual company.

In our modelling, the relevant company structures have the following definitions and key assumptions:

	Notional	Actual	Actual adjusted for financing
Gearing	60%	62%	62%
Dividend yield	3.0%	6.0%	6.0%
Debt costs	Based on Ofgem BP guidance	Based on actual company cost of debt	Adjusted to reflect the all-in cost of debt
Totex allowances	Equal to Totex	Same as Notional	Same as Notional
Capitalisation rates and asset lives	Repex & Capex at 100%, Opex at 0% Accelerated depreciation (Option 2 with acceleration factor of 1)	Same as Notional	Same as Notional
Cost of Equity (RIIO-3 average)	5.44%	Same as Notional	Same as Notional
Cost of debt (RIIO-3 average)	2.9%	Same as Notional	Same as Notional
Accelerated Depreciation	Option 2	Same as Notional	Same as Notional
Cost of debt methodology	Option 1	Same as Notional	Same as Notional

Figure 19: Base Case Key assumptions

6.3. Notional Company Financeability

The notional company is financeable, but if accelerated depreciation and a semi-nominal WACC are implemented as per the SSMD, there is a risk that rating agencies will adjust their ratios to take account of the accelerated cash flows and headroom would significantly reduce. Under adjusted thresholds there is limited / no headroom expected to Baa1 target credit rating.

	2027	2028	2029	2030	2031	RIIO-3 Average
AICR	**1.84**	**1.80**	**1.79**	**1.78**	**1.76**	**1.79**
Net Debt / RAV	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
FFO / Net Debt	16.83%	17.50%	18.15%	18.76%	19.63%	18.17%
RCF / Net Debt	13.15%	13.22%	13.69%	14.52%	14.80%	13.88%
Implied Rating						Baa1/BBB+

Figure 20: Key metrics: Base financeability case: Notional company

In Ofgem's Business Plan guidance published in September 2024, a suite of financial ratios were listed to assess financeability alongside qualitative factors. Below we present these ratios and key financial metrics for RIIO-3 for the Notional Company in the output tables below.

Scenario Ref	Scenario	Net Debt/ RAV	FFO/Net Debt	AICR	RCF / Net Debt	Implied min. Credit Rating
O1	Base case	60.0%	18.2%	1.79	13.9%	Baa1
O2	High interest rate	59.4%	18.7%	1.77	14.4%	Baa1
O3	Low interest rate	60.6%	17.7%	1.83	13.4%	Baa1
O4	High inflation	59.1%	18.5%	1.82	14.1%	Baa1
O5	Low inflation	60.9%	17.9%	1.77	13.6%	Baa1
O6	High CPIH inflation divergence	60.2%	18.1%	1.79	13.8%	Baa1
O7	Low CPIH inflation divergence	59.8%	18.2%	1.80	13.9%	Baa1
O8	High RPI inflation divergence	60.0%	18.2%	1.79	13.9%	Baa1
O9	Low RPI inflation divergence	60.0%	18.2%	1.79	13.9%	Baa1
O10	Totex outperformance	57.2%	19.9%	1.98	15.3%	Baa1+
O11	Totex underperformance	62.8%	16.7%	1.62	12.6%	Baa2
O12	High RoRE	57.4%	20.5%	2.17	16.0%	Baa1+
O13	Low RoRE	62.6%	16.0%	1.44	11.9%	Baa3
O14	High index-linked debt	60.1%	18.1%	1.83	13.8%	Baa1
O15	Low index-linked debt	59.9%	18.2%	1.76	13.9%	Baa1

Figure 21: Notional Company Scenario Summary

Note: Baa+ reflects Baa1 or higher, as the rating thresholds for Cadent at 'A' range ratings is uncertain

We have used the business planning assumptions required by Ofgem, and subject to a fair and balanced Final Determination by Ofgem on totex, outputs and incentives conclude that, overall, the notional company is financeable despite reduced financial headroom and a significant deterioration in the risk-return balance. However, it should be noted that under 2 plausible stress tests the notional company implied credit rating reduces to Baa2 or Baa3 demonstrating a lack of resilience. Given the uncertainty over how credit rating agencies will respond to accelerated cashflows, this level of headroom increases the risk that the notional company structure would be exposed to sub-optimal credit ratings.

6.4. "Actual Company Adjusted for Financing"

The actual company adjusted for financing is financeable and can achieve a Baa1 credit rating, however the projected headroom deteriorates significantly over time as existing debt is refinanced with new debt raised at higher current and projected market rates. This suggests the rate of return is too low in the medium to long term.

	2027	2028	2029	2030	2031	RIIO-3 Average
AICR	2.06	2.06	2.06	2.06	2.06	2.06
Net Debt / RAV	63.74%	63.26%	62.62%	62.30%	61.68%	62.72%
FFO / Net Debt	16.37%	17.11%	17.98%	18.42%	19.47%	17.87%
RCF / Net Debt	12.59%	13.28%	14.09%	14.50%	15.49%	13.99%
Implied Credit Rating				Baa1+		

Figure 22: Key metrics: Base financeability case: Actual company adjusted for financing

Under current thresholds, the Moody's credit rating is strong primarily due to the impact of accelerated depreciation and the semi-nominal WACC, in addition to the lower actual cost of debt.

We present the ratios and key financial metrics for RIIO-3 for the Actual Company in the table below.

Scenario Ref	Scenario	Net Debt/ RAV	FFO/Net Debt	AICR	RCF / Net Debt	Implied min credit Rating
O1	Base case	62.7%	17.9%	2.06	14.0%	Baa1+
O2	High interest rate	57.8%	20.2%	2.28	18.0%	Baa1+
O3	Low interest rate	58.6%	18.9%	2.22	16.8%	Baa1+
O4	High inflation	57.8%	19.7%	2.25	17.5%	Baa1+
O5	Low inflation	58.7%	19.3%	2.25	17.2%	Baa1+
O6	High CPIH inflation divergence	58.3%	19.5%	2.26	17.4%	Baa1+
O7	Low CPIH inflation divergence	57.9%	19.6%	2.26	17.4%	Baa1+
O8	High RPI inflation divergence	58.2%	19.6%	2.26	17.4%	Baa1+
O9	Low RPI inflation divergence	58.1%	19.6%	2.26	17.4%	Baa1+
O10	Totex outperformance	57.8%	20.3%	2.42	18.1%	Baa1+
O11	Totex underperformance	58.0%	19.0%	2.10	16.8%	Baa1+
O12	High RoRE	57.9%	21.0%	2.65	18.8%	Baa1+
O13	Low RoRE	58.9%	17.9%	1.84	15.8%	Baa1
O14	High index-linked debt	58.2%	19.3%	2.20	17.2%	Baa1+
O15	Low index-linked debt	58.0%	19.8%	2.33	17.6%	Baa1+

Figure 23: Actual Company Adjusted for Financing Scenario Summary

6.5. Actual Company Financeability

The actual company is financeable, achieving a comfortable Baa1+ credit rating under all stress tests, driven by Cadent's comparatively low cost of debt, the benefit of which decreases over the price control as embedded debt is refinanced by new debt at a higher projected cost. A corresponding deterioration in the AICR metric is seen.

	2027	2028	2029	2030	2031	RIIO-3 Average
AICR	2.57	2.48	2.38	2.24	2.23	2.38
Net Debt / RAV	62.93%	62.18%	61.36%	60.79%	59.88%	61.43%
FFO / Net Debt	17.02%	17.85%	18.64%	19.29%	20.52%	18.66%
RCF / Net Debt	13.19%	13.95%	14.68%	15.27%	16.42%	14.70%
Implied Credit Rating				Baa1+		

Figure 24: Key metrics: Base financeability case: Actual company

We present the ratios and key financial metrics for RIIO-3 for the Actual Company in the table below.

Scenario Ref	Scenario	Net Debt/ RAV	FFO/Net Debt	AICR	RCF / Net Debt	Implied Min Credit Rating
O1	Base case	61.4%	18.7%	2.38	14.7%	Baa1+
O2	High interest rate	57.3%	20.7%	2.57	18.5%	Baa1+
O3	Low interest rate	58.3%	19.3%	2.55	17.2%	Baa1+
O4	High inflation	57.2%	20.2%	2.56	18.0%	Baa1+
O5	Low inflation	58.0%	20.0%	2.58	17.8%	Baa1+
O6	High CPIH inflation divergence	57.9%	20.0%	2.56	17.8%	Baa1+
O7	Low CPIH inflation divergence	57.6%	20.1%	2.55	17.9%	Baa1+
O8	High RPI inflation divergence	57.8%	20.0%	2.56	17.8%	Baa1+
O9	Low RPI inflation divergence	57.7%	20.0%	2.55	17.8%	Baa1+
O10	Totex outperformance	57.3%	20.8%	2.77	18.6%	Baa1+
O11	Totex underperformance	59.0%	18.9%	2.32	16.8%	Baa1+
O12	High RoRE	57.4%	21.5%	3.03	19.3%	Baa1+
O13	Low RoRE	58.9%	18.2%	2.06	16.1%	Baa1+
O14	High index-linked debt	57.8%	19.8%	2.48	17.6%	Baa1+
O15	Low index-linked debt	57.7%	20.3%	2.63	18.0%	Baa1+

Figure 25: Actual Company Scenario Summary

6.6. Notional gearing considerations

We have considered varying gearing levels but believe notional gearing should remain broadly stable over time and the gas distribution sector has recently experienced a significant change from 65% in RIIO-1 to 60% in RIIO-2. Maintaining consistency across price controls is important. Given this recent and large change, we do not see the need to change this assumption in RIIO-3.

Significant departures from previous practice should be avoided, as these can create real world implications for companies, for instance where protective debt and pension covenants are linked to notional gearing levels; or managing large changes in gearing to maintain alignment between notional and actual structures.

Our plan assumes a 60% gearing level (RIIO-1: 65%, RIIO-2: 60%) and we have assessed the robustness of this assumption to stress tests. This is consistent with the level of debt in our actual company, the level used for RIIO-2, Ofgem's working assumption and is within our financial covenants that support our strong Investment Grade rating.

Reducing gearing further would increase costs to consumers (as the higher equity requirement results in higher consumer bills) and is not required given our assessment of financial resilience of the notional and actual company under the base case and under stress tests.

However, in line with the business plan guidance, we have reviewed the potential impact of changing gearing. Reducing the level of debt (gearing) improves financeability relative to debt metrics but increases the exposure of equity / owners to the risks within the business and therefore the overall cost of capital to consumers given cost of equity is higher than cost of debt. It important to strike the right balances to avoid the cost of capital being higher than required.

Scenario	Net Debt/ RAV	FFO/Net Debt	AICR	RCF / Net Debt
Base case 60%	60.0%	19.6%	1.76	14.80%
Gearing 55%	55.0%	20.3%	1.98	15.0%
Gearing 65%	65.0%	16.4%	1.64	12.9%

Figure 26: Financial ratios under varying Gearing scenarios

The UKRN guidance for regulators on the methodology for setting the cost of capital lists out a number of factors to consider when setting gearing. Below we set out our views on the impact of these factors:

Factor	Impact of reducing notional gearing
Notional company risk profile	• Increases equity buffer to absorb shocks but signals higher risk. The UKRN guidance acknowledges higher risk is associated with lower gearing levels, therefore higher costs to consumers could be incurred to compensate for the perceived risk increase.
Financial resilience	• Increases financial resilience through lowering debt costs, however, increases overall costs to consumers as the cost of equity is higher than the cost of debt due to the increased level of risk.
Trends in actual gearing	• Increased differences between actual and notional company structures.
External benchmarks	• If gearing is lowered, relative to other benchmarks, gas distribution could be perceived more risky than other sectors and therefore increase costs to consumers.
Relationship with the allowed return	• Increases the overall weighted average cost of capital due to higher equity costs, which also results in higher tax allowances, thus higher consumer costs.

Figure 27: Notional gearing factors

6.7. Board Assurance

We have assured ourselves that our plan is financeable and remains attractive to investors and have provided a separate Board assurance statement alongside our plan.

In sections 6.3-6.6 we provide further detail on the various stress tests we have performed to demonstrate whether we are financeable on both a notional, actual and actual adjusted for financing capital structure basis, using the Ofgem working assumptions. In all 3 base cases we are financeable, achieving robust credit metrics with sufficient headroom, which in part is due to the accelerated cashflows in RIIO-3 arising from the move to a semi-nominal WACC and accelerated depreciation.

Whilst credit metrics in RIIO-3 may appear robust, credit rating agencies are expected to adjust the metric thresholds or move to fully nominal metrics, reflecting changes in RIIO-3 such as accelerated depreciation and moving to a semi-nominal cost of debt. Therefore once Ofgem have concluded on their RIIO-3 decisions, our assessment of financeability would need to be reviewed.

The actual company faces less pressure across all metrics due to the actual lower cost of debt, arising from actions taken by shareholders at the time of acquisition from National Grid Gas Distribution in 2016, however the benefit will decrease as debt is refinanced and replaced with new debt at higher current and projected rates, putting further pressure on headroom. AICR weakens across RIIO-3 as a result, a trend which will continue into the longer term if our cost of debt allowance does not reflect the higher interest costs borne. FFO/Net Debt strengthens marginally across the price control, however limited headroom (particularly for the notional company) implies a lack of financial resilience. As a result, when assessing the results of the applied stress tests, some plausible scenarios demonstrate unacceptably low credit ratings (particularly the low RoRE scenario), which are not commensurate with the requirement to maintain greater headroom due to uncertainty around credit ratings.

KPMG has also performed analysis of the financeability and investability of Cadent based on our business plan (using Ofgem's working assumptions) to support our Board in providing assurance that we are financeable.

Looking beyond RIIO-3, Ofgem's proposals in respect of accelerated depreciation assume declining domestic consumer numbers (with full consumer exit by 2050) which may create challenges around longer-term financeability and investability, driven by very high implied consumer bills and a growing mismatch between the risks faced by our business and the allowed return.

7. Consumer Bills

In this section we detail:

1 Consumer bills over RIIO-3

7.1. Consumer bills over RIIO-3

When we refer to consumer bills, we are referring solely to the transportation charge element, as it is the revenue and costs to which these relate that are subject to Ofgem's price control arrangements. The consumer bill figures reflect average bills for domestic consumers which we define as load band 1 (up to 73,200 KWH per annum).

The results of Ofgem's bill calculator within the Business Plan Financial Model (BPFM), for the notional company under Ofgem's base case are summarised below:

£/year (23/24 prices)	2027	2028	2029	2030	2031	RIIO-3 Average
Ofgem bill method 1	206	212	216	219	225	216
Ofgem bill method 2	205	210	214	216	221	213

Figure 28: RIIO-3 Consumer Bills

Our bill calculation (used in the chart below) is not materially different to Ofgem's methodology / calculation. It is aligned to bill method 1 but uses a more accurate view of forecast costs.

Our proposals would increase domestic bills by £15 per annum (9%) from £157 at the end of RIIO-2 to **£172 on average** in RIIO-3, driven by above inflation increases in costs.

Below, we show how Ofgem's proposals relating to changes on how debt is financed and different options for accelerating depreciation affect charges to consumers. These changes could increase bills significantly beyond £172 up to £214 (a 36% increase).

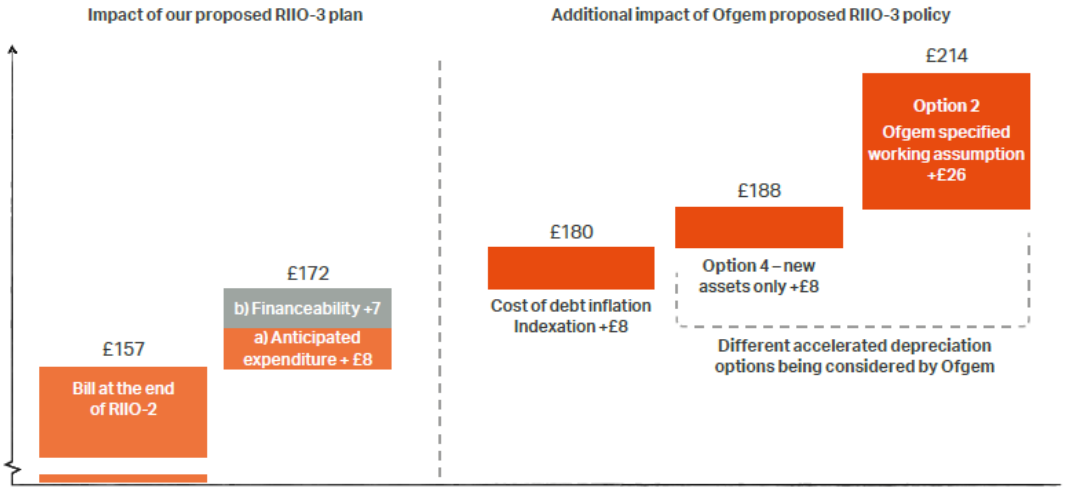

Figure 29: Evolution of consumer bills from RIIO-2: Ofgem base case adjusted for Cadent's cost of capital

The increases in consumer bills under the Ofgem proposals are summarised as follows:

- **Accelerated Depreciation –** As discussed in chapter 2 of this appendix, depending on which accelerated depreciation option Ofgem decide to apply in RIIO-3 will have a significant impact on consumer bills, ranging from +£8 up to +£34 per annum.
- **Cost of debt inflation indexation** – As discussed in chapter 4 of this appendix, the change to semi-nominal WACC will increase bills in the short term.

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8. Glossary

Term	Definition
Acceleration factor	A factor that is applied to the % RAV depreciation calculated
AICR	Adjusted Interest Coverage Ratio
AICR	Adjusted Interest Cover Ratio
ARP-DRP	Asset risk premium to debt risk premium
Beta	The measure of risk used in the CAPM
BPFM	Business Plan Financial Model (issued by Ofgem)
bps	Basis Points – a unit of measure used in finance to describe the percentage change in the value or rate of a financial instrument. One basis point is equivalent to 0.01% (1/100th of a percent) or 0.0001 in decimal form.
Break even inflation	The difference between index-linked and nominal gilts
CAPM	Capital Asset Pricing Model – a model used to calculate investment risk and what return on investment an investor should expect.
CMA	Competition and Markets Authority – a Government body responsible for strengthening business competition and preventing and reducing anti- competitive activities.
CPIH	Consumer Prices Index including owner occupiers' housing costs
CRAs	Credit Rating Agency
ENA	Energy Network Association – an industry body funded by UK gas and electricity transmission and distribution licence holders. This provides a strategic focus for the energy networks sector by communicating key messages and recommendations, supported by technical expertise. The ENA also records faults, defects and safety information on behalf of the industry.
FES	Future Energy Scenarios - Pathways (published by NESO) to get to Net Zero represent different ways to decarbonise our energy system as we strive towards the 2050 target.
FFO	Funds From Operations
GDN	Gas Distribution Network – a regional gas distribution network. Together with the National Transmission System (NTS), the regional GDNs combine to form the national gas distribution system in Great Britain.
IBoxx index	IBoxx indices provide benchmarks that track global markets. In RIIO-2, Ofgem used the iBoxx utilities index 10-14 year trailing average for the cost of debt allowance.
ICR	Interest Coverage Ratio
IRR	Internal Rate of Return
KWH	Kilowatt hour – a measurement of energy transmitted or used over a period of time. One kWh = one thousand Watt-hours.
OBR	Office for Budget Responsibility – a non-departmental public body established by the UK government to provide independent economic forecasts and independent analysis of the public finances.
Option 1	Refers to Ofgem's RIIO-3 RAV depreciation policy option 1 - Sum of digits on a reducing basis to 2050 on all assets
Option 2	Refers to Ofgem's RIIO-3 RAV depreciation policy option 2 - Sum of digits on a reducing basis to 2050 on all assets with an acceleration factor
Option 3	Refers to Ofgem's RIIO-3 RAV depreciation policy option 3 - Straight line to 2050 on all assets with an acceleration factor
Option 4	Refers to Ofgem's RIIO-3 RAV depreciation policy option 4 - Sum of digits on a reducing basis to 2050 on new RAV additions only
PR24	2024 Price Review – the recent Ofwat price review for the water industry.

RAV	Regulatory Asset Value
RCF	Retained Cash Flow
RfR	Risk Free Rate
RoRE	Return on Regulatory Equity – financial return achieved by shareholders according to a price control regime. This is used for comparison with the cost of equity originally allowed.
RPI	Retail Prices Index
SoLR	Supplier of last resort - procedure to ensure continuity of supply when a supplier fails, and ensures he appointed company recovers addition costs incurred in supplying the transferred customers.
Status Quo	Refers to the RIIO-2 RAV depreciation policy i.e. Sum of digits over 45 years for post vesting RAV additions
tenor	Debt tenor refers to the length of time that will be taken by the borrower to repay the loan along with the associated interest
TMR	Total Market return
UNC	Uniform Network Code – the commercial contract that exists between gas transporters (NTS and GDNs) and Gas Shippers.
WACC	Weighted Average Cost of Capital

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Annexes

Annex 1. Notes for Ofgem

The table below identifies the key messages and relevant sections of the strategy against the Business Plan Guidance issued in September 2024.

BPG Ref	BPG Requirement description	Signposting	Key Section(s)
BPG 7.9	Business plans should clearly set out: • Financial projections for each year of the RIIO-3 period under the specified regulatory finance framework, on a notional and actual company basis. The financial projections should consist of the model outputs listed in the BPFM Output Sheet of the BPFM, as well as the results of any stress tests that the licensee considers to be appropriate. Note that this is a requirement for final business plans only.	Outputs from the BPFM output sheets are included in Annex 2. For our Business plan submission, we have undertaken a number of "stress test" scenarios on the financeability of the notional and actual company as requested by Ofgem. We also present results for the Actual company where the true economic cost (all-in cost) of debt is reflected, this is described as the 'Actual adjusted for financing' company. Other than 2 stress tests applied over gearing (see chapter 6.6), we have not presented any additional stress tests over and above those required by Ofgem. Whilst we performed rigorous stress testing for a number of downside case scenarios for the notional company, actual company and actual company adjusted for financing, the results do not differ significantly from those presented. This includes running stress tests using Option 4 accelerated depreciation, which still demonstrated that our plan is financeable.	Annex 2 BPFM Outputs 6.6 Stress testing
	• A clear explanation of any additional stress test scenarios, including rationale, results and commentary of results.		
	• The company's target ratings (including consideration of the trade-offs of different target rating levels) and the key financial ratios and qualitative factors used to assess maintenance of those target ratings.	The target credit rating we have adopted for RIIO-3 is Baa1/BBB+, as described in 5.2.	5.2 Approach to the Financeability assessment of Debt
	• The results of any future Ofgem-prescribed set of common stress test scenarios (as described in the SSMD) with results clearly explained.	The Ofgem-prescribed stress tests (aligned to the BPFM and SSMD Finance annex table 15). Section 6 of this appendix provides details	6.3 Notional Company Financeability 6.4 Actual Company Adjusted for Financing 6.5 Actual Company Financeability 6.6 Notional gearing considerations
	• A clear explanation of the company's proposed capitalisation rates and regulatory depreciation rates and the basis for these proposals (for example, whether proposed capitalisation rates match	Section 2 of this appendix provides details. For RAV depreciation, in our BPFM we have applied option 2 with an acceleration factor of 1 as instructed by Ofgem.	2.2 Ofgem's accelerated depreciation options 2.4 Our views on capitalisation rates

	accounting treatment of opex and capex). However, for the purposes of completing the BPFM and financeability assessment, companies must use the pre-populated assumption for capitalisation and regulatory depreciation.		
BPG 7.9	• If any adjustments to capitalisation rates or depreciation rates are proposed for financeability, networks should include evidence for these adjustments and a well-evidenced demonstration that it is in customers' interests.	Section 2 of this appendix provides details. We do not propose any adjustments for financeability.	2.2 Ofgem's accelerated depreciation options 2.4 Our views on capitalisation rates
	• Any proposed alteration of the profile of revenue and the purpose and level of support for the proposed profile.	We do not propose any revenue profiling adjustments to RIIO-3.	2.5 Revenue profile
	• Clear explanation of the company's dividend and equity issuance policy and strategy and how this influences assumptions in the BPFM.	Section 3.9 and 3.10 provide details. We see no immediate need to attract new equity.	3.9 Dividend policy 3.10 Equity issuance policy
BPG 7.10	Business plans should clearly demonstrate, on a notional company and an actual company basis: • A clear understanding and assessment of the financial risk in the business plan and evidence of risk management measures. This should include: (1) a clear explanation of the assumptions underpinning company risk; (2) risk scenario analysis; (3) a description of how financial risk analysis takes into account company actions for mitigating downside risks; (4) consideration of different gearing levels including consideration of cost and benefit trade-offs of different gearing assumptions; and (5) realistic and well-explained proposals for gearing.	We have completed thorough financial risk scenario analysis and assessed options for mitigating downside risks. These are summarised in section 5 and 6 of this appendix as well as accompanying risk analysis to support financeability assessment completed by KPMG in FA12.	5.5 Financial risk management and mitigation considerations 6.3 Notional Company Financeability 6.4 Actual Company Adjusted for Financing 6.5 Actual Company Financeability 6.6 Notional gearing considerations FA12 KPMG financeability report

	• Justification for any proposed company-specific alternative cost of capital estimates, including a well-evidenced demonstration that it is in customers' interests.	Justification for our proposed company specific cost of capital estimates is provided in Chapter 3 and Chapter 4.	Chapter 3 and Chapter 4.
BPG 7.11	Business plans should also include licensee Board assurance that the Board is satisfied that the licensee is financeable on both a notional and actual capital structure basis (using our working assumptions for cost of capital allowances and other pre-populated parameters). This should cover the baseline level of totex as well as the 'best view' level of totex (ie including forecast re-opener spend) as described in the BPDT guidance. Alternatively, if any financeability challenges are identified, the Business Plan should clearly set out: • what management efforts or mitigating actions could reasonably be made to address them; • what regulatory measures should be taken alongside the management efforts or mitigating actions; • that all other applicable measures to aide financeability have been considered; and • that statements and conclusions are supported by evidence and justification.	KPMG has performed analysis of the financeability and investability of Cadent based on our business plan (using Ofgem's working assumptions) to support our Board in providing assurance that we are financeable on both a notional and actual capital structure basis.	6.7 Board Assurance Appendix 01 Assurance statement FA 12 KPMG Financeability report

Annex 2. BPFM Outputs tab

This annex provides screenshots of the BPFM Output Sheet of the BPFM in line with the Business Plan Guidance requirement 7.9.

Credit Ratio Summary		Base (Notional)				
		'27	'28	'29	'30	'31
FFO interest cover ratio (including accretions)	Scalar	4.64	4.58	4.65	4.74	4.81
FFO interest cover ratio (cash interest only)	Scalar	5.21	5.20	5.29	5.38	5.44
Adjusted interest cover ratio (post-maintenance interest cover ratio)	Scalar	1.88	1.85	1.84	1.82	1.80
FFO / Net Debt	%	17%	18%	18%	19%	20%
Net Debt / Closing RAV	%	60%	60%	60%	60%	60%
Dividends as % of Equity RAV	%	6%	7%	7%	7%	8%
Dividend cover ratio (using statutory depreciation)	Scalar	0.81	0.68	0.65	0.68	0.60

Allowed Revenue Breakdown		31 Mar 2022 RIIO2	31 Mar 2023 RIIO2	31 Mar 2024 RIIO2	31 Mar 2025 RIIO2	31 Mar 2026 RIIO2	31 Mar 2027 RIIO3	31 Mar 2028 RIIO3	31 Mar 2029 RIIO3	31 Mar 2030 RIIO3	31 Mar 2031 RIIO3
Fast money	£m nominal	508.8	535.37	541.8	532.3	520.1	687.8	693.9	706.8	723.7	731.5
Pass-through expenditure	£m nominal	572.6	944.43	473.1	374.6	436.9	461.5	459.4	458.2	450.6	450.3
Depreciation	£m nominal	627.9	643.72	659.1	674.4	689.2	1,007.0	1,044.5	1,076.4	1,108.8	1,148.2
Return	£m nominal	361.6	356.34	395.9	427.8	441.1	569.0	576.1	572.5	569.6	569.1
Equity issuance costs	£m nominal	28.8	-	-	-	-	-	-	-	-	-
Base revenue	£m nominal	**2,099.6**	**2,479.9**	**2,069.9**	**2,009.1**	**2,087.2**	**2,725.2**	**2,773.8**	**2,813.9**	**2,852.6**	**2,899.2**
Return adjustment	£m nominal	-	-	-	-	-	-	-	-	-	-
Directly remunerated services adjustment	£m nominal	-	-	-	-	-	-	-	-	-	-
Cross-subsidy adjustment	£m nominal	-	-	-	-	-	-	-	-	-	-
Business plan incentive	£m nominal	0.3	0.28	0.3	0.3	0.3	-	-	-	-	-
Output delivery incentives	£m nominal	6.1	8.70	8.8	10.7	11.4	-	-	-	-	-
Other revenue allowance	£m nominal	9.0	11.19	22.0	48.6	55.2	9.5	9.4	9.1	9.1	9.1
Calculated revenue (before tax)	£m nominal	**2,115.0**	**2,500.0**	**2,101.0**	**2,068.7**	**2,154.2**	**2,734.8**	**2,783.2**	**2,823.0**	**2,861.8**	**2,908.3**
Tax allowance	£m nominal	110.6	77.0	141.3	150.8	140.2	277.4	305.2	321.8	319.8	347.2
Tax allowance adjustment	£m nominal	-	-	-	-	-	-	-	-	-	-
Calculated revenue	£m nominal	**2,225.6**	**2,577.0**	**2,242.3**	**2,219.5**	**2,294.4**	**3,012.1**	**3,088.4**	**3,144.8**	**3,181.6**	**3,255.5**
Less directly remunerated services adjustment	£m nominal	-	-	-	-	-	-	-	-	-	-
Less cross-subsidy adjustment	£m nominal	-	-	-	-	-	-	-	-	-	-
Calculated revenue (without DRS/SIU adjustment)	£m nominal	**2,225.6**	**2,577.0**	**2,242.3**	**2,219.5**	**2,294.4**	**3,012.1**	**3,088.4**	**3,144.8**	**3,181.6**	**3,255.5**
Calculated revenue (without DRS/SIU adjustment) by Network											
East	£m nominal						1,029.3	1,055.6	1,071.1	1,076.3	1,106.0
London	£m nominal						730.2	757.7	773.0	786.4	807.4
North West	£m nominal						718.4	730.5	743.8	756.7	770.1
West Midlands	£m nominal						534.2	544.6	557.0	562.1	572.1

* The table above has been taken from the 'FBPOutput' tab of the BPFM. However, the revenue numbers quoted are in 2023/24 prices rather than nominal. Additional rows have been added at the bottom of the table to provide a network split for Cadent.

Regulatory financial position

		31 Mar 2022 RIIO2	31 Mar 2023 RIIO2	31 Mar 2024 RIIO2	31 Mar 2025 RIIO2	31 Mar 2026 RIIO2	31 Mar 2027 RIIO3	31 Mar 2028 RIIO3	31 Mar 2029 RIIO3	31 Mar 2030 RIIO3	31 Mar 2031 RIIO3
Closing RAV	£m nominal	10,578.8	11,617.8	12,376.6	12,835.0	13,140.8	13,321.4	13,414.7	13,481.8	13,593.2	13,587.3
Closing Net debt	£m nominal	(6,169.0)	(6,468.5)	(6,739.6)	(6,927.3)	(7,086.4)	(7,992.7)	(8,048.2)	(8,088.6)	(8,155.9)	(8,152.5)
Equity	£m nominal	4,409.8	5,149.3	5,636.9	5,907.6	6,054.3	5,328.8	5,366.5	5,393.2	5,437.3	5,434.8
RAV											
Opening RAV (at prior year nominal)	£m nominal	-	10,578.8	11,617.8	12,376.6	12,835.0	13,140.8	13,321.4	13,414.7	13,481.8	13,593.2
Inflation (uplift from previous year to current nominal)	£m nominal	-	928.2	644.4	348.1	200.4	130.7	149.7	155.5	156.4	157.7
Opening RAV (before transfers)	£m nominal	10,470.3	11,507.0	12,262.2	12,724.7	13,035.4	13,271.5	13,471.2	13,570.2	13,638.2	13,750.9
Transfers	£m nominal	-	-	-	-	-	-	-	-	-	-
Opening RAV (after transfers)	£m nominal	10,470.3	11,507.0	12,262.2	12,724.7	13,035.4	13,271.5	13,471.2	13,570.2	13,638.2	13,750.9
Net additions (after disposals)	£m nominal	655.5	720.7	773.5	803.6	825.0	1,119.5	1,074.4	1,100.2	1,203.9	1,155.6
Deprecation	£m nominal	(546.9)	(609.9)	(659.1)	(693.3)	(719.7)	(1,069.6)	(1,130.8)	(1,188.6)	(1,248.9)	(1,319.2)
Closing RAV	£m nominal	10,578.8	11,617.8	12,376.6	12,835.0	13,140.8	13,321.4	13,414.7	13,481.8	13,593.2	13,587.3
Equity											
Opening equity (before inflation uplift on opening RAV)	£m nominal	-	4,409.8	5,149.3	5,636.9	5,907.6	6,054.3	5,328.8	5,366.5	5,393.2	5,437.3
Inflation uplift on opening RAV	£m nominal	-	928.2	644.4	348.1	200.4	130.7	149.7	155.5	156.4	157.7
Opening equity (after inflation uplift on opening RAV)	£m nominal	4,457.1	5,338.0	5,793.7	5,985.1	6,108.1	6,185.1	5,478.5	5,522.0	5,549.6	5,595.0
RAV adjustment from previous price controls (share to equity)	£m nominal	-	-	-	-	-	-	-	-	-	-
Earnings after tax (after regulatory depreciation)	£m nominal	79.6	(49.3)	(8.3)	76.6	104.0	242.8	240.5	240.7	242.2	243.2
Regulatory dividend	£m nominal	(126.9)	(139.4)	(148.5)	(154.0)	(157.7)	(301.1)	(352.5)	(369.4)	(354.5)	(403.3)
Movement in equity (before issuance)	£m nominal	4,409.8	5,149.3	5,636.9	5,907.6	6,054.3	6,126.8	5,366.5	5,393.2	5,437.3	5,434.8
Equity issued	£m nominal	-	-	-	-	-	-	-	-	-	-
Impact of debt re-set	£m nominal	-	-	-	-	-	(798.0)	-	-	-	-
Closing Equity	£m nominal	4,409.8	5,149.3	5,636.9	5,907.6	6,054.3	5,328.8	5,366.5	5,393.2	5,437.3	5,434.8

PAT											
PAT (per regulatory earnings statement below)	£m nominal	68.5	(30.4)	47.8	125.3	125.6	242.8	240.5	240.7	242.2	243.2
less: excess fast money	£m nominal	-	-	-	-	-	-	-	-	-	-
add back: retained outperformance	£m nominal	11.2	(18.9)	(56.1)	(48.7)	(21.6)	-	-	-	-	-
Adjustment for regulatory depreciation (if statutory depreciation is applied)	£m nominal	-	-	-	-	-	-	-	-	-	-
PAT (after regulatory depreciation)	£m nominal	79.6	(49.3)	(8.3)	76.6	104.0	242.8	240.5	240.7	242.2	243.2
Reconciliation of cash flows to movement in net debt											
Opening net debt	£m nominal	(6,013.1)	(6,169.0)	(6,468.5)	(6,739.6)	(6,927.3)	(7,884.5)	(7,992.7)	(8,048.2)	(8,088.6)	(8,155.9)
Closing net debt	£m nominal	(6,169.0)	(6,468.5)	(6,739.6)	(6,927.3)	(7,086.4)	(7,992.7)	(8,048.2)	(8,088.6)	(8,155.9)	(8,152.5)
Movement in net debt	£m nominal	(155.8)	(299.5)	(271.1)	(187.7)	(159.1)	(108.2)	(55.6)	(40.3)	(67.4)	3.5
Add back: principal inflation accretion	£m nominal	65.6	161.5	107.2	56.5	32.2	39.9	45.5	47.2	47.5	47.7
Net cash flow	£m nominal	(90.2)	(138.0)	(163.9)	(131.2)	(126.9)	(68.3)	(10.0)	6.9	(19.8)	51.2

Regulatory income statement		31 Mar 2022 RIIO2	31 Mar 2023 RIIO2	31 Mar 2024 RIIO2	31 Mar 2025 RIIO2	31 Mar 2026 RIIO2	31 Mar 2027 RIIO3	31 Mar 2028 RIIO3	31 Mar 2029 RIIO3	31 Mar 2030 RIIO3	31 Mar 2031 RIIO3
Operating revenue	£m nominal	1,938.6	2,441.6	2,242.3	2,281.9	2,395.8	3,199.2	3,343.7	3,472.9	3,583.7	3,740.3
Less fast pot expenditure	£m nominal	(443.2)	(507.2)	(541.8)	(547.3)	(543.0)	(730.5)	(751.3)	(780.6)	(815.1)	(840.5)
Less difference in fast pot expenditure pre-TIM and post-TIM	£m nominal	17.9	(12.5)	(36.6)	(53.6)	(62.3)	-	-	-	-	-
Less pass-through expenditure	£m nominal	(498.7)	(894.8)	(473.1)	(385.1)	(456.2)	(490.1)	(497.4)	(505.9)	(507.5)	(517.4)
Less equity issuance cost	£m nominal	(25.1)	-	-	-	-	-	-	-	-	-
Less other costs	£m nominal	(8.4)	(10.9)	(22.5)	(51.5)	(59.2)	(10.6)	(10.6)	(10.5)	(10.8)	(11.0)
EBITDA	**£m nominal**	**981.1**	**1,016.0**	**1,168.3**	**1,244.3**	**1,275.1**	**1,967.9**	**2,084.5**	**2,175.8**	**2,250.3**	**2,371.5**
Less depreciation (Regulatory)	£m nominal	(546.9)	(609.9)	(659.1)	(693.3)	(719.7)	(1,069.6)	(1,130.8)	(1,188.6)	(1,248.9)	(1,319.2)
EBIT	**£m nominal**	**434.2**	**406.2**	**509.1**	**551.0**	**555.4**	**898.4**	**953.7**	**987.2**	**1,001.4**	**1,052.3**
Less net interest paid (excluding principal inflation accretion)	£m nominal	(208.5)	(207.2)	(217.7)	(219.1)	(256.3)	(321.1)	(337.2)	(343.9)	(351.5)	(362.6)
Less net interest paid (principal inflation accretion)	£m nominal	(65.6)	(161.5)	(107.2)	(56.5)	(32.2)	(39.9)	(45.5)	(47.2)	(47.5)	(47.7)
PBT	**£m nominal**	**160.0**	**37.4**	**184.2**	**275.3**	**267.0**	**537.4**	**570.9**	**596.1**	**602.4**	**642.0**
Less tax paid	£m nominal	(91.5)	(67.8)	(136.3)	(150.0)	(141.4)	(294.6)	(330.4)	(355.4)	(360.2)	(398.9)
PAT	**£m nominal**	**68.5**	**(30.4)**	**47.8**	**125.3**	**125.6**	**242.8**	**240.5**	**240.7**	**242.2**	**243.2**
Less dividends paid	£m nominal	(126.9)	(139.4)	(148.5)	(154.0)	(157.7)	(301.1)	(352.5)	(369.4)	(354.5)	(403.3)
Retained earnings for the year	£m nominal	(58.5)	(169.8)	(100.7)	(28.7)	(32.1)	(58.2)	(112.0)	(128.7)	(112.3)	(160.1)

Regulatory cashflow statement		31 Mar 2022 RIIO2	31 Mar 2023 RIIO2	31 Mar 2024 RIIO2	31 Mar 2025 RIIO2	31 Mar 2026 RIIO2	31 Mar 2027 RIIO3	31 Mar 2028 RIIO3	31 Mar 2029 RIIO3	31 Mar 2030 RIIO3	31 Mar 2031 RIIO3
Operating revenue	£m nominal	1,938.6	2,441.6	2,242.3	2,281.9	2,395.8	3,199.2	3,343.7	3,472.9	3,583.7	3,740.3
Less total operating costs	£m nominal	(957.4)	(1,425.5)	(1,074.0)	(1,037.6)	(1,120.7)	(1,231.2)	(1,259.2)	(1,297.1)	(1,333.4)	(1,368.8)
Net cash flow from operations	£m nominal	981.1	1,016.0	1,168.3	1,244.3	1,275.1	1,967.9	2,084.5	2,175.8	2,250.3	2,371.5
Less net interest paid (excluding principal inflation accretion)	£m nominal	(208.5)	(207.2)	(217.7)	(219.1)	(256.3)	(321.1)	(337.2)	(343.9)	(351.5)	(362.6)
Less tax paid	£m nominal	(91.5)	(67.8)	(136.3)	(150.0)	(141.4)	(294.6)	(330.4)	(355.4)	(360.2)	(398.9)
FFO	**£m nominal**	**681.0**	**741.0**	**814.2**	**875.2**	**877.4**	**1,352.3**	**1,416.9**	**1,476.5**	**1,538.6**	**1,610.0**
Less dividends paid	£m nominal	(126.9)	(139.4)	(148.5)	(154.0)	(157.7)	(301.1)	(352.5)	(369.4)	(354.5)	(403.3)
RCF	**£m nominal**	**554.1**	**601.6**	**665.7**	**721.2**	**719.8**	**1,051.2**	**1,064.3**	**1,107.1**	**1,184.1**	**1,206.7**
Net slow pot expenditure	£m nominal	(650.5)	(722.1)	(775.0)	(805.3)	(826.7)	(1,119.5)	(1,074.4)	(1,100.2)	(1,203.9)	(1,155.6)
Less pre-vesting and post-vesting disposal proceeds	£m nominal	(5.0)	1.3	1.6	1.7	1.7	-	-	-	-	-
Net cash flow before financing	**£m nominal**	**(90.2)**	**(138.0)**	**(163.9)**	**(131.2)**	**(126.9)**	**(68.3)**	**(10.0)**	**6.9**	**(19.8)**	**51.2**

Financial Ratios (2dp)		31 Mar 2022 RIIO2	31 Mar 2023 RIIO2	31 Mar 2024 RIIO2	31 Mar 2025 RIIO2	31 Mar 2026 RIIO2	31 Mar 2027 RIIO3	31 Mar 2028 RIIO3	31 Mar 2029 RIIO3	31 Mar 2030 RIIO3	31 Mar 2031 RIIO3
RIIO-2 implied credit rating	Text						A2	A2	A2	A2	A2
Annual implied credit rating	Text	-	-	-	-	-	A3	A3	A3	A2	A2
Annual credit rating score	index	-	-	-	-	-	6.55	6.55	6.55	6.15	5.99
Adjusted interest cover ratio (post-maintenance interest cover ratio)	scalar	1.64	1.63	1.71	1.83	1.62	1.88	1.85	1.84	1.82	1.80
Adjusted interest cover ratio (post-maintenance interest cover ratio), adjusted	scalar	1.61	1.59	1.67	1.79	1.58	1.84	1.80	1.79	1.78	1.76
AICR, adjusted (Moody's)	**scalar**	1.61	1.59	1.67	1.79	1.58	1.84	1.80	1.79	1.78	1.76
FFO / Net Debt	%	11.04%	11.46%	12.08%	12.63%	12.38%	16.92%	17.60%	18.25%	18.86%	19.75%
FFO / Net Debt, adjusted	**%**	9.95%	8.88%	10.45%	11.80%	11.92%	10.96%	11.36%	12.00%	12.57%	12.31%
FFO / Net Debt, adjusted (Moody's)	%	10.96%	11.36%	12.00%	12.57%	12.31%	16.83%	17.50%	18.15%	18.76%	19.63%
FFO interest cover ratio (including accretions)	scalar	3.24	2.57	3.18	3.97	3.93	4.64	4.58	4.65	4.74	4.81
FFO interest cover ratio (including accretions), adjusted	**scalar**	3.17	2.50	3.10	3.89	3.85	4.53	4.47	4.54	4.62	4.69
FFO interest cover ratio (cash interest only)	scalar	4.27	4.58	4.74	4.99	4.42	5.21	5.20	5.29	5.38	5.44
FFO interest cover ratio (cash interest only), adjusted	scalar	4.17	4.44	4.62	4.90	4.33	5.09	5.08	5.17	5.25	5.30
Nominal PMICR	scalar	2.88	3.43	3.13	2.72	2.13	2.03	2.02	2.01	2.00	1.98
Nominal PMICR, adjusted	**scalar**	2.82	3.34	3.05	2.66	2.09	1.99	1.97	1.96	1.95	1.93
RCF / Net Debt	%	8.98%	9.30%	9.88%	10.41%	10.16%	13.15%	13.22%	13.69%	14.52%	14.80%
RCF / Net Debt, adjusted	**%**	8.91%	9.21%	9.80%	10.35%	10.08%	13.06%	13.12%	13.58%	14.41%	14.69%
Net Debt / Closing RAV (aka Modelled Gearing)	%	58.31%	55.68%	54.45%	53.97%	53.93%	60.00%	60.00%	60.00%	60.00%	60.00%
EBITDA / RAV	%	9.27%	8.75%	9.44%	9.69%	9.70%	14.77%	15.54%	16.14%	16.55%	17.45%
RoRE (NPV neutral RAV)	**%**	5.19%	4.57%	4.81%	4.81%	4.61%	7.58%	7.58%	7.58%	7.58%	7.59%
Dividend cover	scalar	0.54	(0.22)	0.32	0.81	0.80	0.81	0.68	0.65	0.68	0.60
Dividend / Regulated equity (NPV neutral RAV)	**%**	3.06%	3.06%	3.06%	3.07%	3.07%	5.79%	6.71%	6.99%	6.66%	7.55%