Consultation

RIIO-3 Draft Determinations - Finance Annex

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The next set of price controls for the Electricity Transmission (ET), Gas Distribution (GD) and Gas Transmission (GT) sectors will cover the five-year period from 1 April 2026 to 31 March 2031 (RIIO-3). In December 2024 the network companies in these sectors submitted their RIIO-3 Business Plans for this period to us. We have now assessed these plans.

This document, and others published alongside it, set out our Draft Determinations for the RIIO-3 price controls. These are for consultation and we would like views from people with an interest in RIIO-3 by 26 August 2025. We particularly welcome responses from consumer groups and energy industry network users. We also welcome responses from other stakeholders and the public.

Once the consultation is closed, we will consider all responses. We want to be transparent in our consultations. We will publish the non-confidential responses we receive alongside a decision on next steps on our website at ofgem.gov.uk/consultations. If you want your response – in whole or in part – to be considered confidential, please tell us in your response and explain why. Please clearly mark the parts of your response that you consider to be confidential, and if possible, put the confidential material in separate appendices to your response.

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1. Introduction

Purpose of this document

1.1 This document sets out our Draft Determination consultation positions on the financial framework for the price control for the Gas Distribution (GD), Gas Transmission (GT) and Electricity Transmission (ET) network companies (collectively the GD&T companies) in Great Britain (GB) covering the five-year period from 1 April 2026 to 31 March 2031 (RIIO-3). All figures in this document are in 2023/24 prices except where otherwise stated.

What is the financial framework?

1.2 Our price controls set revenues that network companies are allowed to recover from consumers. These revenues are based on the costs that they incur for developing and operating gas and electricity networks. Ultimately, consumers pay for these allowed revenues through their bills. Network companies incur financing costs in maintaining and upgrading safe and reliable energy supplies to consumers.

1.3 To ensure financing costs are efficient and fair, our financial framework sets allowances for companies on a notional basis: although companies are expected to make commercial decisions on how to best finance their operations, our framework compensates them for being financed efficiently and sustainably while delivering value for consumers. This in turn promotes stability for the companies, investors and the public.

1.4 Our financial framework is stable and predictable to help attract continued investment into the sector and to set fair returns for companies and investors which in turn lowers costs for consumers. In RIIO-3, it will be vital for networks to attract investment to help them meet CP2030 and net zero targets. Setting clear and objective financial parameters in our framework plays a key role in maintaining sector investment.

1.5 Our financial parameters also incentivise companies by offering higher or lower returns based on their performance and the delivery of their targets. Our framework also has mechanisms in place to safeguard consumers and investors alike from excessive returns or losses.

What are we consulting on?

1.6 The scale of investment required in RIIO-3 is unprecedented with the gas and electricity sectors facing "crossroad" moments. As the demand for electricity grows, it will be increasingly important to ensure our transmission system can

balance supply and demand more flexibly to help the UK meet its net zero targets. While the future of gas networks is less certain with the expectation that customers move away from gas over time, transmission and distribution networks have a vital role in ensuring a smooth transition to our net zero targets, ensuring consumers receive reliable and safe supply. While the scale of investment will deliver significant benefits over generations, the associated energy bill costs paid for by consumers need to be carefully balanced in the RIIO-3 period and beyond. These challenges accentuate the need for companies to raise and service capital competitively and at an efficient cost to consumers.

1.7 The sectoral challenges and the global context including the rise in interest rates since RIIO-2 mean that our financial parameters must evolve. Our starting point is to maintain similar foundational allowances to RIIO-2 while evolving our methodologies in certain key areas. This means our financial framework remains predictable and stable while also adapting to the global financial environment and the changing needs of consumers. In setting our financial framework, we have considered evidence submitted by stakeholders and present in this document our proposals, along with analysis and rationale, for consultation.

1.8 Although our cost of debt allowance remains similar in many respects to RIIO-2, we are evolving our methodology which is set out in chapter 2. For example, we are proposing a nominal allowance for fixed rate debt to protect consumers from excessive inflation risks, a change in benchmark indices for calibrating debt costs and updates to specific allowances to better reflect the efficient debt costs for gas and electricity networks, on a notional basis, in the RIIO-3 period.

1.9 In chapter 3, we set out our approach to investability to ensure we are actively testing whether the RIIO-3 financial framework supports the scale of equity investment required. We outline how we have rigorously benchmarked our proposed cost of equity allowance, including our approach to estimating the different elements of the capital asset pricing model (CAPM) and our consideration of stakeholder evidence and cross-checks in arriving at a fair allowance for investors in exchange for investment that delivers for consumers.

1.10 Our overall Weighted Average Cost of Capital (WACC) allowances are then summarised in chapter 4 for each sector using data as at March 2025, combining the allowances for equity, index-linked debt and fixed rate debt. We have assumed 55% notional gearing for ET and 60% for GD&T and set out both our proposal and rationale for not maintaining a "flat WACC" approach across the sectors. Our Final Determinations will show updated calculations based on data as at October 2025.

1.11 Chapter 5 covers our assessment, when all elements of our Draft Determinations are considered together, whether an efficient operator adopting the notional capital structure would be able to generate sufficient cashflows to meet its debt financing obligations. We also cover our accompanying proposals to accelerate capitalisation rates to underpin the anticipated significant growth in ET capital expenditure.

1.12 We are also progressing with our proposals for new measures to promote financial resilience in chapter 6 as set out in our SSMD. These measures will further increase confidence in the sector and help ensure it is set up to protect consumers from any significant deterioration in resilience whilst imposing no additional costs on companies operating with responsible financing strategies.

1.13 Chapter 7 sets out our approach to setting Corporation Tax allowances, largely mirroring our SSMD position with the exception of certain changes. We considered whether a tax forecasting penalty was needed in RIIO-3 and are consulting on our view that it is not required. We have also conducted a review of the definitions of Adjusted Net Debt and Tax Deductible Net Interest within the Tax Clawback and are consulting on proposed amendments.

1.14 Chapter 8 covers our approach to setting depreciation for RIIO-3. We have considered stakeholder feedback and evidence for accelerating depreciation for GD, GT and ET separately. In GD we propose to accelerate depreciation for assets added to the regulatory asset value (RAV) during RIIO-3 beyond the current 45-year sum of digits profile. We propose to leave the depreciation profile unchanged for ET and GT.

1.15 Chapter 9 covers our approach to setting our return adjustment mechanisms (RAMs). Our approach is broadly unchanged from RIIO-2 and having further considered evidence from stakeholders we believe our existing mechanisms should include major projects in RIIO-3.

1.16 We also summarise our position on other financial issues such as the treatment of directly remunerated services and disposal of assets where our approach broadly mirrors RIIO-2.

What do we expect the financial framework to deliver for consumers?

1.17 Our RIIO-3 price control aims to deliver and maintain a resilient, secure, efficient and affordable energy system for consumers. The level of investment needed to achieve this is unprecedented at a time when energy bills have been

high for a sustained period of time. It is vital to balance these two dynamics and the costs of investment.

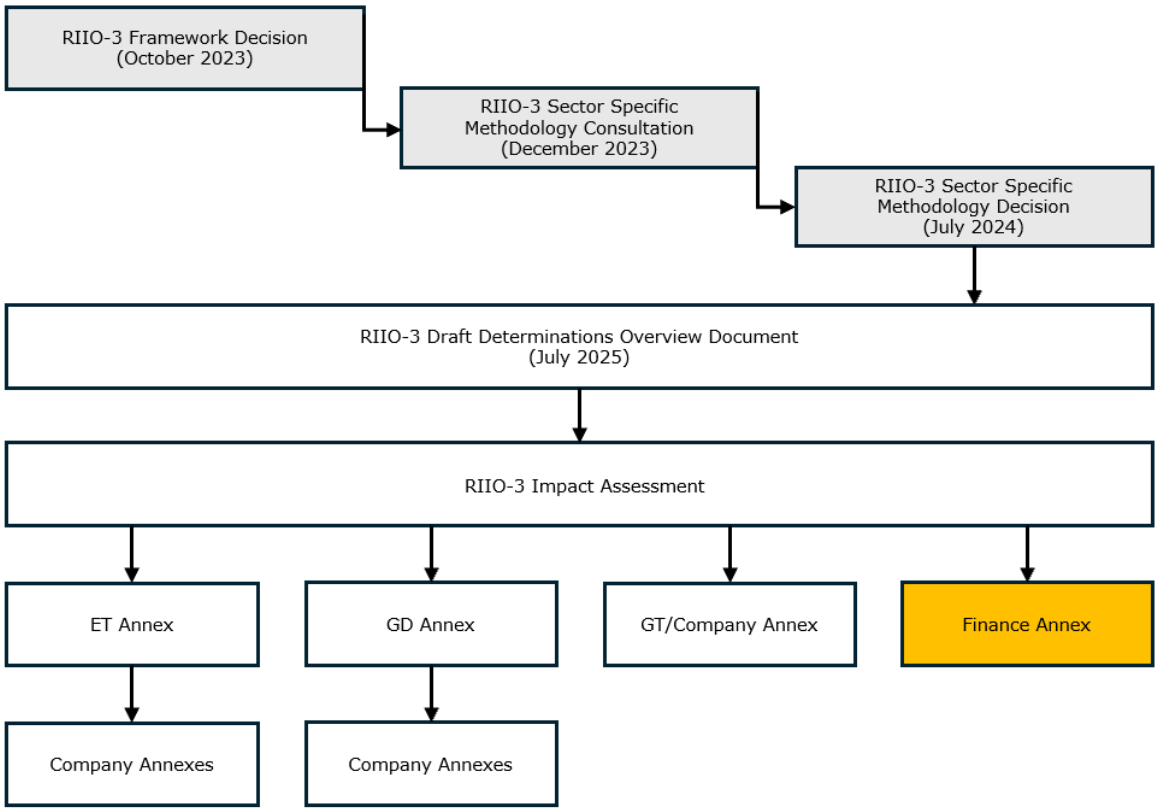
1.18 Our financial framework has been carefully calibrated so that gas and electricity networks can deliver their ambitious investment plans at an efficient cost to consumers. Companies incur financing costs in the delivery of their plans and we set allowances that mean that financing costs borne by consumers are reasonable and not excessive.

1.19 We are also evolving our methodologies from RIIO-2 and have put measures in place to protect consumers from excessive costs, such as modifying our debt allowances to prevent companies from making significant gains due to inflation dynamics.

1.20 Consumers also benefit from energy infrastructure over the course of many decades. Our financial framework also ensures that consumers do not pay for all of these costs today. Instead, costs are paid for over appropriate timeframes that spreads the impact on bills to support intergenerational fairness.

1.21 We are also taking proactive steps on financial resilience. Financial distress or failures can impact the confidence in an industry. That in turn can lead to higher costs for companies and the public. Consumers must have confidence in the energy sector, therefore we are introducing new resilience requirements for companies. This includes a requirement that they maintain more than one investment grade credit rating and a lock-up on distributions if they go beyond a certain level of gearing.

Navigating the RIIO-3 Draft Determinations documents



2. Allowed return on debt

Purpose: Providing a reasonable allowance for debt costs that updates with changes in market conditions.

Benefits: Providing an allowance that references an appropriate index that incentivises networks to minimise their debt costs, which over time feeds through into lower costs for consumers. Adjusting for market rate movements protects both consumers and networks from ex ante forecast error.

Background

2.1 In this chapter, we set out our proposals for setting the cost of debt allowance and address the related issues raised by the network companies in their business plan submissions.

2.2 The allowed return on debt is an estimation of the return debt investors expect from an efficiently run company. The allowance considers debt raised in prior price control periods in addition to new debt to be raised during the current price control period. It is an important feature to enable companies to have sufficient resources to raise and service debt capital to meet investment requirements.

2.3 The allowed return on debt is funded by consumer bills. To further our principal statutory objective which is to protect the interests of existing and future consumers, it is vital that the allowance is structured to incentivise efficient financing outcomes and that shareholders, not consumers, bear the risk and rewards associated with actual financing decisions made by companies.

2.4 Our intention is to provide a reasonable allowance for debt costs which updates with changes in market conditions, based on an appropriate index. This approach retains incentive properties for networks to minimise their debt costs, which over time feeds through into lower costs for consumers. Adjusting for market rate movements protects both consumers and networks from ex ante forecast error.

2.5 In our SSMD we decided to set the allowed return on debt in line with the UKRN Guidance[1] and chose to exclude most derivatives.

[1] UKRN guidance for regulators on the methodology for setting the cost of capital, https://ukrn.org.uk/publications/ukrn-guidance-on-the-methodology-for-setting-the-cost-of-capital/

2.6 In our SSMD we decided to introduce a RAV-weighted trailing average for all ET networks but to retain the RIIO-2 unweighted approach for gas networks. We also stated that we will finalise the specific weighting approach within the general calibration exercise conducted at both DDs and FDs.

2.7 We also said we would continue to conduct a calibration approach that considers forecast average efficient debt costs, however, unlike in RIIO-2, we have conducted independent assessments of gas networks and ET networks reflecting empirical divergences that have emerged between the two sectors.

2.8 In our SSMD we stated that we would continue to allow additional costs of borrowing within our final allowance. However, further company-specific data was required to complete our analysis.

2.9 Finally, we also stated we would implement Inflation Option 1[2], providing a nominal allowance for fixed-rate debt, and apply it proportionally based on the notional capital structure's fixed-rate debt assumption.

[2] RIIO-3 Sector Specific Methodology Decision – Finance Annex, https://www.ofgem.gov.uk/sites/default/files/2024-07/RIIO-3_SSMD_Finance_Annex

Draft Determinations position

Table 1: Summary of our Draft Determinations position

Cost of debt parameter	Draft Determinations position
Benchmark index selection	To index the cost of debt allowance with reference to the simple average of the iBoxx GBP A (ISIN reference: DE000A0JY837) and iBoxx BBB (ISIN reference: DE000A0JZAH1) Non-Financials 10+ corporate indices.
Notional Index-Linked Debt (ILD) assumption	ET: 10% ILD assumption (90% of the ET allowed return on debt would be provided in nominal terms and 10% in real terms). Gas: 30% ILD assumption (70% of the gas allowed return on debt would be provided in nominal terms and 30% in real terms).
Deflation of ILD assumed portion to CPIH (Consumer Price Index including owner occupied housing costs)	For ILD assumed portion utilise the Bank of England CPI inflation target (2%) as a proxy for long run CPIH to deflate nominal "all in" yields for each date of the trailing average to CPIH real yields using the Fisher equation.
Additional cost of borrowing	ET: To add 0.19% to the index above for additional borrowing costs. Gas: To add 0.25% to the index above for additional borrowing costs.
Infrequent issuer premium	No separate allowance proposed for RIIO-3.
Calibrating the index - weighting	ET: RAV weighting of the benchmark index beginning from the start of RIIO-1. Gas: Simple average of the benchmark index.
Calibrating the index - trailing average length	To calculate the allowance using a 14-year trailing average.
Calibrating the index – calibration adjustment	ET: To include a fixed upwards adjustment of 0.45% to the trailing average, excluding additional costs of borrowing. Gas: To include a fixed upwards adjustment of 0.60% to the trailing average, excluding additional costs of borrowing.
Calibration of the allowed return on debt - exceptional cases	To include a close out mechanism to consider costs related to the transition of RPI to the CPIH methodology from 2030.

2.10 For the gas sectors the allowed return on debt is derived from a 14-year simple average of the average iBoxx GBP A and BBB non-financial 10+ index, plus calibration adjustment of 60bps, plus 25bps of additional costs of borrowing.

2.11 For the ET sector the allowed return on debt is derived from a 14-year RAV weighted trailing average of the average iBoxx GBP a and BBB non-financial 10+

index, plus 45bps calibration adjustment, plus 19bps of additional costs of borrowing.

2.12 In RIIO-3, the allowed return on debt is set on a semi-nominal basis, with the allocation between nominal and real components determined by the notional assumptions for fixed-rate and index-linked debt. For ET, we have proposed a notional index-linked debt assumption of 10%, meaning that 90% of the debt allowance will be provided on a nominal basis and 10% on a real basis. For gas we have proposed a notional index-linked debt assumption of 30%, meaning that 70% of the debt allowance will be provided on a nominal basis and 30% on a real basis. To avoid overcompensation under this partially nominal approach, RAV indexation is adjusted accordingly. The approach to RAV indexation is discussed in Chapter 10.

2.13 The following tables represent forecast Draft Determinations of the cost of debt allowances.

Table 2: Forecast cost of debt allowance (semi-nominal)

Sector	Y2027	Y2028	Y2029	Y2030	Y2031	Average
GT & GD	4.25%	4.34%	4.44%	4.55%	4.70%	4.45%
ET	4.99%	5.36%	5.64%	5.85%	5.99%	5.57%

Table 3: Forecast cost of debt allowance (nominal)

Sector	Y2027	Y2028	Y2029	Y2030	Y2031	Average
GT & GD	4.86%	4.95%	5.06%	5.17%	5.32%	5.07%
ET	5.19%	5.57%	5.85%	6.06%	6.20%	5.77%

Rationale for Draft Determinations position

Index selection

2.14 In our SSMD, we stated that we would align the allowance to forecast average efficient debt costs and that we would adopt a split calibration between gas and ET. We stated that the specifics of the calibration would be decided at the Draft Determinations.

2.15 We propose that, for both gas and electricity, the benchmark index utilised in the debt methodology is the average of the iBoxx GBP A and iBoxx BBB non-financial 10+ corporate indices. An average of these indices broadly aligns to the average observed rating of the index to the average credit rating observed in the RIIO sectors (Baa1/ BBB+). We consider that this index choice is a suitable

proxy for macro-changes in network debt costs and is a broad representative index. In RIIO-2 the benchmark index was iBoxx Utilities 10+.

2.16 The iBoxx Utilities 10+ has been impacted by sectorial and issuer specific events in the Water sector. We consider the current volatility inherent in the iBoxx Utilities, driven by causal factors largely distinct from the electricity and gas sectors, increases the risk that the index performance, and thus the allowance, could become misaligned to efficient energy network company costs. To better mitigate this risk, we propose using an average of the iBoxx A and BBB non-financial 10+ indices, where the Water sector represents a smaller proportion of the overall composition.

2.17 NGET supports the adoption of the iBoxx Utilities 10+ index stating that it matches common UK regulated network practice to use long dated financing (as the index is comprised of bonds with an expected maturity of 10 years or more), better matches the risks that the company faces compared to corporate alternatives and would be consistent with other determinations. SSEN also supports continued adoption of the iBoxx Utilities 10+ index. While we recognise the benefit of the regulatory consistency, we consider that the iBoxx A and BBB non-financial 10+ average is likely to derive a more stable and better aligned benchmark than the iBoxx Utilities which has a relatively higher weighting to the Water sector.

2.18 SGN suggests that the use of the iBoxx Utilities index should be reviewed more broadly to ensure the index better matches the gas sector costs. Our review of the index has found the current volatility inherent in the iBoxx Utilities, driven by causal factors largely distinct from the electricity and gas sectors, increases the risk that the index performance, and thus the allowance, could become misaligned to efficient energy network company costs. We have therefore proposed adoption of an average of the iBoxx A / BBB non-financial 10+ as the benchmark index.

New Debt assumption

2.19 A key variable input into the main debt calibration exercise is the assumed rate at which licensees can raise new debt over the price control period. To determine an appropriate assumption, we estimate the pricing that an efficient company, operating under the notional capital structure, could reasonably be expected to achieve.

2.20 For new debt, we propose adding a benchmark adjustment for gas of 25bps to the average of the iBoxx A and iBoxx BBB non-financial 10+ corporate index. We do not recommend a benchmark adjustment for ET.

2.21 We have computed the spread of the yield to maturity (YtM) at issue of recently issued licensee sterling fixed debt against the prevailing benchmark YtM. We have excluded instruments which we consider are unrepresentative.

2.22 For the purposes of this assessment, we have selected two relatively short time periods: 2020–2024 and 2023–2024. The decision to focus on shorter timeframes reflects our intention to capture recent trends that may be influencing both sectors. While the 2020–2024 period indicates stronger benchmark outperformance, we note that it encompasses the Covid-19 pandemic, a period during which the credit fundamentals of regulated utilities could have been perceived as more resilient than those of typical corporates. This may have temporarily enhanced performance in a way that is not expected to persist under normal market conditions. Accordingly, we have placed greater weight on the 2023–2024 period, which we consider to be more representative of current market dynamics and more appropriate for informing forward-looking regulatory decisions.

2.23 In our assessment, we have not adjusted for the tenor of instruments issued relative to those represented in the benchmark index. While spread differentials are typically calculated using instruments with matching tenors, the regulatory allowance does not account for variations between the actual tenor of debt issued during the price control period and the tenor implied by the benchmark. Given that companies have discretion over the tenor of their debt issuance, we consider it more appropriate to assess potential outperformance against the benchmark on an aggregate basis, rather than at specific tenors.

2.24 We do not propose an adjustment to the benchmark for ET. Over the 2023–2024 period, analysis of nine issuances from six different issuers across the ET and ED sectors, indicates that, on a simple average basis, the YtM at issuance was broadly in line with the benchmark, showing an approximate -3 basis point differential. When weighted by issuance size, the differential was 0 basis points. These results suggest no material deviation from the benchmark, supporting the case for maintaining the current approach without adjustment.

2.25 We recommend a benchmark adjustment of +25 basis points for gas. During the 2023–2024 period, analysis of 14 issuances from five issuers across the GD and GT sectors shows a YtM at issuance that exceeded the benchmark by

approximately +23 basis points on a simple average basis. When weighted by issuance size, the differential was +18 basis points. These findings indicate a deviation from the benchmark, supporting the case for an upward adjustment to better reflect observed market conditions.

2.26 NERA, on behalf of the companies, argues that an allowance should be provided to account for a New Issuance Premia (NIP) because the New Debt assumption is derived from instruments trading in the secondary market. SSEN further supports this position, citing evidence of a negative halo effect - where new debt is issued at yields higher than those implied by the benchmark index. NIP refers to the additional yield or return that investors typically receive when purchasing a bond in the primary market (at the time of issuance), compared to a comparable bond trading in the secondary market (where previously issued bonds are bought and sold). NERA proposes a NIP allowance in the range of 6–8 basis points. However, we do not consider NERA's analysis to be sufficiently robust. The assessment includes SSE corporate bonds at the group level rather than at the licensee level, excludes certain instruments with three-month call features, and calculates spreads based on the settlement date rather than the pricing date, each of which may distort the results. It is also important to note that while the indices used in the New Debt Assumption reflect secondary market yields, they include a broad range of issuers and sectors, some of which may issue at wider spreads than regulated network companies. Our own analysis, comparing yields at issuance against the prevailing benchmark index, does not support the need for an additional adjustment. Introducing a further allowance would risk double-counting any NIP already reflected in the observed spreads.

2.27 Cadent, NGN, SGN, National Gas Transmission (NGT) argue there is a presence of risk premia or additional cost associated with new debt issued in the gas sectors when compared to the electricity sector and that the allowance should be adjusted to account for this. The companies also cited confidential evidence they had commissioned from KPMG. SGN states this premium should be set to 30bps to 50bps over electricity. Cadent argues for a 40bps uplift. Our analysis indicates a benchmark adjustment is required for gas which we have sized to 25bps, this is slightly below the company estimates but we consider is robust based on observed data.

2.28 SGN argues for an end of price control premia true-up by comparing the issuance spreads to iBoxx Utilities of Gas and Electricity networks. However, we have decided not to adopt this proposal. Differences in debt costs between gas

and ET companies over time may arise from a range of factors, including company-specific decisions, financial strategies, or operational performance. Rather than isolating systematic, sector-wide trends, such a true-up mechanism could inadvertently capture differences arising from these company controllable factors. This would risk exposing consumers to the consequences of individual company financing choices and could weaken the incentive for gas companies to manage debt costs efficiently and prudently.

Inflation treatment with respect of setting the allowed return on debt

2.29 In our SSMD, we have decided to implement Inflation Option 1: Nominal allowance for fixed rate debt and apply this in proportion to the notional capital structure fixed rate debt assumption. Under this option, the cost of debt allowance for fixed rate debt would be provided on a nominal rather than on a real basis. To effect this change, a portion of RAV, aligned to the notional fixed rate debt assumption, would be delinked from outturn inflation to avoid compensating investors twice. The indexation of the RAV to CPIH for ILD and equity would be unaffected.

2.30 In our SSMD, we stated that we consider Option 1 to be better suited to the strategic challenges of RIIO-3, and that it aligns the cash allowance with the servicing requirements of fixed rate debt capital, and we expect the option over the long run to result in lower costs for consumers.

2.31 Regarding our review of the index-linked debt assumption, in our SSMD we stated that we will evaluate whether the assumption of 30% remains appropriate considering observed debt structures, Business Plans and our previous regulatory determinations and other market benchmarks - and we would confirm our decision at DDs and FDs.

ILD assumption

2.32 We propose the ILD notional capital structure assumptions presented in table 4.

Table 4: ILD assumption

Sector	**RIIO-2**	**RIIO-3**
Gas	30%	30%
ET	30%	10%

2.33 We recommend a 30% notional assumption for the gas sector, acknowledging gas network companies' preferences for stability of the assumption to facilitate the implementation of the nominal allowance for fixed rate debt and that the

assumption broadly aligns with the observed sector average limiting the scope of the inflation leverage effect[3] to occur.

2.34 Gas companies have requested greater clarity on how the index-linked debt (ILD) assumption is determined, particularly whether our assessment incorporates actual company ILD proportions, including those achieved through derivatives. In setting notional assumptions, we draw on a broad range of evidence to reflect our judgement of what is appropriate for an efficiently run company under the conditions of the price control. This includes market data and benchmarking, company submissions, stakeholder engagement, regulatory considerations (such as financeability), and historical precedent. With respect to company submissions and the ILD assumption, we consider average sector actual ILD positions both including and excluding derivatives. While we believe the cost of debt allowance can be reasonably achieved through standard debt instruments, companies may choose to use derivatives at their own discretion. In this circumstance, we consider it appropriate for the notional ILD assumption to broadly align with the total average ILD exposure, whether directly issued or synthetically achieved through derivatives. This approach helps to limit the potential for the inflation leverage effect to reoccur. For this assessment, derivatives are only being considered for the purpose of understanding the proportion of a capital structure linked to inflation and does not extend to assessment of efficiency.

2.35 We propose to reduce the ILD assumption for ET from 30% to 10%. This adjustment would more closely align to the forecast sector average and reduce the scope for the inflation leverage effect to reoccur. It also improves near-term cash generation, thereby reducing modelled equity issuance. In RIIO-3, the portion of the cost of debt allowance paid in nominal terms is aligned with the assumed share of fixed-rate debt. By lowering the ILD assumption, a greater share of the allowance is paid in cash (nominal terms), with future RAV indexation is correspondingly reduced. As a result, ET companies in the short run receive a higher cash allowance, decreasing implied equity injections on a notional basis. Consequently, as the equity issuance allowance is set to 5% of implied equity injections on a notional basis, we anticipate the associated transaction costs allowance would be reduced by an estimated £13 million to £63 million. These savings represent a direct benefit to consumers through

[3] Call For Input - Impact of high inflation on the network price control operation, Call For Input - https://www.ofgem.gov.uk/call-for-input/call-input-impact-high-inflation-network-price-control-operation

lower bills. Additionally, by reducing required equity injections, this change is expected to support the overall investability of the sector on a notional basis.

2.36 A significant change in a notional assumption would typically be implemented with a glide path to the new assumption reflecting how a theoretical efficient company would be expected to migrate to a new capital structure. However, given the split of the ET cohort from gas, and that all ET companies support a lower ILD notional assumption, we do not consider a glide path is required for ET. We intend to discuss this approach with ET companies ahead of FDs.

2.37 Cadent stated that the ILD can be more efficiently achieved through the use of derivatives. We have explained our approach and treatment of derivatives to setting the notional assumption for ILD in 2.34.2.34 In paragraph 2.134 to 2.138 we also outline our rationale to exclude derivatives from the main allowance calibration.

2.38 Cadent also stated that it supported the adoption of nominal allowance for fixed rate debt but on the basis the ILD notional assumption does not change. NGT stated it does not challenge Ofgem's decision but that this is based on the application of the solution in line with the notional capital structure. NGET stated it also supported the adoption of nominal allowance for fixed rate debt but did not cite the assumption. NGN did not see the case for change however noted it was positive for financeability. We have proposed that the notional assumption is not changed for gas.

2.39 Cadent stated that it believes a 30% ILD assumption is reflective of an efficient network. NGT also supports the 30% assumption citing analysis highlighting the economic benefits of ILD. We have recommended an unchanged 30% assumption in line with these proposals for gas.

2.40 NGET proposed a reduction in the ILD assumption from 30% to 20% at the start of RIIO-3. NGET stated that they consider it important the ILD assumption corresponds to the actual structure to reduce the scope for the inflation leverage effect and offer better cashflow alignment between the allowance and underlying debt instruments. SPT also proposed an unspecified reduction in the ILD assumption given the size of the ILD market size of the ILD market is incapable of maintaining a 30% ILD assumption. SPT added that the new notional assumption should align with the expected average ILD debt portion for the ET sector over the RIIO-T3 period. SSEN states that the ILD assumption should be aligned to actual ILD company structures to fully eliminate leverage effect and avoid the assumption being skewed to the largest TO. We consider that the

proposal to reduce the notional assumption for ET from 30% to 10% appropriately balances the anticipated trend in the sector average and does not place a disproportionate weight on any one company.

Transition mechanism

2.41 In our SSMD we said we will consider setting a transition mechanism to implement the nominal allowance for fixed rate debt.[4] Following our assessment, we concluded that a transition mechanism is not required. We consider the inflation leverage effect currently presents a risk of consumer detriment. A delay to implementation would potentially result in consumer being exposed to this risk for longer than necessary. We also do not consider there to be evidence of a detrimental impact, on a notional basis, to financial resilience from implementing Option 1 in line with the current notional cap structure.

2.42 For an efficient company adopting the notional capital structure, we consider there is a positive rather than detrimental impact to financial resilience given the changes improve cashflow and reduce the sensitivity of key financial metrics to inflation.

2.43 Companies deviate from the notional assumptions at their own risk. However, given 58% of the RAV remains indexed to inflation for gas and 51% for ET,[5] we also do not consider there is a detrimental impact to financial resilience of those companies deviating from the ILD assumption as no company holds a sufficiently high quantum of ILD which would result in higher gearing due to an inflation shock under the proposed methodology.

2.44 We note that companies have also not advocated for a transition mechanism in business plans following confirmation that Option 1 would be implemented in line with the notional capital structure.

RPI to CPIH transition methodology

2.45 Given the uncertainty associated with both the level and composition of costs, we recommend a close out mechanism is included to consider whether costs associated with the transition should be allowable. We recommend a close out mechanism as associated litigation (between debt investors and companies) and/ or finalisation of compensatory arrangements may be protracted delaying

[4] RIIO-3 Sector Specific Methodology Decision – Finance Annex, paragraph 2.151, https://www.ofgem.gov.uk/decision/riio-3-sector-specific-methodology-decision-gas-distribution-gas-transmission-and-electricity-transmission-sectors

[5] Proportion of RAV indexed to inflation calculated as (1 - notional gearing) + (ILD assumption * notional gearing). For gas: 40% + 30% * 60% = 58%. For ET: 45% + 10% * 55% = 51%.

resolution beyond 2030. We recommend the close out mechanism considers costs in line with the following principles:

- whether costs are efficient and reasonable including whether the underlying documentation and compensatory provisions aligns to wider corporate practice; and
- costs should be considered only with respect to the notional capital structure.

2.46 Some network companies highlighted a high level of uncertainty attached to potential costs associated with RPI linked debt and the transition of the RPI methodology to CPIH from 2030. The companies did not expect similar costs in relation to RPI inflation derivatives.

2.47 NGT proposed an uncertainty mechanism to consider costs associated with RPI-linked debt and the RPI methodology change in 2030 to the CPIH methodology. We propose to include a close out mechanism in line with NGT's proposal.

Deflation of ILD assumed portion to CPIH

2.48 In our SSMD, we stated that a long run CPIH assumption will still be required for the ILD assumed portion (30% of total debt for gas and 10% of total debt for ET) which will continue with the old methodology. For this portion we proposed to adopt the Bank of England CPI inflation target (2%) as opposed to the 5th year of the prevailing Office for Budget Responsibility (OBR) CPI forecast as the long run assumption as in RIIO-2. The 5th year OBR forecast is usually aligned to 2%.

2.49 In its 2024 report, the OBR stated that the long-run wedge between CPIH and CPI is assumed to be 0.4%. This implies that the 2% inflation assumption (anchored to the Bank of England's CPI target) may understate long-term CPIH expectations. In light of this, we will review whether an adjustment to the inflation assumption and CPIH basis risk allowance is warranted to reflect the OBR's long-run wedge for FDs. A higher CPIH assumption would lower the allowance provided in relation to ILD which is expressed in CPIH real terms. We estimate that changing the CPIH long run assumption to 2.4% would lower the overall allowed return on debt by up to 12bps for gas and 4bps for ET.

Additional cost of borrowing

2.50 In our SSMD, we said that we will make our decision on the approach to setting additional borrowing allowances at DDs. We said we will incorporate additional data to complete our analysis of the allowances including updated transaction

cost data, daily cash balance data and daily RCF drawings which was gathered via Business Plans submissions.

2.51 In our SSMD, we set out a working assumption of 25bps for the annual additional cost of borrowing in line with our RIIO-2 decision.

2.52 We have thoroughly reviewed each component of additional cost of borrowing allowance alongside NERA's evidence and assumptions and propose a total allowance of 19bps for RIIO-3 ET and 25bps for RIIO-3 GD and GT which is broken down in the table below.

Table 5: Additional cost of borrowing estimate

Additional cost component	Ofgem estimate for GD and GT	Ofgem estimate for ET	Estimate basis
Liquidity	15bps	13bps	Based on networks' data excluding some intra-group arrangements and one outlier.
Transaction costs	7bps	5bps	Based on networks' data, excluding one network.
CPIH basis risk mitigation	3bps	1bps	Based on RPI-CPI basis swap pricing and notional ILD assumptions.
Total	25bps	19bps	

2.53 All networks considered that the additional costs of borrowing were insufficient. The reports from NERA,[6,7] commissioned by Energy Networks Association (ENA) on behalf of network companies, were provided on these costs and the infrequent issuer premium. We discuss our proposed approach to each component and stakeholders' evidence below.

Liquidity

2.54 Network companies need to maintain sufficient liquidity levels to achieve financial resilience and to meet credit rating requirements. These are covered by companies' cash, cash equivalents and liquidity facilities. Companies also incur costs as they need to raise debt ahead of investment. In RIIO-2 these costs

[6] Additional Cost of Borrowing for the RIIO-3 Price Control, https://www.northerngasnetworks.co.uk/wp-content/uploads/2024/12/NERA_ENA_Additional-Cost-of-Borrowing_220224.pdf
[7] Impact of GDNs' Reduced Debt Tenor on Additional Cost of Borrowing at RIIO-3, https://www.northerngasnetworks.co.uk/wp-content/uploads/2024/12/NERA_GDN_borrowing-costs_040324.pdf

were covered by our liquidity/revolving credit facility (RCF) allowance and by our cost of carry allowance.

2.55 In RIIO-3, we propose to merge the cost of carry and liquidity/RCF cost into a single additional borrowing allowance called the liquidity allowance as the sizing of cash balances and RCFs are likely to be driven by common causal factors. We consider there to be an underlying negative correlation between the relative amount of cash held and the size of RCFs. The total allowance we propose is 13bps for ET and 15bps for GD and GT.

2.56 Our estimate of the combined cost of carry and liquidity/RCF cost has been derived broadly in line with the methodology adopted for RIIO-2 & ED2. We have made minor updates to the methodology and utilised more frequent and granular data which improves the accuracy and robustness of the estimate.

2.57 We calculate the revolving credit facility (RCF) component of the allowance based on facilities sized to cover 10% of companies' embedded debt. This sizing assumption is derived from a two-year average of actual RCF and debt data reported by network companies. We then multiply this proportion by our estimate of a suitable commitment fee which we have estimated to be 16bps based on an average of actual network company commitment fees over a 2-year period.

2.58 For the cash balance component, we assume the proportion of cash and cash equivalents on networks' balance sheets is 8% of average embedded debt based on an average of network companies' 2-year actual historic cash, cash equivalents and debt data. We estimate the cost of carry based on the five-year average difference between the benchmark of average iBoxx GBP A and BBB non-financial 10+ indices and the 3-month cash deposit rate. The main driver of the difference in liquidity cost for the gas and ET sectors is 25bps of index adjustment for the gas sector. We consider that both the iBoxx benchmark rate and the 3-month cash deposit rate reflect reasonable assumptions for an average efficient company.

2.59 In our analysis, we excluded the RCF data and cash data provided by two network companies which manage liquidity on an intra-group basis and includes material non-regulated or non-UK operations as we consider these could be non-representative. We excluded another company which contains a relatively low amount of cash and cash equivalents but high RCF drawings which we consider to be an outlier.

2.60 We include group level data where the licensee liquidity is managed as part of a group treasury arrangement when such arrangements do not capture non-regulated operations. If group level data was not considered, standalone licensee data may result in an underestimation of the cash that an efficient licensee would reasonably require without the benefit of such arrangements in place.

2.61 For the RCF component of the liquidity allowance NERA, on behalf of the licensees, stated that this should be increased from 4bps in RIIO-2 to 13bps in RIIO-3 for all sectors. NERA noted this is to account for higher short-term borrowing rates and a 15% RCF drawdown assumption. This is followed by the additional assumptions regarding annual utilisation fees and interest on the liquidity facility. In the analysis NERA also included up-front legal and arrangement fees and assumed commitment fees to be a mid-point of a 35-45bps, as per RIIO-2.

2.62 Our analysis of the utilisation of network companies' RCFs shows that majority do not draw down their RCFs and those that do, maintain the ratio of drawn RCFs to Total RCFs at the level significantly lower than 15% as assumed by NERA. On average, we calculate this ratio to be approximately 1.5% across network companies. This finding aligns with our understanding of common corporate practice, where RCFs are typically maintained as a liquidity backstop rather than used on a sustained basis, due to the punitive costs associated with utilisation. As such, we consider it reasonable to assume that RCFs are not drawn under normal circumstances. Consequently, we do not consider it appropriate to include either the utilisation fee or the associated margin in the assessment.

2.63 We do not adjust the estimate to consider upfront legal and arrangement fees in line with the RIIO-2 approach. Our understanding is that these liquidity facilities rollover frequently and are normally part of a broader bank relationship and so we would expect these to be a very small component of overall costs.

2.64 The summary of the liquidity allowance calculations is presented in the table below.

Table 6: Summary of the liquidity allowance assumptions and estimates

Parameter	**RIIO-GD&T2 & ED2**	**RIIO-3 GD & GT**	**RIIO-3 ET**
RCF size assumption (% debt) (A)	10%	10%	10%

Parameter	RIIO-GD&T2 & ED2	RIIO-3 GD & GT	RIIO-3 ET
Commitment fees (B)	35-45bps (40bps)	16bps	16bps
Liquidity allowance (C=A*B)	4bps	2bps	2bps
Cash assumption (% debt) (D)	5.0%	7.7%	7.7%
Cost of carry (E)	2.00%	1.70%	1.45%
Cost of carry allowance (F=D*E)	10bps	13bps	11bps
Total allowance (C+F)	14bps	15bps	13bps

2.65 NERA also noted that the allowance of 13 bps could understate liquidity costs if Ofgem implements proposed financial resilience measures, such as where availability of resources requirement covers a longer time period. We consider the financial resilience measures to be cost-neutral. This assessment is based on current financial indicators across the sectors: the vast majority of companies already maintain two investment-grade credit ratings, and most bond covenants typically impose distribution restrictions at more stringent gearing thresholds. Furthermore, the additional Availability of Resources requirement is intended to enhance transparency and support sound financial management. It achieves this without disrupting existing financial strategies or necessitating prefunding. Further details are provided in Section 6.

2.66 With respect to the cost of carry NERA stated that this should be adjusted from 10bps to 12bps, derived from updated data utilising the Ofgem based approach. In addition, NERA argued that for GDNs the cost of carry should be increased further from 10bps to 12-27bps. It was supported by stating that GDNs are now forced to issue shorter tenor bonds and so the required liquidity in any particular year increases due to a higher quantum of debt maturities in each year.

2.67 We consider our updated approach, which utilises more frequent company data is more robust than the NERA approach which relies solely on year-end data. Period-end figures can be misleading, as they may not capture intra-year fluctuations in cash balances, including operational cycles. We also do not consider it appropriate to estimate a higher cost of carry for the gas sector due to pre-financing costs being amortised over shorter bond tenor. Our analysis of

company data does not indicate that gas network companies consistently hold materially higher levels of cash and cash equivalents compared to other networks.

2.68 In its report NERA also provided a cross-check by estimating notional cost of carry as a range of 8-16bps. It assumed that pre-financing needs are half met by issuing debt ahead of maturity, and half by RCF, pre-financing period of 12-24 months as required by licence condition/rating and debt tenor of 15 years as well as that net carry cost equals iBoxx Utilities index less SONIA on cash-deposits. We do not consider that this cross-check approach is likely to derive a more accurate view of an efficient reasonable allowance. In particular, as discussed in paragraph 2.62 our analysis indicates RCF usage is generally very low, and we do not expect a change in behaviour particularly when NERA's analysis indicates this may be more costly.

2.69 In their business plan submissions most RIIO-3 network companies confirmed that their view on additional borrowing costs remained consistent with the proposal presented by NERA and therefore that both liquidity/RCFs cost, and cost of carry allowances should increase compared to RIIO-2.

2.70 Cadent and SGN both made adjustments to the NERA proposals in their submissions. Cadent proposed to maintain Liquidity/RCF costs at 4bps in line with RIIO-2 while SGN suggested increasing the Liquidity/RCF costs allowance compared to RIIO-2 to 10bps. While our proposed liquidity allowance has been derived broadly in line with the methodology adopted for RIIO-2 & ED2 we have made minor updates to the methodology and utilised more frequent and granular data which improves the accuracy and robustness of the estimate and changes the amount of the allowance compared to RIIO-2. As further explained in paragraph 2.62 we do not consider it appropriate to include the utilisation fee or the associated margin in the assessment.

Transaction costs

2.71 The allowance for transaction costs reflects both ongoing and up-front costs in relation to debt issuance including underwriting/arrangement/listing fees, rating fees and legal fees.

2.72 For RIIO-3, we propose setting the allowance for ET networks at 5bps and the allowance for GD and GT networks at 7bps. We consider analysing transaction costs for electricity and gas sectors separately to be appropriate due to divergences in observed issuance trends in each sector and to ensure consistency in approach between the two sectors. This diverges from the

approach presented by NERA in which the allowance for ET networks was estimated based on the historical transaction costs data for all networks while proposing a bespoke approach for gas based only on GDN data.

2.73 We have determined the allowance aligning to observed sectoral averages using data provided by NERA, which was submitted by network companies as supporting evidence. This data captures the fees associated with individual instruments and annuitizes them over the respective instrument lives. To inform our estimates, we used a GD&GT-only group for the GD&GT allowance and an ED&ET group for the ET allowance. We have excluded one significant outlier when estimating the allowance for ET networks. This modification provides a more representative estimate of a notional efficient operator's transaction costs.

2.74 The NERA study concluded that transaction costs for ET networks should remain unadjusted at six basis points, based on historical transaction cost data from both gas and electricity network companies. However, we consider this approach inconsistent with the methodology applied to gas networks, which relied solely on gas-specific data. Accordingly, we propose an approach that uses electricity-only data for ET. We also believe that analysing transaction costs separately for the electricity and gas sectors is appropriate, given the observed differences in issuance trends emerging between the two sectors.

2.75 NERA stated that transaction costs of 6bps per annum based on industry-wide historical transaction cost data increases to 8.5bps per annum based on GD historical transaction cost data and assuming a shorter debt tenor of 10 years for GDNs. NERA argued that a shorter bond tenor would increase the annuitised upfront fee. NERA also noted that if Ofgem were to assume a shorter tenor at RIIO-3 (eg, in calibration of cost of debt indexation mechanism), the transaction cost should be adjusted to reflect this change.

2.76 When analysing the gas sector, we also observed that the majority of gas networks companies' average bond tenors have shortened over time, with the most recent bonds issued after 2023 having an average tenor of around 12 years. However, we also conducted further analysis which suggests a correlation between bond tenor and the size of associated arrangement and underwriting fees specifically, that shorter-tenor bonds tend to incur lower fees. We understand this observation is consistent with common market practice. In light of this, we find the evidence presented by NERA to justify a higher allowance for the gas sector based solely on expectations of shorter future bond tenors to be unconvincing. Our recommended allowance of 7bps for GD&GT is based on an

unadjusted estimate derived from observed historic data, which we consider to be a more robust and evidence-based approach.

2.77 We emphasise that the trailing average length should not be considered an Ofgem assumption of the expected average tenor of instruments over the price control. The selection of the trailing average is derived from broadly matching the expected efficient debt costs and its performance in scenario analysis.

2.78 In their business plan submissions most network companies aligned with the position presented in the NERA evidence.

CPIH basis risk mitigation

2.79 This allowance reflects hedging costs associated with RPI/ CPIH basis risk resulting from our proposal to switch indexation of the RAV from RPI at RIIO-1 to CPIH at RIIO-2.

2.80 We propose to provide the allowance solely upon the cost assumption an RPI-CPI basis swap. This is the lowest of the cost estimates available in the submitted evidence to manage this risk and we are not aware of any inhibiting factor that would prevent such an approach being adopted for new debt as well as embedded debt. Based on data submitted by companies, we also consider this approach better aligned to observed average company behaviour. The RPI-CPI swap cost assumption is derived from NERA analysis submitted by companies as evidence.

2.81 We also propose to introduce a modifier to the cost estimate to take account of the RPI methodology transition to the CPIH methodology from February 2030. Upon this transition the basis risk between the RAV base and RPI-linked debt will be eliminated. The modifier is a fraction applied to the cost estimate based upon the number of months that RPI is expected to remain on the current methodology over RIIO-3 (46 months) over the total number of months in RIIO-3 (60 month).

2.82 In order to compute the final allowance, we then propose to multiply the modified cost estimate by the ILD notional assumption, 30% for gas and 10% for ET.

2.83 We do not propose providing an allowance for the CPI/ CPIH element of basis risk in line with RIIO-2, no company actively hedges this risk, and we believe the risk of outperformance and underperformance is at least broadly equally likely or is favourable to companies. It is important to note that companies with exposure to CPI-linked instruments stand to benefit if CPI remains below CPIH. Our analysis of historic data indicates there an average difference between CPI-

CPIH of 0.06% between 1998-2024. In its October 2024 report[8], the OBR stated that the long-run wedge assumption between CPIH and CPI is 0.4% implying the basis risk is favourable for companies. No evidence has been presented to suggest that the future basis differentials between the two measures is likely to differ from historic patterns and present a skewed risk for companies to the downside. In line with 2.49, we will review whether an adjustment to the inflation assumption and CPIH basis risk allowance is warranted to reflect the OBR's long-run wedge.

2.84 The summary of the CPIH basis risk mitigation allowance calculations is presented in the table below.

Table 7: Summary of CPIH basis risk mitigation allowance assumptions and estimates

Parameter	**GD&T**	**ET**
RPI/ CPI Swap Cost Assumption (A)	15bps	15bps
RPI Methodology Modifier (B)	76.67%	76.67%
ILD Assumption (C)	30%	10%
Total Allowance (A*B*C)	3bps	1bps

2.85 For the basis risk mitigation between RPI-CPI associated with embedded debt, NERA propose to set the allowance based upon RPI/CPI swap charges of 15bps which is in line with our approach.

2.86 For new debt, NERA suggest utilising pricing of 10-year CPI inflation-linked real coupon swaps, with an estimated cost of 30 to 50bps. NERA state this is in line with a typical company approach given limited market liquidity to absorb CPI-ILD issuance need in RIIO-3. NERA also highlight that the main cost component of these swaps is due to credit/capital charges. NERA state that this is due to the accretion payments which naturally build over the swap, which we understand are paid down periodically or at termination. This is in line with our view of these derivatives, however we do not consider it a reasonable basis to size the allowance. As NERA cites, the swap charges are primarily the result of the credit/capital charges associated with the accretion payments, however this swap feature is not necessary to mitigate the basis risk between RPI-CPI. We consider that instead a company could issue RPI-linked debt and enter into an RPI/ CPI basis risk swap.

[8] The long-run difference between RPI and CPI inflation - Office for Budget Responsibility, https://obr.uk/box/the-long-run-difference-between-rpi-and-cpi-inflation/

2.87 NERA also argue that companies should receive an additional allowance for bearing CPI-CPIH basis risk equating to one standard deviation of the historic basis differential between these measures which equates to 40-50bps. As stated in paragraph 2.83, we do not consider this is a reasonable basis to provide this allowance as we believe the risk of outperformance and underperformance is at least broadly equally likely or is favourable to companies.

2.88 NERA has also suggested it is wrong to remove the allowance when the RPI methodology migrates to the CPIH methodology in 2030. NERA state there will be transition costs associated such as compensation for bond holders in addition to other administration costs such as legal and bank fees. Network companies highlighted there is high degree of uncertainty associated with potential costs associated with the transition and so we have instead proposed a close out mechanism to directly address these costs. This is discussed in paragraph 2.45. We do not consider this allowance, nor the methodology will provide an appropriate basis to account for the transition costs as these are fundamentally different from the basis risk mitigation costs that the allowance is intended to address.

Infrequent issuer premium

2.89 The infrequent issuer premium reflects an increase in the cost of new debt for those licensees, on a notional basis, that are expected to issue smaller size new debt or issue new debt less frequently than other networks, due to their smaller RAV sizes and/or lower RAV growth for RIIO-3.

2.90 We stated in both the RIIO-2 FD[9] and ED2 FD[10], that we would review the approach and assumptions to this allowance in future price controls.[11]

2.91 Eligibility for receiving the allowance was determined from modelled expected annual debt issuance on a licensee notional basis. In RIIO-2, this was set to £150 million or less, whereas in ED2 it was increased to £250 million or less. Raising the threshold is viewed as more favourable to companies, as it allows a greater number to qualify for the allowance.

2.92 In RIIO-2, the threshold was set lower than the typical £250m benchmark size because it is possible to issue £250m face value (qualifying for the benchmark index) but retain some bonds for sale at a later date. However, this listing

[9] RIIO-2 Final Determination – Finance Annex, paragraph 2.63, RIIO-2 Final Determinations – Finance Annex (REVISED)
[10] RIIO-ED2 Final Determination – Finance Annex, paragraph 2.57, RIIO-ED2 Final Determinations Finance Annex

technique is generally considered to be limited to retaining £100m for sale at a later date.

2.93 Respondents to the ED2 DDs noted that this issuance approach was not commonly observed for utilities and was an approach more commonly applied in the social housing sector. A threshold of £250m was adopted in ED2 FD.

Table 8: Modelled average annual issuance

Licensee	**Modelled average annual issuance, £m p.a.**
SGN Scotland	87
WWU	124
NGN	137
SGN Southern	222
NGT	367
Cadent	547
SPT	1,302
SHET	3,878
NGET	4,164

2.94 We have identified four infrequent issuers—SGN Scotland, SGN Southern, WWU, and NGN—over the course of RIIO-3, who are below the expected average issuance threshold of £250 million per annum on a notional basis.

2.95 We consider that, to the extent that additional costs from infrequent issuance exist, the data used to calibrate the main debt allowance already broadly reflects the characteristics of infrequent issuers because:

- While derivatives are excluded from the main calibration, derivative use to manage infrequent issuance is limited. Just one infrequent issuer regularly engages in interest rate hedging to mitigate the risk of becoming misaligned to the trailing average which only covers a portion of their total debt (c.70%).
- The data used to underpin the gas 25bps benchmark adjustment for new debt is predominantly drawn from issuances by entities classified as infrequent issuers. In the data, infrequent issuers comprise 86% issues used in the sample and represent 57% when weighted by amount outstanding.

- Similarly, the data input used for the embedded, historical debt component of the main calibration is comprised predominately of issuers classified as infrequent (4 out of 6).

2.96 We do not propose to provide a distinct infrequent issuer allowance in RIIO-3. Overall, we have concluded that an infrequent issuance premium, to the extent it is incurred, would already be sufficiently reflected in the main allowance given the data inputs cited above. We consider that providing an additional allowance would present a material risk of overcompensation of companies.

2.97 The NERA study, commissioned by the ENA on behalf of network companies, stated that the allowance should increase from 6bps to 10-18bps.

2.98 NERA states that all companies but SGN Southern, Cadent East[12], NGET and SHET should qualify for the allowance based on an issuance threshold of £250m. NERA estimates those who qualify by taking a projected average RAV over RIIO-3 (utilising a flat 5% growth rate of RAV) and a simplified tenor assumption derived from the trailing average. We consider that the NERA approach is too simplistic particularly with respect to RAV growth rate assumptions and misapplies the trailing average length which is not an approximation of the average tenor of debt issuance outstanding. Our proposed approach utilises modelling based on the average weighted tenor for the sectors debt portfolio and uses individual RAV profile forecasts reflecting the decisions made within the draft determination.

2.99 NERA argues that the CMS pricing used by Ofgem is too low, as it only accounts for interest rate risk and does not hedge against changes in associated credit spreads. However, we have found no evidence that network companies actively hedge credit spread risk associated with trailing average, nor that this risk is asymmetric. Accordingly, we do not consider an adjustment to our proposed estimate to be justified.

2.100 NERA outlines an alternative approach to capture credit spread risk, which assumes that companies issue lower-value nominal debt annually, but at a higher cost due to the reduced liquidity associated with smaller issuance sizes. To quantify this illiquidity premium, NERA proposes using the difference in bid-ask spreads observed on the day of issue between smaller and larger issuances, estimating the premium at 50 basis points. However, we do not consider this approach to be robust. The bid-ask spreads cited by NERA relate to secondary

[12] In NERA's ENA industry-wide submission, NERA suggest Cadent – Eastern does qualify however in their GDN specific analysis, due to a shorter 10-year tenor assumed, Cadent – Eastern does not qualify.

market trading, and we do not consider them a reliable proxy for a yield premium at issuance that is directly attributable to issuance size. Additionally, as we state in 2.99 we do not consider an alternative is required.

2.101 NERA also states that the latest estimates from banks indicate that CMS costs in range of 18-41bps per annum. (mid-point 30bps), higher than the 26bps estimated at RIIO-GD/T2. We do not consider an allowance is required in RIIO-3 as stated in paragraph 2.96 and we are not aware of any UK regulated network company that has utilised these products in practice.

Calibration of the allowed return on debt

2.102 The calibration of the allowed return on debt is intended to broadly align forecast average efficient debt costs over RIIO-3. The allowance is set with reference to a trailing average of an index of public debt instruments to enable the allowance to respond dynamically to changes in the market interest rate environment.

2.103 In our SSMD, we decided to continue to conduct a calibration approach that considers forecast average efficient debt costs. Given the significant control that companies have over the financing choices they make, we consider it essential that companies are incentivised to act efficiently and to ensure that the risk of financing decisions resides with shareholders not consumers.

2.104 In our SSMD, we decided to exclude the following instruments from consideration in the calibration exercise:

- Derivative instruments (as we consider the allowance can reasonably be achieved using standard debt instruments, and that derivative use is likely to reflect company-specific risk management decisions, and we therefore consider that the costs and benefits from these instruments should be borne by equity investors);
- Liquidity facilities, revolving credit facilities and overdrafts (as these are considered in the additional costs of borrowing);
- Intercompany loans other than back-to-back arrangements (as these may not represent commercial terms/pricing available from third parties);
- Subordinated instruments, such as 'Class B' debt; and
- Instruments with insufficient data to model.

2.105 In our SSMD we decided that we would adopt a full indexation approach in line with RIIO-2. This approach means the allowance companies receive is set with reference to a trailing average of an index of debt instruments to enable the

allowance to adjust dynamically to changes in market rates throughout the price control period.

2.106 In our SSMD, we decided to split the calibration cohorts between GD & GT and ET reflecting structural differences that are likely to emerge between the sectors due to the transition of net zero. For ET, we decided to adopt RAV weighting for the trailing average owing to the high level of expected RAV growth, and consequent new debt issuance over RIIO-3, which will generate greater exposure to the current higher interest rate environment than GD & GT will face.

2.107 We also stated that we continue to disagree with company specific "pass-through" allowances which we do not consider to be in the interests of consumers. Under a pass-through approach, the allowance would align to actual company costs incurred. This means companies could not out or underperform the allowance, removing the incentivisation to raise finance as efficiently as possible and exposing consumers to the risks of companies' financing decisions.

2.108 We have tested the suitability of calibrating the cost of debt index to different trailing average periods with forecast efficient industry debt costs under different scenarios; these scenarios involve varying assumptions in relation to expected totex and interest rates ie iBoxx and SONIA, over RIIO-3.

2.109 Adopting longer trailing averages (20 year +) provides initially greater alignment to forecast efficient debt costs without a calibration adjustment, however, these are less responsive to rate changes (increasing the risk the allowance becomes misaligned to forecast average efficient debt costs over the period). Shorter trailing averages are generally more responsive, however, we also find that the longer and shorter trailing averages of our testing range have greater variation in their single year alignment to forecast efficient costs.

2.110 We do not believe it is necessary to calibrate the index to fully compensate networks in all potential macro-economic environments or company specific scenarios, as this could lead to consumers overpaying to cover risks that we consider should be borne by equity holders. Our approach to the calibration of the index is that consumers should pay no more than is necessary to be consistent with our duties, in particular that companies are able to finance their activities, which we assess on a notional basis at an industry level.

2.111 We recommend a 14-year simple trailing average with an 60bps calibration adjustment for gas. This index selection is supported by our modelling, which shows that the profile of forecast average efficient debt costs closely aligns with the expected allowance in any given year when applying a 14-year trailing

average. Furthermore, the modelling indicates that this approach results in an allowance that remains broadly aligned with forecast average efficient costs under plausible sensitivity scenarios, providing confidence that consumer costs will remain fair and reasonable.

2.112 We recommend a RAV weighted 14-year trailing average with a 45bps calibration adjustment for ET. We recommend starting the RAV weighting from the start of ET1 with an assumed refinancing period aligned to the trailing average assumption. We consider this index selection is appropriate because our modelling indicates that the profile of forecast average efficient ET and ED debt costs and the allowance do not vary significantly from one another in any given year when using a 14-year trailing average. We have chosen to include ED (assuming similar RAV growth to ET following the conclusion of ED2) within the calibration group to mitigate the risk that an ET calibration cohort would be small (3 TOs) and dominated by the largest ET company. It also indicates that the trailing average results in an allowance that continues to align broadly to forecast average efficient costs under plausible sensitivities which provides assurance of fair consumer costs. A RAV weighted trailing average requires a much smaller initial calibration adjustment and delivers significantly better performance under interest rate sensitivities. We have chosen to start the RAV weighting from the start of RIIO-1 to maximise the use of available data and a refinancing assumption aligned to the trailing average to minimise complexity. A 14-year trailing average is consistent with the trailing average length at the end of the RIIO-2 period.

2.113 In mathematical form, we propose the following approach to the ET RAV weighting of the trailing average:

2.114 $$KdFRD_t = \frac{\left([Opening\ RAV_{2013/14} \times IBATA_{t-1}] + \left[\sum_{i=2013/14}^{t-1} IBAFY_t \times (DRAV_t + DRAV_{t-14})\right]\right)}{Closing\ RAV_{t-1}} + KdUP$$

Where:

Table 9: Definitions of the equation components

Term	**Definition**
KdFRD	means the nominal allowed return on debt
IBATA	means the simple 14-year Trailing Average of IBAFY
IBAFY	means the "iBoxx average", variable value obtained as an arithmetic average of the daily nominal value of iBoxx GBP A and iBoxx GBP BBB non-financial 10+ corporate indices bond yield

DRAV	means the difference between the closing nominal RAV and the opening nominal RAV
KdUP	means the combined calibration uplift and additional borrowing cost uplift

2.115 The analysis in tables 10 - 12 Table 10show the results of inflation and interest rate scenarios applied to this higher case totex scenario. The following tables do not include any calibration adjustment.

Table 10: Calibration options - expected allowed return on debt minus forecast average efficient debt costs in RIIO-3 GD&GT (excluding derivatives)

Index calibration	**Baseline**	**Higher Totex**	**Lower Totex**	**Rates +1%**	**Rates -1%**
10yr	-0.37%	-0.39%	-0.36%	-0.37%	-0.38%
14yr	-0.54%	-0.55%	-0.53%	-0.60%	-0.49%
15yr	-0.51%	-0.53%	-0.50%	-0.58%	-0.45%
17yr	-0.40%	-0.41%	-0.39%	-0.48%	-0.32%
18yr	-0.32%	-0.33%	-0.30%	-0.40%	-0.23%
20yr	-0.15%	-0.16%	-0.14%	-0.25%	-0.05%
22yr	-0.03%	-0.04%	-0.02%	-0.13%	0.08%
24yr	-0.04%	-0.06%	-0.03%	-0.16%	0.08%

Table 11: Calibration options - expected allowed return on debt minus forecast average efficient debt costs in RIIO-3 ET (excluding derivatives)

Index calibration	**Baseline**	**Higher Totex**	**Lower Totex**	**Rates +1%**	**Rates -1%**
10yr	0.13%	0.12%	0.13%	0.07%	0.18%
14yr	-0.06%	-0.06%	-0.06%	-0.15%	0.03%
15yr	-0.07%	-0.07%	-0.07%	-0.17%	0.03%
17yr	-0.06%	-0.06%	-0.06%	-0.17%	0.05%
18yr	-0.04%	-0.04%	-0.04%	-0.15%	0.07%
20yr	0.00%	-0.01%	0.00%	-0.12%	0.11%
22yr	0.02%	0.02%	0.02%	-0.10%	0.14%
24yr	0.04%	0.04%	0.04%	-0.08%	0.16%

Table 12: Calibration options - expected allowed return on debt minus forecast average efficient debt costs in RIIO-3 ED&ET (excluding derivatives)

Index calibration	Baseline	Higher Totex	Lower Totex	Rates +1%	Rates -1%
10yr	-0.19%	-0.19%	-0.18%	-0.28%	-0.09%
14yr	-0.31%	-0.31%	-0.31%	-0.45%	-0.18%
15yr	-0.30%	-0.30%	-0.30%	-0.44%	-0.16%
17yr	-0.25%	-0.25%	-0.25%	-0.40%	-0.11%
18yr	-0.22%	-0.22%	-0.22%	-0.37%	-0.07%
20yr	-0.17%	-0.17%	-0.17%	-0.32%	-0.02%
22yr	-0.14%	-0.14%	-0.14%	-0.29%	0.02%
24yr	-0.10%	-0.10%	-0.10%	-0.26%	0.05%

2.116 Table 13 shows the difference between expected allowed return on debt and forecast average efficient debt costs, excluding derivatives, for each of the scenarios using our chosen approach.

Table 13: Difference between expected industry debt costs and expected allowed debt costs, RIIO-3 average, excluding derivatives

Sector	Index calibration	Baseline	Higher Totex	Lower Totex	Rates +1%	Rates -1%
GD&GT	14 Years TA + 60bps	0.06%	0.05%	0.07%	0.00%	0.11%
ET	14 Year RAV Weighted + 45bps	0.39%	0.39%	0.39%	0.30%	0.48%
ET&ED	14 Year RAV Weighted + 45bps	0.14%	0.14%	0.14%	0.00%	0.27%
ET&ED	14 Years TA + 45bps	-0.54%	-0.55%	-0.53%	-0.86%	-0.21%

2.117 The National Wealth Fund (NWF) has recently committed a £600 million loan to Iberdrola in support of Scottish Power's investment programme. Ahead of the Final Determinations, we will assess whether the availability of funding through the NWF necessitates any adjustments to our allowance methodology.

2.118 Cadent supports the use of the notional construct. We have decided to continue to seek to align the allowance to an efficient company adopting the notional capital structure.

2.119 Cadent, NGET, NGN support indexation of the trailing average. We have decided to continue to adopt full indexation of the allowance.

2.120 Cadent, NGET, NGT, SPT support a split calibration cohort between gas and ET. NGT supports being included in the gas cohort. We decided at our SSMD stage to split the calibration cohort between gas and ET.

2.121 NGT emphasises the importance of a fair assessment of the amount of new debt being raised over the price control. We consider our assessment of new debt is fair and robust considering the impact of refinancing from embedded debt and RAV growth under a variety of sensitivity scenarios.

2.122 Cadent suggests that the length of the trailing average for gas should shorten to 10 years to reflect costs and the tenor of debt that the sector can raise. Our modelling indicates that a 14-year trailing average provides more consistent performance against forecast average costs in each given year. We consider this reduces the risk of substantial over or under funding in each particular year in the price control period.

2.123 SPT argues that an 18-year trailing average and RAV weighting from the start of ET2 would ensure sufficient sensitivity of the index and alignment to sector borrowing costs. We found that an 18-year trailing average was less responsive to rate sensitivities and had greater variation in single year performance against forecast efficient costs. We consider that starting the weighting from the beginning of ET1 maximises use of available data. SSEN supports a 14-year trailing average RAV weighted trailing average in line with our recommendation.

2.124 SSEN argues a calibration adjustment should be applied to the trailing average. We have recommended a calibration adjustment to the trailing average of 45bps for ET.

2.125 SSEN suggest that the assumed refinancing period in the weighting methodology should align to the trailing average length. We have adopted this approach.

2.126 SSEN did not consider there were any reasons to remove intercompany loans from the calibration when the license prohibits cross subsidy, and all loans were conducted on an arm's length basis and pricing based on market rates. We consider that facilities raised from third parties offer stronger assurance that the

pricing reflects commercially available terms. In contrast, intercompany loans, even when benchmarked, inevitably involve a degree of judgement, which can introduce uncertainty with respect to what pricing might have been alternatively achieved in the open market.

2.127 NGET broadly support the overall approach set out in UKRN recommendation 8 which states that regulators should estimate an allowance for an efficient company under the notional financial structure, with actual debt costs suitably benchmarked against other market evidence.

2.128 NGET supports the adoption of company specific RAV-weighting of the trailing average. SPT stated it supported RAV-weighting of the trailing average. We have adopted company-specific RAV weighting for ET.

2.129 SGN proposes adjustments to Cadent's embedded cost of debt to account for the separation from National Grid. We confirmed at our SSMD we would adopt these adjustments on the same basis as RIIO-2.

2.130 NGET supports an ET & ED cross check as it provides a larger sample size. We have chosen to adopt ET & ED as a cross check.

2.131 SSEN argues against ED being included in a cross check, stating that, given the disparity of expected RAV growth between the sectors, it is an attempt by Ofgem to artificially lower the CoD. We have conducted the calibration exercise including ED and have assumed RAV growth rates consistent with those of ET from the conclusion of ED2. We also note inclusion of ED supports a larger allowance as opposed to SSEN's suggestion of a lower allowance.

2.132 WWU argues for a company specific allowance for all "efficiently and prudently incurred" debt and derivatives costs assuming the notional gearing assumption. WWU argues the shortfall between the allowed rate and company specific costs impairs financeability. WWU state that this approach is not a pass-through approach given the efficiency test and that risk management would have to be consistent with achieving an investment grade rating. WWU states that Ofgem should also include derivatives in the allowance for legitimate risk management purposes given:

- the significant data Ofgem holds on derivatives, so should be able to carry out full term evaluations for those derivatives;
- that we already include cross-currency swaps in the allowance and WWU allege these could be significant and exceed the amount of RPI swaps;
- Six licensees challenged the exclusion of derivatives; and

- in 2006 and 2011, WWU state that Ofgem suggested RPI derivatives could be used as overlays on nominal rate debt to achieve inflation linked cost of debt positions.

2.133 We consider under WWU's proposed approach companies could not out- or underperform the allowance and so this would remove the incentive to raise finance efficiently and we therefore regard this approach to be detrimental to consumer interests. This aligns with our decisions in RIIO-2.

2.134 Derivative instruments are not included as we:

- do not consider a robust assessment could be proportionately undertaken;
- that the debt allowance can reasonably be achieved using standard debt instruments; and
- derivative use is likely to reflect company-specific risk management decisions, and we consider that the costs and benefits from these instruments should be borne by equity investors.

2.135 Assessing derivatives at a single point in time introduces a material risk of gaming. Specifically, companies could be incentivised to enter into derivative contracts shortly before the calibration exercise, deliberately shaping cash flows to inflate apparent costs. This could result in higher allowances being set than would otherwise be justified. Such behaviour would undermine the integrity of the calibration process. Moreover, forecasting future derivative use is inherently uncertain, making it difficult to assess whether any observed positions are representative or opportunistic.

2.136 We do not consider an instrument efficiency test would be robust or proportionate because an efficiency test would need to consider a range of parameters other than pricing to determine efficiency, including assessment of:

- timing of issuance (it could be issued when the market was under stress);
- currency of issue (the optimal currency would depend upon foreign market conditions and the swap market);
- tenor (at a particular time the pricing may be more economic at certain tenors or more consistent with an appropriate treasury strategy);
- intention of the instrument; and
- supporting terms.

2.137 When evaluating efficiency, we also believe that licensees would benefit from information asymmetry impairing our ability to conduct such an assessment.

2.138 We also consider adjusting for gearing or the investment grade rating requirement to be insufficient to ensure efficiency or prudence of decisions. Companies are able to make financing choices which may not be considered efficient or prudent for a range of other factors as discussed above.

Consultation questions on allowed return on debt

FQ1. Do you agree with our approach to estimating efficient debt costs and calibrating the index?

FQ2. Do you agree with our proposal to use a combination of iBoxx GBP A and BBB 10+ non-financial indices rather than the iBoxx GBP Utilities 10+?

FQ3. Do you consider our proposed notional ILD assumption to be appropriate?

FQ4. Do you agree with our approach to setting the additional cost of borrowing allowances?

FQ5. Do you agree with our proposed treatment of inflation with respect to the allowed return of debt?

FQ6. Do you agree with the removal of the infrequent issuer allowance?

3. Allowed return on equity

Purpose: The allowed return on equity is an estimation of the return required to attract and retain sufficient equity capital, in this case within the network companies in the GD, GT and ET sectors. As a result, when setting an allowed return, we are generally basing this on our assessment of the "required return" or "cost" of this equity. Here we outline the steps we have taken to estimate the allowed return as set out in our SSMD.

Benefits: Proportionate returns for equity investors will secure network investment during RIIO-3 and help keep consumer charges in line with efficient costs.

Business plan submissions

3.1 Network companies generally submitted plans using both their own proposals and our SSMD working assumptions, as shown below.

Table 14: Company cost of equity proposals

Company	Cost of equity proposal (real at 60% notional gearing)
Cadent	6.30%
SGN	6.70%
WWU	6.89%
NGN	6.36%
SPT	6.86%
NGET	6.31%
SHET	6.50%
NGT	6.48%

Our approach for RIIO-3

3.2 We use a similar multi-step approach as used in RIIO-2 to help ensure we set an appropriate allowed return on equity for RIIO-3.

3.3 Step-1 of the process will be to assess the market cost of capital using the CAPM. We lay out our detailed methodology decisions for Step-1 in the next section.

3.4 In Step-2 we will consider a range of factors to ensure that our Step-1 estimate is sufficient but not excessive. Step-2 will consider cross-checks on equity financeability, as in RIIO-2. However, we will also consider any evidence

presented on broader equity 'investability' concerns during this step. We discuss the background to the concept of 'investability' at paragraphs 3.69-3.70.

3.5 In Step-3 we assess if expected returns match our best estimate of the cost of capital.

Step 1 - The Capital Asset Pricing Model cost of equity calculations

Estimating the Risk-Free Rate (RFR)

Background

Proxies used to estimate the RFR

3.6 The RFR is, in theory, the rate of return required to invest at zero risk. In practice, no investment is truly risk-free, so this hypothetical risk-free rate of return must be estimated. In our SSMD we proposed to set the RFR for each year of the price control based on the one-month average of 20-year index linked gilt (ILG) yields.

3.7 In our SSMD we outlined the network companies' arguments for adjusting ILG yields upwards to account for a perceived convenience yield in ILGs. We highlighted that the UKRN guidance noted that there are no empirical estimates of the convenience yield in ILGs at the 10–20-year CAPM investment horizon.

3.8 With regards to using the yields of AAA non-government bonds as our RFR proxy, we noted that if these yields are adjusted for the Competition and Markets Authority (CMA) 0.13% assumption for each of the credit and liquidity risks, using them would derive a RFR that was below our RFR proxy (ie ILGs).

3.9 For these reasons Ofgem believed the proposed methodology of focusing solely on ILGs was likely to provide a sufficiently accurate estimate of the RFR.

Setting the RFR in CPIH-real terms

3.10 ILGs are RPI-real instruments, meaning both the coupon payment and the principal repayment are adjusted based on the retail price index. The RFR is set in CPIH-real terms, a measure of inflation that includes owner occupiers' housing costs and council tax. To use ILGs as a proxy for the RFR, we must adjust their yields to CPIH-real terms by estimating the difference between future CPIH and RPI inflation, often referred to as the inflation 'wedge'. In our SSMD we stated we would estimate the wedge using official forecasts of RPI and CPIH from the Office for Budget Responsibility (OBR) up to the point of

convergence (assumed to be February 2030).[13] No wedge will be applied for the remaining years until the maturity of the 20-year ILG. We calculated the geometric average 'wedge' required over the 20-year tenor of our RFR proxy to be 0.11%.

3.11 The network companies (via Oxera) suggested we include data from the swaps markets as well as our preferred 'official forecast' methodology for assessing the 'wedge' and estimate this at 0.39%. Oxera have also argued for a large adjustment (0.33%) for differences between CPI and CPIH (when using CPI as a proxy for CPIH). Oxera calculate that the RPI-CPIH wedge should be 0.72%.

3.12 In our SSMD, we did not object in principle to the use of swaps data when considering the appropriate CPIH-RPI wedge but did not see it as providing a materially more accurate estimate, given the 'noise' in swap markets. We said we may use swap data as a cross-check in DDs and FDs.

3.13 In our SSMD we stated we did not agree with the argument that there should be a material further 'wedge' between our assumptions of CPIH and CPI. The average difference over a longer-term dataset (Jan 1989 - Mar 2024) is only 0.04%.

Indexing the cost of equity via updating the RFR

3.14 In our SSMD we stated we would update the RFR within our allowed return on equity annually to be the one-month (October, daily) average of 20-year ILG yields, plus our assessment of the appropriate RPI-CPIH 'wedge'.

RFR estimate

3.15 In our SSMD, our 'early view' of the RFR was estimated as 1.18% comprised of an ILG Yield of 1.07% and an inflation 'wedge' of 0.11%.

Decision and Rationale

3.16 We propose that we continue to set the RFR for each year of the price control based on the one-month average of the 20-year ILG yield. This will be done in the October preceding the commencement of each year of the price control and not include other proxies in our estimate.

3.17 We propose that we continue to adjust RPI-real ILG yields to CPIH-real terms based on a 'wedge' calculated primarily using the official forecast methodology described in our SSMD. In its 2024 report, the OBR stated that the long-run

[13] OBR The long-run difference between RPI and CPI inflation, https://obr.uk/box/the-long-run-difference-between-rpi-and-cpi-inflation/

wedge between CPIH and CPI is assumed to be 0.4%. This implies that the 2% inflation assumption (anchored in the Bank of England's CPI target) may understate long-term CPIH expectations. Considering this, we will review whether an adjustment to the inflation assumption and inflation wedge is warranted to reflect the OBR's long-run wedge.

3.18 We propose to continue to 'index' the overall allowed return on equity by the annually updated RFR used within our CAPM.

3.19 The RFR is the required return of a riskless asset in the CAPM. Such a riskless asset does not exist in practice and so the RFR is a hypothetical number. The UKRN Guidance notes that most regulators have in recent years used yields on ILGs of 10 to 20 years maturity as the closest available market proxy of a risk-free instrument, having no inflation risk and very low default risk and liquidity risk.[14]

3.20 ILGs differ from conventional gilts in that both the semi-annual coupon payments and the principal payment are adjusted in line with movements in the RPI which means they have no inflation risk. United Kingdom Debt Management Data shows that ILGs in issue, range from around £11bn to £18bn depending on the maturity year meaning there is very low liquidity risk.[15] The S&P Global rating agency rate the UK "AA/A-1+" meaning default risk is very low.[16] This combination of no inflation risk and very low default risk and low liquidity risk is why we have chosen to use ILGs as the best available proxy of a risk-free instrument.

3.21 The UKRN Guidance highlights that recently there has been a debate as to whether real government bonds alone provide a sufficient proxy for the RFR. However, their recommendation remains that to estimate the RFR, regulators should use recent yields on ILGs, with a maturity which matched the assumed investment horizon for their sector.[17] In the appeal of RIIO-2, the CMA concluded that Ofgem's decision to rely solely on ILG yields when estimating the RFR was 'not wrong'.[18]

[14] UKRN Guidance for regulators on the methodology for setting the cost of capital (2023) - page 12, https://ukrn.org.uk/app/uploads/2023/03/CoC-guidance_22.03.23.pdf
[15] United Kingdom Debt Management Office (2025) Index-linked Gilts in Issue, https://www.dmo.gov.uk/data/pdfdatareport?reportCode=D1D
[16] S&P Global United Kingdom 'AA/A-1+' Ratings Affirmed, https://disclosure.spglobal.com/ratings/en/regulatory/article/-/view/type/HTML/id/3270593
[17] UKRN Guidance for regulators on the methodology for setting the cost of capital (2023), https://ukrn.org.uk/app/uploads/2023/03/CoC-guidance_22.03.23.pdf
[18] CMA Final Determinations: Volume 2A: Joined Grounds: Cost of equity (2021) - para 5.63, https://assets.publishing.service.gov.uk/media/617fe5468fa8f52980d93209/ELMA_Final_Determination_Vol_2A_publication.pdf

3.22 We continue to consider there to be a lack of compelling evidence that would support the use of additional RFR proxies or manual adjustment of ILG yields when estimating the RFR within our CAPM calculations. In the following paragraphs, we assess the new evidence in relation to the so-called 'convenience yield' and/or the use of AAA non-gilt bonds when estimating the RFR.

3.23 Oxera refer to three academic or related papers in support of the use of a convenience yield when estimating the RFR:

- a Feldhutter and Lando paper citing numerous drivers to the convenience yield in government bonds;[19]
- a Bank of England study that stated that some investors in government bonds are less sensitive to price movements than others and this is consistent with the existence of a convenience yield;[20] and
- an Acharya and Laarits (2023) paper that argues that the convenience yield of US Treasuries exhibits properties that are consistent with a hedging perspective of safe assets.[21]

3.24 In relation to the Feldhutter and Lando paper, we note that the authors estimated a range for the convenience yield of approximately 0.25% to 0.90% between 1997 and 2005. The paper also cross-checked the estimate of the 10-year convenience yield by using the spread between Fannie Mae bonds and Treasury bonds. Shortly after this paper was published Fannie Mae became illiquid as the market for its home mortgage bonds collapsed in the subprime mortgage crisis. Fannie Mae was taken over in September 2008 by the US government's housing finance agency. It is not clear to us that this paper demonstrates the presence of a convenience yield in 20-yr UK ILGs. In line with our commentary in our SSMD Finance Annex (paragraph 3.48) we note that this paper shows that a range of assets can be assessed as very low risk during more stable markets, but that when there are periods of market distress government bonds tend to be the only asset considered to be risk-free. Rather than predict what type of market we will face in the future, we consider it to be more efficient to focus on ILGs as the assets that provide the best proxy for the RFR.

[19] Feldhutter and Lando - Decomposing swap spreads (2008), https://feldhutter.com/SwapPaper.pdf
[20] Bank of England Staff Working Paper No.939 (2023), https://www.bankofengland.co.uk/-/media/boe/files/working-paper/2021/preferred-habitat-investors-in-the-uk-government-bond-market.pdf
[21] Acharya and Laarits - When do Treasuries Earn the Convenience Yield? (2023), https://www.nber.org/system/files/working_papers/w31863/w31863.pdf

3.25 The Bank of England study focuses on the fourth round of UK government bond purchases (Quantitative Easing) between August 2016 and March 2017 in the aftermath of the UK Brexit referendum in June 2016. It shows that the biggest sellers of bonds to the government were the cluster of investors with an average holdings' duration of around seven years. It is not clear to us that this study of conventional gilt transactions in one narrow period provides robust evidence of a convenience yield in ILGs at the 20-year investment horizon.

3.26 The Acharya and Laarits (2023) paper, which is focused on US data, highlights how variable the results in estimating a convenience yield can be and how external factors like stock market returns and inflation expectations might influence it. This paper does not offer clear evidence of the size or existence of a convenience yield in UK ILGs at the 20-year investment horizon.

3.27 Oxera disagreed with Ofgem's adjustment of non-government bonds for credit and liquidity risks, noting that credit and liquidity premia are subject to a wide range of volatility. Oxera also state that subtracting liquidity and risk premia calculated with reference to long time periods from the spot value of spreads between AAA non-government bond yield and gilts is not robust. Oxera state that this approach has been superseded by the CMA, the Civil Aviation Authority (CAA) and the Utility Regulator of Northern Ireland (UR) in past determinations that did not use adjusted non-government bond yields for credit and liquidity risk premia. In response, we first note that the adjustments to AAA bond data to account for higher liquidity and credit risk used by Ofgem in our SSMD were used by the CMA in their PR19 redetermination, based originally on suggestions from Oxera's analysis of historical risk premia.[22] Secondly, while it is correct to note that 'unadjusted' AAA data had been used by the CMA in the redetermination of PR19, as well as by the CAA and UR in recent decisions, the decision to use only ILG data has been used by Ofwat, Ofgem (in RIIO-2) and was considered to be 'not wrong' by the CMA during the appeal of RIIO-2.[23] As noted in the UKRN Guidance, there is not yet consensus on this issue. As a result, regulators must make judgements based on the evidence available.

[22] CMA PR19 Redetermination - Final Report (2021), Paragraph 9.110 https://assets.publishing.service.gov.uk/media/60702370e90e076f5589bb8f/Final_Report_---_web_version_-_CMA.pdf

[23] CMA, Final determination: Volume 2A: Joined Grounds: Cost of equity (2021), Paragraph 5.107, assets.publishing.service.gov.uk/media/617fe5468fa8f52980d93209/ELMA_Final_Determination_Vol_2A_publication.pdf

3.28 We note Ofwat's recently published concerns that the inclusion of AAA bond data could confuse the liquidity premium embedded in thinly traded assets with any convenience yield embedded in the yield of gilts.

3.29 Oxera disagreed with our SSMD analysis comparing AAA corporate bonds to zero-coupon gilts of similar maturity. Oxera state that bonds of similar duration, not maturities, should be matched. Oxera state that this calculation would increase the implied convenience premium. Duration is used by investors to measure the sensitivity of bond prices to interest rate changes. It also allows them to match assets and liabilities. In any event, Oxera's analysis should use AAA corporate bonds with a duration of 20 years rather than approaching the debate the other way round and using ILGs with tenors of 10.5 to 13.0 years. We have previously highlighted our concerns with using AAA bond indices that are thinly populated with instruments. It does not offer compelling evidence of the convenience yield in ILGs at the 20-year investment horizon.

3.30 NERA, in their paper commissioned by SPT, cite a working paper by the Bank of England (2023) that found nominal gilts to be on average 135 basis points (1.35%) more expensive than their synthetic counterparts constructed from inflation swaps and inflation linked bonds. Looking at the data it is worth noting that in one third of the dataset, nominal gilts were less expensive than the synthetic counterparts. Also, the dataset used consisted of only 12 pairs of bonds, the range of the averages was large and included negatives and positives (-0.24% to +4.11%). This does not offer compelling evidence of the convenience yield in ILGs at the 20-year investment horizon.

3.31 NERA's view is that the implied 20-year breakeven inflation rate (ie the difference in yields) between nominal gilts and ILGs does not make sense when compared to market expectations of inflation. We agree with the CMA finding that that the more likely explanation is that price differences between nominal gilts and index linked gilts are impacted by factors such as aggregate inflation assumptions, aggregate liquidity risk premiums and inflation risk premiums.[24] A lack of visibility as to the composition and balance of these factors makes it difficult to define their impact. The CMA concluded that this limits the use of using nominal gilt yields as a cross-check on an RFR defined with reference to ILGs. We also believe that to assume a continued anomaly in pricing between

[24] CMA Final determination: Volume 2A: Joined Grounds: Cost of equity (2021), Paragraph 5.139, assets.publishing.service.gov.uk/media/617fe5468fa8f52980d93209/ELMA_Final_Determination_Vol_2A_publication.pdf

ILGs and nominal gilts implies there is a persistent arbitrage opportunity that is being missed by investors, and this is unlikely to be the case.

3.32 Frontier in their paper, commissioned by NGET, cite two pieces of academic literature in support of the existence of convenience yields. The van Binsbergen et al (2022) article in the Journal of Financial Economics appears to focus its study on interest rates and implied convenience yields on US Treasuries with maturities up to three years. The Diamond and Van Tassel paper (2021) also refers to the existence of a convenience yield but appears to focus on short term maturities up to two years. Neither publication offers compelling evidence of the convenience yield in ILGs at the 20-year investment horizon given that one focuses on US Treasuries and the other on maturities of two years and less.

Estimating the Total Market Return (TMR)

Background

Adjusting historical returns for inflation

3.33 Our SSMD decision was to deflate historical nominal returns to real returns using a combination of the Consumption Expenditure Deflator (CED) for 1900-1949, the Office for National Statistics' (ONS) CPIH back cast for 1950-1987 and the ONS 'actual' CPIH dataset from 1988 onwards. There is broad agreement across regulators and stakeholders that is current best practice.

Calculating ex post historical returns

3.34 We stated in our SSMD that we would base our estimate of the ex post TMR on the 1-year arithmetic average of historical returns from the Dimson, Marsh and Staunton (DMS) dataset. We have set our ex post estimate based on the 1-year arithmetic return of 6.97%.

Calculating ex ante returns

3.35 Our SSMD decision was to base our estimate of the ex ante TMR on a version of the decompositional approach which was also used by the CMA in the redetermination of PR19. We have set our ex ante estimate at 6.50%.

3.36 The decompositional approach uses 2024 DMS data on historical average dividend yield and adds this to the historical average of dividend growth. We adjust this data from its geometric terms into an equivalent arithmetic average. This adjustment used the same approach as our ex post TMR methodology and was an uplift of 1.65% based on our analysis of half of the variance of log real returns. In line with the approach used by the CMA we made a -0.35% adjustment to reflect DMS's use of Cost of Living (COLI) rather than CED

inflation data when calculating real returns. We also applied a -0.10% adjustment to reflect serial correlation between the 1-yr, 10-yr and 20-yr holding period returns. We recognised there are conflicting views around the presence of serial correlation in the data and note the difficulties of proving or disproving this with a statistically significant level of accuracy.

Calculating the TMR range

3.37 Our RIIO-3 SSMD decision was to set the TMR range based on our ex ante and ex post estimates. The TMR represents a long horizon estimate of expected market returns. On this basis we present the TMR range in 'rounded' terms to one decimal place. We decided to present this range as 6.5% (based on the ex ante analysis) to 7.0% (based on the ex post analysis).

Consultation position and rationale

3.38 We propose that the estimated ex ante TMR will be 6.79%. This compares to our RIIO-3 SSMD estimate of 6.50%. Our rationale for changing the calculation methodology is laid out below.

3.39 DMS now provide the necessary data for the ex ante calculation in nominal terms, whereas previously this data had been provided only in real terms. This means we can now deflate both ex ante and ex post nominal data using the same inflation series.

3.40 We propose not to continue to make a serial correlation adjustment to the ex ante TMR estimate. In our SSMD the serial correlation adjustment we used was -0.1%. We recognised that there are conflicting views as to the presence of serial correlation and noted difficulties in proving or disproving this with a statistically significant level of accuracy. We have now decided not to do it based on this rationale.

Table 15: Ofgem ex ante TMR analysis

Calculation step	Description	SSMD	Draft Determination proposal
A	Geometric mean dividend yield	4.55%	4.55%
B	Growth rate of real dividends	0.75%	0.64%
C = A + B	Geometric mean 'ex ante' TMR	5.30%	5.19%
D	Geometric-to-arithmetic conversion	1.65%	1.61%
E = C + D	Raw arithmetic 'ex ante' TMR	6.95%	6.79%
F	COLI-CED adjustment	-0.35%	n/a
G	Serial correlation adjustment	-0.10%	n/a
H = E + F + G	Final arithmetic ex ante TMR estimate	6.50%	6.79%

Source: Ofgem analysis using the 2024 DMS returns data and Ofgem's inflation dataset (values may not sum due to rounding)

3.41 We propose that we continue to calculate the ex post TMR estimate as set out in our SSMD. In our SSMD we based our analysis on the 1-year arithmetic average return of 6.92%. In using this approach we are following CMA precedent and UKRN Guidance. The UKRN guidance was published in 2023. Oxera and the networks agree with this approach.

3.42 We propose we continue to set our TMR range on our ex ante and ex post estimates. We continue to recommend we give equal weight to both ex ante and ex post TMR estimates. We recommend we present this range, 'rounded' to one decimal place, as 6.8% (based on our ex ante analysis) to 6.9% (based on our ex post analysis).

3.43 Oxera argue that the ex ante approach should have less weight because it requires subjective adjustments and because the result is very similar to the ex post TMR.

3.44 We agree that using the ex ante approach requires subjective adjustments but do not believe this detracts from the value of the approach. UKRN guidance

proposes that regulators should place weight on historical ex ante evidence.[25] It states that since there is evidence that historical returns were not expected ex ante by investors, using achieved returns as a guide to future expectations may be unreliable. We agree with this and believe an ex ante approach can add balance to an ex post approach.

3.45 Oxera argue that the ex ante estimate of TMR is very close to the ex post TMR estimate and see this as a reason to predominantly base the TMR estimate on the ex post TMR estimate. Our ex ante TMR estimate of 6.79% is close to our ex post TMR estimate of 6.92% but we see a spread of 0.13% that remains meaningful in terms of outcomes for the allowed cost of equity. We do not see this as a sufficient reason for not using an ex ante TMR estimate.

3.46 Oxera argue that there is a need to adjust the TMR higher to reflect the higher interest rate environment as Ofgem's 'through the cycle' approach gives no weight to changes in market conditions. Oxera refer to Frontier's TMR Glider and Dividend Growth Model (DGM) approaches. Based on this, Oxera consider that a TMR range of 7.00-7.50% is appropriate.

3.47 We continue to believe that it is inappropriate to make manual adjustments to the TMR to reflect prevailing interest rates. However, we plan to continue to use cross-checks to assess if our 'bottom-up' methodology for calculating TMR is materially out of line with what investors require.

Estimating Beta (β)

Background

3.48 In our SSMD we decided to retain the RIIO-2 approach of OLS regression and the de-gearing and re-gearing of beta. We also said we would derive beta against local or regional stock markets not a global index. We said that we would use daily data and, in line with our practice in RIIO-2, set the greatest weight on 10-year beta data which aligned with the long-term nature of investment in energy networks. We said that we would not make use of rolling averages. We stated that along with the beta of National Grid (NG), we would consider the betas of the UK listed water companies Severn Trent (SVT) and United Utilities (UU), as well as that of Pennon (PNN). Although we said we had concerns that changes in the business profile of Pennon had made historical data less useful. We said that we saw value in considering the betas of European energy networks and would look to include those in our analysis.

[25] UKRN Guidance for regulators on the methodology for setting the cost of capital (2023), Page 21, https://ukrn.org.uk/publications/ukrn-guidance-on-the-methodology-for-setting-the-cost-of-capital/

3.49 We also said that we did not consider that there was sufficient evidence to justify using different beta estimates for the gas sectors and ET.

3.50 We proposed to use our estimate of debt beta of 0.075 and we set a range of asset beta of 0.3 to 0.4, with a notional gearing of 60%. We said that we did not feel constrained to use the mid-point of that asset beta range.

Consultation position and rationale

3.51 We propose to use OLS regression, and the Harris-Pringle de-gearing methodology, taking gearing as net debt/ market value.

3.52 We did not receive substantive criticisms of these positions that we stated in our SSMD and we note they are in line with the UKRN Cost of Capital guidance.

3.53 We propose to use daily betas, with our emphasis placed on the 10-year betas. We also propose to use a debt beta of 0.075.

3.54 In RIIO-2 and in our SSMD we signalled our preference for using longer-term betas which should reduce the distortions caused by periods of high or low market volatility. 10-year betas satisfy this criterion best. Our debt beta is within the ranges suggested by recent UK regulatory practice and the value used by the CMA in the RIIO-GD&T2 appeals.[26]

3.55 We propose to include 3 sets of comparators in our estimation of beta: 1). UK water stocks-Severn Trent (SVT), United Utilities (UU), Pennon (PNN); 2). National Grid plc (NG); and 3). a group of comparator European energy utilities for which we have 10-year betas (Enagas, SNAM, Red Electrica, Terna).

3.56 We believe that there is value in retaining the use of the UK water company betas as evidence, in the absence of pure play GB energy network comparators. The companies operate in a GB regulatory environment and investors in UK utility companies will consider them in comparison to energy networks. This is consistent with our incorporation of this data in RIIO-2. In addition, they also face net zero risks. Although Pennon could only since 2020 be counted as principally a UK-regulated water company, we nonetheless see value in including it in our sample set, as we did in RIIO-2, and several respondents agreed with this.

3.57 Although National Grid plc (NG) has substantial non-GB regulated network businesses both in the USA and in NG Ventures, the business has over time increased its exposure to regulated GB electricity networks with the acquisition

[26] RIIO-3 SSMD - Finance Annex - paragraph 3.204-3.029, https://www.ofgem.gov.uk/sites/default/files/2024-07/RIIO-3_SSMD_Finance_Annex.pdf

of the DNO WPD in 2021.[27] It also has the greatest exposure to the RIIO price controls of any listed company. Therefore, we propose to use it in our derivation of beta. We do not agree that the US businesses of NG are necessarily of lower risk than their UK operations and so we do not attempt to further disaggregate a beta for the UK network businesses alone.

3.58 We propose to include the betas of four European energy network companies into our analysis: Enagas; Redeia, (Red Electrica); Snam; and Terna. A fifth company, Italgas, provided us with 2-year and 5-year betas but not a 10-year one, and accordingly we consider it to be less valuable. Regulatory energy networks are the majority of these companies' businesses. We received a response from Oxera, with which we agree, that showed that the regulatory regimes of Spain and Italy are closer to the GB model than, say, the one prevalent in Germany. These companies also face net zero risks. Accordingly, we believe these to be the most appropriate comparators to add to our dataset. We recognise that including European energy network companies in estimating beta differs from our previous approach in RIIO-2. However, when taking into account the changes in risk for RIIO-3 relative to RIIO-2, we consider that including EU network companies better addresses these changes.

3.59 We calculated the following betas for our chosen set of comparators:

Table 16 Asset Beta at 0.075 debt beta

Network companies	**2-year**	**5-year**	**10-year**
UU	0.38	0.30	0.32
SVT	0.40	0.30	0.33
Pennon	0.46	0.40	0.39
National Grid	0.35	0.31	0.36
Enagas	0.29	0.29	0.36
Snam	0.29	0.39	0.44
Red Elec	0.24	0.25	0.33
Terna	0.26	0.37	0.43
Italgas	0.30	0.35	N/A

[27] Our analysis is that GB regulated networks accounted for 68% of post exceptional operating profits accounts for the year ended Mar 2024.

3.60 We considered other candidate European network stocks for inclusion. We excluded Elia, an electric utility operating in Belgium and Germany, because the systems of regulation seemed to be sufficiently different from RIIO as to make the comparison less helpful. In any case at our preferred 10-year measure of beta the inclusion of Elia would have only lowered the average slightly. We also considered REN, a Portuguese energy network operator, that had a beta of much lower than any other comparators (2-year beta 0.12, 5-year beta 0.19, 10-year beta 0.20) for reasons we could not explain. We considered Hera, an Italian multi-service company. Hera is not a pure play energy network utility, and analysis submitted by Frontier showed that only 30-40% of Hera's revenues came from regulated energy activities. Therefore, we rejected its inclusion.

3.61 We propose to set the asset beta coefficient to a value of 0.375, which is the approximate mid-point of our range of 10-year betas from a lower end of 0.3 to a high end of 0.45.

3.62 We propose not to set different asset betas for each of the 3 sectors RIIO-ET3, RIIO-GT3 and RIIO-GD3. Both the ET and Gas sectors made arguments as to the unique risks of their businesses. Besides the difficulty of weighing the arguments of one sector against the others, we did not think any additional risks identified were systematic, non-diversifiable, and therefore something that consumers should compensate investors in energy networks for. We also did not see that the European comparator evidence gave an unambiguous signal that the market awards gas companies higher betas than electric companies.

3.63 We do not propose to adjust the ET beta for the higher capital expenditure anticipated during RIIO-3 than RIIO-2. In our view, these are non-systematic (diversifiable) risks. We believe that these risks have been addressed in the RIIO-ET3 package (including ASTI) and that an increase in the beta coefficient, which would be of necessity arbitrary in size, is not necessary as a further measure.

3.64 We do not propose to adjust the GD and GT betas for asset stranding risk. As we argued in the appeal before the CMA for RIIO-2, we continue to believe that asset stranding risk is non-systematic and therefore diversifiable by investors. This is in line with the CMA's final determinations on the cost of equity for RIIO-2, which accepted Ofgem's arguments that we should not aim up on the cost of

capital for gas due to asset stranding risk, and do not see that an increase in beta is the appropriate way to address such risks.[28]

3.65 Our proposed value is at the middle of that proposed by NGET (0.34 to 0.42), as well as that proposed by SPT and Cadent (0.35 to 0.40), and close to the lower end of the range proposed by NGN and SGN (0.38 to 0.44). It is just above the low end of KPMG's relative risk range (0.37 to 0.47). SPT suggested that a range of 0.37 to 0.40 was appropriate before being adjusted "to reflect increasing forward-looking rates" but we were unclear as to how such adjustments would fit into the CAPM theoretical framework.

3.66 For GD and GT, Oxera evidenced a full sample empirical range of 0.30 to 0.50, but proposed an empirical estimate narrow range of 0.40 to 0.44. Oxera proposes the bottom end as being the estimate (0.40) of the long-term average betas for European comparators. Their higher end is the average of the European betas and the betas of their chosen North American comparators. We do not think that the narrowing of range they propose is justified. They derive a 10-year beta for Snam of 0.44 and for Enagas of 0.34 (which is below our estimate of 0.36). The average of those two companies is 0.39. We did not find in that unambiguous evidence that gas companies have a higher beta than electricity companies. We did not consider evidence of betas for North American gas companies due to the differences in regulation and net zero risks.

3.67 On balance we feel that our revised range and chosen midpoint correctly reflect the inclusion of the evidence of European comparators, as we said we would do at our SSMD, and that we have avoided including beta comparators which seem anomalously low or high, or where the case for comparability to a UK regulatory regime is weak.

Step 1 - CAPM-implied cost of equity at 60% and 55% notional gearing

3.68 Table 17 summarises the CAPM evidence as per the preceding sections.

Table 17: Step 1, CAPM-implied cost of equity at 60% notional gearing (GD&GT)

Proposal with March 2025 RFR	Low	Proposed	High	Proposal with Oct 2024 RFR
RFR	2.01%	2.01%	2.01%	1.36%

[28] CMA Final Determination: Volume 2A: Joined Grounds: Cost of Equity (2021) - paragraphs 5.879-5.885, https://assets.publishing.service.gov.uk/media/617fe5468fa8f52980d93209/ELMA_Final_Determination_Vol_2A_publication.pdf

Proposal with March 2025 RFR	Low	Proposed	High	Proposal with Oct 2024 RFR
TMR	6.8%	6.9%	6.9%	6.9%
Debt beta	0.075	0.075	0.075	0.075
Asset beta	0.30	0.375	0.45	0.375
Notional Gearing	60%	60%	60%	60%
Equity Beta	0.64	0.83	1.01	0.83
Cost of equity	5.06%	6.04%	6.96%	5.93%

Table 18: Step 1, CAPM-implied cost of equity at 55% notional gearing (ET)

Proposal with March 2025 RFR	Low	Proposed	High	Proposal with Oct 2024 RFR
RFR	2.01%	2.01%	2.01%	1.36%
TMR	6.8%	6.9%	6.9%	6.9%
Debt beta	0.075	0.075	0.075	0.075
Asset beta	0.30	0.375	0.45	0.375
Notional Gearing	55%	55%	55%	55%
Equity Beta	0.58	0.74	0.91	0.74
Cost of equity	4.76%	5.64%	6.45%	5.47%

Source: Ofgem analysis

Step 2 - Checking our Step-1 estimate is neither excessive nor insufficient

Background

3.69 In our SSMD we introduced the concept of 'investability' in RIIO-3 to both signal and ensure that we are conscious of the potential challenges that the sectors could face in this and future price controls - particularly in relation to the challenges associated with supporting the achievement of GB's net zero targets.

3.70 We said we would consider investability in several ways: equity financeability primarily measured via cross-checks to our Step-1, CAPM-based estimate of the cost of equity; the need for additional checks; the assessment of additional risk factors; picking a point estimate from the cost of equity range; and assessing equity issuance costs.

The use of cross-checks

3.71 We said we expected to continue to reference the following cross-checks in our RIIO-3 cross-check process: listed and asset transaction MARs (market asset ratios); OFTO bid implied equity IRRs; Investment Manager TMR forecasts; and Infrastructure Fund implied equity IRRs.

3.72 We highlighted issues we had and said we would consider if and how we might employ several cross-checks proposed by the network companies. These included: the hybrid bond cross-check; and the ARP-DRP (asset risk premium to debt risk premium) differential and the debt inference analysis.

3.73 We highlighted concerns with long-term profitability benchmarking and said we did not intend to use it as a cross-check within our Step-2 process.

Additional tests of investability

3.74 In response to our SSMD, the network companies suggested a range of metrics to ensure that they remained investable during the RIIO-3 price control period. Suggestions included an attractive dividend yield, attractive accounting earnings growth, valuation and debt metrics and a strong balance sheet. The network companies also suggested that Ofgem should take account of sell side analyst commentary, investor feedback and share price movements. Network companies argued that a clear, predictable, and appropriate regulatory framework that avoided 'shocks' is important.

3.75 We did not, in general, agree with the appropriateness of the additional metrics suggested by the network companies. We had concerns about metrics in relation to earnings growth profiles and valuation metrics. Regulated utilities enjoy valuable characteristics like highly secure cashflows and significant inflation protection that are not typically present in companies operating in competitive markets. Regulated utilities may also have lumpier growth profiles or temporary mismatches between asset growth and earnings growth. We stated we did not consider it to be the role of the regulator to facilitate particular earnings profiles or valuation metrics at any point in time.

3.76 We also stated that there was no clear evidence why attempting to smooth earnings or maintain certain valuation metrics through the price control would be in the interests of consumers. We said it was not clear to us that changes to maintain these features could be applied in such a way that consumers would face a neutral cost. We noted that network companies are generally against the using the Net Present Value (NPV) - neutral moving of cashflows to alleviate

financeability concerns, and the stance here would seem to be inconsistent unless there was a permanent transfer of value from consumers to investors.

3.77 We stated we were open minded to the requirements of investors. We said we must be careful to capture the potential value of both growth and income when considering the attractiveness of the investment proposition. We said we must ensure we are being logically consistent in our assumptions regarding equity raising and equity distributions. Our working assumption in our SSMD was to maintain a 3% dividend yield base case (at the notional structure).

3.78 We stated we already carefully consider the financial strength and investment grade credit rating that an efficient company operating at the notional capital structure could be expected to achieve. We said we do not consider it in consumers' interests to be excessively rigid in the application of this process (such as guaranteeing that companies will always have metrics at or above a certain level).

3.79 We agreed that stability in the overall regulatory framework can be important to investors. However, we will always act of the basis of the evidence and will look to make changes and improvements that will help improve our ability to discharge our duties.

Additional risks in RIIO-3

3.80 We stated that in general terms, we would expect higher levels of risk exposure to be accompanied by an offsetting increase in expected returns (ie, a higher cost of equity). In assessing changes in risk, it is vital that we do so on a 'net' basis. In other words, we must assess the overall change in risk, including new or updated mitigations used throughout the price control package, to ensure that consumers are not funding more return than is required.

3.81 We also said we must carefully consider the type of risk being faced. A key assumption in the CAPM is that idiosyncratic risks can be diversified away by investors and only systematic (common) risks, such as exposure to the broader economy, require compensation in the form of return to investors.

3.82 We said we considered it most appropriate to address changes of risk 'at source'. Elsewhere in the regulatory package this involved considering issues such as Totex Incentive Mechanism (TIM) rates, and other mechanisms that allocate relative exposure to operational risks between investors and consumers, such as load-related re-opener mechanisms and the advanced procurement mechanism (APM) in ET.

3.83 Within the financial framework, we said we have looked to address potential changes in risk for RIIO-3 (relative to RIIO-2) in two ways. One is to consider including European gas and electricity companies in our comparator set when estimating an appropriate beta. In addition, we said we have acted to mitigate the perception of asset stranding risks in GD by accelerating depreciation - effectively increasing the speed at which investors recover previously invested funds and reducing upward pressure on average bills in the medium term. We considered this mitigation of perceived risk more suitable than pre-emptive increases to allowed returns on equity. Please refer to Chapter 8 Regulatory Depreciation for further details of our proposed depreciation approach for each sector.

Picking point estimates from the metric ranges

3.84 We stated that UKRN Guidance recommends that the RFR, TMR and (re-levered) equity beta assumptions should be combined using the CAPM to produce a cost of equity range, and that the mid-point of the range should be used as the point estimate for the CAPM cost of equity. We said we broadly agreed with this. However, we said that this recommendation best applies where CAPM metric ranges are broadly symmetrical. This is likely to apply to the TMR (we do not supply a range for the RFR) but not to beta. We said we retained the ability to weight individual or groups of beta comparators where this will lead to a more accurate estimate. As a result, the most accurate estimate may not be the same as the middle of the identified range.

3.85 We said we will use cross-checks to ensure that our CAPM-based estimate of the cost of equity is not materially insufficient nor excessive.

3.86 In relation to arguments in favour of more general 'aiming up' to help facilitate investment we said we agreed with UKRN Guidance that regulators should only deviate from the mid-point of the CAPM cost of equity range if there are strong reasons to do so. We see our Step-2 methodologies and our assessment of investability to be a more considered approach to ensuring our allowed return on equity is sufficient but not excessive.

Additional equity costs

3.87 We said we did not consider it appropriate to increase the equity issuance allowance in its current form. We said we were considering two potential approaches to setting the equity issuance allowance in RIIO-3. However, we said we expected to keep the equity issuance allowance at the 5% level currently used in RIIO-2.

3.88 The first option would be to leave the allowance at 5% and continue to apply this to implied equity injections under the notional capital structure.

3.89 The second option would be to create a new mechanism for assessing the equity issuance costs actually incurred by companies. This approach would be much more intensive but would help ensure that only costs efficiently incurred were compensated by consumers. This approach could take the form of an initial allowance and a 'claw back' mechanism, as currently applied to corporation tax allowances, or could involve a comprehensive ex post review.

3.90 We said we did not see a need to make specific allowances for large carry costs associated with equity issuance. We expect network companies to manage their treasury facilities efficiently to avoid such excess cash holdings over extended periods. We also noted that notional gearing is set at a lower level in ET versus gas sectors specifically to facilitate temporary increases in gearing to support investment - gearing which can subsequently be offset by equity injections to return to the notional level in a timely fashion.

Draft Determinations position and rationale

The use of cross-checks

3.91 We propose that we continue to use the cross-checks highlighted in our RIIO-3 SSMD decision. These are: MARs (Market-to-Asset-Ratios), OFTO (Offshore Transmission Owner) bid implied returns, Investment Managers' TMR forecasts and Infrastructure Funds' implied cost of equity. The outcome of these cross-checks is shown in the table below. These cross-checks demonstrate that our recommended cost of equity estimate range is within a sensible range and is sufficient to attract investors and allow companies to finance their activities. We recommend that we do not use other cross-checks recommended by the networks and their advisors. The rationale for these recommendations is given below.

Table 19: Summary evidence on cross-checks

Cross-check	**Cost of equity (CPIH-real)**
MAR-implied cost of equity	4.2%-6.2%
OFTO implied equity IRR	5.7%
Unadjusted investment managers' (TMR) cost of equity	5.9%
Unadjusted infrastructure fund implied equity IRR	8.5%

Cross-check	Cost of equity (CPIH-real)
Ofgem's recommended cost of equity estimate range	4.76%-6.96%
Ofgem's proposed cost of equity (55%/60% gearing)	5.64% / 6.04% (with March RFR)

Source: Ofgem analysis

3.92 We propose that we continue to reference the following cross-checks in our RIIO-3 cross-check process:

- A MAR cross-check on implied costs of equity.
- An OFTO implied returns cross-check.
- An unadjusted investment managers' implied cost of equity cross-check.
- An unadjusted infrastructure funds' implied cost of equity cross-check.

We consider each of these below.

3.93 In December 2024 Ofwat published its Final Determinations for the water sector price controls (PR24).[29] We agree with Ofwat's view that MAR analysis is better suited to providing an indicative range within which the likely required return lies rather than a precise calibration of a point estimate. Ofwat show a chart of the UK listed water sector MAR premia to regulated capital value (RCV). The September 2024 average MAR premium was 9% which Ofwat state is closely aligned with the long-run average for the sector of 10%. Ofwat ran a MAR analysis on the three UK-listed water companies, United Utilities, Severn Trent and Pennon. This analysis uses assumptions for RCV growth and Return on Regulated Equity (RoRE) outperformance projected to perpetuity, to infer a plausible cost of equity given the allowed return on equity. The indicative cost of equity range from this analysis, taking the midpoint for each of the three companies, ranged from 4.2% to 6.2% (CPIH-real).

3.94 In terms of transaction MARs, in 2024 several major transactions were announced that continue to show transactions being completed at premia to regulated asset bases. It is difficult to accept that large MAR premiums can be justified by assumptions other than higher than required returns or lengthy and consistent expected outperformance. In January 2024 Pennon Group plc announced the acquisition of Sutton and East Surrey (SES) Water. Pennon

[29] Ofwat PR24 Final Determinations, https://www.ofwat.gov.uk/regulated-companies/price-review/2024-price-review/final-determinations/

stated that the acquisition value equated to a premium to SES Water's RCV of approximately 6%. In July 2024 Macquarie Asset Management exercised its option to acquire the remaining 20 per cent equity interest in NGT held by National Grid. In August 2024 Iberdrola signed an agreement to acquire 88% of Electricity North West (ENWL). Analysis by UBS shows these acquisition values equated to premia of approximately 25% and 60% respectively to the regulated asset bases.

3.95 We propose that we continue to use an OFTO-based cross-check in RIIO-3 for the following reasons:

- We see the benefit in using evidence from competitive processes.
- OFTO projects have a comparable level of risk to networks.
- OFTO projects, like network investments, have long-term time horizons.

We accept that there are compromises with this (and all) cross-checks that means it must be used with caution. Our updated data for the latest OFTO bids (2022-2024) implies a cost of equity of 5.7% real.

3.96 We propose that we continue to use an unadjusted investment managers' implied cost of equity cross-check. We agree that the investment manager forecasts of TMR provide a cross-check more directly on our TMR assumption, but believe it can still bring value to the process of determining the cost of equity. We have collated forecasts of TMR from nine financial institutions. The average nominal TMR forecast of these is 8.0% and the average CPIH-real TMR forecast is 5.9%.

3.97 We propose that we continue to use an infrastructure fund implied cost of equity check. We have updated the data on nine infrastructure funds. The average implied equity IRR has risen to 10.7% (nominal) or 8.5% in CPIH-real terms. This reflects the fact that all the funds are now trading at discounts to their net asset values. As stated in our SSMD it is important that we make our cross-checks as useful and relevant as possible, but do not 'cherry pick' only those that provide a certain view for each control.

3.98 Frontier and Oxera, on behalf of the network companies, recommended other cross-checks for Ofgem to consider that test the adequacy of the Step 1 Cost of Equity. These included:

- the hybrid bond cross-check;
- the ARP-DRP relationship; and
- long-term profitability benchmarking.

We consider each of these below.

3.99 We propose that we do not use the hybrid bond cross-check against our CAPM-based cost of equity estimate. Our rationale is based on the accuracy of assessment of the 'equity-like' nature of hybrid bonds and the difficulty in consistently inferring specific required returns from debt pricing because of changing levels or inaccuracies when assessing debt and equity risk premia over time. Frontier argue that one of the equity-like characteristics of hybrid bonds is that they can be of very long tenor, covering multiple decades, making them similar to the perpetual nature of equity. However, Frontier has highlighted that in practice many hybrid bonds are designed to be called at the first call date. A call date refers to the date when an issuer can repay the bond for a predetermined call price before its maturity. Frontier's updated paper does not detail the tenors from issue date to call date for the hybrid bonds. In a previous paper Frontier focussed on six hybrid bonds with tenors from issue date to call date that ranged from 5.8 years to 12.3 years. We consider that these tenors make the hybrids less equity-like, and we question their utility in deriving an appropriate alternative estimate of the cost of equity. Frontier present data over time to support their view of consistency. The consistency shown in the paper is that the spread of hybrid bond yields over the relevant iBoxx utilities yield index has been positive over the last seven years. The spreads themselves have varied from just above 0.50% to nearly 3.0%. We consider that this variability makes it difficult to solve for the required returns on equity. However, Frontier inferred a real cost of equity of 6.6% from this cross-check which is above our proposed cost of equity estimate but within our range.

3.100 We propose that we do not use the ARP-DRP relationship as a cross-check for our CAPM-based cost of equity. Our rationale, as stated in our SSMD, is that while the exact calibration of any cross-check can be debated, our broader concern with any debt-based cross-check is that we do not consider that it can definitively prove or 'back solve' to a required return on equity. The assumption that real equity returns do not respond one-for-one with the RFR is a generally accepted UK regulatory principle.[30] This means that when interest rates rise the ARP is likely to fall. The relationship is unlikely to be constant as presented by Oxera. The CMA concluded that that they did not consider the ARP-DRP cross-check to provide superior insight into the correct cost of capital. They also noted

[30] UKRN Guidance for regulators on the methodology for setting the cost of capital (2023) - page 16-17,https://ukrn.org.uk/publications/ukrn-guidance-on-the-methodology-for-setting-the-cost-of-capital/

that the assumed inputs are not universally accepted.[31] Ofgem ran an updated ARP-DRP analysis that implied a minimum cost of equity similar to our proposed cost of equity.

3.101 We propose that we do not use long-term profitability benchmarking as a cross-check for our CAPM-based cost of equity. Frontier did not provide an updated analysis of their long-term profitability benchmarking. Frontier recognised our concerns with the limitations with this cross-check but felt it should not be dismissed as they point to similar issues with other cross-checks. Nonetheless we continue to see some of the non-regulated businesses and sectors contained in this cross-check as riskier than regulated utilities. We also see difficulties in comparing accounting metrics with regulatory return metrics. Finally, we see issues in controlling for the different levels of gearing used in the comparators.

3.102 The Frontier report further recommended several total market return cross-checks. These included:

- TMR Glider;
- Dividend Growth Model (DGM);
- 124-year long historic average; and
- survey evidence.

We consider each of these below.

3.103 We propose that we do not use the TMR Glider as a cross-check for our TMR estimate. Frontier's TMG Glider involves estimating a TMR using a dividend growth model then estimating a linear relationship between that TMR estimate and gilt yields. We have concerns with the dividend growth model. Not all companies pay dividends, so the model is only applicable to those that do. The dividend growth model also assumes perpetual dividend growth. However, a company's dividend might fluctuate or indeed be cut completely. Dividend growth models are also highly sensitive to assumptions about the future dividend growth rate which is uncertain and can lead to very different outcomes.

3.104 In line with our rationale on the TMR Gilder, which uses the same model, we propose that we do not use the dividend growth model as a cross-check for our TMR estimate.

[31] CMA Final Determination Volume 2A: Joined Grounds: Cost of Equity (2021) - paragraph 5.70, https://assets.publishing.service.gov.uk/media/617fe5468fa8f52980d93209/ELMA_Final_Determination_Vol_2A_publication.pdf

3.105 Frontier compare their dividend growth model analysis alongside the long-run historical average return as part of their TMR cross-check. For the long-run historical average return they use the same calculation as Ofgem uses in estimating the ex post TMR estimate.

3.106 Frontier recommend the use of the Fernandez TMR investor survey as a cross-check for our TMR estimate. We propose not to use this cross-check. We already utilise an investment manager implied cost of equity cross-check compiled from investment managers' firms. The Fernandez survey is conducted by an email sent to more than 14,000 email addresses of finance and economics professors, analysts and managers of companies. For the UK TMR estimate they received 82 responses. We have no detail about who these respondents are.

3.107 Citizens Advice use the MAR cross-check in conjunction with the recent Iberdrola acquisition of ENWL to argue for a cost of equity at the low end of our SSMD cost of equity estimate range. We believe the MAR model is more suited to traded MAR ratios rather than transaction MARs because of the difficulty in estimating the acquisition synergies arising from a transaction MAR. We do agree, however, that transaction MARs can nonetheless convey important information on cost of equity.

Additional tests of investability

3.108 Oxera, on behalf of both the ET operators and the GD networks, stated that attractive dividend yields were required to ensure that the companies remained investable. Oxera referred to historical dividend yield data from both the UK and European utility sectors to support its view that the allowed dividend yields should be higher and that gas network companies may require higher dividend yields than electricity network companies.

3.109 We see substantial value for investors in the anticipated growth in the RAV in ET and that growth will increase dividend potential in the future. Dividend growth, which will match RAV growth, could range between 14% and 30% on a compound annual growth basis over RIIO-3. We must be careful to capture the potential value of both growth and income when considering the attractiveness of the investment proposition. Our working assumption is to maintain the 3% dividend yield base case used in RIIO-2.

3.110 During RIIO-3 there may be downward pressure on gearing in the GD sector but with options still under consideration it would be premature to change the allowed notional company dividend yield at this stage. Our working assumption is to maintain the 3% of equity RAV as the base case assumption for the

dividend yield, that was used in RIIO-2. One proposal to consider would be the allowance of special dividends were gearing to reach a certain level. This could be symmetric with the assumption that the notional company raises equity if gearing deviates from its assumed level.

3.111 We received feedback from investors that the awarded returns on equity in the US electric utilities sector were significantly more attractive than the allowed returns available in the UK. We do not think US nominal returns in the region of 9% are significantly higher than the 7.7-8.2% cost of equity (nominal, assuming 2% inflation) we are proposing in RIIO-3. Additionally, US utilities do not always earn their awarded returns whereas GB energy network utilities have generally outperformed their allowed returns in recent price controls.

3.112 International comparisons between regulators are difficult to make for many reasons. For example, US awarded returns are based on the book value of equity whereas GB allowed returns are based on a regulatory asset base indexed to inflation. US utility regulation tends to be on an ex post basis whereas GB regulation is on an ex ante basis, this means there is greater risk for US utilities in recovering costs incurred. Equity investors in GB utilities are protected from inflation due to the indexation of the equity portion of the regulatory asset base whereas US utilities may need to recover unexpected inflationary costs via a supplementary rate case which the regulator may not grant. We also think, GB regulation has stronger performance-based incentives which means networks should, in principle, have greater opportunities to outperform than US networks.

Additional risks in RIIO-3

3.113 As stated in our SSMD, in general terms, we would expect higher levels of risk exposure to be accompanied by an offsetting increase in expected returns (ie a higher cost of equity).

3.114 Oxera, on behalf the GDNs, argue that either asset stranding risk be addressed within the regulatory regime, or an appropriate uplift should be applied to the allowed return. We consider that mitigation of perceived risk to the recovery of RAV via changes to the rate of depreciation is more suitable than pre-emptive increases to allowed returns on equity.

3.115 Oxera further argue that accelerated depreciation may not eliminate gas asset stranding risks altogether. As we state above, within the financial framework, we have looked to address increased risks by including five new companies in our comparator set, including three gas companies, when estimating an

appropriate beta. Companies will also be looking to repurpose gas assets and will likely see long-term value in these assets beyond 2050.

3.116 Oxera, on behalf of the ET operators, highlighted potential asymmetries within the regulatory package, particularly related to risks in the ASTI regime. We consider it appropriate to look to address changes of risk at the source of that risk. The regulatory package is designed to include mechanisms that allocate the relative exposure to operational risks between investors and consumers (eg our Return Adjustment Mechanism - see Chapter 9). Therefore, we do not consider it appropriate to address these risks through changing the allowed cost of equity.

3.117 As stated in our SSMD we must carefully consider the type of risk being faced. A key assumption in the CAPM used to estimate the cost of equity is that idiosyncratic or non-systematic risks can be diversified away by investors holding a diversified portfolio of holdings, and only systematic risks require compensation in the form of return to investors. Oxera argue that it is relevant to consider if there might be a systematic component to gas asset stranding risk.

3.118 Within the financial framework we are looking to address potential additional risks in RIIO-3 in two ways. Firstly, we propose to add European GD, GT and ET companies into our comparator set when estimating an appropriate beta. UKRN Guidance, from 2023, states that appropriate comparable companies are those that have similar exposure to systematic risks as the notional company. Including European energy network company comparators would increase our estimate of the beta to a higher level than RIIO-2. By incorporating a broader set of relevant data, this change should explicitly address the potential for a higher risk profile in RIIO-3 relative to RIIO-2.

3.119 In addition, we are acting to mitigate the perception of asset stranding risks in the GD sector by accelerating depreciation - effectively increasing the speed at which investors recover previously invested funds and reducing future upward pressure on average bills. In line with the view expressed by the CMA in the appeal of RIIO-2,[32] we consider accelerated depreciation to be a more appropriate solution to the risk of stranded assets than small pre-emptive increases to the allowed cost of equity.

[32] CMA Final Determination, Volume 2A: Joined Grounds: Cost of Equity (2021) - paragraph 5.869, https://assets.publishing.service.gov.uk/media/617fe5468fa8f52980d93209/ELMA_Final_Determination_Vol_2A_publication.pdf

3.120 We consider the changes to the beta comparators, our accelerated depreciation proposals and project incentives to be sufficient to reflect any changes to the risk profile of RIIO-3 relative to RIIO-2 and to be superior approaches relative to applying subjective uplifts to the allowed cost of equity.

3.121 Oxera argued that Ofgem should continue the flat WACC approach used in RIIO-2. Under the flat WACC approach, Ofgem assumed that the cost of capital for the gas and electricity sectors was identical at the 60% and 55% notional gearing assumption. Oxera's key arguments for the retention of the flat WACC approach are that it would improve the investability of the regime and that Ofgem should maintain the approach to maintain regulatory consistency. We are proposing not to apply the flat WACC approach for RIIO-3. We do not consider there is a strong enough theoretical basis to continue with the approach as not all sources of capital in the calculation are priced simultaneously. A further challenge to taking this approach in RIIO-3 is that the debt allowances for ET and gas sectors will be set separately. Finally, depending on how flat WACC is calculated, one can derive very different results which we believe challenges its application. This can be seen when using the different debt allowances, as proposed in RIIO-3. The 55% notional geared company has a higher semi-nominal debt and WACC allowance than the 60% notional geared company as it has a larger proportion of fixed rate debt. Using the flat WACC approach would result in a lower cost of equity for the 55% notional company. We believe regulatory consistency, whilst desirable, should not be the sole driver of regulatory judgement and therefore we have decided not to continue with the flat WACC approach.

Picking point estimates from the metric ranges

3.122 We agree with the UKRN guidance that the midpoint of the cost of equity range be used as the point estimate. However, this best applies when CAPM ranges are symmetrical. This is likely to apply to TMR (we do not supply a range for the RFR), but not to beta. For beta we retain the ability to weight individual or groups of beta comparators.

3.123 Oxera argue on behalf of both the GDNs and the ET operators that that Ofgem should aim up within its cost of equity range. UKRN Guidance recommendation 6 is that the mid-point of the range should be used as the point estimate for the CAPM cost of equity. UKRN recommendation 7 proposes that cross-checks may be used to sense check the CAPM derived point estimate. It further states that regulators should only deviate from the mid-point of the CAPM cost of equity range if there are strong reasons to do so. We currently view that the evidence

considered within our Step-2 methodologies to be a more considered approach to ensuring that our allowed return on equity is sufficient but not excessive. This evidence does not indicate that there are strong reasons to deviate from the mid-point of our CAPM cost of equity range.

3.124 We propose that we use the mid-point of our CAPM cost of equity as our point estimate.

Additional equity costs

3.125 The ET companies argue that the total cost of equity issuance is higher than the current 5% equity issuance allowance which we used in RIIO-ET2 and in our SSMD.

3.126 It is particularly important that we set an appropriate equity issuance allowance. Large projects in ET are likely to cause significant RAV growth over RIIO-3 and beyond, and so it is likely that transmission operators will need to raise equity to remain at appropriate levels of gearing.

3.127 Given a relative lack of historical data specific to equity issuance costs at the companies subject to RIIO-3, it is difficult to set an appropriate allowance ex ante that will provide sufficient compensation for efficient equity issuance costs in most scenarios whilst preventing consumers from over-compensating companies for costs that were ultimately not incurred.

3.128 As stated at our SSMD we must strive to prevent unintended consequences, such as an incentive to increase gearing via dividends from the licensee, whilst earning an additional allowance for assumed equity injections at the notional capital structure.

3.129 National Grid's 2010 and 2024 rights issues both had direct costs of ~3.0%. Indirect costs are more difficult to estimate because analysis will typically compare a share price at different dates after an issue with the share price before the issue as a proxy for what the counterfactual price on the later date might have been had the issue not occurred. There are many factors that can affect a share price, including expectations for future issuance, so ascribing what is related to a rights issue is difficult. This difficulty is highlighted by Oxera analysis estimating a wide range for indirect costs of 2.6% to 9.7%. The Oxera analysis also showed that the 25th percentile of UK regulated indirect costs ranged from 1.7% to 2.6% (2004-2024 data). In this context, a total allowance of 5% appears reasonable given the notional ET sector could be raising around £22bn of equity in RIIO-3 and receiving around £1.1bn in equity issuance cost allowances.

3.130 We do not currently consider it appropriate to increase the equity issuance allowance in its current form. We remain open to assessing it, if the option of creating a clawback or ex post cost assessment process would be in the consumer interest and would support more accurate compensation of efficient equity issuance costs.

Step 2 implied cost of equity at 55% / 60% notional gearing

3.131 In our view, Step-2 supports values at the midpoint of the CAPM ranges. We welcome views from stakeholders on this and therefore ask consultations question on this below.

Step 3 - Expected versus allowed returns

Background

3.132 In RIIO-2, Step 3 was an adjustment to account for anticipated outperformance resulting from network companies possessing an information advantage over the regulator. The adjustment was known as the 'outperformance wedge'. Under the appeal of the RIIO-2 price control, Ofgem's Step-3 process and the introduction of the 'outperformance wedge' was considered to be 'wrong' by the CMA and was subsequently removed from the RIIO-2 price controls. In its determination the CMA concluded that GEMA had not demonstrated sufficiently why the extensive set of RIIO-2 tools should be regarded as providing insufficient protection for customers.

3.133 In our SSMD we said we had not identified any SSMD decisions which would imply an asymmetric return. We would only expect to make such a 'Step 3' adjustment if future decisions in relation to the design of the price control led to an intentional and material skew in expected outcomes relative to allowed returns. We also said we would seek to avoid undermining the power of incentives if we consider that these will provide positive outcomes for consumers.

Draft Determinations position and rationale

3.134 As stated in our SSMD, in general terms, we would expect higher levels of risk to be accompanied by an offsetting increase in expected returns (ie a higher cost of equity).

3.135 In assessing changes in risk, it is vital that we do so on a 'net' basis. In other words, we must assess the overall change in risk, including new or updated mitigations used throughout the price control package. The presence of individual asymmetric risks within the package is not a reason to provide additional returns. It is the aggregated balance of the whole price control that

should influence the associated balancing of overall risk and reward. Our working assumption is that there is risk symmetry within the aggregate balance of the whole price control, and therefore a step-3 adjustment is not required at this stage.

3.136 Within the financial framework we are proposing using European utility companies in our comparator set when estimating an appropriate beta. This should mean that the net-zero driven risks that energy networks face, to the extent that they are systematic, should be better captured in our cost of equity assessment process.

Return on Regulated Equity (RoRE)

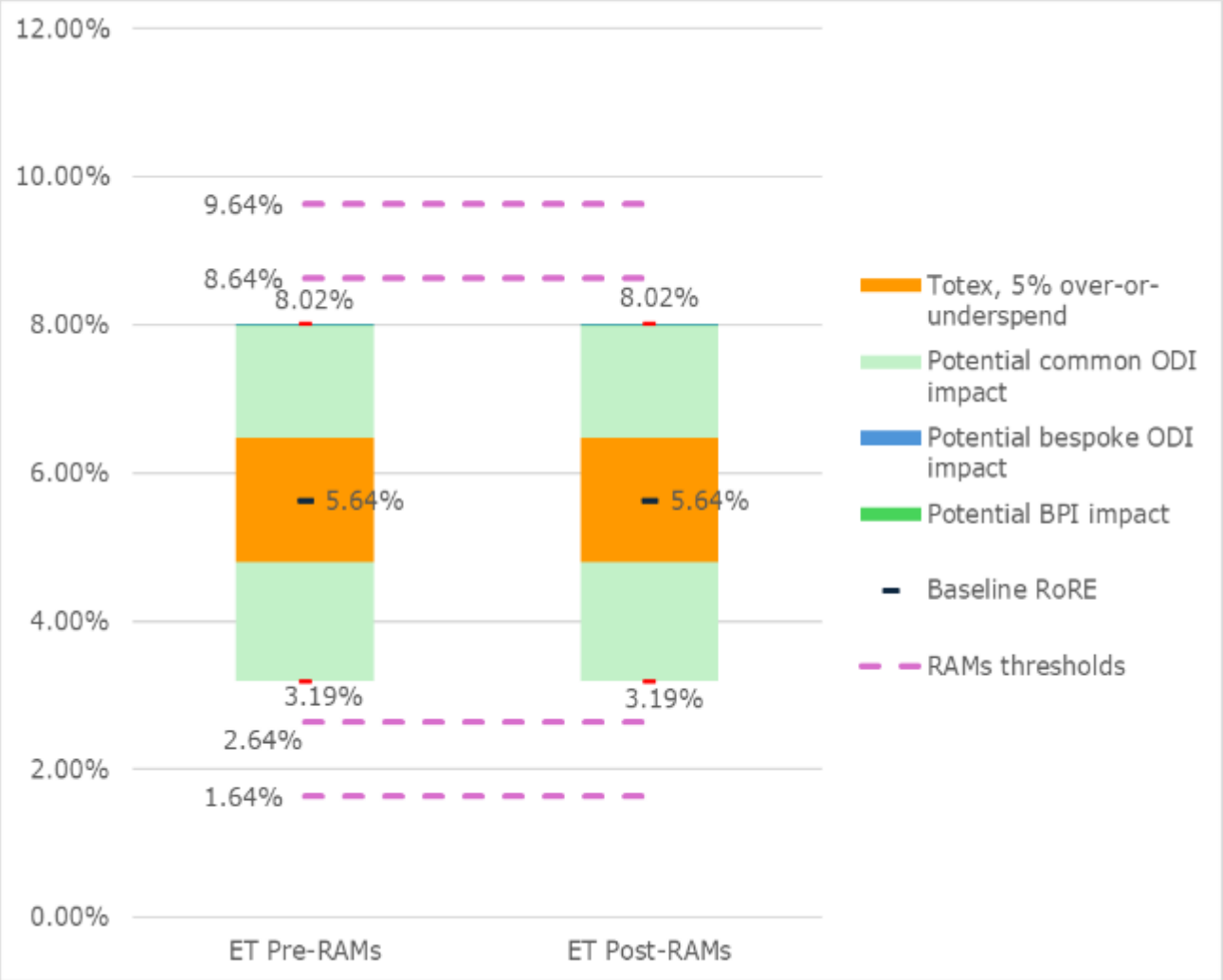
3.137 In this section we present our view on the package of incentives for RIIO-3.

3.138 The graph below shows ET Pre-RAM and ET Post-RAM RoRE ranges based on common ODI caps and collars and an illustrative 5% over/underspend on totex.

3.139 The graph shows the following key points:

- A base RoRE of 5.64%.
- When assuming the ODI cap is triggered and 5% totex underspend, a RoRE high of 8.02%.
- When assuming the ODI collar is triggered and 5% totex overspend, a RoRE low of 3.19%.
- The graph also shows the RAM thresholds: Secondary high 9.64%, Primary high 8.64%, Primary low 2.64% and Secondary low 1.64%.
- As the RAM thresholds are not triggered the RoRE ranges pre-RAMs and post-RAMs are identical.

Figure 1: RIIO-3 ET3 average RoRE ranges

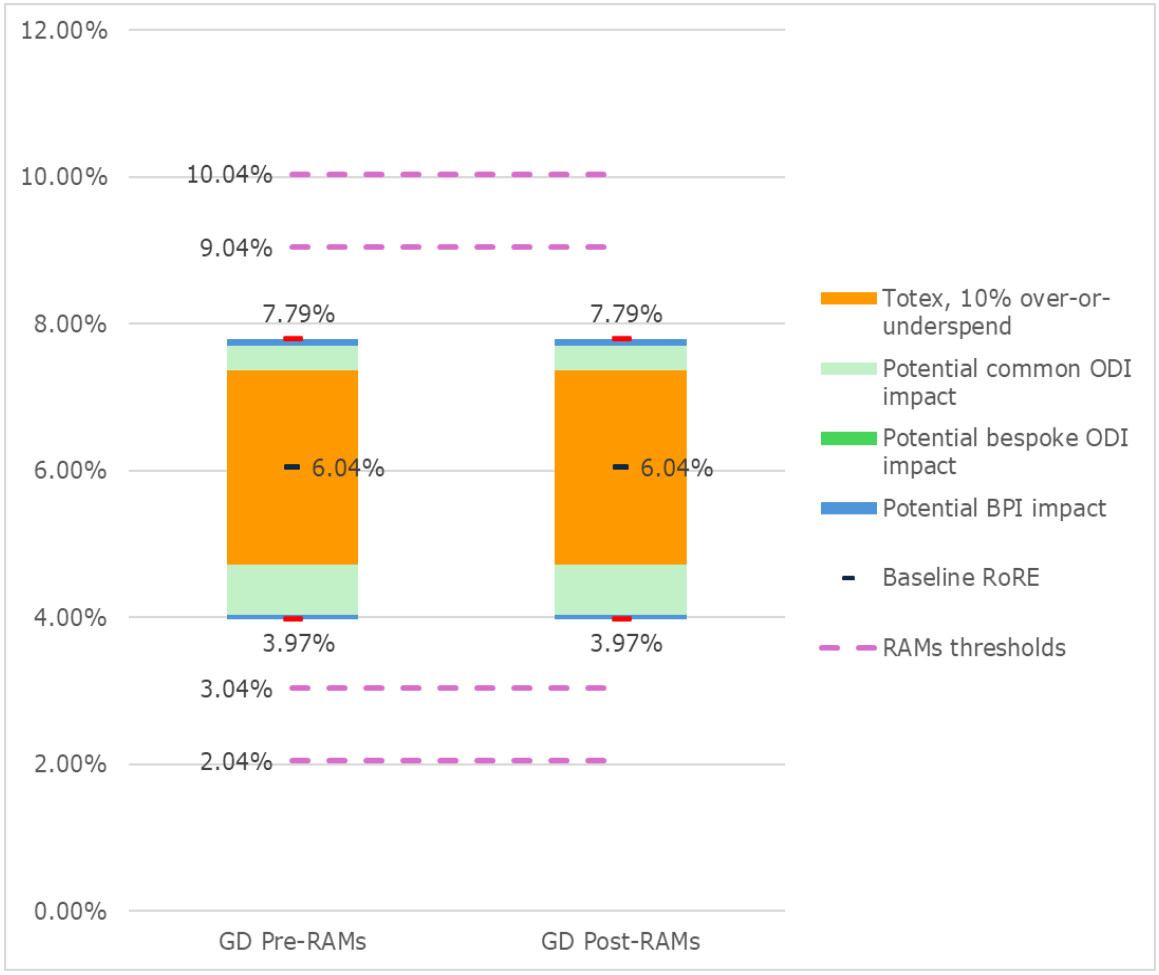


3.140 The graph below shows the GD Pre-RAM and GD Post-RAM RoRE ranges based on common ODI caps and collars and an illustrative 10% over/underspend on totex.

3.141 The graph shows the following points:

- A base RoRE of 6.04%.
- When assuming the ODI cap is triggered and 10% totex underspend, a RoRE high of 7.79%.
- When assuming the ODI collar is triggered and 10% totex overspend, a RoRE low of 3.97%.
- The graph also shows the RAM thresholds: Secondary high 10.04%, Primary high 9.04%, Primary low 3.04% and Secondary low 2.04%.
- As the RAM thresholds are not triggered the RoRE ranges pre-RAMs and post-RAMs are identical.

Figure 2: RIIO GD3 average RoRE ranges

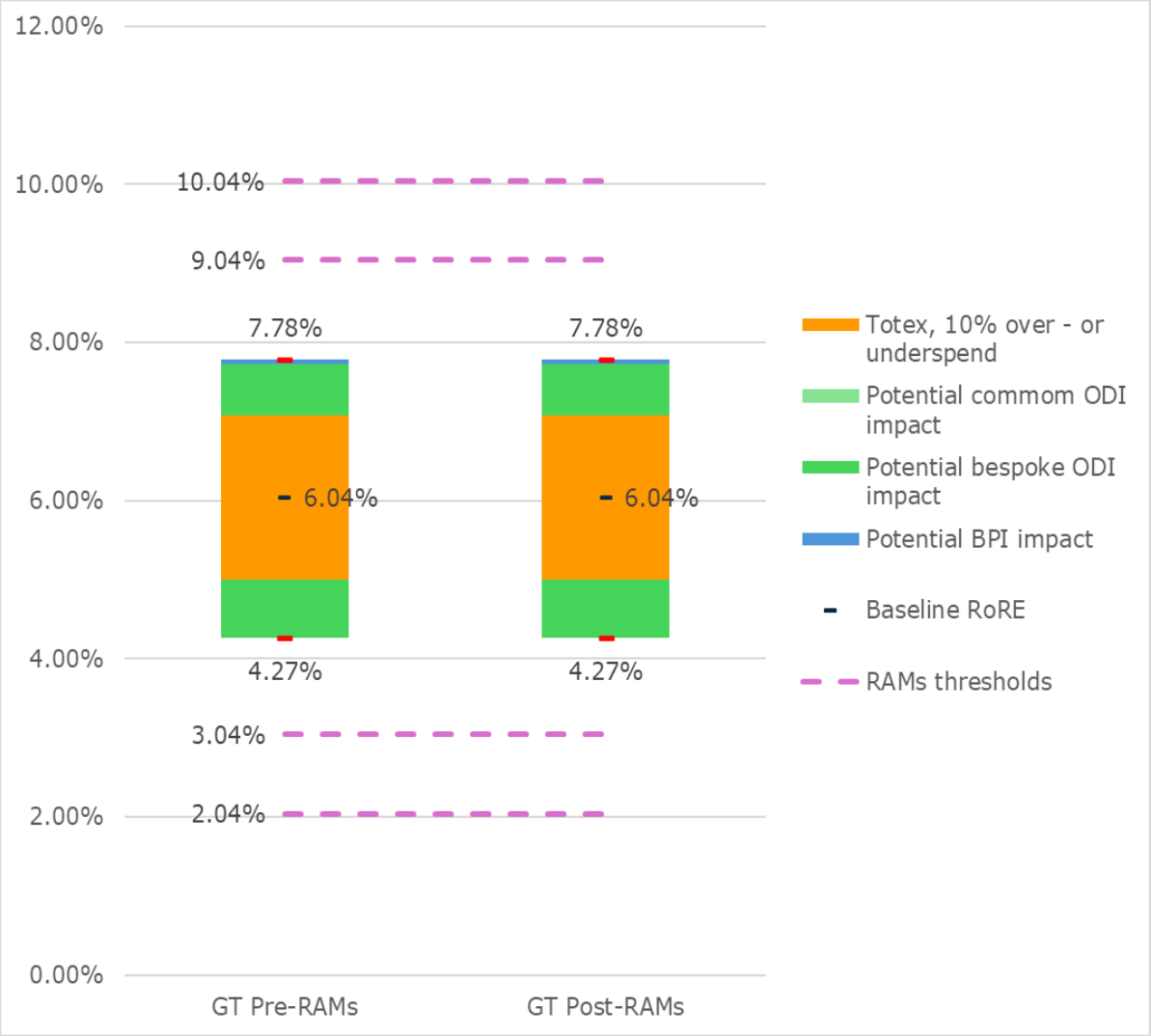


3.142 The graph below shows the GT Pre-RAM and GD Post-RAM RoRE ranges based on common ODI caps and collars and an illustrative 10% over/underspend on totex.

3.143 The graph shows the following points:

- A base RoRE of 6.04%.
- When assuming the ODI cap is triggered and 10% totex underspend, a RoRE high of 7.78%.
- When assuming the ODI collar is triggered and 10% totex overspend, a RoRE low of 4.27%.
- The graph also shows the RAM thresholds: Secondary high 10.04%, Primary high 9.04%, Primary low 3.04% and Secondary low 2.04%.
- As the RAM thresholds are not triggered the RoRE ranges pre-RAMs and post-RAMs are identical.

Figure 32: RIIO GT3 average RoRE ranges



3.144 We consider that our RIIO-3 price control package offers a reasonable balance between scope for outperformance for high performing companies and underperformance for those companies that fall short.

3.145 We also highlight that there is a difference between possible outcomes and probable outcomes. It would be incorrect to assume that the largest downside shown in any RoRE chart has precisely the same probability as the largest upside.

Consultation questions on RFR

FQ7. Do you agree with our methodology for calculating the RFR?

FQ8. Do you agree with our methodology for calculating the inflation wedge?

Consultation questions on TMR

FQ9. Do you agree with our methodology change in calculating the ex ante TMR?

Consultation questions on Beta

FQ10. Do you agree with our methodology for estimating beta?

FQ11. Do you agree with our proposed set of comparators which also incorporates selected European utility stocks?

Consultation questions on Step-2

FQ12. Do you agree with the conclusions we have drawn from our chosen cross-checks?

FQ13. Do you agree with our treatment of risks to the ET and Gas sectors as non-systematic?

FQ14. Do you agree with our proposed dividend allowance policies for the notional gas and electricity companies?

FQ15. Do you agree with our proposal not to apply the flat WACC approach?

FQ16. Do you agree that our proposed package for gas and electricity companies is investable?

Consultation questions on expected versus allowed returns

FQ17. Do you agree with our working assumption that there is risk symmetry within the aggregate balance of the whole price control?

4. WACC allowance

Purpose: The WACC allowance remunerates debt and equity investors for their investment in network services.

Benefits: Accurate remuneration will secure network investment during RIIO-3 and keep consumer charges in line with efficient costs.

Draft Determinations position

4.1 Our current view on the baseline allowed return on capital during RIIO-3 is summarised in table 20, and reflects the combined proposals made in other chapters: debt, equity and financeability.

4.2 As discussed in Additional Risks in RIIO-3 above we propose not to take a flat WACC approach. See paragraph 3.121

Table 20: Draft Determinations on the baseline allowed return on capital (average for the five years ending 31st March 2031, CPIH real)

Component	GD&GT3	NGET	SPT	SHET
Notional Gearing	60%	55%	55%	55%
Cost of equity allowance (real)	6.04%	5.64%	5.64%	5.64%
Cost of debt allowance (semi-nominal)	4.45%	5.43%	5.65%	5.81%
WACC allowance (semi-nominal)	5.09%	5.52%	5.64%	5.73%
WACC allowance (real)	4.22%	4.49%	4.61%	4.70%
WACC allowance (nominal)	6.31%	6.60%	6.71%	6.82%

Source: Ofgem analysis (values may not sum due to rounding)

4.3 In RIIO-3 the approach to the allowed return on debt is foundationally similar to RIIO-2. However, there are some proposed methodological changes, as set out in chapter 2. These include a benchmark change for the new debt assumption, a reduction in the ILD assumption for ET, a benchmark adjustment for the new debt cost assumption for Gas and a reduction in additional borrowing allowances for ET.

4.4 In the table above we show the WACC allowances for the gas sector and for each of the ET companies.

4.5 The semi-nominal WACC allowance is calculated using the real cost of equity allowance and the semi-nominal cost of debt allowance. The semi-nominal cost

of debt allowance is calculated using the proportions of ILD and fixed rate debt for each sector. The ILD proportion for gas is 30% and for ET companies is 10%. The semi-nominal WACC is used to calculate the cash part of the return that investors receive. However, this does not include the effect of inflation indexation to the RAV, which also contributes to the total returns investors earn. The real WACC allowance is calculated using the real cost of equity allowance and a real cost of debt allowance on a like-for-like basis with RIIO-2. This allows comparability between RIIO-3 and RIIO-2.

4.6 The nominal WACC allowance is calculated using a nominal cost of equity and a nominal cost of debt. This shows the total return to investors considering both the cash component and the inflation indexation of RAV.

4.7 The inflation assumption used throughout the calculations is the Bank of England long-term assumption of 2.0%.

4.8 In line with UKRN guidance we set notional gearing to reflect our assessment of the balance of risks facing the regulated company and a range of relevant evidence not just the gearing levels of the actual companies. We propose notional gearing levels in RIIO-3 to remain consistent with those used in RIIO-2. These gearing assumptions are 55% for ET and 60% for the gas sectors. We propose the notional capital structure remains constant in each year of the price control. Notional gearing is set lower at a lower level in ET versus gas sectors specifically to facilitate temporary increases in gearing to support investment, gearing which can be offset by equity injections to return to notional level in a timely fashion.

5. Debt Financeability

Purpose: Checking that all components of our Draft Determinations, when taken together, allow an efficient operator assuming the notional capital structure to generate cashflows sufficient to meet its debt financing needs.

Benefits: Enabling continued investment in networks, facilitating stable and efficient energy supply systems that deliver long-term benefits and cost-effectiveness for consumers.

Background

5.1 GEMA is required to have regard to the need to secure that network companies are able to finance the activities which are the subject of obligations imposed by or under a range of legislation.[33] The assessments we perform to discharge this duty are often referred to as assessments of 'financeability'.

5.2 In our SSMD, we confirmed that we assess the financeability of energy networks on the basis of an efficient licensee adopting the notional capital structure. This is to ensure that consumers are protected from risk associated with actual financing decisions that licensees and their shareholders have made. Consistent with previous price controls, we consider it appropriate that the risks and rewards arising from financing decisions reside with investors.

5.3 We use a debt financeability assessment at the last stage of the process to ensure that, when all the individual components of our determination are taken together (including totex, allowed return, notional gearing, depreciation and capitalisation), an efficient operator adopting the notional capital structure can generate cashflows sufficient to meet its debt financing needs. Equity financeability is considered in Chapter 3, which is also termed "Investability".

5.4 As discussed in Chapters 2 and 3 above, we have updated the assumptions for equity and debt based on further work since Business Plan submission and changes in macro-economic factors such as interest rates and inflation forecasts.

5.5 Our Business Plan guidance required companies to submit a financeability assessment in their Business Plans, accompanied by Board assurance that either the plan is financeable on both the notional and actual capital structure bases or

[33] Ofgem's principal statutory objective is to protect the interests of existing and future gas and electricity consumers. Ofgem also has a range of secondary duties including its duty to have regard to the need to secure that licence holders are able to finance the activities which are the subject of obligations imposed on them (See section 3A(2)(b) of the Electricity Act 1989 and section 4AA(2)(b) of the Gas Act 1986).

that the Board has considered all applicable mitigating measures to improve financeability. The Business Plan guidance also required companies to provide an explanation of their target credit rating supported with evidence of the financial metrics on both a notional and an actual basis. We use this information to inform both our assessment of company Business Plans and also to inform our own financeability assessment.

5.6 In their Business Plan submissions, networks expressed some concerns over either the Ofgem working assumption inputs or the outputs of their financeability assessments.

Draft Determinations position

Table 21: Financeability parameters

Financeability parameter	**Draft Determination position**
Notional Gearing Assumption	ET: Notional gearing of 55% for the ET networks. Gas: Notional gearing of 60% for the Gas networks.
Financeability Check	ET: We consider all ET licensees are financeable on a notional capital structure basis, taking account of cost and incentive allowances, cost recovery and allowed returns if following adjustment applies: • Capitalisation rate adjustment - reducing capitalisation rates for bucket two from natural to 85%. Gas: We consider all GD and GT licensees are financeable on a notional capital structure basis, taking account of cost and incentive allowances, cost recovery and allowed returns.

5.7 We consider that the baseline credit quality of an efficient Gas licensee adopting the notional capital structure is, in the round, generally stronger than BBB+/Baa1, which was the target rating most commonly proposed by Gas networks.

5.8 With respect to ET, we have proposed reducing the capitalisation rate for bucket two totex spend from a natural average rate of 100% to 85% for all licensees to support financeability (see paragraph 11.3 for details of capitalisation buckets). Following this adjustment, we consider that the baseline credit quality of an efficient ET licensee adopting the notional capital structure is, in the round, generally consistent with Baa1/BBB+, which was the target rating proposed by all ET networks.

Rationale for Draft Determinations position

5.9 In our SSMD, we said that we will proceed with the proposal to incorporate long form modelling into the financeability assessment. We also noted that we were in the process of evaluating two approaches, economic form modelling (which was utilised in the ED2 price control)[34] or an extended form of the price control financial model (PCFM).

5.10 We agreed that the extended modelling could provide useful insight to consider how RIIO-3 policies would be expected to impact long-term debt servicing, however due to its limitations, we said we may consider using extended modelling as a cross-check to our primary methods. We noted that we would engage further with stakeholders on this matter and that we would discuss our decisions on these options in more detail at DDs.

5.11 We decided to retain the in-the-round assessment that targets each licensee, adopting the notional capital structure and assuming efficient performance, broadly achieving comfortable investment grade credit quality. We stated we would continue to use the Moody's methodology scorecard to create implied ratings, as this is the most transparent and therefore replicable methodology of the three rating agencies that we currently rely upon but stated we would seek to model and analyse key credit ratios utilised by S&P and Fitch as this aligns to our in-the-round approach to assessing financeability which is not reliant on a single credit rating agency methodology.

5.12 We also stated that in our modelling of credit ratios we will substitute the assumption that debt costs align to the allowed return on debt with forecast average efficient debt costs utilised in the calibration exercise. This ensures accurate assessment of network companies' ability to fund efficient debt costs at the notional capital structure. Although this adjustment was not formally incorporated into the modelling for the draft determinations, we note that the RIIO-2 approach represents a more conservative assumption. We still intend to include this adjustment in the modelling used for the final determination.

5.13 In our SSMD we also stated that it is appropriate to retain the option of revenue advancement options, such as adjusting capitalisation or depreciation rates, to address financeability challenges.

[34] ED2 FD Finance Annex Document, paragraphs 5.60-5.63, https://www.ofgem.gov.uk/decision/riio-ed2-final-determinations

Target Credit Rating

5.14 In our SSMD, we noted that there may be circumstances where the consumer costs of making adjustments to achieve a Baa1/BBB+ credit rating could outweigh the potential costs of temporarily accepting a slightly lower rating. However, for our Draft Determination, we have concluded that there is a strong consumer interest and evidence base in RIIO-3 to target credit quality consistent, in-the-round, with at least a Baa1/BBB+rating. Our rationale is based on the following points:

- Scale of investment and financing needs: The RIIO-3 period will require significant investment and corresponding new debt capital for ET. Evidence submitted by companies indicates that a Baa1 rating enhances access to market capacity, at lower cost, supporting the efficient management of these financing requirements, compared to lower credit ratings;
- Capitalisation rate adjustment: Adjustments to the capitalisation rate aimed at achieving an overall Baa1/BBB+ rating constitute a NPV neutral cost for consumers over time; and
- Financial resilience: A Baa1/BBB+ credit rating provides good financial headroom to absorb adverse shocks. A stronger credit profile also supports long-term stability and confidence in the sector, which is particularly important given the scale and strategic importance of the RIIO-3 investment programme.

5.15 To support our financeability assessment, we consider the key methodologies used by credit rating agencies, along with other relevant information that informs credit opinions. This includes any changes to methodologies or views that arise in response to regulatory policy developments or structural trends within the sector. We will continue to engage with credit rating agencies throughout the RIIO-3 consultation process.

5.16 It is important to note that rating agencies, lenders and market participants do not always agree on the credit quality of a given entity and that this assessment involves some degree of judgement.

5.17 Credit rating agencies may also differ in how they treat specific policy actions. For example, there can be variation in the treatment of revenue-advancing measures such as changes to capitalisation or depreciation rates, as well as in their approach to inflation treatment in the allowed return on debt.

5.18 Given these differences, we do not consider it appropriate to rely solely on the interpretation of a single agency in relation to the target rating. Instead, we

propose to maintain our in-the-round approach utilised in RIIO-2 that reflects a balanced view across methodologies.

5.19 In relation to target credit rating all RIIO-3 network companies argue for BBB+ target rating. We consider that the baseline credit quality of an efficient licensee adopting the notional capital structure is, in the round, generally consistent with Baa1/BBB+ or better.

5.20 NGET supports its view by stating that BBB+ rating ensures strong access to capital and low costs for consumers. NGET also states that BBB+ rating is consistent with the index selected, ensures financial resilience at a time of heightened investment and sends a positive signal to investors on the intent to maintain creditworthiness. NGET also argues that equity is subordinated to debt, so if the likelihood of recovering debt is reduced, it further increases risk and discourages future equity investment.

5.21 SGN states that a downgrade to Baa2/BBB would cost 26-71bps based on analysis of constituents of the iBoxx indices.

5.22 WWU adds some arguments supporting BBB+ mentioning lower cost of debt, lower risk of migration to sub IG, better access to capital, greater financial resilience, support of new debt requirements and regulatory consistency in the UK.

5.23 NGN argues this is financially prudent, consistent with debt methodology and aligned to NGN's credit rating.

5.24 NGT states that it has the ability to absorb shocks and is consistent with most company's actual ratings.

5.25 Cadent and SPT argue that a Baa1/BBB+ provides headroom to manage risks and shocks, is in line with long-term investor preference and that the benchmark Ofgem utilises aligns to a solid investment grade rating.

5.26 Cadent notes that the financeability assessment is in part a test of whether the notional company can achieve the cost of debt outlined in the allowance.

5.27 Cadent highlighted that rating agency methodologies or guidance may change. As explained in paragraph 5.15, we will consider rating agency methodology or guidance changes to the extent these occur prior to the final determination in line with our in-the-round approach to financeability.

Moody's scorecard

5.28 In our SSMD, we said we will continue to use the Moody's methodology scorecard to create implied ratings as this is the most transparent and therefore

replicable methodology of the three rating agencies that we currently rely upon. We also stated that we will seek to model and analyse key credit ratios utilised by S&P and Fitch.

5.29 Moody's scorecard uses several inputs to calculate a score and simulated rating. Each input is assigned a weight in determination of the score.

5.30 For RIIO-3, we consider there is a greater amount of uncertainty associated with the scorecard assessment considering both sectoral trends and regulatory changes. These could include rating agency reviews of their respective guidance. We consider that our assessment and recommended actions form a conservative interpretation of how external stakeholders may consider these developments in the context of debt financeability. We may refine our approach to the assessment in Final Determinations including considering new evidence that arises such as credit rating agency guidance changes.

5.31 In RIIO-3, the key constraint for ET is the complexity of the capital programme. This input is designed to reflect the deliverability and financing challenges associated with the capital programme. Moody's increase the weighting for lower scores in the scorecard because they consider a serious weakness in one area often cannot be completely offset by strength in another. The low scoring capital programme input therefore has a disproportionate impact to due to the overweighting.

5.32 Moody's guidance for complexity of the capital programme is based on the average annual Capex to RAV ratio over the price control. A ratio which exceeds 30% attracts Caa (the weakest score), 20-30% would achieve a B input and 12-20% Ba.

5.33 Rating agencies use judgement in their rating opinions and do not always strictly apply the guidance they set. We believe that the regulatory package mitigates deliverability and financing risks from such a large programme to a sufficient extent. These include:

- Fair and competitive equity return and equity issuance allowances;
- The introduction of the Advanced Procurement Mechanism (APM) which supports TOs in mitigating the risk of supply chain causing delays to their projects; and
- Significant adjustments to the Totex Incentive Mechanism rates (relative to all previous RIIO price controls) which reduce the scope for underperformance due to overspend of capital allowances, even with allowances increasing.

5.34 We have therefore proposed a floor of B for that input (the 2nd lowest) which we consider still reflects a conservative yet pragmatic adjustment of the potential impact of the scale of the capital programme on the credit profile of the company while acknowledging the strong and comprehensive regulatory mitigations which we have proposed. Although we believe the regulatory package significantly reduces the risks associated with delivering such a large investment programme, and that debt investors may, in-the-round, view the programme as less of a credit concern than the mechanistic scorecard suggests, we recognise there remains a degree of uncertainty. Given the scale, value, and strategic importance of the RIIO-3 investment for consumers, we consider a cautious approach to be justified.

5.35 NGN disagreed with the score inputs selected for the qualitative factors in the scorecard utilised in our assessment. However, we consider that the qualitative scores are appropriately specified for such an efficient company adopting the notional capital structure.

Capitalisation Rate Adjustment

5.36 In the RIIO-3 SSMD Finance Annex[35] we stated that it was appropriate to retain the option of revenue advancement options, such as adjusting capitalisation or depreciation rates, to address financeability challenges.

5.37 Our financeability assessment for ET indicated that, without intervention, baseline credit quality of an efficient ET licensee adopting the notional capital structure, in the round, may not be consistent with a Baa1/BBB+ rating. This is primarily due to the scale and complexity of the capital investment programme, which significantly impacts the simulated rating outcome.

5.38 To address this, we propose adjusting the capitalisation rate for bucket two Totex from a natural average of c.100% to 85%.

5.39 We propose reducing the capitalisation rate for bucket 2 Totex for the following reasons:

- Capital Requirements: Given the scale of the capital programme in RIIO-3, significant debt and equity capital is required to fund this investment. Reducing the capitalisation rates reduces the required capital by increasing the proportion of investment that is directly funded by consumers in period.
- Financial ratios: Adjusting capitalisation rates directly improves the financial ratios relevant to rating agencies' assessments. It is one of the few levers

[35] Ofgem (2024), paragraph 5.41, RIIO-3 SSMD Finance Annex,

that can significantly improve the FFO/Net Debt and RCF/Net Debt metrics without undermining other aspects of the financial package.

- Consumer Cost Neutrality Over Time: This measure is at worst[36] NPV-neutral - it increases consumer bills in the short term by accelerating revenue, but this is offset by lower bills in the long-term due to a reduced RAV. Additionally, reduced equity requirements result in a corresponding lower equity issuance cost allowance of approximately £200m[37] provided by consumers, representing an absolute cost bill saving. In contrast to non-NPV neutral options such as aiming up the cost of equity, this approach avoids imposing a permanent cost on consumers.
- Support for Timely Network Investment: As noted in paragraph 5.34, while we consider our assumptions regarding the credit impact of the capital programme to be conservative given the strength of the regulatory mitigations in place, we believe a cautious approach is warranted. Ensuring financeability through this adjustment helps to secure the timely delivery of critical network investment, which is critical to the consumer interest.

5.40 In summary, we consider adjusting capitalisation rates offers a balanced, proportionate, and cost-effective means of ensuring that ET licensees remain financeable under the RIIO-3 framework, while supporting the delivery of critical infrastructure investment and maintaining consumer value.

5.41 We anticipate that the level of capital spend to RAV for all ET companies should decline from RIIO-ET4 onwards, due to the increased RAV. As a result, the capital programme is expected to have a reduced influence on the simulated scorecard outcomes in future.

5.42 SSEN proposed a capitalisation rate of no higher than 80%. We consider that the adjustment to the bucket two capitalisation rate achieves a broadly similar effect to SSEN's proposal.

5.43 SPT proposed NPV neutral adjustments through a combination of asset lives, capitalisation rates and a change to the index linked debt assumption. We have adjusted the capitalisation rates and index linked debt assumption. As stated in paragraph 5.74, our long run analysis does not currently suggest a change to the asset life assumption is required.

[36] Assuming the discount rate is equivalent to the WACC. If a lower discount rate is assumed such as the Green Book discount rate, known as the Social Time Preference Rate (STPR), for use in UK government appraisal (3.5% real), the change is NPV positive for consumers. The Green Book (2022) - GOV.UK - A6 Discounting

[37] Real 2023/24 prices

5.44 SSEN proposed that the notional gearing assumption is increased from 55% to 60%. We do not consider it is appropriate to increase the notional gearing assumption given the financeability constraints identified.

5.45 NGET proposes capitalisation rates are adjusted by 6% for uncertainty mechanism spend and the acceleration of the RAV differential over 10 years from the start of T3. We consider our proposal achieves a broadly consistent effect.

Financeability assessment

Approach

5.46 In our analysis we have considered:

- financial projections from our financial model(s);
- the implied Moody's methodology rating (as this is the most transparent and therefore replicable methodology of the three rating agencies that we currently rely upon);
- the strength of quantitative metrics for credit quality, particularly those emphasised by credit rating agencies or that are under pressure;
- the strength of other metrics and qualitative factors; and
- stress testing results.

5.47 Strict application of thresholds for individual metrics can result in the modelled credit ratings being highly sensitive to very small variations. Applying mechanistic changes to the price control on the basis of such sensitivity may risk undermining the stability of our regulatory decision-making, particularly as other considerations are relevant beyond the impact on credit ratings. Credit rating agencies also apply differing methodologies and judgement in their interpretation of specific metrics. Accordingly, we continue to believe our financeability testing should take an in-the-round assessment, rather than applying strict threshold levels to particular credit metrics that must be met in all circumstances.

5.48 Alongside these totex scenarios, we have used the following starting assumptions in our baseline case and higher case scenario modelling:

- The allowed return (WACC allowance) as set out in Chapter 4.
- In the base case totex allowances are assumed to be exactly matched by forecast totex expenditure, so there is no Totex Incentive Mechanism adjustment applied (including for UMs).

- We have used differing higher totex scenarios for ET (5%) and Gas (10%). This is to acknowledge the fact that despite the lower percentage, the absolute monetary impact of a 5% sensitivity for ET remains significantly greater than a 10% sensitivity for Gas, due to the substantially higher expected totex for the average electricity TO in RIIO-3 compared to the average Gas licensee.
- Net debt is reset to the notional gearing assumption at the start of RIIO-3, with any opening de-gearing assumed to be achieved by an equity injection (with an equity issuance allowance paid and used).
- Debt costs are assumed to equal the allowances set out in Chapter 2.
- Index Linked Debt assumptions are set out to the proposed assumption in Chapter 2.
- Tax allowances are equal to tax costs, as calculated using the business plan financial model (BPFM).
- Opening RAV values to be based on totex forecasts for RIIO-2 as provided in licensees' Business Plan Data Template submissions, and inclusive of any known logged-up adjustments.
- Lagged revenue impacts arising from RIIO-2 are excluded (eg inflation true-up, cost pass-through adjustments, output incentive revenue and over / under collection of revenue).
- Depreciation rates are based on our decisions set out in Chapter 8.
- Capitalisation rates are based on our decisions set out in Chapter 11 including the proposed ET adjustment of the bucket two cap rate to 85%.
- Notional dividend yield assumed at 3% of regulatory equity.
- Equity issuance transaction costs of 5% of any amount forecast to be issued.

5.49 In our modelling, we also include equity injections or special distributions where the modelled level of gearing exceeds or falls below a pre-defined level, namely five percentage points from notional gearing assumption. The equity injection or special dividend returns the notional licensee to the level of notional gearing. In our modelling, efficient ET companies, adopting the notional capital structure, are anticipated to frequently issue equity through the RIIO-3 period.

5.50 We consider that these modelling assumptions are consistent with the behaviour of an efficient operator, ensuring that rapid growth in gearing does not create financeability challenges. We do not consider the assumed equity injections in our modelling are an issue for our conclusions on financeability. Our allowed

return on equity is consistent with the opportunity cost of these equity injection requirements (including associated transaction costs), and so they are NPV neutral in their impact. As a result, we also do not consider it problematic for the conclusions of our debt financeability assessment that during a period of high RAV growth in the ET sector equity holders, on a notional efficient basis, are modelled to be subject to negative cash flows (ie a negative net dividend yield after the modelled equity injections) for the duration of the price control to manage the level of gearing during a period of RAV growth.

5.51 All ET companies proposed a change to the approach of modelled equity injections. Whereas previously equity injections were modelled to align gearing at the beginning of the year to the notional assumption, ET companies proposed aligning gearing at the end of each regulatory year. We have adopted this approach in our modelling considering it better reflects typical market practice.

5.52 SSEN proposed the equity issuance threshold is lowered to 0% from 5%. However, we do not consider this proposal to be consistent with the practices of an efficient operator or with standard market norms. Issuing small amounts of equity typically incurs disproportionate costs relative to the benefits.

5.53 NGET does not consider a further reduction in the notional dividend assumption or gearing assumption supports investability. SPT states that that investors prefer dividends and external studies suggest across Europe these are consistently above 3%. We have not proposed a change to the dividend assumption as further discussed in paragraph 3.109.

Calibration of stress scenarios

5.54 We have carried out scenario analysis for each licensee, on a notional basis, reflecting our DD package and in particular the range of RoRE outcomes based on company performance. RoRE analysis allows us to stress test notional businesses by examining a reasonable range of returns to which networks may be exposed, Figure the figures below illustrate the potential range of returns based on common ODI caps and collars and an illustrative 10% over/underspend on totex.

Figure 4: RIIO GD3 average RoRE ranges

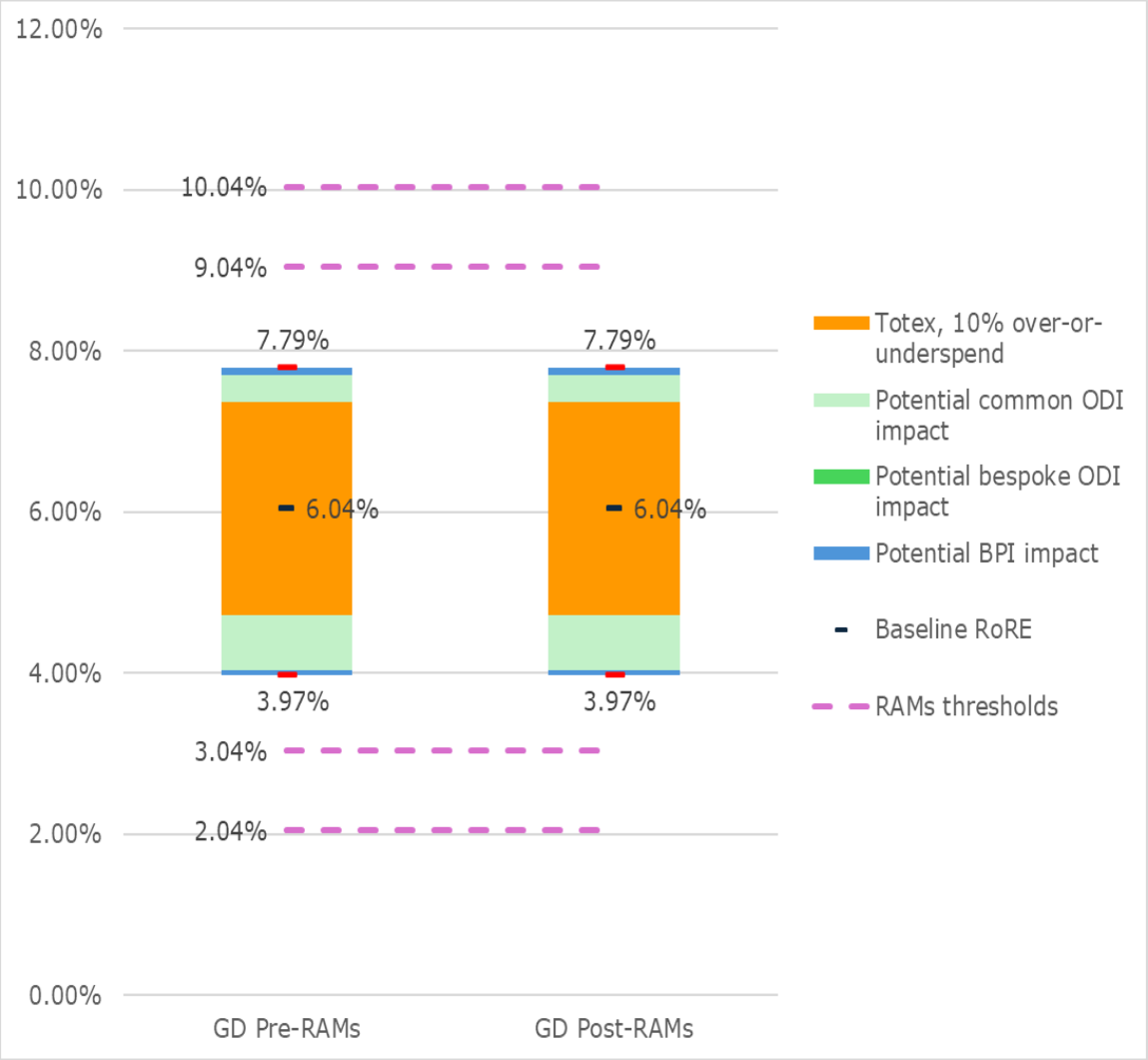


Figure 53: RIIO GT3 average RoRE ranges

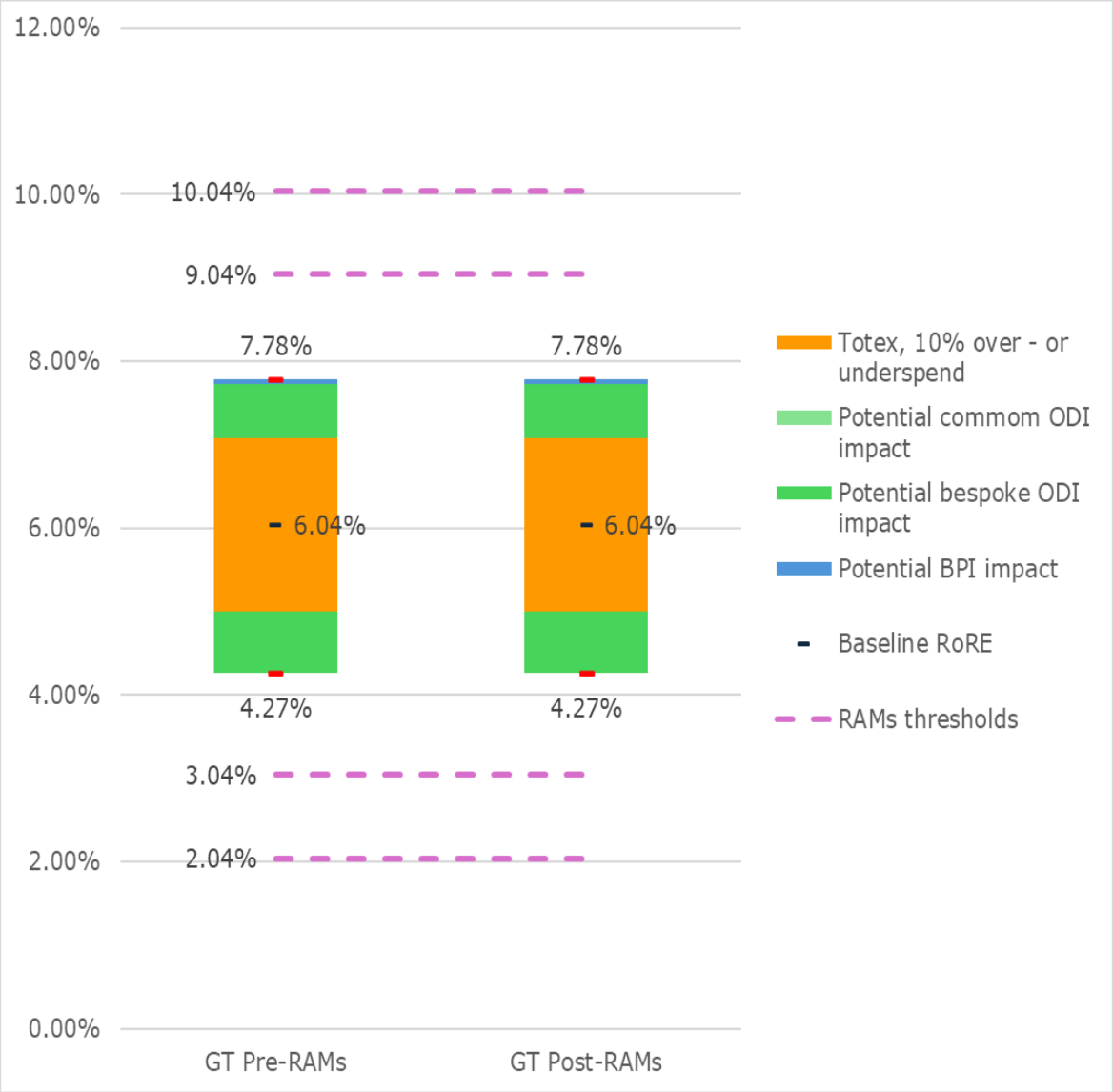
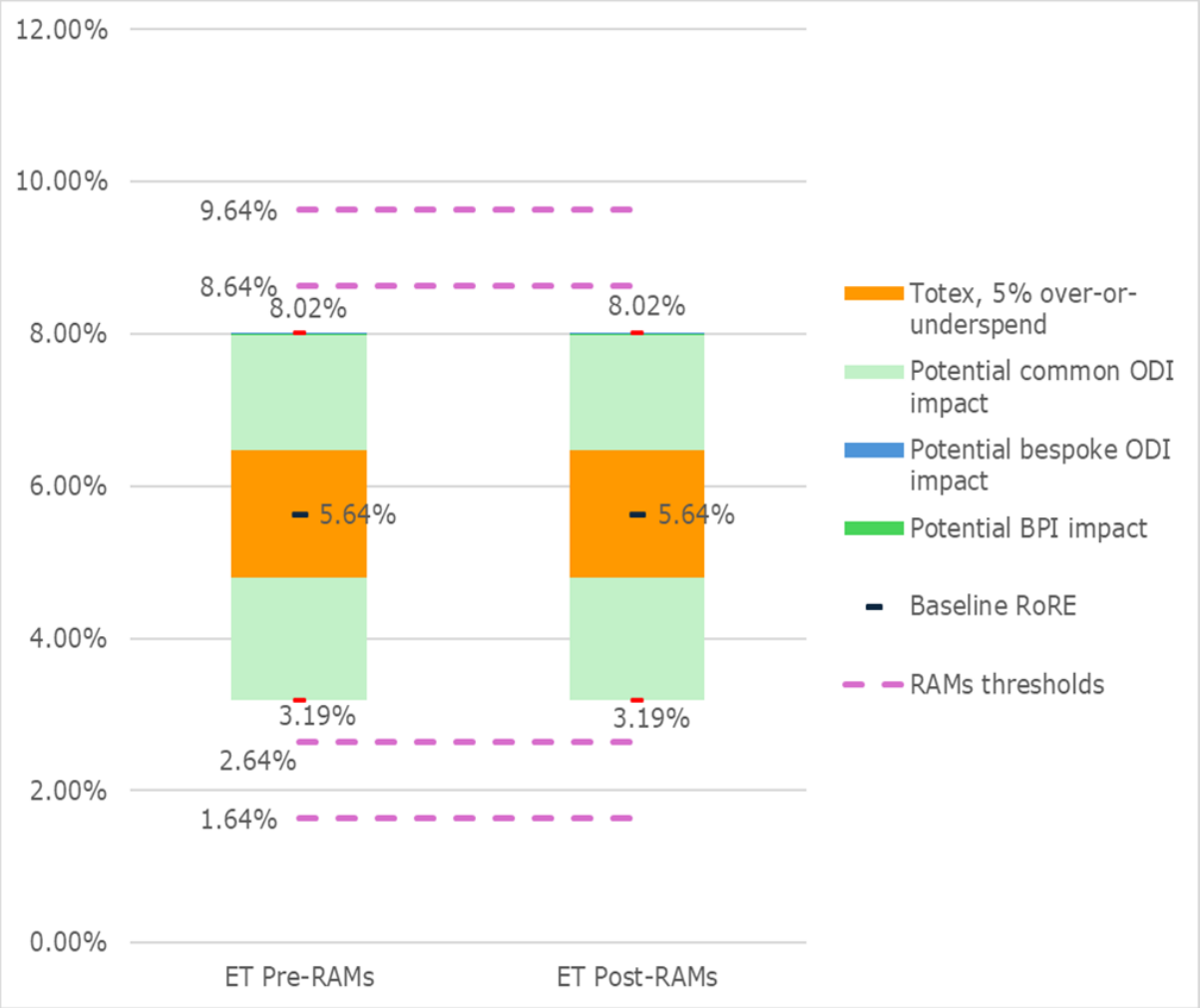


Figure 64: RIIO ET3 average RoRE ranges



5.55 The objective of our stress tests is to assess whether the proposed DD package provides an appropriate degree of robustness to downside scenarios. In performing our duties, we must have regard to the need to secure that network companies are able to finance the activities which are the subject of obligations imposed by or under the relevant legislation. Network companies are also required by their licences to take all appropriate steps within their power to ensure that at all times they maintain an investment grade credit rating.

5.56 This does not, however, imply that we are required to secure that notional licensees can maintain an investment grade credit rating in any and all scenarios, including in all underperformance scenarios. We consider that our financeability assessment should not be determined by the extreme tail of the probability distribution of potential outcomes. We have not tested financeability to the very extreme downside limit shown in our illustrative RoRE range above.

5.57 We consider that using 'plausible downside scenarios' is appropriate. We do not consider it realistic to assume that licensees' totex and ODI performances are

perfectly correlated; nor should our stress testing preclude the possibility that there may be offsetting positive performance in other areas of the price control.

5.58 We assume that a plausible downside scenario for an individual licensee, on a notional basis, might reasonably fall in the range of 100- 200bps RoRE. Our estimate of the plausible downside scenario has been informed by a bottom-up assessment of potential outturn performance under the proposed DD package, and historical performance and regulatory determinations.

5.59 We have modelled the upper bound of this range, as well as having regard to the 'tipping point' downside scenario beyond which an individual licensee, on a notional basis, might have a sub-investment grade credit rating.

Analysis results

5.60 Financeability analysis enables us to test whether our proposed DD package allows the notional efficient operator to maintain sufficient headroom to service its debt.

5.61 We have performed a financeability analysis based on the DD package and an in the round approach to financeability assessment as set out above that finds each licensee on a notional basis broadly achieving a simulated rating outcome of Baa1/BBB+.

5.62 Tables 22 and 23 set out the resulting financial ratios of our DDs for both the baseline case and higher case scenarios and a simulated credit rating consistent with the methodology that we applied at DDs. We present a range of key financial ratios of the main rating agencies including (Adjusted Interest Coverage Ratio) AICR and FFO (Funds From Operations)/ Net Debt (Moody's), FFO/ Net Debt (S&P) and PMICR (Post-Maintenance Interest Cover Ratio) (Fitch). For both the baseline and higher case scenarios, we also show the total simulated equity issuance.

Table 22: Baseline case modelled notional credit ratings and metrics (RIIO GD&T3 average)

Licensee	AICR	Moody's - FFO/ Net Debt	Scorecard Rating	Nominal PMICR	S&P - FFO/ Net Debt	Equity Issuance (£m)
Cadent	1.92	15%	A2	2.09	14%	-
NGN	1.98	15%	A2	2.14	14%	-
SGN Scotland	1.92	15%	A2	2.08	14%	-

Licensee	AICR	Moody's - FFO/ Net Debt	Scorecard Rating	Nominal PMICR	S&P - FFO/ Net Debt	Equity Issuance (£m)
SGN Southern	1.91	15%	A2	2.07	14%	-
WWU	1.91	15%	A2	2.09	14%	-
NGT	1.92	15%	A2	2.10	13%	-
NGET	1.81	15%	Baa1	2.96	17%	8,452
SHET	1.75	16%	Baa1	3.52	20%	10,804
SPT	1.77	16%	Baa1	3.21	19%	3,215

Table 23: Higher totex case modelled notional credit ratings and metrics (RIIO GD&T3 average)

Licensee	AICR	Moody's - FFO/ Net Debt	Scorecard Rating	Nominal PMICR	S&P - FFO/ Net Debt	Equity Issuance (£m)
Cadent	1.91	15%	A2	2.07	14%	-
NGN	1.97	15%	A2	2.13	14%	-
SGN Scotland	1.92	15%	A2	2.09	14%	-
SGN Southern	1.92	15%	A2	2.09	14%	-
WWU	1.90	15%	A2	2.07	14%	-
NGT	1.90	14%	A2	2.08	13%	-
NGET	1.81	15%	Baa1	2.98	17%	9,092
SHET	1.75	16%	Baa1	3.55	21%	11,421
SPT	1.77	16%	Baa1	3.24	19%	3,421

5.63 The financial ratios results in these tables above indicate to us that there is sufficient headroom in the baseline case and in our higher case to consider each company, on a notional basis, financeable. All simulated rating outcomes are in line or above the minimum Baa1/ BBB+ target rating.

5.64 Under the range of plausible downside scenarios that we have reviewed - including a 200bps RoRE downside, 10% overspend and -2% inflation sensitivity - all licensees, on a notional basis, achieve simulated rating outcomes of Baa1 or better when using both the base and higher totex cases. Under the DD package,

the tipping point when a notional licensee turns to sub-investment grade is around 600 bps RoRE downside with the higher totex scenario. We consider this to be a remote scenario.

5.65 Cadent agrees with the notional approach but argues the assessment needs to consider the liquidity position of the company to overcome unexpected cash shortfalls or downside shocks. Licensees are required to maintain sufficient liquidity to cover their needs over the next 12 months. We consider the liquidity allowance, discussed in paragraphs 2.54-2.70 2.70provided to companies, based on averages of actual company data and subject to this licence obligation, is sufficient to support such a position. We therefore consider that the proposed package in-the-round provides companies, on a notional efficient basis, the capability to support a liquidity position that would be consistent to overcome unexpected downside events and further modelling is not required.

5.66 SSEN recommends that Ofgem should ensure that the Financial Framework is robust to higher interest rates. We have conducted interest rate sensitivities and consider our proposal is robust to higher interest rates.

5.67 Gas Network Companies highlighted that rating agencies may reconsider their ratio guidance in light of the adoption of a nominal allowance for fixed-rate debt and changes to depreciation assumptions, which lead to an increase in certain financial ratios. To evaluate the potential impact, we have taken a conservative approach by modelling a scenario in which the semi-nominal allowance and changes to GD&GT depreciation are fully reversed in the ratio calculations. Our analysis shows that this adjustment does not alter the conclusions of our assessment, and all Gas simulated rating outcomes under the efficient company, notional capital structure approach equate to A2.

5.68 Network companies made comments and proposed a range of changes to the financeability modelling and scenario testing approach. We consider the financeability modelling and scenario testing we have conducted to be robust.

Long-term modelling

5.69 We have undertaken long-term modelling of the FFO/Net Debt, PMICR and AICR ratios, using a simplified approach based on an extended version of the PCFM. This modelling broadly extrapolates RIIO-3 price control policies and the current macroeconomic environment into future periods. It is important to emphasise that the assumptions underpinning this analysis are necessarily simplified and may not reflect the actual policies or allowances that will be adopted in future price controls.

5.70 The limitations inherent in long-term modelling cited above mean that apparent weakness in the projected ratios should not necessarily be viewed as definitive evidence to prompt immediate action. Future policy developments or adjustments to allowances could materially alter the financial outlook, potentially mitigating any issues currently forecast. Moreover, modest financeability issues identified may be more appropriately addressed at the time of the relevant price control, when more accurate and up-to-date information will be available. Despite these limitations, the modelling remains a useful tool for identifying potential material long-term structural trends that may be best addressed within the RIIO-3 framework, rather than deferred to subsequent periods.

5.71 In our ET modelling we have assumed the capitalisation rate applied in RIIO-4 is aligns to RIIO-3 (85% for bucket 2) while in RIIO-5 it is assumed these revert to RIIO-2 regulatory rates. Totex is assumed be the same in RIIO-4 as RIIO-3. In RIIO-5, Totex is assumed to drop to RIIO-2 levels (in real terms).

Figure 75: Long-term modelling for RIIO ET3 - AICR ratios (sector average - notional)

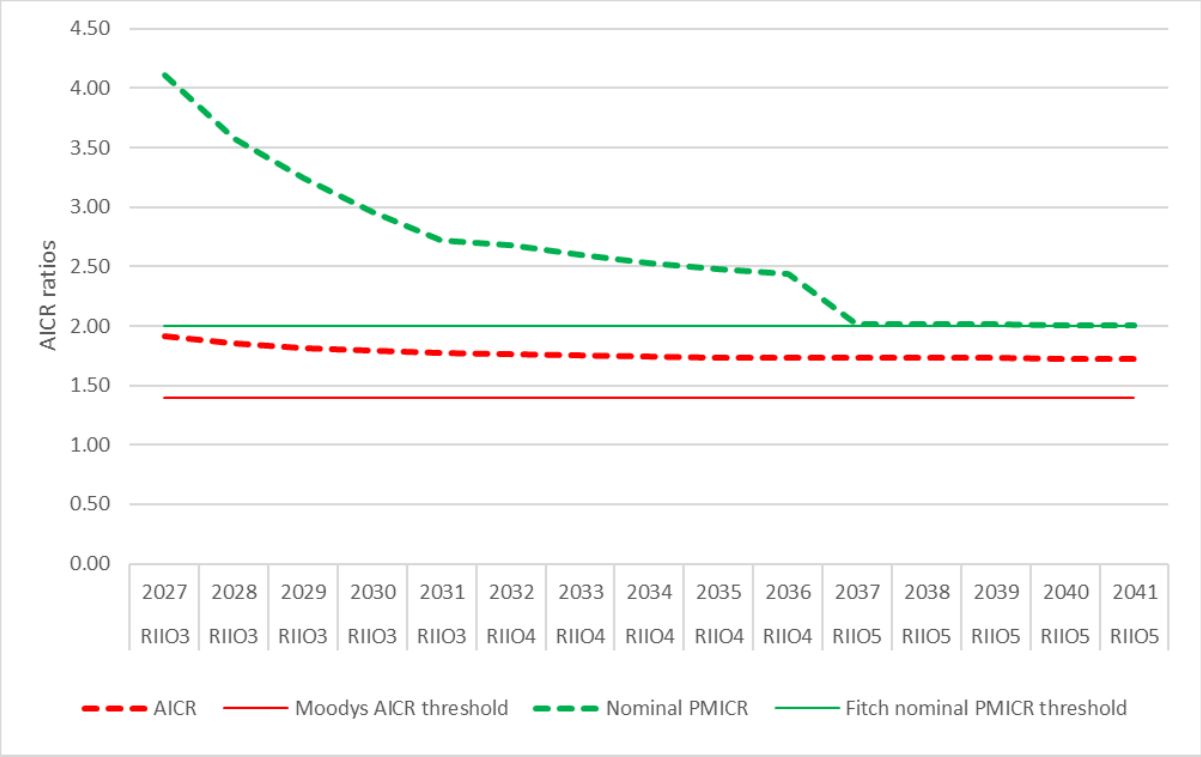
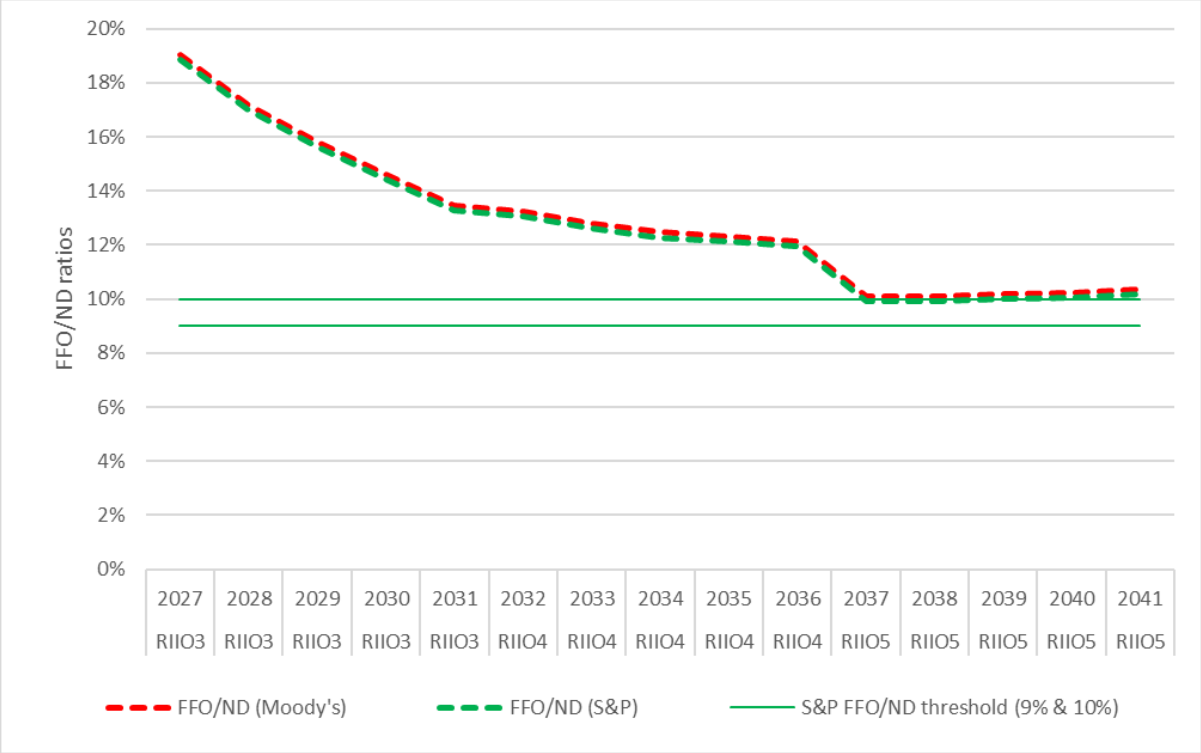


Figure 86: Long-term modelling for RIIO ET3 - FFO/Net Debt ratios (sector average - notional)



5.72 In our Gas modelling we have assumed the capitalisation rate applied in RIIO-4 and RIIO-5 aligns to RIIO-3. Totex is also assumed to be equal to RIIO-3 levels.

Figure 97: Long-term modelling for RIIO GD3 - AICR ratios (sector average - notional)

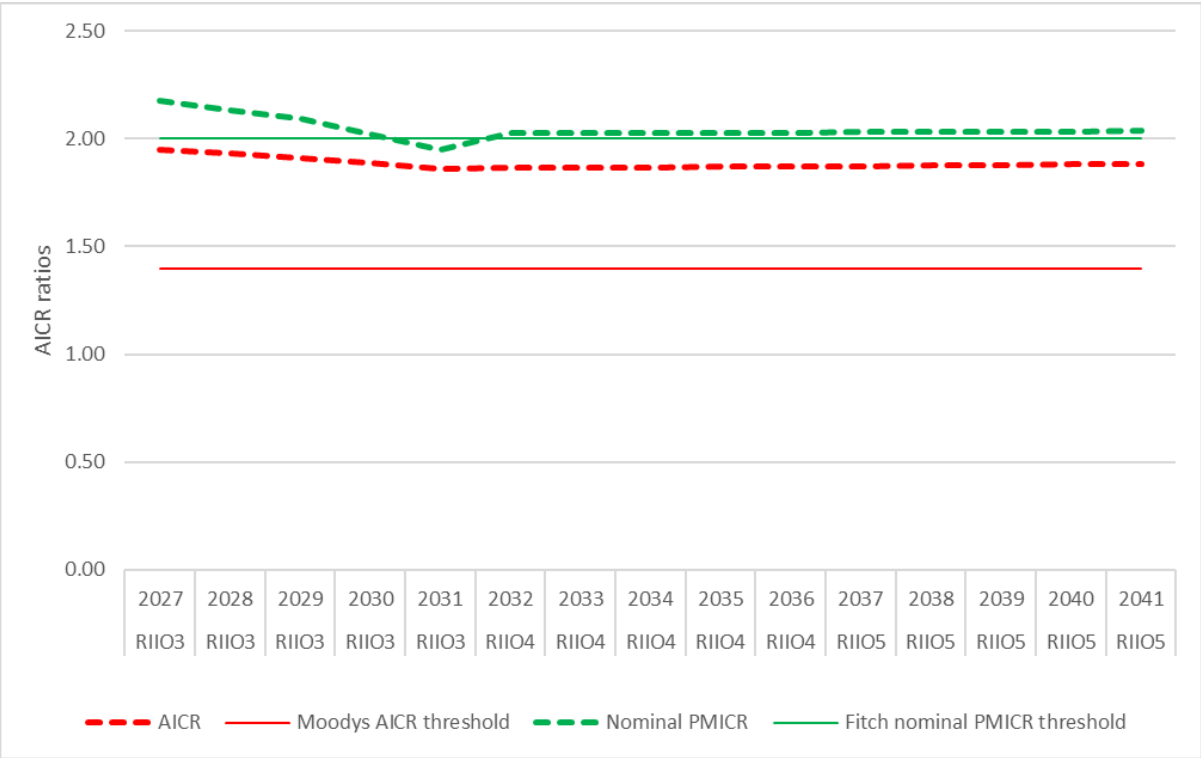


Figure 108: Long-term modelling for RIIO GD3 - FFO/Net Debt ratios (sector average - notional)

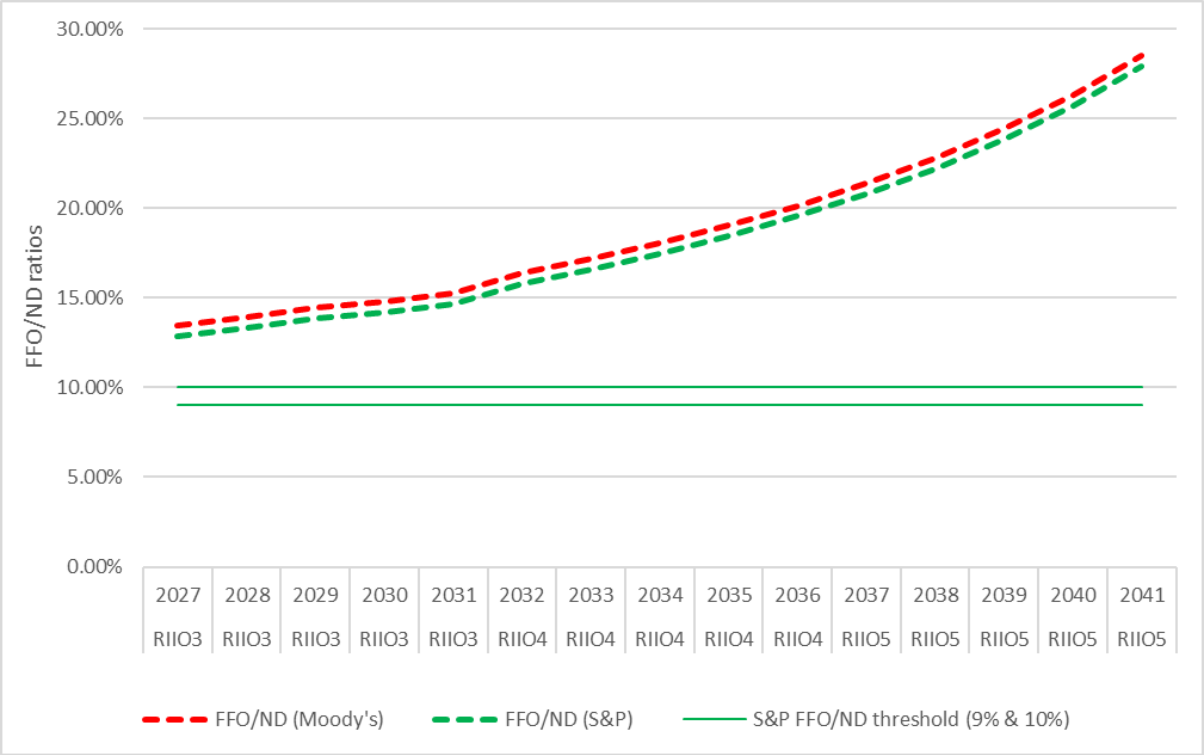


Figure 119: Long-term modelling for RIIO GT3 - AICR ratios (sector average - notional)

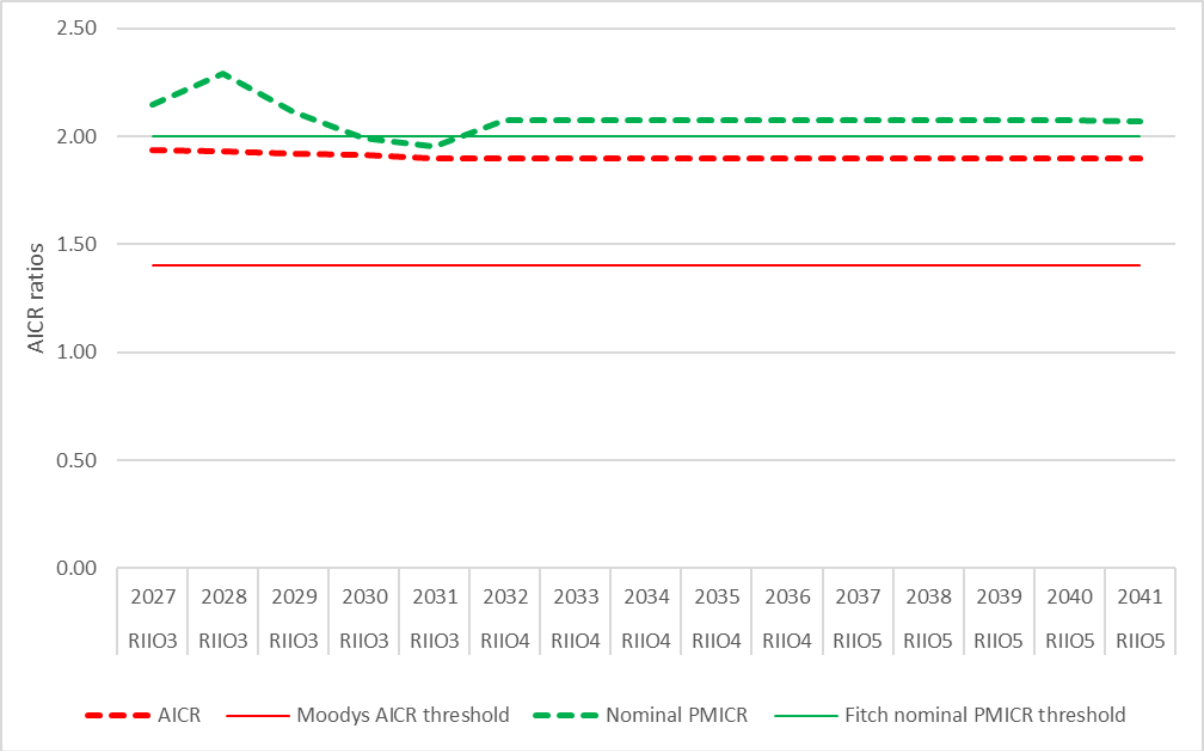
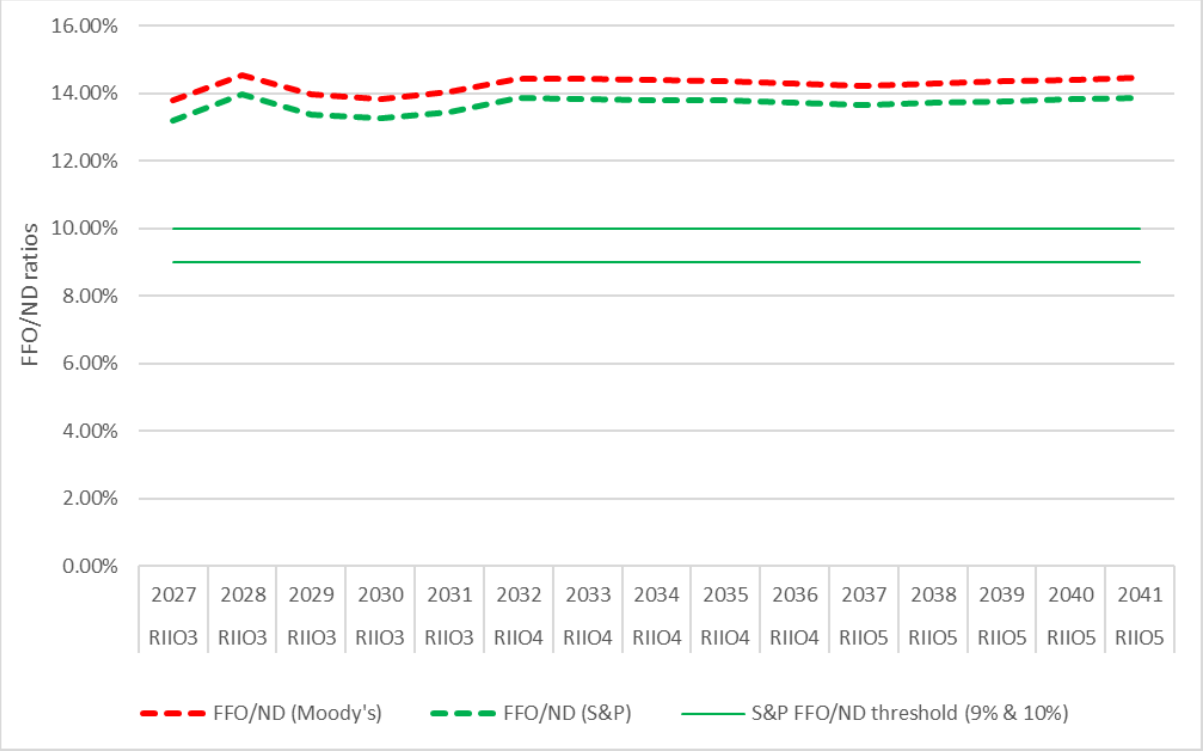


Figure 1210: Long-term modelling for RIIO GT3 - FFO/Net debt ratios (sector average - notional)



5.73 Our modelling shows on average, that companies, on a notional efficient basis, would broadly align to minimum credit rating expectations at the Baa1/ BBB+ credit rating.

5.74 ET network companies have argued that the asset life assumption should be reviewed. Based on our long-term modelling, our initial conclusion is that the projected weakening of the FFO/ Net debt ratio does not pose a financeability concern for RIIO-3. The expected long-term performance remains broadly consistent with a Baa1/BBB+ credit rating and does not warrant immediate action. We welcome further evidence from stakeholders on this matter.

5.75 SGN and Cadent supported the incorporation of long run modelling in the financeability assessment.

Consultation questions on debt financeability

FQ18. Do you agree with our approach to assessing financeability?

FQ19. Do you agree with our proposal to adjust bucket 2 capitalisation rates from natural rates to 85% for all ET licensees to support financeability? Are there alternative measures that stakeholders consider more appropriate?

FQ20. Do stakeholders have views or evidence on long-term financeability considerations, including the appropriateness of the proposed asset lives?

6. Financial resilience

Purpose: To provide Ofgem early warning of financial distress, ability to consider potential mitigations and/or restrict activities in the event of financial deterioration of licensees.

Benefits: Making company failure less likely and/or increasing the chance and quantum of recovery for the benefit of consumers.

Background

6.1 Financial resilience is the ability for companies to withstand shocks to their financial position and/or manage the risk of financial distress. Our requirements relating to financial resilience have the overarching objective to protect consumers. At our SSMD we decided to reinforce the existing financial resilience provisions and adopt a suite of measures in this regard:

- Amend the Credit Rating of the licensee and related obligations[38] to replace the current obligation for licensees to "use reasonable endeavours" with a requirement that they "must" maintain more than one investment grade rating (Measure 1);
- Amend the Indebtedness conditions[39] to include an additional distribution lock-up trigger when the licensee reaches 75% Regulatory Gearing (calculated as Net Debt / RAV) along with the existing trigger when the licensee reaches a credit rating of BBB- with a Negative Watch/Outlook (Measure 2); and
- Amend the Availability of Resources (AOR) obligations[40] to require licensees to state that, based on the agreed assumptions, they have sufficient financial resources to cover the entire price control period or a minimum of three years ahead (Measure 3). Additionally, the certificate in relation to financial resources would have to include references to stress testing analysis undertaken prior to the licensee issuing the certificate: "After making enquiries, **including reviewing the results of any appropriate stress tests**, and having…" (new text in bold).

[38] Electricity Transmission Standard Licence Conditions Condition B10 and Gas Standard Special Condition - PART A Consolidated Condition A38
[39] Electricity Transmission Standard Licence Conditions Condition B9 and Gas Standard Special Condition - PART A Consolidated Condition A39
[40] Electricity Transmission Standard Licence Conditions Condition B7 and Gas Standard Special Condition - PART A Consolidated Condition A37

Draft Determinations position

6.2 We propose that we proceed with implementing the financial resilience measures as laid out in our SSMD, noting the details presented below.

6.3 For Measure 1 we propose requiring licensees to maintain more than one investment grade Issuer Credit Rating (ICR), as defined in the current licence conditions[41]. We believe this measure allows Ofgem to monitor credit ratings that reflect the credit worthiness of a licensee as a whole and, therefore, strengthens consumer protection from a regulated entity's risk of defaulting on its debt.

6.4 For Measure 2, which introduces an additional distribution lock-up trigger at 75% gearing, we propose the triggers should be both backward and forward-looking. We consider that this measure helps mitigate the impacts of potentially excessive leverage, which can limit a company's ability to raise capital efficiently at the expense of consumers.

6.5 We propose that the backward-looking test refers to the actual regulatory gearing as reported at the closing of the last reporting year. The forward-looking test will be based on projected gearing for the end of the current reporting year, using reasonable assumptions and projections made by the licensee at the time of the distribution. This means that the lock-up will be triggered if the licensee has or is projected (based on reasonable forecast) to have a gearing ratio of 75% or higher.

6.6 For the avoidance of doubt, the intent of Measure 2 is to achieve an impact identical to that of the existing credit rating trigger. This provision will encompass transactions as delineated in the current licence conditions.[42]

6.7 For Measure 3 we propose to introduce an additional and extended version of the existing certificate in relation to financial resources, along with a statement of factors.

6.8 The new certificate will require board approval and sign-off from a licensee director but will not require sign-off from independent auditors. This measure is intended to provide Ofgem early indication of potential financial distress and to incentivise company directors to take a medium-term view of financing plans.

[41] Electricity Transmission Standard Licence Conditions Condition A1: Definitions and interpretation, and Gas Standard Special Condition - PART A Consolidated Condition A3: Definitions and interpretation

[42] Electricity Transmission Standard Licence Conditions Condition B9, paragraph 1(b) items (i) to (vii) and Gas Standard Special Condition - PART A Consolidated Condition A39, paragraph 1(b) items (i) to (vii)

6.9 We note that the current requirement for a 12-month certificate, alongside a relevant statement of factors and an independent auditor report, remains.

6.10 We propose the statement of factors of the new extended certificate refers to:

- Assessments of forecast financial standing, including assessments of downside scenarios;
- Assumptions made in relation to access to and availability of financial markets for financing, refinancing or equity injections;
- Credit facilities, financial covenants and compliance with these.

Rationale

6.11 Network companies broadly recognised our concerns around financial resilience and the need for both flexible financial strategies and appropriate scrutiny.

6.12 Two licensees supported our proposed measures, endorsing regulatory arrangements and protections for a financially resilient sector.

6.13 Two licensees reiterated their SSMC arguments on the disproportionality, ineffectiveness and costliness of our measures. They also cited the need for appropriate credit rating definitions and the effectiveness of current financial covenants to replace our measures. However, their business plans lacked new evidence or rationale to support these views.

6.14 The other four licensees did not have views on the financial resilience measures.

Measure 1 – "require" minimum two investment grade credit ratings

6.15 One network company re-emphasised its SSMC response that Ofgem put an absolute requirement on credit rating agency actions, which can be beyond companies' control. As an example, the company mentioned Moody's downgrade of the stability and predictability of the regulatory environment in the water sector to A from Aa, arguing that a similar downgrade of Ofgem's predictability and stability of regulatory environment could negatively impact the company's credit rating.

6.16 The same respondent stated that gas network companies are exposed to negative rating actions due to policy decisions out of their control. The company referred to uncertainty around the future of gas and the government's gas policy.

6.17 We understand that credit ratings are impacted by factors outside of companies' control, but we believe that a licensee has the most control over their credit rating through financial decisions and operational performance. This is proved

by the historical performance of licensees, which shows that they have been the main factor on credit ratings rather than policy decisions outside their control.

6.18 We note that Moody's rating methodology for Regulated Electric and Gas Networks assigns a 15% weight (before overweighting factors) to the stability and predictability of the regulatory environment factor when arriving to a preliminary credit rating. Therefore, the impact of this factor on the final rating assigned is minimal and has historically not been a major influence on ratings.

6.19 Two network companies reiterated their SSMC ask to use appropriate ratings, considering the methodological differences between credit rating agencies. They advocate for using Fitch's unsecured debt rating as the appropriate rating to monitor, rather than the issuer credit rating, arguing that this is aligned with the issuer's credit quality and reflect Ofgem's intent regarding this financial resilience measure.

6.20 We appreciate that credit rating agencies might consider an instrument credit rating as the equivalent of an issuer credit rating in some instances. However, our aim is to protect consumers from a regulated entity's risk of defaulting on its debt; we do not consider this is achieved by a debt instrument rating.

6.21 The issuer credit rating that will meet the requirements of this measure can be provided by any of the following: Standard & Poor's Ratings Group, Moody's Investors Service Inc., Fitch Ratings Ltd, DBRS Ratings Limited. The issuer credit rating can also be provided by other reputable credit rating agencies, subject to Ofgem approval, as per the current licence conditions.

Measure 2 – dividend lock-up at earlier of BBB- (negative outlook) and 75% gearing

6.22 One network company highlighted the lack of evidence in the energy sector to support a gearing threshold as well as Ofgem not providing evidence for lowering the threshold from 80% gearing at our SSMC to 75% gearing at our SSMD. It also raised a concern that this cap may adversely impact investability through a perception that the gearing threshold may reduce further in the future.

6.23 As mentioned in our SSMD, this measure is preventative and aimed at providing early warning of financial distress. Moreover, the move of the dividend lock-up gearing threshold to 75% has aligned our measure with credit rating methodologies, debt market expectations, and analogous industries.

6.24 We also believe that excessive leverage can pressure credit strength and impair the ability to raise capital efficiently, invest and maintain shareholder value. A lock-up will therefore support efficient capital sourcing in network companies.

Measure 3 – AOR certificate to capture price control period (or minimum 3 years)

6.25 Two network companies reiterated the concern raised at our SSMC that changing the period of the AOR certificate can increase liquidity requirements which need to be included in the additional cost of borrowing or in the cost of carry.

6.26 We do not consider that licensees are required to increase liquidity beyond current levels, as our measure does not expect pre-funding the entire price control period. However, licensees should set out any assumptions made in relation to the availability of financial markets for any financing or refinancing requirements or around equity injections, and reviews of appropriate stress testing in the attestation process. This aligns with the reasonable expectation that companies already plan to ensure adequate resources are available for periods longer than 12 months as part of their normal business planning cycles.

Consultation questions on financial resilience

FQ21. Do you agree with our proposal to implement the Financial Resilience measures as laid out in our SSMD and the proposed methodologies set out above?

7. Corporation tax

Purpose: To provide a tax allowance to compensate networks for efficient tax payments.

Benefits: Providing a notional allowance enables networks to recover amounts required to cover their costs, while incentivising them to manage their tax affairs efficiently, thereby keeping costs lower for consumers.

Introduction

7.1 In RIIO-2, a financial model is used to calculate a tax allowance on the basis of an efficient company with a notional capital structure, as a proxy for efficient corporation tax costs, for each of the relevant licensees. The tax allowance is supplemented by three specific uncertainty mechanisms:

- A tax trigger (TTE) mechanism that reflects changes in tax legislation and accounting standards;
- A tax clawback (TGIE) mechanism that claws back the tax benefit a licensee is assessed to have obtained as a result of gearing levels and interest costs that are higher than assumed; and
- A tax allowance adjustment ($TAXA_t$) mechanism that enables Ofgem to direct an adjustment to the Calculated Tax Allowance subject to a tax review and having consulted with the licensee.

7.2 The purpose of the tax allowance adjustment mechanism is to adjust a licensee's tax allowance to account for any unexplained material variances between a licensee's calculated tax allowance and actual tax liability, as part of an annual review and update of Allowed Revenue during the Annual Iteration Process (AIP). The mechanism is in the best interests of consumers and furthers Ofgem's principal objective, which includes ensuring that licensees do not benefit from undue financial gains if there is an unexplained material variance between the actual tax liability and the notional tax allowance. As a supportive measure, two additional protections were introduced, namely a 'Tax reconciliation' and 'Board assurance statement' which require licensees to submit an annual tax reconciliation between the notional allowance and actual tax liability accompanied by an assurance statement from the board in respect of the appropriateness of the values in the reconciliation, as an enabler for Ofgem to trigger a formal tax review if necessary.

7.3 The approach in RIIO-2 outlined above was referred to in our SSMC as the 'Notional Allowance with added protections' and defined as Option A for the purposes of our SSMC.

Background

Notional Allowance with added protections

7.4 In our SSMD we decided to, in line with RIIO-2 and RIIO-ED2, maintain Option A - Notional Allowance with added protections.

7.5 We decided within our SSMD, that the proposed 'glide path', in respect of the gearing ratios for the tax clawback, was unnecessary and therefore would not be included in RIIO-3.

7.6 Within our SSMC responses, licensees had highlighted the need to align the logic relating to loss utilisation within the PCFM with current UK tax legislation. We decided to update the PCFM accordingly.

7.7 We also decided to update the PCFM to facilitate Full Expensing and First Year Allowances (FYAs). We noted that the impact of Full Expensing/FYAs and higher headline rates of corporation tax would increase estimation differences between the PCFM and actual tax returns. We decided to update the PCFM guidance to allow licensees to update tax pool allocations for all periods within the price control.

Tax clawback methodology

7.8 Within our SSMD we decided to update the tax clawback methodology to include interest accretion net of paydown within the definition of net debt for the purposes of the tax clawback calculation. There will not be any change to the cost of debt allowance as a result of the amendment to the tax clawback mechanism. The rationale for the exclusion of derivatives within the cost of debt allowance is set out in Chapter 2 and was also detailed within the SSMD.

Draft Determinations position

Notional Allowance with added protections

7.9 We propose to retain the position we set out at our SSMD to continue to use the Notional Allowance with added protections for RIIO-3.

7.10 No new evidence has been provided to warrant amending this decision.

Tax clawback methodology - calculation of excess interest

7.11 This position was considered within our SSMD and we consider that the rationale remains unchanged.

7.12 We are not proposing any change to the calculation of excess interest.

Tax clawback definitions of Adjusted Net Debt (AND_t) and Tax Deductible Net Interest ($TDNI_t$)

7.13 Following publication of a call for input, the definitions of AND_t and $TDNI_t$ have been reviewed to reflect the changes in accounting standards and tax legislation since the Tax Clawback was introduced. Whilst the definitions are being updated, the fundamental principles and calculation of the Tax Clawback are unchanged from RIIO-2.

7.14 Summary of proposed changes:

- include inflation accretion in AND (as set out in the RIIO-3 SSMD);
- include hybrid coupon payments in TDNI, and hybrid bond amounts in AND;
- exclude operating lease interest arising under IFRS16 or FRS102 equivalent from TDNI;
- include fair value (FV) movements of financing derivatives where such movements are taxable/deductible in line with the accounting treatment; and
- include interest which has been temporarily restricted due to the application of Corporate Interest Restriction (CIR).

Tax forecasting penalty

7.15 As a result of the decision made at our SSMD to allow licensees to amend tax variable values, specifically tax pool allocations, across all periods of the RIIO-3 price control including retrospectively, we have considered whether it is necessary to include a forecasting penalty within the Revenue Restriction section of the licenses.

7.16 We propose not to introduce a tax forecasting penalty within RIIO-3, but to instead propose to make amendments to the Price Control Financial Handbook, to provide additional protection.

7.17 These proposed changes seek to make explicit that the licensees should update the PCFM variable values on the basis of the notional efficient company, and aim to provide more detail on what the notional efficient company means in practice.

7.18 We may continue to consider whether a tax forecasting penalty is required in future price controls.

Rationale

Licensee business plan submissions

7.19 Licensee business plan submissions make limited reference to the tax allowance.

7.20 Within its Business Plan submissions NGT stated that it considered the changes in methodology to be reasonable.

7.21 NGET state that it considers the notional allowance approach to be an effective mechanism and supports its continued use in RIIO-3. It also states that it supports the decisions made in our SSMD as they will further align the notional and actual company tax charge.

7.22 SPT did not directly reference our SSMD tax decisions in its Business Plan submissions.

7.23 Cadent and NGN did not directly reference our SSMD tax decisions in their Business Plans. SGN stated that it is important that tax methodologies and definitions are consistent with other areas of the price control and achieve their desired outcomes accurately.

7.24 SHET and WWU Business Plan comments are set out in more detail below.

Notional allowance with added protections

7.25 Within its Business Plan submission SHET re-stated its position that it considers that Ofgem should move to a pass-through method for providing tax allowances to licensees. No new evidence was presented.

7.26 SHET raised a concern that if pass-through is not adopted, notional pool balances and statutory balances will diverge materially over time. We consider that the decision made at our SSMD to allow licensees to amend totex allocations for all periods within the RIIO-3 price control throughout the RIIO-3 price control will mitigate the risk of material divergence.

7.27 We therefore consider it reasonable to propose to retain a notional allowance with added protections in line with the SSMD position.

Tax clawback methodology - Inflation accretion

7.28 Within its Business Plan submission WWU stated that it did not agree with our SSMD decision to include inflation accretion (net of paydown) in respect of index linked derivatives within the definition of Adjusted Net Debt. No new evidence was presented to support this view.

7.29 NGT stated that it considers Ofgem's approach to be reasonable as it further aligns the tax clawback methodology with the statutory basis on which it obtains relief for its finance costs.

7.30 We therefore consider it reasonable to propose to include inflation accretion within the definition of Adjusted Net Debt for the purposes of the Tax Clawback calculation in line with the SSMD position.

Tax clawback methodology - calculation of excess interest

7.31 WWU has, within its Business Plan and response to the Tax Clawback Call for Input, restated its view provided in its SSMC response that the calculation of excess interest within the tax clawback is disproportionate. It seeks to characterise this as an 'error' and proposes that excess interest be calculated by pro-rating the interest cost by the proportionate over-gearing.

7.32 No further evidence has been provided by WWU, other than stating disagreement with Ofgem's response and noting that it considers that small increases to gearing above the excess level would not result in higher credit spreads.

7.33 Over-gearing above the notional level could reduce the financial resilience of licensees, making them more vulnerable to economic shocks. In extreme cases, this may lead to acute credit distress, undermining a licensee’s ability to maintain operational performance and deliver planned investment, ultimately eroding outcomes for consumers. Furthermore, heightened financial risk could damage investor confidence in the sector, leading to an increased cost of capital that is ultimately passed on to consumers. Licensees with higher than notional interest costs may have a greater financial resilience risk, and therefore it is important that licensees are disincentivised to over-gear. Licensees who have higher interest costs are more greatly incentivised to remain within the gearing limit as they retain the benefit of the greater tax-shield, unless they breach the gearing limit.

7.34 The tax clawback operates to help to achieve two important policy objectives, which are to deter excess gearing compared to our notional levels, and to help to ensure that licensees do not receive a tax allowance for tax they do not ultimately pay, as a result of interest costs which exceed the notional allowance. Neither of these objectives takes precedence over the other. The clawback was first introduced when Ofgem moved from a pre-tax to a post-tax cost of capital. A protection was therefore required to prevent licensees from benefiting from over-gearing and benefiting from tax costs lower than the notional allowance.

Across the RIIO-2 price control period, licensees have benefited from the 'glide-path' and are expected to be within the gearing ratios by the end of the RIIO-2 price control period. The tax clawback continues to be important as it deters licensees from increasing gearing beyond the limit during RIIO-3, and ensures that over-geared licensees do not benefit from receiving a tax allowance in respect of interest costs which exceed the notional allowance (thus reducing the licensees actual tax charge).

7.35 Our view is that the current methodology is in line with the policy intent because licensees whose financing costs exceed the notional interest allowance benefit from greater tax deductions than calculated in the notional allowance.

7.36 The gearing test therefore provides proportionality as action is only taken to restrict the notional tax allowance where a licensee becomes over-geared. This has been a feature of the tax clawback since it was first brought into use in 2009. The tax allowance is not increased for licensees whose financing costs are lower than the notional interest allowance.

7.37 We consider that it is proportionate to restrict the tax allowance for the full excess of tax-deductible net interest over the notional allowance for licensees which exceed gearing limits, as any form of pro-rating the restriction may still incentivise licensees to over-gear.

7.38 The tax clawback methodology currently disproportionately benefits licensees which have interest costs in excess of the notional allowance, but remain within the notional gearing limit. This is because they have, all else being equal, lower tax costs than the notional company, and therefore benefit from the notional tax allowance included in Allowed Revenue exceeding their actual tax costs. This would result in consumers providing revenue for tax ultimately not borne by the licensee. Licensees which have lower interest costs than the notional interest allowance do not benefit symmetrically because they do not receive a higher tax allowance as a result of lower than notional interest costs.

7.39 The current tax clawback methodology is proportionate, as it allows licensees with higher interest cost to benefit from increased tax deductibility provided they remain within established gearing limits, and does not provide additional tax allowances to licensees with lower than notional interest costs.

7.40 For the reasons set out above, we consider the tax methodology to be proportionate to the risks to consumers of licensee over-gearing, and of providing allowances in excess of licensees actual tax costs. We do not propose to change the tax clawback calculation methodology.

Tax clawback definitions of AND_t and $TDNI_t$

Principles

7.41 In proposing to update the definitions of AND_t and $TDNI_t$, the following principles have been applied:

- The definitions should seek to align TDNI with the tax deductions arising in the licensee's actual tax return and statutory accounts as closely as practicable.
- The definitions should seek to minimise the ability of licensees to prevent the clawback from applying by group tax elections or accounting choices.
- The definitions should seek to ensure that only 'real' financing amounts relating to the funding of the business are included, not other amounts which are re-categorised as interest for accounting presentation purposes.

Hybrid Coupon payments / Hybrid bonds

7.42 Equity accounted hybrids are perpetual or long-dated instruments which are classed as equity for accounting purposes. The coupon payments on these instruments are not accounted for within interest payable within the accounts, they are accounted for as dividend payments. However, for tax purposes the coupon payments (unlike a normal dividend payment) are tax deductible. This tax treatment was re-instated in 2018/19[43] after previous changes in 2016 restricted the tax treatment from applying to entities which were not within the banking or insurance sectors.

7.43 No licensee entities currently issue hybrid bonds directly, although licensee groups (such as SSE plc and National Grid plc) do. We consider that the increased levels of funding required by ET licensees in particular may see hybrids being issued directly by licensees during RIIO-3 or in later price controls.

7.44 Ofgem therefore consider that any equity accounted hybrid instruments within the licensees' statutory accounts should be included within the definition of net debt, and any associated coupon payments should be included within the definition of $TDNI_t$.

Operating lease interest

7.45 Ofgem considers that operating lease interest expenses should not form part of the Tax Deductible Net Interest for the purposes of calculating the tax clawback,

[43] Taxation of hybrid capital instruments - GOV.UK

as these charges do not relate to the borrowings of the business, nor do they relate to methods of directly financing the acquisition of assets, in lieu of debt at the corporate level.

7.46 Following the adoption of IFRS16, there is no longer a distinction between operating and finance leases, and all leases which are not for low-value assets (US$5,000 threshold) must be recorded. Leased assets are held on balance sheet, alongside lease liabilities, and are depreciated over the life of the lease, with lease interest being charged in the income statement. This has the impact of slightly front-loading the charges to the income statement compared to the previous accounting treatment. The FRS 102 (2024) amendments will bring this accounting treatment into effect from 1 January 2026 for entities which follow FRS102.

7.47 The tax treatment of leased plant and equipment depends on whether the lease in question functions as a short lease, finance lease, or a long funding lease for tax purposes[44]. Where a lease is a finance lease or a long funding lease, the capital allowances rules will apply. For short leases, deductions are available on an accruals basis. This treatment remains broadly the same under the new standard, with deductions arising in respect of right of use assets on the basis of the charges in the income statement, subject to certain additional rules for property leases, capital elements and spreading rules in respect of commencement.

7.48 The change in accounting standard results in interest expenses being recognised in the companies' accounts, which form part of the rental payments made for the asset. As can be seen in the example above, the IFRS16 lease interest can be separately identified within the accounts, and can be identified within the companies' tax returns, as it must be separately classified for CIR purposes.

7.49 For CIR purposes, interest arising on right-of-use assets which under the previous standard would have been classed as operating leases, is not included as a tax-interest expense for CIR purposes.[45]

7.50 Finance lease interest should remain included within $TDNI_t$, as to exclude this would incentivise licensees to fund asset purchases through finance lease, rather than borrow at a corporate level.

[44] CA23800 - PMA: Long funding leases: contents - HMRC internal manual - GOV.UK
[45] CFM97810 - Interest restriction: leasing: overview - HMRC internal manual - GOV.UK

Taxable / Deductible Fair Value Movements

7.51 In 2015, the UK introduced changes to the disregard regulations, which are designed to address the tax treatment of derivative contracts used for hedging purposes. These changes were necessary due to the shift from old UK Generally Accepted Accounting Practice (GAAP) to new financial reporting standards like FRS 101, FRS 102, and IFRS1.

7.52 A review of licensees' tax returns has concluded that there are divergent practices amongst licensees. Some licensees have little or no finance related derivatives, with all movements arising in reserves, whilst other licensees hold material derivative balances with significant income statement movements. Some licensees have elected into the disregard regime, whilst others have not. Some licensees which have elected into the disregard regime nonetheless hold some derivative instruments which do not fall within the disregard regulations. This leads to significant differences between licensees as regards the timing of tax deductions in respect of derivative financial instruments.

7.53 The review of the licensee accounts was made more complex as some licensees prepare consolidated accounts, where the licensee is the consolidating entity, and have applied the exemption from preparing a profit and loss account / income statement for the parent company.

7.54 Ofgem must therefore consider if the existing guidance should be amended, following the change in default position from fair value (FV) movements being disregarded for tax purposes, to being taxed in line with the income statement. The taxation of FV movements in derivatives is primarily a timing difference. Over the full life of the derivative contract, the same total tax deductions will arise, however an entity which does not apply the disregard regulations is likely to have greater volatility in its tax charge. Changes in tax rates in later periods can result in different tax liabilities arising, despite the gross deductions being identical. Further, the timing of relief can be impacted by loss-restriction and CIR rules.

7.55 There are three options in respect of the change:

- Include FV movements in finance derivatives in the income statement of the statutory accounts within the definition of Tax Deductible Net Interest for all licensees;
- Include FV movements in finance derivatives in the income statement of the statutory accounts if they are taxable/deductible; or
- Continue to exclude FV movements in derivatives.

7.56 We consider Option 1 and Option 3 to be impractical, as Option 1 would result in licensees who have elected into the disregard regulations having a mismatch between their reported TDNI and their submitted tax computation and statutory accounts. The reverse situation applies to licensees who do not apply the disregard regulations if Option 3 is maintained, with licensees having to exclude taxable/deductible FV movements from TDNI.

7.57 We consider that the best option is Option 2, to include FV movements in financing derivatives where the movements are taxable / deductible (ie where the licensee has not entered into the disregard regulations, or the movements are not within the disregard regulations).

7.58 The position will therefore be unchanged for those licensees who have elected into the disregard regime.

7.59 For licensees who have not elected into the disregard regime (or are otherwise unable to hedge account), TDNI will then align more closely with the tax computation and statutory accounts.

Corporate Interest Restriction (CIR)

7.60 We conclude that TDNI should not be adjusted to reflect any restrictions of deductibility arising under the CIR rules.

7.61 For the purposes of calculating the notional tax allowance, no interest is assumed to be restricted under the CIR rules. This is because a standalone UK company (as the notional UK company is assumed to be) will be able to use the 'Group Ratio Rule' to ensure that no interest is restricted, even if the fixed ratio rule would be breached. Further the legislation has adopted a 'Public Benefit Infrastructure Exemption' (PBIE), which ensures that UK assets constructed for the public benefit can exclude interest on non-related party debt for the purposes of the CIR rules[46].

7.62 Another important aspect of the CIR rules is the carry-forward of disallowed interest. Interest which is disallowed can be carried forward indefinitely, and offset in a later period in which there is capacity. This means that CIR restrictions can be temporary, simply deferring the period in which the tax relief arises.

7.63 There are several other sets of rules restricting the deductibility of interest, specifically the thin capitalisation rules, general transfer pricing rules, the

[46] CFM97100 - Interest restriction: public infrastructure - HMRC internal manual - GOV.UK

unallowable purpose rules and the hybrid and other mismatch rules. There are also rules around late paid interest which arise in certain circumstances.

7.64 The CIR rules operate on a group basis, this creates a risk that if CIR disallowances are incorporated within the definition of TDNI, licensees could use the CIR restriction group rules to manipulate the tax clawback. They could prevent the clawback from arising, or mitigate its impact by allocating interest restrictions arising within other non-regulated entities to the licensee.

7.65 There is also a risk of information asymmetry, as the CIR return is prepared on a group basis, and the nominated company may not be the licensee. The licence[47] provides that copies of the corporation tax return of the licensee must be provided to Ofgem, but at present no obligation exists to provide CIR returns for the wider group.

7.66 We consider that there are three options available with regard to the application of the CIR rules within TDNI.

- Option 1 - Reduce TDNI for interest amounts which are restricted for deduction by the CIR rules in the licensee entity tax return, and increase TDNI for amounts of interest which are re-activated under the CIR rules.
- Option 2 - Reduce TDNI for restricted interest calculated in line with the Fixed Ratio Rule (30% EBITDA), and increase TDNI for interest amounts which are calculated to be re-activated in later periods. Amounts could be limited to non-related party interest.
- Option 3 - Do not reduce TDNI for amounts that are restricted in the licensee entity return under the CIR rules, and do not include any re-activations within TDNI.

7.67 As noted above, we consider that adjusting TDNI for CIR restrictions creates potential for licensees to utilise the group allocation rules to potentially circumvent or mitigate the application of the Tax Clawback. The use of shareholder loans is a choice which is available to licensees, as is the corporate structure of any licensee group. Therefore, licensees could structure their group to prevent the CIR rules from restricting interest deductibility, through use of the PBIE, and / or issuing equity instead of shareholder loans. The benefit of Option 1 is that it aligns TDNI more closely with the licensee's actual tax return, in circumstances where there are restrictions and reactivations under the CIR

[47] All licenses contain this provision, for example National Grid Electricity Transmission Special Condition 9.8

rules. However, we do not consider that this outweighs the risk of manipulation by licensee groups.

7.68 We consider that Option 2 would create a significant additional burden, either through the PCFM, or through offline calculations, for both licensees and Ofgem and therefore do not propose considering it further.

7.69 Under IAS12 companies must establish whether deferred tax assets (DTAs) can be recognised on the balance sheet of the entity. DTAs can be offset only if they can be directly offset against DT liabilities within the same jurisdiction, or if sufficient future profits will arise against which they can be offset. At each balance sheet date companies must review and disclose any unrecognised DTAs.

7.70 A review of licensee statutory accounts from 2017 to 2023 has been undertaken to establish if licensees were recording any recognised or unrecognised deferred tax liabilities in respect of CIR. As restricted amounts can be carried forward indefinitely and offset if future headroom is available, if licensee entities were subject to restrictions, these would result in DTAs which would be recognised (if expected to reverse) and would therefore be temporary differences. Alternatively, such DTAs would be unrecognised if there was not expected to be future available interest allowances against which to offset them, in which case the amounts would be de facto permanent differences.

7.71 In the periods between 2017 and 2023, no licensee reported any unrecognised deferred tax assets in their accounts in respect of CIR. Only one licensee, WWU, recognised a DTA in respect of CIR, in 2022, which subsequently reversed in 2023.

7.72 Therefore, we conclude that to the extent that any licensee entity does suffer from CIR within its tax return, this would be expected to be a temporary difference. Therefore, we consider Option 3 to be a proportionate measure.

7.73 As such, we consider that TDNI should not be adjusted to reflect any restrictions of deductibility arising under the CIR rules (Option 3).

Tax forecasting penalty

7.74 As a result of the decision made at our SSMD to allow licensees to amend tax variable values, specifically tax pool allocations, across all periods of the RIIO-3 price control including retrospectively, we have considered whether it is necessary to include a tax forecasting penalty within the Revenue Restriction section of the licenses.

7.75 As a result of the decision made at our SSMD to allow licensees to retrospectively amend tax variable values, including tax pool allocation variable values, within the RIIO-3 price control, Ofgem considered that the risk of Allowed Revenue being manipulated through deliberate / negligent mis-forecasting of tax values to be increased. Without additional protection, licensees could manipulate the timing of Allowed Revenue by for example under-allocating Totex to capital allowance tax pools in the earlier years of the price control, and restating these with the correct allocations in the final year of the price control.

7.76 An analysis of licensee business plan financial models (BPFMs) was undertaken to establish the potential range of variance in allowed revenue, if licensees were to make material adjustments to tax pool allocations in various periods in the price control.

7.77 The analysis found that due to the underlying revenue and totex profiles of the ET and GD sectors, significant variances in tax pool allocations for multiple years would be required to be made before a material (assumed as 6% of Allowed Revenue) variance would arise.

7.78 Within the ET sector this was primarily because FYAs/Full expensing combined with the significantly increased capex compared to RIIO-2 results in regulatory losses for the entirety of the RIIO-3 price control for all ET licensees.

7.79 Within the GD sector, lower totex allocations to CA pools (compared to ET), combined with higher Allowed Revenue to capital allowance percentages meant that significant multi-year variances in tax pool allocations were required to create a material impact on Allowed Revenue.

7.80 It should be noted that specific totex profiles arising in these sectors in this price control reduce the risk of material variances. The need case for a tax forecasting penalty will be re-considered in future price controls, and for other sectors such as ED.

7.81 The PCFH has been updated to expand the description of the concept of the notional efficient company, making it explicit that PCFM variable values, such as tax pool allocations must be updated on the basis of the behaviour of a notional efficient company.

7.82 The PCFH has been updated to make Ofgem's current view explicit, that a Tax Review may be undertaken where a material unexplained variance would have arisen had the PCFM variable values been updated in line with both Ofgem guidance and the behaviour of a notional efficient company. This is necessary to

prevent the deliberate manipulation of PCFM variable values in a way that is contrary to the behaviour of a notional efficient company.

7.83 The PCFH has also been updated to allow Tax Trigger Events which impact multiple licensees to be engaged on jointly by Ofgem, and to allow the PCFM to be updated, rather than use the Tax Trigger Event mechanism in such circumstances.

Consultation questions

FQ22. Do you agree with the proposed position that by including robust protections within the Price Control Financial Handbook, a tax forecasting penalty is not required?

FQ23. Do you agree definitions for ANDt and TDNIt should be updated to reflect the principles outlined in paragraph 7.41?

8. Regulatory Depreciation

Purpose: Regulatory depreciation rates determine the speed that RAV additions are repaid by consumers.

Benefits: Appropriate rates of depreciation help ensure, over time, that consumer charges are fair for both current and future consumers. Depreciation rates can reflect the economic and technical lives of the underlying assets.

Background

8.1 Regulatory depreciation is a building block of the revenue that network companies are allowed. Regulatory depreciation is comprised of an assumed asset life (or lives) and an assumption of the profile(s) of usage across the asset life (or lives). The regulatory depreciation assumptions determine the speed that RAV additions are paid for by consumers as part of the return of capital to investors. It is also commonly referred to as "RAV depreciation" or "allowed depreciation". Our existing policy for RIIO-1 and RIIO-2 has been to depreciate the RAV at a rate that broadly approximates the useful economic life of the network assets.

8.2 In our SSMD we considered differing depreciation actions for GD, GT and ET.

8.3 For our GD SSMD we decided to accelerate depreciation to target paying back additions to the GD RAV in line with the statutory net zero target date (currently 2050). We proposed four regulatory depreciation options:

- Option One: Sum-of-digits with RAV returned by government's net zero target date. A sum-of-digits profile with asset lives set such that the RAV is fully depreciated by the government net zero target date.
- Option Two: Sum-of-digits, variable declining balance with RAV returned by government's net zero target date. As with the option above, but with an acceleration factor decided at each price control and applied to the depreciation amount for that period to accelerate payments as required.
- Option Three: Straight-line, variable declining balance profile with RAV returned by government's net zero target date. As with Option Two above but with a straight-line depreciation profile rather than sum-of-digits.
- Option Four: For existing assets - retaining the existing depreciation profile and asset life assumptions; for new investments - sum-of-digits with investment returned by government's net zero target date.

8.4 For GD we also outlined four different metrics to assess the different policy options to inform our decision-making:

- Immediate Consumer Bill Increases: Consider any immediate increases in consumer bills due to accelerated depreciation, ensuring fairness for current consumers.
- Long-term Consumer Bill Impact: Implement a depreciation profile that smooths payments over time to avoid significantly impacting future consumer bills.
- Perceived Asset Stranding Risk: Assess the impact on forecast outstanding RAV balance and the risk of unsustainable gas consumer bills due to a smaller consumer base paying fixed depreciation charges.
- Financeability: Ensure gas networks can finance their activities, considering the potential impact on credit rating metrics and the ability to raise financing.

8.5 For GT, whilst we proposed to accelerate depreciation, we stated that we consider that it is more likely that some assets will retain their useful life beyond the government's net zero target date. We also noted the potential consumer bill impact of accelerating depreciation in GT is significantly lower than in GD as the GT RAV is smaller. Therefore, we did not propose a target date for RAV repayment and asked for evidence from NGT to understand how its network could be used or repurposed beyond the governments' net zero target date.

8.6 We noted in paragraph 8.68 of our SSMD Finance Annex that "we do not consider that any of our proposed options for GD or GT fetter the government's ability to make future decisions relating to the long-term future of the gas networks or limit alternative approaches to dealing with residual gas assets." We also stated that in considering the depreciation options we would also consider and adapt to market changes, including in government policy.

8.7 For ET we decided in our SSMD to maintain the existing 45-year asset life assumption, based on updated analysis from Cambridge Economic Policy Associates (CEPA) which found that the existing weighted average technical life of assets to be 55 years and did not receive substantive evidence to suggest significant changes since RIIO-2. However, we were open to review any evidence to the contrary in the business plan submissions.

8.8 In the sections below we will look at our individual Draft Determinations for GD, GT and ET. The Overview Document provides context on the government's long-term programme to address the strategic challenges facing the gas system

(Chapter 3) and also summarises our positions on gas depreciation (Chapter 8), which are discussed in more detail below.

GD Draft Determinations position

8.9 We propose to implement Option Four, maintaining the existing depreciation profile for RAV outstanding at the end of RIIO-2 and depreciating new additions to the RAV during RIIO-3 and onwards on a sum-of-digits basis with the assets depreciated to zero by the government's net zero target date, which is currently 2050.

GD feedback

8.10 All the GDNs provided a consistent view on the issues and risks highlighted by the modelling and discussion on accelerating the rate of depreciation, namely the recovery of the RAV and the risk of asset stranding.

8.11 All GDNs stated the importance of clear commitments from Ofgem and the government on the repayment of the RAV to investors to maintain investor confidence in the sector and ensure long-term financeability and investability.

8.12 The GDNs highlighted the risks associated with accelerating depreciation and setting an end date for the RAV, such as discouraging investment into the network (in particular long-term investment); reducing incentives for GDNs to innovate to maintain value in the network; and undermining investor confidence.

8.13 The GDNs also maintained that there was significant risk of asset stranding regardless of Ofgem's approach to depreciation, due to the transition to net zero and the increase in consumer bills from other network costs, as well as depreciation (eg tax, operating costs, returns).

8.14 They also highlighted that the accelerated depreciation could not solve the uncertainty presented by Future Energy Scenarios (FES) as the UK transitions to net zero.

8.15 The GDNs believe that government and Ofgem need to work to provide the regulatory frameworks and government policies and support to minimise the financial impacts leading to asset stranding.

8.16 The GDNs also highlighted the implications for consumer bills during RIIO-3 of accelerated depreciation and the requirement to take a balanced approach. There was broad consensus that the four metrics proposed to assess depreciation were the right ones to consider.

8.17 The GDNs had different views on the application of accelerated depreciation during the RIIO-3 price control period.

8.18 Cadent stated that "Ofgem do not need to make any urgent change to the RAV depreciation policy" due to uncertainty in the future decarbonisation pathway, which could lead to current customers getting charged more than future customers if the RAV is depreciated too aggressively. Cadent reviewed the four depreciation options and recommend Option Four, as the fairest for current and future consumers.

8.19 Cadent also proposed a 100% capitalisation rate of repex and capex over the price control period.

8.20 NGN preferred an approach that considers various long-term outcomes and maintains financeability and investability. It suggested reducing asset lives to 35 years as it would have a small short-term bill impact and would allow more time for uncertainty to resolve, and to revisit the policy ahead of RIIO-4 and adjust based on any new developments.

8.21 SGN emphasised the need for a "clear and transparent methodology for any acceleration factors to avoid introducing volatility and regulatory discretion". It stated that "it does not seem appropriate to add further to bills unnecessarily in GD", "unless there are clear and tangible long-term benefits".

8.22 SGN instead proposed a "calibrated" approach. This would accelerate the depreciation based on the actual number of customers which have historically switched from gas to electricity, adjusting the rate of depreciation each year. SGN considered that the calibrated approach with an equalisation factor to flatten the increasing bill profile provides for a more balanced and fair distribution of costs over time and avoids the sharp increases in bills seen in other scenarios (the "SGN Option").

8.23 SGN forecast residential costs per customer under five scenarios: (A) the ideal scenario based on perfect future knowledge of customer numbers; (B) sum-of-digits with 2050 end date; (C) calibrated depreciation based on customer leaving the network; (D) the same as C but with an equalisation mechanism; and (E) no change to existing policy.

8.24 SGN also forecast the total depreciation costs per annum under the five scenarios.

Figure 1311: SGN analysis - Depreciation per residential customer (£m, 23/24 real)

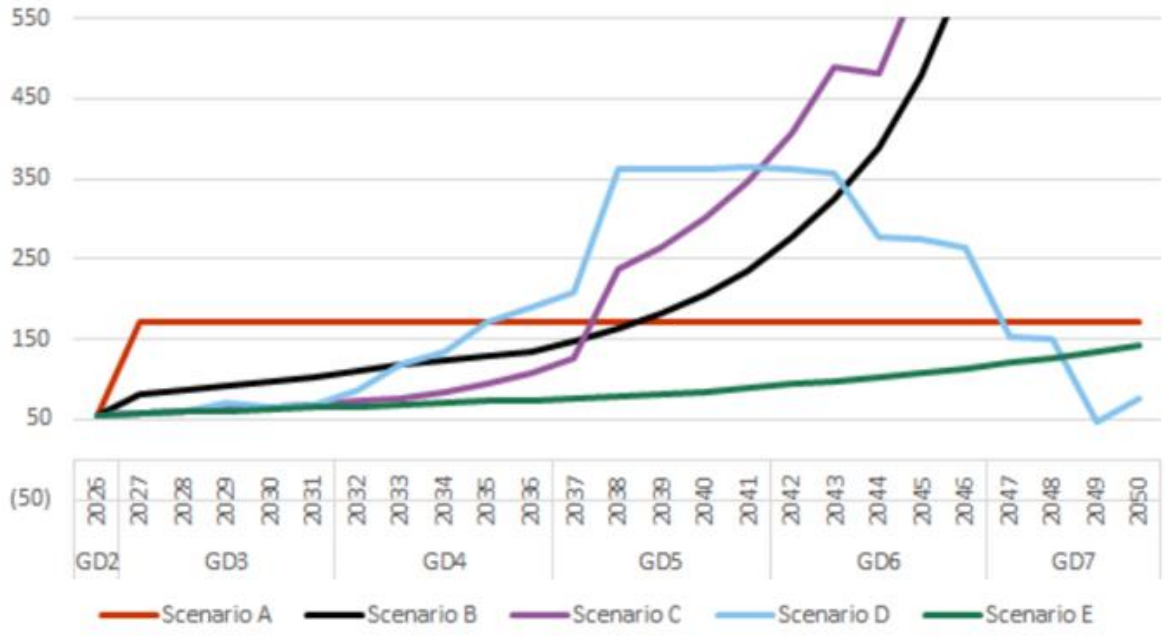
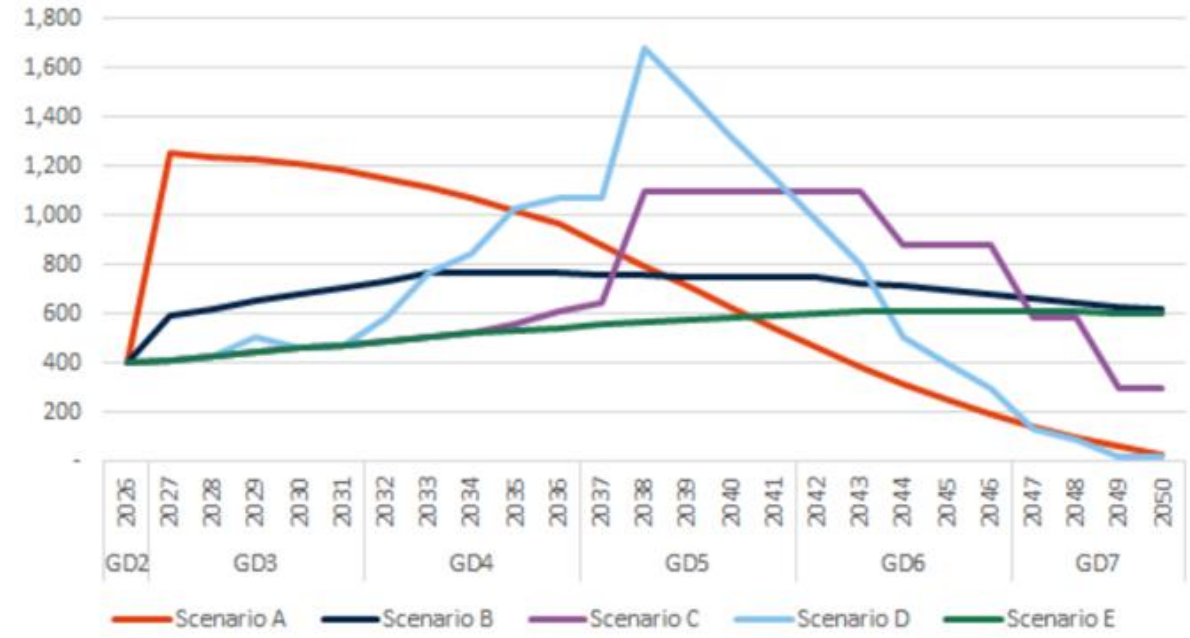


Figure 14:12 13SGN analysis: Total depreciation (floor = cf, £m 23/24 real)



8.25 SGN analysis suggested that, based on the FES Holistic Transition pathway, consumer bills become unaffordable by RIIO-GD5 due to a variety of costs that do not decline in proportion to customer numbers. It stated that it is "not a function of the choice of depreciation policy, but rather a function of the impact of low utilisation of the gas network".

8.26 WWU recommended keeping the alignment between the depreciation rate and the economic life of assets and a depreciation and asset valuation approach which reflects the usage of assets and degradation rather than a fixed timeframe. WWU highlighted asset stranding as a significant risk and proposed a comprehensive approach with regular assessments of asset values and supportive policies. WWU agreed with our proposed metrics for assessing a new depreciation rate and suggested that the business plan assumption of Option Two without a factor uplift may not be enough acceleration to "mitigate asset stranding risk". WWU recognises the complexity of this decision.

8.27 During stakeholder engagement following our SSMD, there was broad feedback that, as well as depreciation, we should engage with government on wider issues around the future of gas, including disconnection costs, the potential of hydrogen, regional differences in disconnection rates and affordability.

8.28 One stakeholder emphasised the need for flexibility in decision-making in order not to over burden today's customers. They highlighted the uncertainty as to the future use of and value of the gas network, which could be repurposed for other uses, and advocated for solving for a residual value by 2050, rather than full repayment of the RAV, and exploring alternative uses for the assets.

GD rationale

8.29 Based on the diverse stakeholder feedback, we considered a number of new options for depreciation for GD, as well as reviewing our approach for the metrics to be used in assessing what we consider to be the most appropriate depreciation policy.

8.30 We considered eight options, and for ease we have grouped them into four different categories:

- No change to RIIO-3 bills
  - Maintain the existing depreciation policy
  - The SGN option[48]
- Gradual Change
  - Option Four: accelerate depreciation of RIIO-3 assets only
  - NGN proposal for a 35-year asset life
  - Option One + 10 years: zero RAV by net zero date plus 10 years

[48] SGN-GD3-SD-09 Finance Annex_Redacted V3_Redacted.pdf. Section C1. No change during RIIO-3 based on GDNs forecast gas customer switching during RIIO-3

    - Option One with 10% stub: RAV reduced by 90% by net zero date
- Stabilise RAV during RIIO-3
    - Option One: zero RAV by net zero date
- Reduce RAV during RIIO-3
    - Option One: zero RAV by net zero date with an acceleration factor applied to increase RIIO-3 bill payments

8.31 We also considered whether the four metrics for assessing the most appropriate depreciation policy were sufficient. We reflected on the stakeholder feedback that due to the uncertainty of government policy, the sensitivity of the household bills to future gas connection forecasts and the potential for assets to retain value after 2050, we should consider maintaining some flexibility to review the broader depreciation policy during RIIO-3 for RIIO-4.

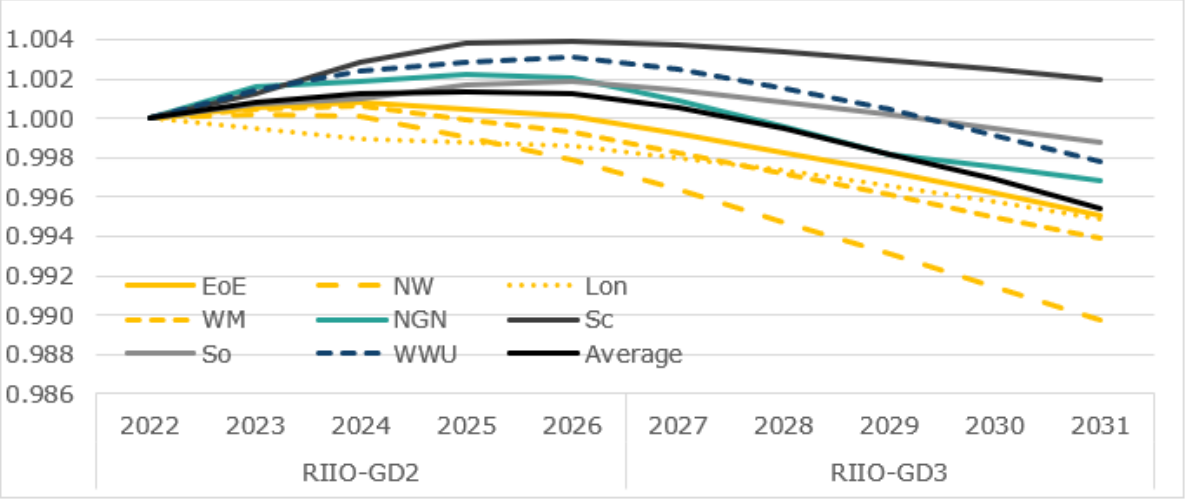
8.32 As discussed in Chapter 3 of the Overview Document, we welcome the government's Gas Update to Market setting out its long-term work on the future of gas and how that programme will be progressed. We expect the outcomes of this programme to give further clarification on the speed and scale of any transition and will be highly relevant to our decisions on regulatory depreciation and economic asset lives for the gas sector. Accordingly, any decisions we take for the RIIO-3 period and beyond must be able to adapt to the outcomes of this future of gas policy review, in line with our statutory duties.

8.33 In considering the options above we came to the following positions which we are consulting on as part of our Draft Determinations.

8.34 The approach of not implementing a change during RIIO-3 and the SGN option were considered insufficient in dealing with customer fairness over time. For the SGN option where we would set the future depreciation based on historic gas consumer disconnection rates, it leaves the issue of repaying the RAV to customers remaining on the network rather than fairly attributing the historic costs to gas network users. It also does not allow adjustments to the depreciation policy based on government policy decisions that may drive foreseeable future electrification. Finally, the SGN proposal resulted in an annual rate that can change every year, bringing uncertainty and variability into the annual depreciation charges which other stakeholders wanted to avoid.

8.35 The approaches of stabilising or reducing the RAV during RIIO-3 were considered too aggressive, given the evidence from the GDNs with forecasts for customers directly connected to the network during RIIO-3 showing a potential for a very gradual reduction in gas customers.

Figure 1514: GDN forecasts for change in customers connected to the GD network (2022=1)



8.36 Therefore, the minded-to position to implement a gradual change during RIIO-3 led to a judgement between the differing gradual change options and how much further to accelerate depreciation beyond the existing 45-year sum-of-digits approach.

8.37 We propose to implement accelerated depreciation for new assets only in GD.

8.38 This approach is designed to manage the risk of asset stranding in a way that we consider proportionate, forward-looking, and responsive to evolving government policy on the future of gas. It reflects a balanced regulatory stance that aims to protect both current and future consumers while maintaining investor confidence.

8.39 By accelerating depreciation for new assets only, we can begin the process of accelerated depreciation based on the facts and outlook available to us today, without locking in a more aggressive policy that may later prove unnecessary or misaligned with government direction. This approach also avoids a sharp increase in consumer bills in the short term, which is particularly important given current affordability concerns.

8.40 From a statutory perspective, the recommendation aligns with our duties to ensure fairness across generations, support the net zero transition, and maintain the financeability of network companies. Allowing the RAV to grow unchecked would place an unfair burden on future consumers—who are likely to be fewer in number and potentially more vulnerable—as they would bear the

cost of legacy infrastructure. Accelerated depreciation for new assets helps to moderate this risk while still allowing for flexibility in future regulatory decisions.

8.41 We consider that the proposed approach, coupled with the government work considering the future of gas, will signal to financial markets that we are taking measured action, alongside government, to address long-term risks.

8.42 In conclusion, by taking a cautious but proactive stance, we aim to begin to tackle the evolving risks associated with the GD network while preserving the flexibility to respond to future policy developments. This approach supports a fair, efficient, and forward-looking energy system that aligns with the UK's broader decarbonisation goals.

GT Draft Determinations position

8.43 We propose to retain the existing sum-of-digits with a 45-year asset life depreciation profile for GT.

GT feedback

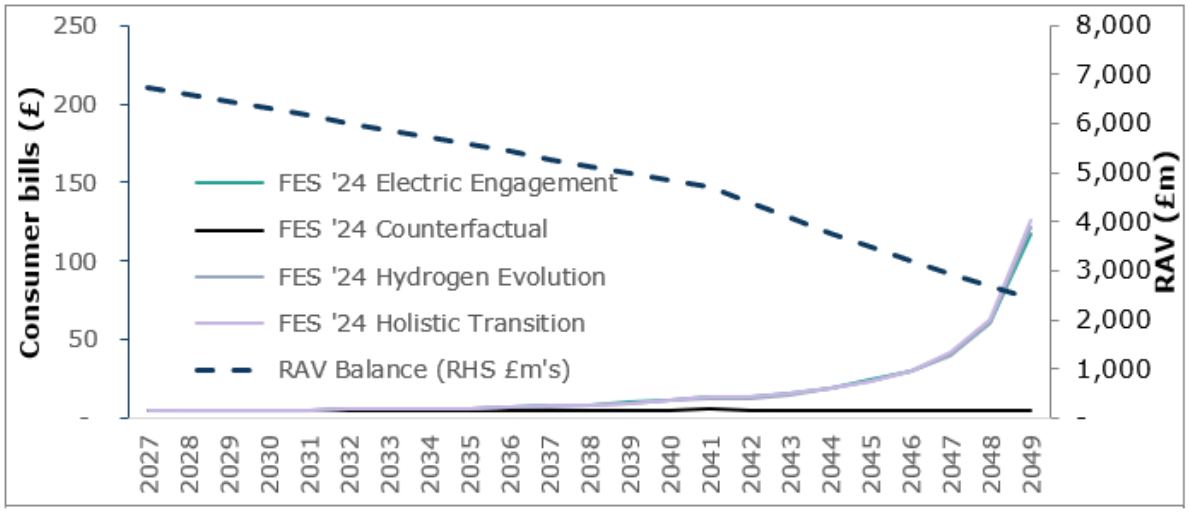
8.44 NGT stated that accelerated depreciation is not required during RIIO-3, however instead the period should be used to monitor and re-assess the data until a clearer picture emerges and when the hydrogen and carbon, capture and storage business models are finalised.

8.45 NGT considered that under all analysed scenarios gas will be required in the gas transmission network post-2050, which includes the NIC reports, Project Union, NESO demand forecasts and its own analysis. Although it noted the inherent uncertainty in all the forecasts.

GT rationale

8.46 We propose against further acceleration of depreciation for GT beyond the current 45-year sum-of-digits profile and the implementation of the semi-nominal RAV. We believe that there is a low regret risk in waiting for the conclusion of the government review before deciding whether to accelerate depreciation ins GT. GT depreciation currently constitutes less than 1% of customer household bills and will remain at less than 1% of consumer bills by 2040 with no action. Therefore, there is minimal consumer impact in adjusting based on future evidence on the usage of the network or potential repurposing beyond 2050.

Figure 1615: Estimated annual consumer bill impact (£) if no change to GT depreciation policy



8.47 The figure shows the forecast consumer bill amount for GT depreciation costs in £ based on the four FES24 pathways on the left-hand axis, with the forecast GT RAV balance on the right-hand axis.

ET Draft Determinations position

8.48 We propose maintaining the current 45-year asset life for ET. This is based on CEPA analysis and stakeholder feedback. Our initial long-form modelling indicates that the 45-year asset life does not pose a financeability concern for RIIO-3 but we welcome further evidence from stakeholders on this matter.

ET feedback

8.49 In its business plan submission NGET proposed assigning an asset life of 40 years to better match the benefit and costs of the asset to consumers over time.

8.50 NGET stated that with the evolving technologies and the increasing number of submarine cables, initial data indicates that 78% of assets built during RIIO-3 will have an economic useful life of 40 years or less.

8.51 SP Energy Networks advocated for a reduction in asset life from 45 years to 35 years. This reduction is evidenced by the assumption of lower estimated technical lives in line with Ofgem's consultation on the Early Competition Model (ECM). The reduction is also required to support financeability of the TOs which aligns with consumer interests as it balances the need for capital required to invest into the infrastructure with the goal of affordable costs for consumers.

8.52 SHET proposed a reduction in asset lives for new additions from 45 years to 35 years. This is justified by the shorter technical lives of new assets built offshore or near-shore. Real world examples indicate average asset lives of 30 to 35

years for offshore assets. SHET states that the reduction in asset lives also supports financeability and investability, as shorter asset lives increases the release of slow money, improving cash flows and reducing debt/equity requirements, as well as positively impacting credit metrics. SHET also references the consultations for competition for onshore transmission assets which sets the revenue period for 35 years for investability reasons.[49]

ET rationale

8.53 Our decision is based on CEPA analysis, and stakeholder feedback on the existing technical asset life of transmission assets and the potential for a shorter technical life for new assets built during RIIO-3. The weighted average of the technical life between the old and new assets is between 43 to 48 years supporting the maintenance of the existing policy.

8.54 In a report commissioned by Ofgem, CEPA concluded that the assets under the existing RAV (pre-2027) have an average technical life of 55 years.

8.55 NGET estimated that 78% of its assets built during RIIO-3 would have a 35-year asset life. This was the highest estimation of the percentage of new assets that would have a less than 40-year asset life from the evidenced received.

8.56 To balance this evidence, we looked at the proposed RAV growth from the business plans for the ET companies. We ascribed a 55-year life to existing RAV and a 35-year life to 78% of the increase in RAV from 2027 to 2032 (ie a proxy for new assets). For the 22% balance of the new assets, we assumed a 55-year life. This resulted in a weighted average asset life for NGET, SHET and SPEN of 48, 45 and 43 respectively.

8.57 As discussed in paragraph 5.74, network companies have presented evidence to suggest that the asset life assumption should be reviewed to consider the long-term impacts of the 45 year assumption on financeability. Based on our long-form modelling, our initial conclusion is that the 45-year asset life does not pose a financeability concern for RIIO-3. The projected long-term performance remains broadly consistent with a Baa1/BBB+ credit rating and does not warrant immediate action. We welcome further evidence from stakeholders on this matter.

[49] https://www.ofgem.gov.uk/consultation/consultation-onshore-electricity-transmission-early-competition-commercial-framework

GD Consultation questions

FQ24. What are your views on our proposal to accelerate depreciation for new assets only in GD and is there any further evidence you would like us to consider before we reach a final decision?

GT Consultation questions

FQ25. Do you agree with our proposal to maintain the existing depreciation policy for gas transmission assets?

ET Consultation questions

FQ26. Do you agree with our proposal to maintain the existing depreciation policy for electricity transmission assets?

9. Return Adjustment Mechanisms

Purpose: The purpose of RAMs is to provide protection to consumers and investors in the event that network company returns are significantly higher or lower than anticipated at the time of setting the price control.

Benefits: Consumers and investors benefit from RAMs as they are protected against the possibility of unreasonably high or low returns in the RIIO-3 price control period. RAMs will help to ensure the fairness of RIIO-3 by protecting consumers and investors against ex post overall returns from network price controls deviating greatly from ex ante expectations.

Background

9.1 The purpose of RAMs is to provide protection to consumers and investors in the event that network investor returns (as measured by RoRE) are significantly higher or lower than anticipated at the time of setting the price control.

9.2 RAMs protect both consumers and investors because they guard against either the possibility of unreasonably high or low returns. They help to ensure the fairness of RIIO-3 by protecting consumers and investors against ex post overall returns from network price controls deviating greatly from ex ante expectations.

9.3 Within RIIO-2, RAMs take into account combined performance under the TIM and Output Delivery Incentives (ODIs), with adjustments under the RAMs being made as part of the close out of RIIO-2. We apply symmetry to the upside and downside application of the RAMs thresholds, providing for adjustments both due to under and outperformance. This represents a fair balancing of the interests of consumers and investors.

9.4 In our SSMD, we stated it is appropriate to retain the RAMs as we do not consider there to be sufficient evidence that an alternative mechanism or method would be more effective in achieving the aim of protecting investors and consumers from unreasonably high or low returns.

9.5 We also stated that we do not consider it to be in the interest of consumers to include financial performance when calculating RAMs. We stated we would keep this position under consideration as we assess the implementation of our proposed changes to debt allowance methodologies and will confirm our approach at Draft Determinations.

9.6 At our SSMD stage, we stated there does not appear to be a compelling reason to introduce separate RAMs for the GT and GD sectors. As a result, we have

decided to roll over the existing methodology for RIIO-GD3 and GT3. For ET, we stated we will confirm our approach at DDs in light of decisions made in relation to the structure and anticipated outcomes of major projects such as ASTI in the ET sector.

Draft Determinations position

9.7 We propose to maintain the RIIO-2 RAMs mechanism for RIIO-3 for all sectors and will be excluding financial performance when calculating RAMs.

9.8 As we stated in our SSMD, we use a notional structure for setting allowed returns for network companies. We believe that extended RAMs to include financial performance could compromise this principle. It is up to the companies' owners, and not for consumers, to decide on the best financial structure and to bear the risks of these decisions.

9.9 While including financial performance in RAM calculations may allow consumers to share in the benefits of network company outperformance, it would also expose them to higher costs if financing decisions lead to higher costs of capital than provided via our allowances. If for example a licensee had a very significant underperformance due to a poor financial decision, a RAMs mechanism which included financial performance would expose consumers to the majority share of those additional costs. In RIIO-2 the companies outperformed financially substantially due to the inflation leveraging effect, however we consider that in RIIO-3 we have addressed the issue of financial outperformance due to inflation-leveraging at its source. We would also not wish to incentivise the companies to take large financial risks knowing that the costs of a bad outcome would largely be borne by consumers. Therefore, we do not believe that financial performance should be included in the RAMs.

9.10 We have considered including a separate RAMs for discrete programmes such as the Accelerated Strategic Transmission Investment (ASTI) framework. We have come to the view that doing so would not allow investors to assess company investability in the round across the price control. Therefore, on balance for ET, we have decided we will not be introducing a separate RAMs for programmes such as ASTI. We consider that this decision benefits consumers because it will lower uncertainty for investors by giving them a more transparent view of the impact of the ET companies' overall performance on their returns. That lower uncertainty and greater transparency should lead to a lower cost of capital and thus lower costs for consumers.

9.11 At SSMD we stated we would set the RAMs parameters once we have a more complete picture of the overall price control package, the potential RoRE ranges and in light of Business Plans. Having reviewed these, we have decided to continue with the RIIO-2 thresholds and adjustment rates.

Table 24: RAMS thresholds and adjustment rates

Parameter	Draft Determination
Primary threshold level	3% plus or minus the baseline allowed return on equity
Primary adjustment rate	Adjustment of 50% applied to returns above or below the primary threshold level
Secondary threshold level	4% plus or minus the baseline allowed return on equity
Secondary adjustment rate	Adjustment of 90% applied to returns above or below the secondary threshold level

Draft Determinations position

Business Plan review

9.12 Network companies provided varied responses within their business plans. While some support the measures we set out in our SSMD, they emphasised the need for careful calibration in RIIO-3 to effectively manage complexities and balance associated risks.

9.13 Similarly, one licensee supports the protections in the RIIO-2 mechanism but believes it needs calibration in the Draft Determinations.

9.14 One licensee opposes the RAMs in RIIO-2 and recommends a review for RIIO-3 due to its perceived unnecessary complexity. They note the significant negative skew on RoRE penalties but recognise the need for downside protection through a RAM unless adjustments are made.

9.15 One licensee acknowledges that regulatory mechanisms like cost re-opener mechanisms, and the TIM help mitigate cost risks. However, they highlight that new ODIs and stricter licence breach conditions introduce significant delay risks. While these mechanisms reduce cost risk exposure, they significantly increase delay risk due to the new ODI regime for ASTI and stricter license enforcement conditions. Therefore, careful calibration of RAMs is crucial to balance these factors effectively.

9.16 Another company highlights significant financial risks from totex performance and delivery incentives (ASTI ODIs) in the RIIO-ET3 period. They suggest a more forward-looking approach to setting allowances and adjusting existing

mechanisms, such as reducing TIM or extending the 5% cap on cost overruns, to mitigate downside risks. They emphasise the need for these adjustments to balance customer protection against excessive outperformance or under delivery. Additionally, they express concerns about financing their programme of work if risks are not adequately reflected in allowed returns and seek guidance on disapplying financial penalties for delays beyond their control.

9.17 We therefore propose to maintain the position that we took in the SSMD. Other price control mechanisms such as ODIs have been altered in RIIO-3 versus RIIO-2, to try to reflect a changing industry environment, and to reduce the possibilities of extreme operational underperformance or outperformance. Nevertheless, we continue to believe that there will always be the possibility of other unforeseen factors, which open up the possibility of a fundamental miscalibration of the price control, to the detriment of consumers, or, in the other extreme, to the detriment of investors. We do not believe that changes in other mechanisms in RIIO-3 are sufficient to protect consumers without a fail-safe mechanism to account for any unforeseen factors. It is therefore appropriate, in our view, to retain the RAMs mechanism for RIIO-3.

Threshold levels

9.18 To inform our RAMs threshold calibration, we have assessed business plans and considered the total RIIO-3 package in the round, including the calibration of the cost of equity, the size of the ODI package including the baseline target setting, and the calibration of the TIM.

9.19 We propose to calibrate two thresholds for the RAMs of 300bps and 400bps either side of our baseline allowed return on equity. In our view, these threshold levels either side of allowed return on equity protect consumers on the downside and preserve reasonable incentives for companies to outperform.

9.20 The charts below demonstrate that none of the licensees are forecast to breach these proposed RAMs thresholds within each of the sectors during RIIO-3. As was the case previously, RAMs should only be triggered in cases of extreme, and in our assessment unlikely, operational underperformance or outperformance, constituting a fundamental miscalibration of the price control. Consumers should share in the benefits of extreme outperformance and conversely the companies are protected from some of the costs of an extreme underperformance. For this reason, we do not propose to change the threshold levels for RAMs from RIIO-2 because we consider that they continue to reflect an appropriate balance to these aims.

Figure 17: Illustrative RoRE ranges, GD3 average

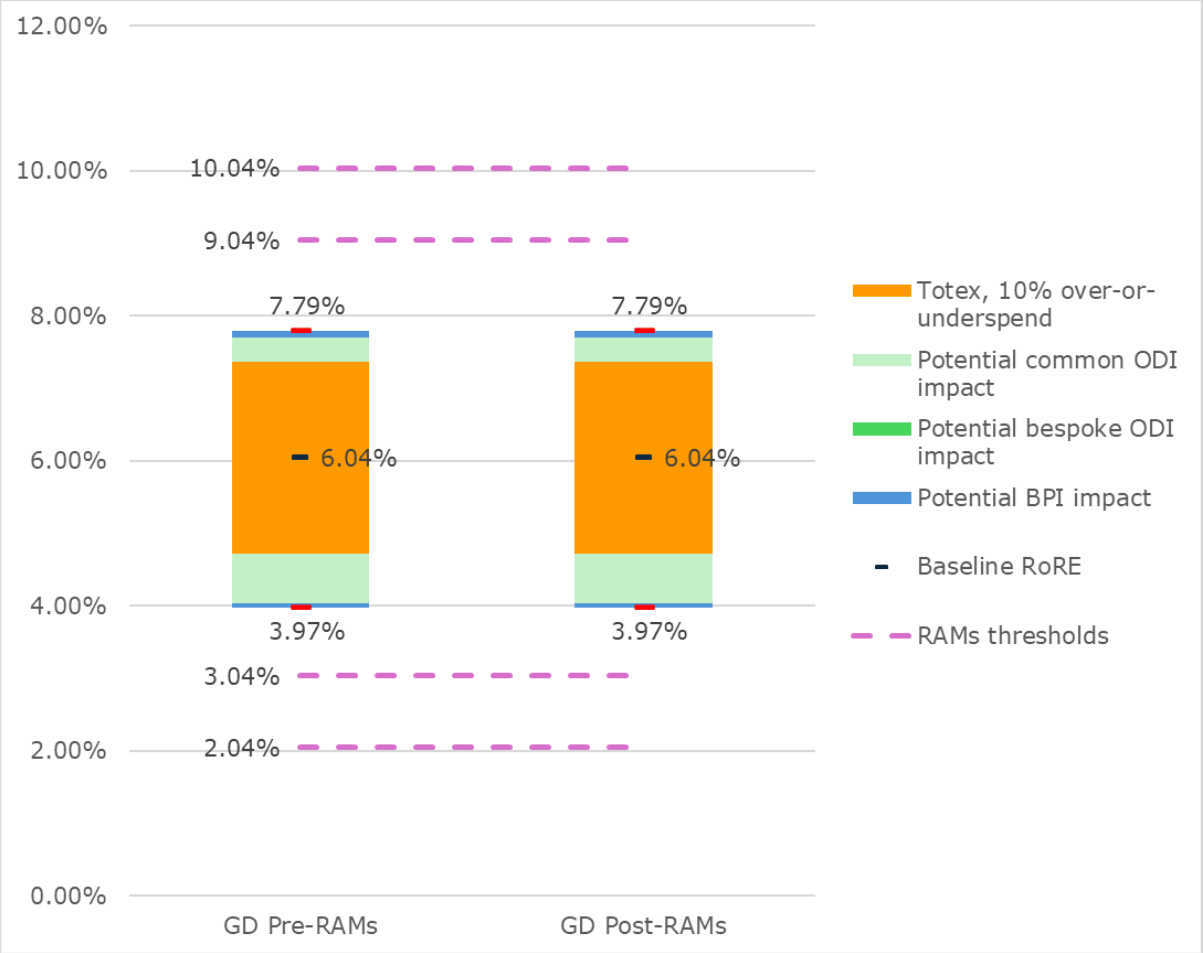


Figure 1816: Illustrative RoRE ranges, GT3 average

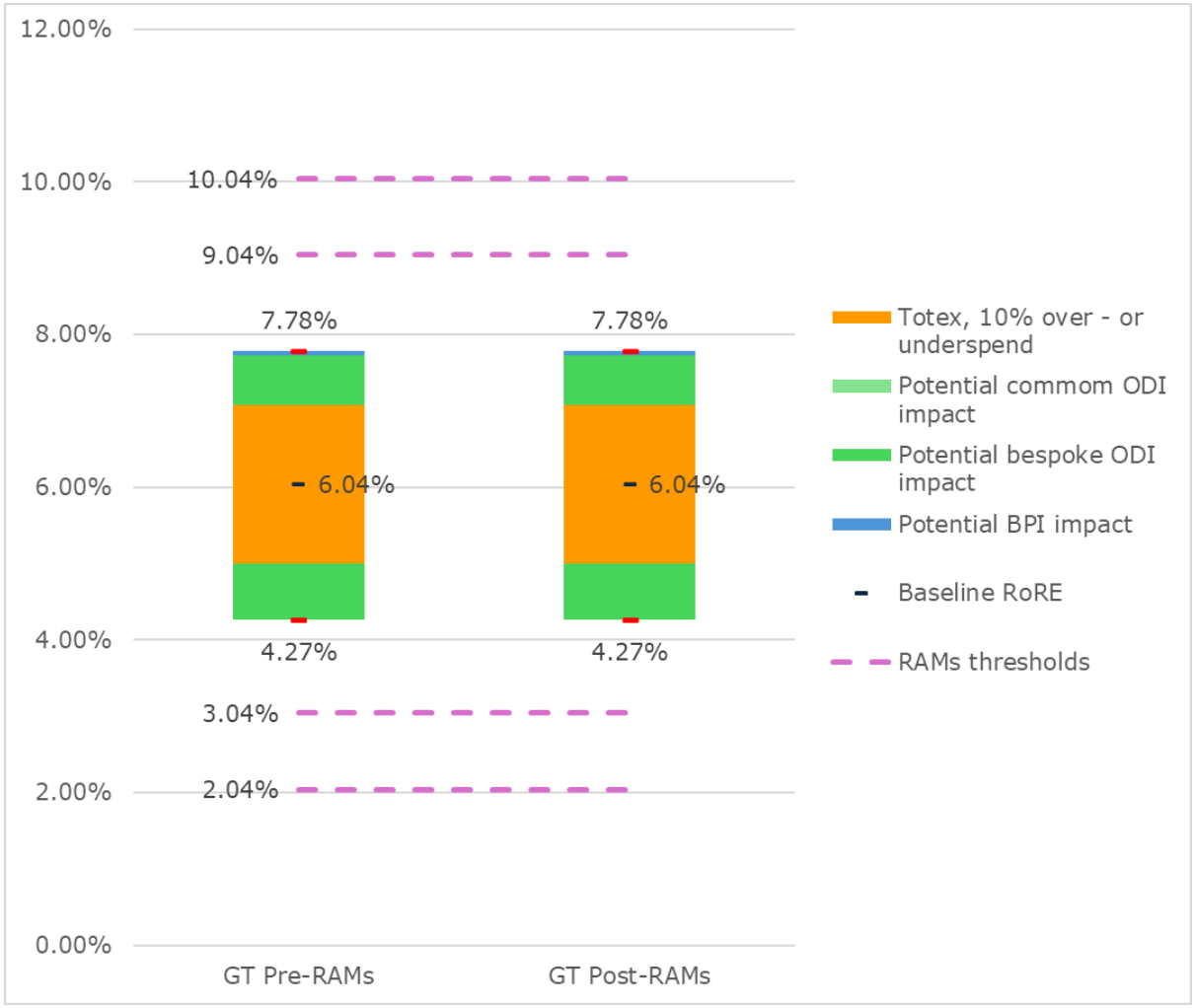
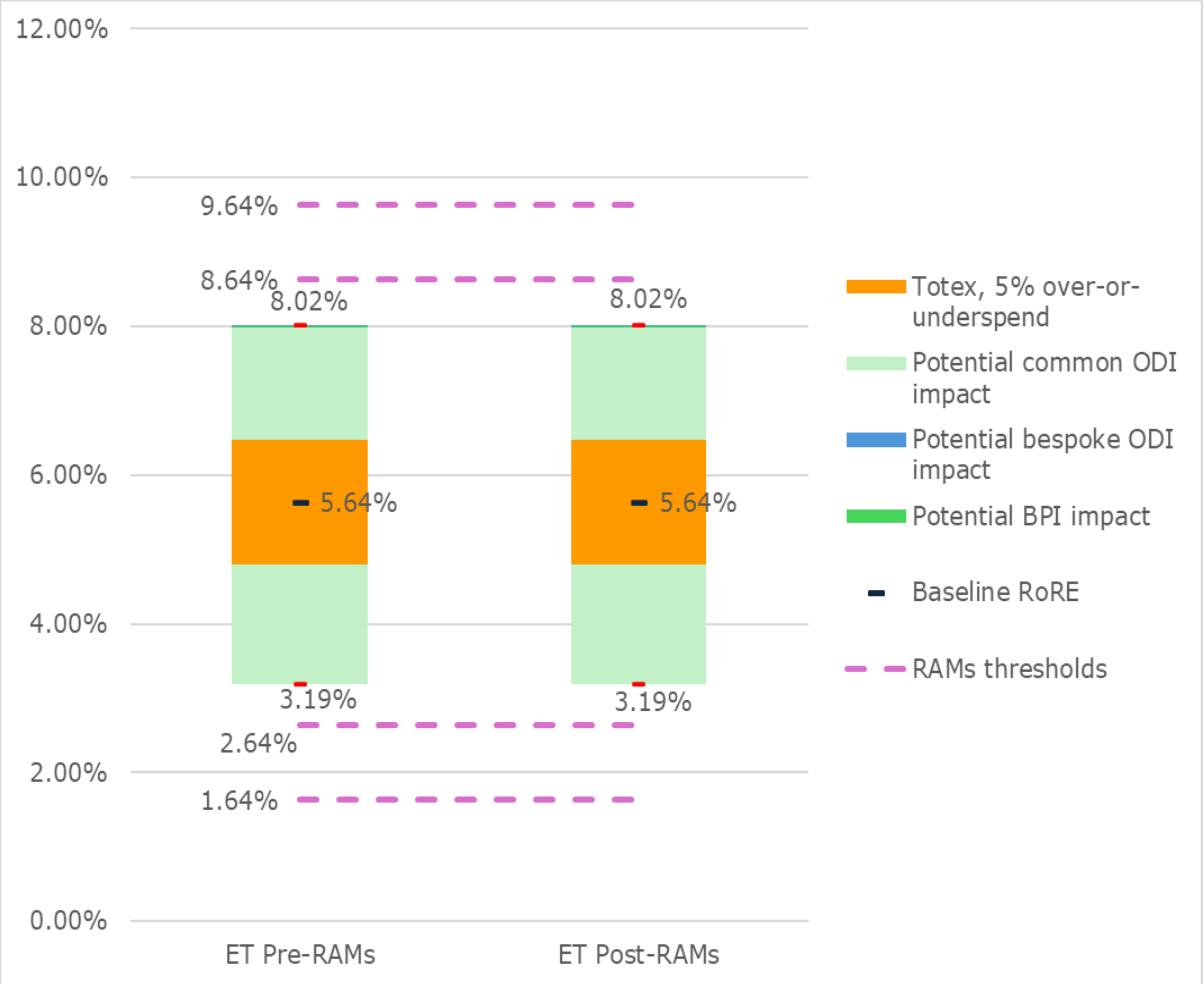


Figure 1917: Illustrative RoRE ranges, ET3 average



9.21 The tables below show the RoRE impact in RIIO-3 of various combinations of ODI performance (the x axis shows the RoRE minimum and maximum ranges where the maximum and the y axis shows the totex performance where >100% represents an overspend), aggregated across all the licensees. This further demonstrates that none of the licensees are forecast to breach the RAMs threshold.

Table 25 - GD sector RAM Matrix showing RoRE impact (basis points of combinations of ODIs – x axis and Totex performance – y axis)

	-0.68%	**-0.51%**	**-0.34%**	**-0.17%**	**0.00%**	**0.09%**	**0.17%**	**0.26%**	**0.34%**
110%	(198)	(181)	(164)	(147)	(130)	(122)	(113)	(105)	(96)
108%	(172)	(155)	(138)	(121)	(104)	(96)	(87)	(79)	(70)
106%	(146)	(129)	(112)	(95)	(78)	(70)	(61)	(53)	(44)
104%	(120)	(103)	(86)	(69)	(52)	(44)	(35)	(27)	(18)
102%	(94)	(77)	(60)	(43)	(26)	(18)	(9)	(1)	8
100%	(68)	(51)	(34)	(17)	-	9	17	26	34

	-0.68%	-0.51%	-0.34%	-0.17%	0.00%	0.09%	0.17%	0.26%	0.34%
98%	(42)	(25)	(8)	9	26	35	43	52	60
	(15)	2	19	36	53	61	70	78	87
	11	28	45	62	79	87	96	104	113
	37	54	71	88	105	114	122	131	139
	64	81	98	115	132	140	149	157	166

Table 26 - GT sector RAM Matrix showing RoRE impact (basis points of combinations of ODIs -x axis and Totex performance – y axis)

	-0.74%	-0.55%	-0.37%	-0.18%	0.00%	0.16%	0.32%	0.48%	0.64%
110%	(175)	(157)	(139)	(121)	(103)	(87)	(72)	(56)	(41)
108%	(155)	(137)	(119)	(101)	(83)	(67)	(51)	(36)	(20)
106%	(134)	(116)	(98)	(80)	(62)	(46)	(31)	(15)	0
104%	(114)	(96)	(78)	(60)	(41)	(26)	(10)	5	21
102%	(93)	(75)	(57)	(39)	(21)	(5)	10	26	42
100%	(72)	(54)	(36)	(18)	-	16	31	47	62
98%	(51)	(33)	(15)	3	21	36	52	68	83
96%	(30)	(12)	6	24	42	57	73	89	104
94%	(9)	9	27	45	63	78	94	110	125
92%	12	30	48	66	84	100	115	131	146
90%	33	51	69	87	105	121	136	152	168

Table 27 - ET sector RAM Matrix showing RoRE impact (basis points of combinations of ODIs – x axis and Totex performance – y axis)

	-1.59%	-1.19%	-0.79%	-0.40%	0.00%	0.38%	0.77%	1.15%	1.53%
105%	(237)	(197)	(157)	(118)	(78)	(40)	(2)	36	75
104%	(222)	(182)	(142)	(102)	(62)	(24)	14	52	90
103%	(207)	(167)	(127)	(87)	(47)	(9)	29	67	105
102%	(191)	(151)	(111)	(71)	(31)	7	45	83	121
101%	(176)	(136)	(96)	(56)	(16)	22	60	98	136
100%	(160)	(120)	(80)	(40)	-	38	76	114	152
99%	(144)	(104)	(64)	(24)	16	54	92	130	168
98%	(128)	(88)	(48)	(8)	32	70	108	146	184
97%	(112)	(72)	(32)	8	48	86	124	162	200
96%	(96)	(56)	(16)	24	64	102	140	178	216
95%	(80)	(40)	0	40	80	118	156	194	232

9.22 The tables above show that on what we consider to be plausible levels of under and outperformance, the RAMs are unlikely to be triggered and therefore help to ensure that the companies have sufficient incentives to be cost efficient and meet their targets on ODIs.

9.23 The downside RAM threshold is symmetrical to the upside threshold. Historical performance from RIIO-2 suggests that there is a limited probability of this RAM threshold being triggered.

Adjustment rate

9.24 The adjustment rates are the rates at which company returns are adjusted upwards or downwards in the event that the threshold is breached.

9.25 We consider it to be appropriate to calibrate the adjustment levels to each threshold as follows as per the tables above.

9.26 As in RIIO-2, we consider these adjustment rates to represent a fair balance between investors and consumers, and we do not believe that the operating environment in RIIO-3 means they should be changed. We set sharing factors which we judge will preserve sufficient incentive for the companies to continue to perform to the benefit of consumers but also provide a degree of downside protection. For example, with these rates, if a company outperforms above 300bps during RIIO-3, its owners will maintain 50% of those returns and the other 50% would go back to consumers. If they outperformed by more than 400bps the licensee's owners would still benefit albeit at a low rate of 10 per cent.

9.27 Conversely, levels of under performance of greater than 300bps and 400bps still incentivises companies to improve operational performance because they are bearing 50% and 10% of those losses respectively.

9.28 As set out above, we believe that a company's under/outperformance in breach of the RAMs thresholds would suggest a miscalibration of the price control. We consider that the adjustment rates would protect companies as well as consumers while still maintaining a positive marginal incentive.

Consultation questions

FQ27. Do you agree with our proposals for the RAM thresholds and adjustment rates?

FQ28. Do you agree with our proposal to include programmes such as ASTI within RAMs?

10. Indexation of Regulatory Asset Value

Purpose: The RIIO price controls offer inflation protection to equity investors through inflation adjustments to the RAV.

Benefits: An appropriate indexation mechanism improves legitimacy and fairness for consumers and investors.

Background

10.1 The RIIO price controls offer inflation protection to equity investors through inflation adjustments to the RAV. Under RIIO-2, the entire RAV was indexed to CPIH.

10.2 In the RIIO-3 SSMD, we decided to adopt a nominal allowance for fixed-rate debt in line with the notional capital structure. To implement this change, a portion of the RAV corresponding to the notionally assumed level of fixed-rate debt must be delinked from inflation. This ensures that investors are not compensated twice for inflation. The indexation of the RAV for index-linked debt (ILD) and equity remains unchanged.

Rationale for Draft Determinations position

10.3 In mathematical form, we propose the following approach to RAV indexation:

$$Proposed\ RAV\ Indexation = Opening\ RAV * (CPIH * (1 - FRD\ NA))$$

Table 28: Definition of equation components

Term	Definition
FRD NA	Means the fixed rate debt notional assumption

10.4 The proposed approach to RAV indexation requires a minor modification for the final year of RIIO-2 and the first year of RIIO-3, in order to ensure that the closing balance of RIIO-2 reflects the full year's inflation for 2025/26. We have not addressed this issue currently, but (provided this proposed approach is adopted) will implement it at Final Determinations.

Consultation question

FQ29. Do you agree with our proposals for RAV Indexation?

11. Other finance issues

Capitalisation rates

Purpose: Capitalisation rates determine the proportion of costs added to the RAV, with the remainder recovered within the year incurred.

Benefits: Appropriate rates help to balance charges fairly between existing and future consumers, whilst also ensuring that networks can meet the costs they face in the near-term.

Background

11.1 Capitalisation rates are the proportion of costs added to the RAV and paid by consumers over time (slow money) rather than paid within the year incurred (fast money).

11.2 In general, the regulatory capitalisation rate broadly reflects the split of capital expenditure (capex) and operating expenditure (opex) expected over the price control, referred to as the "natural" rate.

11.3 In RIIO-2, we implemented two capitalisation rates "buckets": one for ex ante allowed totex (rate one/bucket one) and one for re-openers and volume drivers (rate two/bucket two). Bucket one rates were set bespoke for each company, whilst bucket two rates were uniform within each sector. These two buckets allow the overall capitalisation rate to change as additional re-opener funding is allowed.

11.4 Bucket one is for baseline non-variant activities and Price Control Deliverables (PCDs), and bucket two is for re-openers and volume drivers (variant activities), including use it or lose it (UIOLI) allowances.

11.5 Both capitalisation rate buckets have their capitalisation rates fixed ex ante for the duration of the price control.

11.6 In our SSMD, we decided to retain the RIIO-2 approach for RIIO-3. We believe that it provides a good balance between targeting the natural capitalisation rate, providing ex ante certainty, and allowing for a degree of flexibility for activities with uncertain spending levels at the time of setting the price control.

11.7 We intend to set the bucket one and bucket two rates to reflect licensees' anticipated natural capitalisation rates during RIIO-3 whilst at the same time setting rates that are reasonably consistent within each sector. Where necessary, we may deviate from natural rates to help address financeability

challenges. This was the case in RIIO-2, where the regulatory capitalisation rates were set lower than the natural rates.

Business plan submissions

11.8 Based on data submitted to us in companies' Business Plans, average natural capitalisation rates over the duration of RIIO-3 are 93%, 61%, 71% and 44% for ET, GD, GT (TO) and GT (SO), respectively.

11.9 Generally, the proposals licensees made in their Business Plans for regulatory capitalisation rates were comparable to the submitted natural. SHET was the exception, suggesting decreasing their regulatory capitalisation rate from their natural capitalisation rate of 92.0% to 80.0%.

Draft Determinations position

11.10 For all licensees, we propose to fix capitalisation rates ex ante with the same rate applicable in all years of the price control. Bucket one rates are company-specific, while bucket 2 rates are uniform within each sector.

11.11 The proposed regulatory rates for ET, GT and GD at Draft Determinations are presented below in tables 28 - 30 respectively.

11.12 For GD and GT, the proposed capitalisation rates broadly align with the licensees' submitted natural rates in the business plan submissions. We have not yet settled on a uniform bucket two rate for GDNs. For the financeability assessment of GDNs we applied the annual average of companies' natural rate. The uniform bucket two rate for GDNs will be set at Final Determinations.

11.13 For ET, bucket one rates broadly align with licensees' submitted natural rates. We propose a bucket two rate of 85% to address financeability challenges. This is discussed in paragraph 5.36.

Table 29: Ofgem proposed totex capitalisation rates for RIIO-3 compared with RIIO-2 for the ET sector

Licensee	Bucket one (RIIO-3)	Bucket 2 (RIIO-3)	Bucket one (RIIO-2)	Bucket 2 (RIIO-2)
SHET	57%	85%	77%	85%
SPT	41%	85%	84%	85%
NGET	46%	85%	78%	85%

Source: Ofgem analysis

Table 30: Ofgem proposed totex capitalisation rates for RIIO-3 compared with RIIO-2 for the GT sector

Licensee	Bucket one (RIIO-3)	Bucket two (RIIO-3)	Bucket one (RIIO-2)	Bucket two (RIIO-2)
NGT (TO)	52%	100%	65%	75%
NGT (SO)	40%	N/A	34%	N/A

Source: Ofgem analysis

Table 31: Ofgem proposed totex capitalisation rates for RIIO-3 compared with RIIO-2 for the GD sector[50]

Licensee	Bucket one (RIIO-3)	Bucket two (RIIO-3)	Repex (RIIO-3)	Bucket one (RIIO-2)	Bucket two (RIIO-2)	Repex (RIIO-2)
East	23%	TBD	100%	29%	70%	100%
London	18%	TBD	100%	20%	70%	100%
North West	24%	TBD	100%	27%	70%	100%
West Midlands	21%	TBD	100%	25%	70%	100%
Northern	27%	TBD	100%	34%	70%	100%
Scotland	36%	TBD	100%	41%	70%	100%
Southern	30%	TBD	100%	33%	70%	100%
Wales & West	28%	TBD	100%	31%	70%	100%

Source: Ofgem analysis

Consultation question

FQ30. Is there any additional evidence we should consider to improve our setting of regulatory capitalisation rates?

RIIO-2 close-out

Purpose: To ensure the accuracy of opening balances at the start of RIIO-3 and that any items not settled by the end of RIIO-2 are captured in RIIO-3 allowances.

Benefits: The opening RAV balance and historical RAV additions, along with fast money, drives a number of the building blocks of allowed revenue (depreciation,

[50] In Draft Determinations, we have not decided on a uniform bucket two rate for GDNs. For the financeability assessment of GDNs, we applied the average of the 5-year natural rate for the bucket two rate. The bucket two rate for GDNs will be determined in the Final Determinations.

return on RAV) and so will need to be correctly set to ensure the accuracy of allowed revenues in RIIO-3.

Background

11.14 There are several areas within the price controls that need to be settled once the price control has ended and outturn data becomes known. These include things such as UMs, incentives and the final RIIO-2 allowed revenue correction adjustments (the Kt and ADJt terms) from the RIIO-2 PCFM. Closeout adjustments can be either positive or negative and will be made through either an adjustment to allowed revenue or an adjustment to RAV and closing tax balances.

RIIO-2 Legacy PCFM

11.15 We propose to use a modified version of the existing RIIO-2 PCFM, which will be known as the "RIIO-2 legacy PCFM" to calculate both the legacy adjustments to revenue and the closing RAV balances and closing tax balances for RIIO-2.

11.16 The RIIO-2 PCFM contains all of the fixed and variable values needed to calculate the adjustments required for the closeout of the RIIO-2 price controls. Taking this approach would be the most straightforward and transparent way to arrive at a closing position for RIIO-2.

11.17 The legacy allowed revenue values from the RIIO-2 Legacy PCFM would be reflected in opening revenue allowances for RIIO-3 and will be phased over the five years of RIIO-3 as a default but the phasing may be amended at the request of the licensee. This will ensure that revenues earned in the RIIO-2 period are correctly reflected in allowances received in the RIIO-3 period.

11.18 Similarly, we would take the closing RAV balance and tax balances from the same RIIO-2 Legacy PCFM and will use these as inputs in the RIIO-3 PCFM to calculate the opening balances for RIIO-3.

11.19 Because of the time lag[51] between finalising RIIO-2 and the start of RIIO-3, the RIIO-2 Legacy PCFM will contain actual expenditure data for the 2024/25 period and forecast data for 2025/26, which will be trued up in 2027 following the submission of actual expenditure.

[51] The final closing balances for RIIO-2 cannot be determined until the closeout of the RIIO-2 price control which it is not possible to commence until actual expenditure data is submitted in summer 2026.

Draft Determinations position

11.20 We propose to use estimated values for closeout adjustments, based on the actual data that is known to us at the time, until we are able to formally close out the RIIO-2 price controls.

11.21 Where we have used estimates due to an absence of outturn data, these will be trued up at a subsequent AIP once that outturn information becomes available.

11.22 There are no questions in this section.

RAV opening balances

Purpose: To ensure the accuracy of opening balances at the start of RIIO-3.

Benefits: The opening RAV balance drives a number of the building blocks of allowed revenue (depreciation, return on RAV) and so will need to be correctly set to ensure the accuracy of allowed revenues in RIIO-3.

Background

11.23 Companies submitted estimated values for their opening RIIO-3 RAV balances in their business plan financial model submissions. This included actual and forecast information to bridge the time lag between finalising RIIO-2 and the beginning of RIIO-3.

11.24 We have reviewed the reasonableness of the submitted opening RAV balances for the RIIO-3 PCFM, by comparing them against the estimated closing RAV balances in the current RIIO-2 PCFM.

11.25 Once we have received the outturn data for the final two years of RIIO-2, we will settle the final values for these "close-out" items and similarly, we will settle the final RAV impacts. For now, companies have used estimates to calculate the RAV impact and this has been factored into the opening RAV balance that they have submitted.

11.26 We propose to determine the opening RAV balances following the closeout process described above, by inputting the RIIO-2 RAV additions into the RIIO-3 PCFM to generate the correct opening balances. Until the formal close-out of RIIO-2, a forecast will be used for the RIIO-3 opening RAV balances.

11.27 As with RIIO-2, we will make the historical net RAV additions a variable value in the RIIO-3 PCFM and so the value of opening RAV in RIIO-3 will not be finalised until after the close-out of RIIO-2.

11.28 Once the RIIO-2 closing RAV balances are finalised, the effect of any knock-on changes to RIIO-3 allowed revenues will be trued up via the K-correction mechanism, when allowed revenues are recalculated in 2027.

Draft Determinations position

11.29 We propose forecasting the closing RIIO-2 RAV balances as opening RAV balances for RIIO-3 because final closing balances for RIIO-2 will not be known until we have completed the close-out of the RIIO-2 price controls, which will not take place until after the summer of 2026.

11.30 In the meantime, we have asked licensees to reflect forecast expenditure data in the RIIO-2 PCFM to be able to calculate a provisional closing balance in the absence of actual outturn data.

11.31 These closing balances represent the best estimate of opening RAV for RIIO-3 and remain under review until we can formally close out the RIIO-2 price controls.

11.32 This proposal is made for consistency with the approach to close-out described in the previous section.

11.33 There are no questions in this section.

Directly Remunerated Services

Purpose: To allow companies to charge their customers directly for certain services.

Benefits: To avoid consumers paying for a service for which the network companies have already been remunerated.

Background

11.34 Directly Remunerated Services (DRS) are specific activities of the network companies that are settled outside of the normal regulatory price control. Companies are allowed to charge their customers directly for certain services performed. For instance, a network company may enter into a commercial agreement with a third party such as a telecoms provider to lease out unused space on its grid infrastructure for the placement of satellite dishes or pylons. The telecoms provider would then pay a rental fee directly to the network company, according to the terms of that agreement. These services are "directly remunerated" by the third party rather than through Ordinary Transportation Charges.

11.35 The policy intent across sectors is to avoid consumers paying for a service for which the network companies have already been remunerated. Moreover, costs associated with these services are paid for directly by the specific party (or parties) requiring the service. As such, these costs should not be factored into the network companies' cost allowances, to avoid double-counting.

11.36 In our SSMD we decided to continue to use the DRS methodology in place in RIIO-2 as we were satisfied with the operation of this mechanism. We welcomed further evidence and information from stakeholders on considerations such as how DRS can support net zero and the benefit to consumers in allowing network companies to keep a portion of the profit for DRS services when they have no statutory duty to complete the work. The Business plans were silent with regards to this.

11.37 In our SSMD we stated that the issue of the potentially increasing disconnection costs and how they should be treated was highlighted by several stakeholders. Ofgem published an open letter[52] in January 2025 in relation to this and are currently reviewing responses and considering whether regulatory change is needed to the current disconnections charging policy.

Draft Determinations position

11.38 The Business plans did not raise any further comments regarding DRS.

11.39 Ofgem recently consulted on amending Special Licence Condition 9.7[53] of the Gas Transporter Licence and a proposal to modify the GD2 PCFM. The outcome of this consultation was to pause making any amendments for now, pending potential a wider DRS review.

11.40 Therefore, as per our SSMD position, we are proposing to continue with the RIIO-2 DRS methodology that is in place. We are aware that DRS has not been reviewed for some time and we may consider carrying out a broader review of DRS during the RIIO-3 price control period.

11.41 There are no questions in this section.

Disposal of assets

Purpose: To appropriately incentivise networks to dispose of assets no longer required.

[52] Call for Input - Exercising Consumer Choice: A review of the gas disconnections framework
[53] Statutory consultation to modify the Price Control Financial Instruments and licence conditions for electricity and gas distribution and transmission

Benefits: Consumers will benefit from receiving a share of the proceeds from the sale of assets no longer required.

Background

11.42 Where network assets are no longer required, network operators may dispose of or relinquish operational control, subject to consent and where this is clearly in consumers' interests. Some of these transactions can include the disposal of land. Consumers should benefit from receiving a share of the proceeds from the sale of assets no longer required.

11.43 In RIIO-2, it was decided that where a company has disposed of an asset, we would net the cash proceeds off against totex from the year in which the proceeds occur before it was subject to the TIM. This decision followed a consultation where all eight respondents were in favour of this policy change.

11.44 In our SSMD, we noted that a majority of stakeholders were in favour of retaining the current treatment of asset disposals. However, we considered our proposal to treat disposals of fully depreciated assets as fast money had merit due to intergenerational fairness. We had concerns that the current approach could potentially create unfair outcomes for consumers. As a general principle, assets that have been fully depreciated have been 'paid for' by consumers, and consumers should benefit from any disposal proceeds.

11.45 In our SSMD we stated that we will further review what impact moving to an approach of 100% fast money would have. The current treatment is subject to the appropriate sharing factor and capitalisation rates. We have carried out an analysis which showed that moving to an approach of 100% fast money was NPV neutral over the long-term, meaning that with all other things being equal, there is no strong rationale for change.

11.46 In addition, we stated that we are also reviewing how we can ascertain whether an asset has been fully depreciated. As one stakeholder highlighted, RAV is not akin to an asset register. Therefore, we will need to develop our thinking around how this can be achieved before progressing this issue.

11.47 We noted that government's decision on the suitability of hydrogen for heating homes in 2026 would have a big impact on the question of objective identifiability of assets. We also acknowledged that repurposing will play an important part in reaching net zero. We are due to consult on the asset repurposing methodology later this year. This consultation will determine a methodology to derive a value for gas assets which are being repurposed. Given

the planned timing of that consultation, and that the ringfencing review is due to be carried out, we propose to retain the RIIO-2 approach for disposal of assets within RIIO-3. This may be revisited during the RIIO-3 period.

Draft Determinations position

11.48 There was no new evidence presented in the business plans. As stated above, our analysis to determine the impact of moving the approach to 100% fast money showed it was NPV neutral over the long-term, so there is no strong rationale for change. Therefore, our Draft Determinations position is to retain the RIIO-2 approach for disposal of assets within RIIO-3.

11.49 We note that the RIIO-2 PCFM is currently deducting disposal proceeds from totex allowances instead of totex actuals. The way this has been implemented does not reflect what we consider the policy intent to be. After engaging with companies, we have amended the PCFM so that disposal proceeds will be deducted from totex within RIIO-3.

Consultation question

FQ31. Do you agree with the approach to maintain the RIIO-2 treatment for disposal of assets?

Pension scheme established deficit funding

Purpose: To provide networks a pass-through allowance for funding pension scheme established deficits.

Benefits: Clarification of our existing commitment to provide funding for pension scheme established deficits.

Background

11.50 Our current policy sets a commitment to consumer funding of deficits in defined benefit pension schemes, which were generally in existence before the energy network sector was privatised. To reflect this commitment, our price controls provide a form of pass-through funding by consumers of pension scheme established deficits (PSEDs) in respect of those attributable to service before certain specified cut-off dates. We last updated our policy on this in April 2017.[54]

11.51 The allowed revenue that network companies can recover under this policy is reviewed on a triennial basis as a 'reasonableness review'. We recently

[54] Decision on Ofgem's policy for funding Pension Scheme Established Deficits

performed this review and set a new established deficit pension allowances effective from 1 April 2024.[55]

11.52 We also noted that most schemes are now over 90% funded, with some schemes in surplus. We flagged that we consider that this may be an appropriate time to carry out a review of the policy for funding PSEDs and who should bear the relevant risk in the future. Should we decide to proceed with a review, it will be accompanied by a full consultation process. Any outcomes would only be effective from 1 April 2027 at the earliest and we may also consult on the most appropriate date from which any policy changes should be effective.

11.53 In our SSMD, we asked network companies to assume pension allowances for the relevant portion of PSEDs during the RIIO-3 period that reflect the outcome of the triennial review effective 1 April 2024 with no change to existing policy.

Draft Determinations position

11.54 We reaffirm our SSMD position and propose that network companies reflect pension allowances for the relevant portion of PSEDs during the RIIO-3 period that express the outcome of the triennial review effective 1 April 2024 with no change to existing policy.

Transparency through RIIO- 3 reporting

Purpose: To clarify and reinforce existing reporting requirements in relation to corporate governance.

Benefits: Ensuring compliance with current corporate governance reporting requirements enhances transparency and helps demonstrate the legitimacy of company performance.

Background

11.55 As companies adapt to a variety of challenges over the coming years, most obviously the changes required to help meet net zero targets, maintaining best practice in corporate governance measures is likely to become increasingly important.

[55] Revised pension allowance values and completion of 2023 reasonableness review

11.56 During the development of both RIIO-2[56] and RIIO-ED2[57] we identified several areas where we considered there could be improved transparency through reporting. These included:

- Executive pay/remuneration;
- Dividend policy; and
- Corporate governance and ownership

11.57 Our focus on these issues reflected a recommendation to us from the January 2020 National Audit Office report on electricity networks.[58] This recommended that we should ensure network companies make it clear how much tax they pay; how executives are rewarded and how this links to quality of service for customers, and how dividend policies ensure companies remain sustainable.

11.58 In our RIIO-2 Final Determinations we introduced new reporting requirements for the disclosure of executive remuneration to a similar level to that required for UK-listed public limited companies and publication of sustainable dividend policies. These new reporting requirements were practically introduced via a new section on Corporate Governance, contained within the RIGs and RFPR template.[59]

11.59 We have a clear expectation that the requirements of the RFPR corporate governance section are met in full and that remuneration and decision making in the interests of consumers and other stakeholders are an integral component of licensees annual reporting.

11.60 In our SSMD, we decided to retain the existing RIIO-2 requirements and re-iterate our clear expectation that the requirements of the RFPR corporate governance section are met in full.

Draft Determinations position

11.61 We maintain our position as set out in SSMD.

11.62 There are no questions in this section.

[56] RIIO-2 Draft Determinations – Finance Annex
[57] RIIO-ED2 Sector Specific Methodology Consultation: Annex 3 - Finance
[58] See paragraph 22d here:https://www.nao.org.uk/wp-content/uploads/2020/01/Electricity-networks.pdf#page=13
[59] Decision on modifications to the Regulatory Financial Performance Reporting (RFPR) template and Regulatory Instructions and Guidance (RIGs) for RIIO-2

Ex ante base revenue and RAV

Purpose: To provide a methodology by which ex ante positions for Business Plan Incentive (BPI), UM materiality thresholds and financial Output Delivery Incentives (ODI-F) caps and collars can be set.

Benefits: Providing certainty in advance around the monetary values for these items.

Background

11.63 In our SSMD and Business Plan Guidance (BPG) we discussed how the BPI, UM materiality thresholds and ODI-F caps and collars would be set. This section adds detailed proposals on how monetary values for each of these items will be set ex ante in our Final Determinations.

Draft Determinations position

11.64 In our Final Determinations, we will calculate and fix an ex ante position for base revenue and the equity portion of the RAV (calculated in line with notional gearing levels). This ex ante position will support the setting of BPI, UM materiality thresholds and ODI caps and collars. We propose that all these values are set out and fixed in the network companies' licences to provide certainty around the monetary values for each of these items. For each area, we have taken a slightly different approach.

11.65 The BPI reward or penalty is determined as a percentage of RoRE, based on the outcome of the BPI assessment process. To convert this into a £m allowance we multiply the percentage RoRE reward or penalty by the equity portion of ex ante RAV. This ex ante RAV is calculated using a subset of ex ante totex allowances that excludes:

- ongoing efficiency adjustments;
- UMs that are capitalised under bucket 2 capitalisation rate (re-openers and UIOLIs); and
- additional allowances for real price effects.

11.66 The BPI financial reward or penalty varies annually in real 2023/24 price terms, reflecting annual variation in the ex ante equity RAV. This approach was decided as part of the methodology outlined in section 9 of the RIIO-3 Business Plan Guidance.

11.67 We propose that where UM materiality thresholds are sized as a % of average annual ex ante base revenue, the totex used to calculate ex ante base revenue will be the same as that used in the BPI calculation. This definition of totex

therefore excludes the influence of UMs on thresholds. Applying this totex to derive calculated revenues in the BPFM, we then take a subset as base revenue: fast money, pass-through, depreciation and return. Finally a simple average of this ex ante base revenue over the RIIO-3 period is then calculated, and can be used for calculating the monetary value of materiality thresholds. The default materiality threshold is 0.5% of average annual ex ante base revenue. The rationale for having a default UM materiality threshold is discussed in the Overview Document Chapter 6.

11.68 In our SSMD we decided to set ODIs on the basis of RoRE. To enact this decision we propose to use an ex ante calculation of the equity portion of RAV to calculate the monetary value of ODI caps and collars. We will then take a simple average over the RIIO-3 period to set the caps and collars for the duration of the price control. The totex that we will use for this calculation will be equal to total totex allowances set at final determinations (ie including all UMs, post ongoing efficiency and with real price effects allowances). We propose to use the full totex allowance since incentives are intended to reward companies' actions across the whole of the price control. This is contrary to the BPI calculation, where the reward or penalty is sized around costs that were foreseeable at the outset of the price control. There are some ODIs for which their caps and collars are set using an alternative method to the RoRE approach, for example CSNP-F.

11.69 The values for BPI reward or penalties at Draft Determinations are as follows:

Table 32: Business plan incentive rewards or penalties

Licensee (23/24 prices)	**2027**	**2028**	**2029**	**2030**	**2031**
Cadent	£0.3m	£0.3m	£0.3m	£0.3m	£0.3m
NGN	£4.9m	£4.9m	£4.8m	£4.8m	£4.8m
SGN	-£3.5m	-£3.5m	-£3.5m	-£3.5m	-£3.4m
WWU	-£1.2m	-£1.2m	-£1.2m	-£1.2m	-£1.2m
National Gas	£1.8m	£1.7m	£1.7m	£1.6m	£1.6m
NGET	£2.9m	£2.8m	£2.7m	£2.6m	£2.5m
SHET	-£0.4m	-£0.4m	-£0.4m	-£0.4m	-£0.4m
SPT	£0.9m	£0.9m	£0.9m	£0.9m	£0.9m

11.70 The £m ex ante average annual base revenue values for the purposes of setting UM materiality thresholds are as follows:[60]

Table 33: Ex ante average annual base revenue values for the purposes of setting UM materiality thresholds

Licensee	**Annual average ex ante base revenue (23/24 prices)**	**Default Materiality Threshold (23/24 prices)**
Cadent-EoE	£820.2m	£4.1m
Cadent-LDN	£582.6m	£2.9m
Cadent-NW	£557.3m	£2.8m
Cadent-WM	£425.4m	£2.1m
NGN	£572.8m	£2.9m
SGN-SC	£428.1m	£2.1m
SGN-SO	£914.6m	£4.6m
WWU	£582.9m	£2.9m
NGT	£1,034.5m	£5.2m
NGET	£2,544.6m	£12.7m
SHET	£1,111.7m	£5.6m
SPT	£737.5m	£3.7m

11.71 The £m values of ODI caps and collars are as follows:[61]

[60] Figures are presented on a licensee basis as opposed to a company basis, as this reflects how inputs will be inserted into the BPFM.
[61] Figures are presented on a licensee basis as opposed to a company basis, as this reflects how inputs will be inserted into the BPFM.

Table 34: ODI caps and collars for Cadent - East of England

Cadent - EoE - ODI (23/24 prices)	**Caps**	**Collars**
Customer satisfaction	£2.8m	-£2.8m
Complaints	-	-£2.8m
Unplanned Interruptions	-	-£2.8m
Collaborative Streetworks	£2.8m	-
7 and 28 day repair standards	-	-£2.8m

Table 35: ODI caps and collars for Cadent - London

Cadent - LDN - ODI (23/24 prices)	**Caps**	**Collars**
Customer satisfaction	£2.0m	-£2.0m
Complaints	-	-£2.0m
Unplanned Interruptions	-	-£2.0m
Collaborative Streetworks	£2.0m	-
7 and 28 day repair standards	-	-£2.0m

Table 36: ODI caps and collars for Cadent - North West

Cadent - NW - ODI (23/24 prices)	**Caps**	**Collars**
Customer satisfaction	£1.9m	-£1.9m
Complaints	-	-£1.9m
Unplanned Interruptions	-	-£1.9m
Collaborative Streetworks	£1.9m	-
7 and 28 day repair standards	-	-£1.9m

Table 37: ODI caps and collars for Cadent - West Midlands

Cadent - WM - ODI (23/24 prices)	**Caps**	**Collars**
Customer satisfaction	£1.4m	-£1.4m
Complaints	-	-£1.4m
Unplanned Interruptions	-	-£1.4m
Collaborative Streetworks	£1.4m	-
7 and 28 day repair standards	-	-£1.4m

Table 38: ODI caps and collars for Northern

NGN - ODI (23/24 prices)	Caps	Collars
Customer satisfaction	£1.9m	-£1.9m
Complaints	-	-£1.9m
Unplanned Interruptions	-	-£1.9m
Collaborative Streetworks	£1.9m	-
7 and 28 day repair standards	-	-£1.9m

Table 39: ODI caps and collars for SGN Scotland

SGN - SC - ODI (23/24 prices)	Caps	Collars
Customer satisfaction	£1.5m	-£1.5m
Complaints	-	-£1.5m
Unplanned Interruptions	-	-£1.5m
Collaborative Streetworks	£1.5m	-
7 and 28 day repair standards	-	-£1.5m

Table 40: ODI caps and collars for SGN Southern

SGN - SO - ODI (23/24 prices)	Caps	Collars
Customer satisfaction	£3.3m	-£3.3m
Complaints	-	-£3.3m
Unplanned Interruptions	-	-£3.3m
Collaborative Streetworks	£3.3m	-
7 and 28 day repair standards	-	-£3.3m

Table 41: ODI caps and collars for Wales and West

WWU - ODI (23/24 prices)	Caps	Collars
Customer satisfaction	£1.9m	-£1.9m
Complaints	-	-£1.9m
Unplanned Interruptions	-	-£1.9m
Collaborative Streetworks	£1.9m	-
7 and 28 day repair standards	-	-£1.9m

Table 42: ODI caps and collars for NGT

NGT - ODI (23/24 prices)	Caps	Collars
Customer Satisfaction Survey	£2.8m	-£2.8m
Quality of Demand Forecasting	£1.7m	-£1.7m

Maintenance	£0.6m	-£1.7m
Constraint Management	£6.1m	-£6.1m
Residual Balancing	£2.4m	-£4.2m
GHG emission	£2.0m	-£2.0m
NTS shrinkage	£2.3m	-£2.3m
Pipeline emissions	£0.7m	-£0.7m

Table 43: ODI caps and collars for NGET

NGET - ODI (23/24 prices)	**Caps**	**Collars**
Energy Not Supplied (ENS)	£1.4m	-£54.4m
Connections Capacity	£43.0m	-£43.0m
SO:TO Optimisation	£14.3m	-

Table 44: ODI caps and collars for SHET

SHET - ODI (23/24 prices)	**Caps**	**Collars**
Energy Not Supplied (ENS)	£0.9m	-£34.0m
Connections Capacity	£26.8m	-£26.8m
SO:TO Optimisation	£8.9m	-

Table 45: ODI caps and collars for SPT

SPT - ODI (23/24 prices)	**Caps**	**Collars**
Energy Not Supplied (ENS)	£0.9m	-£13.7m
Connections Capacity	£10.8m	-£10.8m
SO:TO Optimisation	£3.6m	-

Consultation question

FQ32. Do you agree with the proposal for the ex ante base revenue definition we will use to calculate the re-opener materiality thresholds?

FQ33. Do you agree with the proposal for how we will set ODI caps and collars at final determinations that are fixed for the duration of RIIO-3?

Annual Iteration Process and Modelling Issues

Purpose: Provide a process of continuously updating allowed revenue and reporting of regulatory data.

Benefits: Increasing transparency and reducing overall regulatory burden.

Background

11.72 The Annual Iteration Process (AIP) for the PCFM enables annual remodelling of revenue allowances using an updated set of 'PCFM Variable Values'. As a result, any changes to inputs, such as actual expenditure, can be reflected in the next year's AIP rather than waiting until the next price control.

11.73 At each price control, we aim to enhance the PCFM by improving efficiency, simplicity, and flexibility within the AIP framework, while acknowledging that these goals sometimes involve trade-offs. In our SSMC, we proposed carrying forward procedural changes from the RIIO-ED2 PCFM into RIIO-3.

11.74 During RIIO-2, we published a consolidated copy of the PCFM following each AIP and the calculation of Allowed Revenue was dependent on Ofgem directing Adjusted Revenue term (ADJRt) in accordance with Special Condition 2.1.

11.75 In our SSMC, we proposed that licensees, rather than Ofgem, should take responsibility for annually publishing the model used to determine their allowed revenue in accordance with the licence, Price Control Financial Handbook (PCFH), and PCFM guidance.

11.76 We retain responsibility for the PCFM, the PCFH, the policies and methodologies for updating PCFM variable values, PCFM guidance and the special licence conditions that define allowed revenue.

11.77 Under a self-publication requirement, licensees would be responsible for calculating their own Allowed Revenue values and publishing the PCFM on their websites at the time of charge-setting.

11.78 Ofgem will continue to publish an annual consolidated version for the sector, incorporating all modifications to the PCFM as well as updates to variable values.

11.79 In our SSMD, we decided to proceed with the change to licensee self-publication of the model used to calculate allowed revenue. This will align RIIO-3 with RIIO-ED2, which we believe brings improvements in clarity of the process and of ultimate responsibilities.

11.80 We decided that the RIIO-3 PCFM will be based substantially on the RIIO-2 PCFM, with only modest incremental changes added. We stated that we will continue to consider respondents' suggestions for improvements and will work with licensees on implementing them via regular working group meetings in the lead-up to the RIIO-3 Draft Determinations.

Draft Determinations position

11.81 We reaffirm our positions stated in sections 10.92 and 10.102 of our SSMD Finance Annex.

11.82 Our proposal for licensees to self-publish the model used to calculate allowed revenue builds on the decisions made in RIIO-2 and RIIO-ED2 to move away from a directed AIP. We believe this approach more clearly places the responsibility on the licensee rather than Ofgem to accurately estimate revenue in accordance with their licence obligations. We also propose that the PCFM, which sets out the allowed revenue for each regulatory year during the AIP, be published by licensees at the point of charge setting.[62]

11.83 Additionally, we intend to streamline the dry run process to enhance overall efficiency where possible. This proposal is a continuation of the decisions we made in RIIO-2 and ED2 to move away from a directed AIP.

11.84 The PCFM Variable Values and the methodologies under which they can be revised for each AIP will be specified in the special conditions of the licence, PCFH and the PCFM guidance.

11.85 The Authority will continue to review AIP submissions in line with the process outlined in the PCFM guidance

Interest on prior year adjustments

Purpose: The interest rate applied to revenue true ups relating to prior years.

Benefits: A properly calibrated rate of interest enables companies and customers to remain broadly neutral to deviations in cash flow timing.

Background

11.86 We make three types of revenue true-ups relating to prior years, to which a rate of interest is applied:

- historical revisions to PCFM inputs (eg reporting totex underspend and reducing revenue accordingly);
- incentive, or other income 'earned' in previous years, forming part of allowed revenue two years after; and

[62] For ET licensees, we propose that a copy of the RIIO-ET3 Price Control Financial Model that was used to notify the ISOP should be published by 31 January.

- correcting charging error for amounts over or under recovered based on the ex ante restriction (where a licensee collects a different amount to that which it set out to collect).

11.87 In RIIO-2, two different interest rates are applied to these adjustments across the sectors:

- nominal WACC for historical revisions to PCFM model inputs including incentive revenue earned by past performance; and
- SONIA + 115bp for charging error.

11.88 We refer to these rates of interest as the Time Value of Money (TVOM) associated with that true-up.

11.89 In RIIO-ED2 we applied a single true-up mechanism using the nominal WACC as the TVOM rate.

11.90 In our SSMD, we decided to proceed with the change to a single true-up mechanism with a uniform TVOM using nominal WACC as the rate. We believe this is a worthwhile simplification, and with the move to licensees self-publishing their allowed revenue, this eliminates a potential gaming risk when there are multiple rates for different sources of error.

Draft Determinations position

11.91 We propose to maintain our SSMD decision of using nominal WACC as the single uniform TVOM.

11.92 We have received representations from licensees that are split between supporting the change as a simplification, and opposing it as it is no longer reflective of the different risks and costs associated with different types of true-ups.

11.93 We maintain that the benefits of the change outweigh the disadvantages, and that nominal WACC is the most appropriate single rate to use.

Consultation question

FQ34. Do you agree with the proposal to move to using nominal WACC as the single uniform TVOM?

Forecasting penalties

Purpose: To incentivise accurate forecasting for charge-setting and base revenues.

Benefits: Base revenue forecasts feed into the networks' tariffs, which determine consumer bills. Mis-forecasting could result in consumer detriment and a base revenue forecasting penalty would protect against this.

Background

11.94 In RIIO-2, we applied a forecasting penalty to the difference between the allowed revenue used to set licensees' tariffs and the amount of revenue that was collected for that period, where that difference was less than or greater than 6%. This penalised poor forecasting by applying a penalty rate of 1.15% to the over or under-recovery. We also had a waiver mechanism that allowed Ofgem to waive some or all of the penalty by direction if the error was caused by factors outside of the licensee's reasonable control.

11.95 In our SSMD, we said that we will engage with licensees on forecasting penalties through working groups and that we will provide further information at the Draft Determinations stage, which we set out below.

Decision

11.96 For RIIO-3 we propose to retain this recovered revenue penalty mechanism and introduce a similar mechanism to apply to base revenue[63] forecasting error. This would penalise poor forecasting in relation to a subset of revenue, measured in constant prices. Like the existing recovered revenue penalty, we propose to have a mechanism whereby Ofgem may waive some or all of the penalty by direction if the error is caused by factors outside of the reasonable control of the licensee.

Rationale

11.97 Licensees have an annual opportunity to update their variable value forecasts for the remainder of the price control and these forecasts feed into their tariffs and therefore into consumer bills. We think it is therefore reasonable and proportionate to better incentivise accurate forecasting as misforecasting would result in inaccurate bills, which could result in consumer detriment. While we have a correction mechanism in place through the K correction term, we think it is appropriate to have an additional penal mechanism to provide a stronger incentive for good base revenue forecasting and we note that in RIIO-2 we already had a similar incentive in place for revenue collection errors.

[63] For RIIO-3, base revenue is the sum of fast money, pass-through costs, RAV depreciation and return.

11.98 Notwithstanding the above we recognise that there will sometimes be factors outside of the licensees' reasonable control which might not have been foreseeable at the time of setting its forecasts and for these circumstances, we would apply a waiver.

11.99 We also note that we have recently introduced a base revenue forecasting penalty for ED2 and we think there is value in having consistency between sectors, where possible.

Licensee responses

11.100 During engagement prior to Draft Determinations, all licensees raised concerns about a base revenue forecasting penalty, which are broadly:

- Pass-through costs should be excluded as they are non-controllable. GDNs noted that pass-through costs are more material in GD than in the ED sector and are more volatile and difficult to accurately forecast in GD, due to a reliance on external factors.
- National Gas raised similar concerns noting that UMs should also be excluded as the final decision-making power on those sits with Ofgem and not with the licensee. They also argued that the penalty should not apply to the GSO given its base revenue has a larger proportion of fast money, compared to other networks.
- The ET companies raised similar arguments, noting that the ET sector will require a material amount of uncertain expenditure over T3 and that being penalised for forecasting errors in relation to these UMs would be unfair.

11.101 Licensees argued that given the potential significant uncertainty in forecasting, either the penalty threshold should be increased or the scope of the penalty should be narrowed. They argued that Ofgem should not assess the reasonableness of the penalty threshold by looking at the individual components of base revenue in isolation. Some suggested removing it entirely, arguing that the waiver process would represent a significant administrative burden on licensees to have to justify if a change was outside of their reasonable control and that a monitoring-only regime was sufficient.

Business plans

11.102 We examined historical AIP data from the RIIO-2 period and applied a 6% penalty threshold for differences between forecast and outturn base revenues in each period. We found that had such a base revenue forecasting penalty mechanism existed over RIIO-2, it would have been triggered in very few cases. Our analysis did not indicate that penalties would be routine or that there would

have been a significant administrative burden resulting from numerous waiver requests as suggested by some companies.

11.103 We also reviewed the companies' business plans to determine whether the proposed threshold would be reasonable for RIIO-3. We looked at the companies' expected pass-through costs and fast money on a combined basis as these elements of base revenue were the main areas of concern for networks as they carry some forecasting risk. We consider that there is little forecasting risk around the depreciation and return elements of base revenue and as such our analysis does not include these.

11.104 Table 45 shows each licensee's average annual base revenues, fast money and pass-through costs in columns 2-4. We then show the sum of pass-through costs and fast money as a proportion of base revenue in column 5. The 6% penalty threshold is shown in £m in column 7 and the final column shows the 6% threshold as a proportion of pass-through costs and fast money - or, the amount of forecasting error which would be required to breach the 6% threshold.

Table 46: Fast money and pass-through as a proportion of base revenue

Licensee	**RIIO-3 Base revenue (BR) (£m)[64]**	**Fast Money (FM) (£m)**	**Pass-through (PT) (£m)**	**FM + PT as % BR**	**BR Threshold**	**6% BR (£m)**	**6% BR as proportion of FM & PT**
Cadent - East of England	818	190	162	43%	6%	49	14%
Cadent - London	581	135	99	40%	6%	35	15%
Cadent - North West	556	123	107	41%	6%	33	15%
Cadent - West Midlands	424	98	79	42%	6%	25	14%
Northern	571	132	111	43%	6%	34	14%
SGN - Scotland	427	97	77	41%	6%	26	15%
SGN - Southern	911	176	175	39%	6%	55	16%

[64] For this analysis, base revenue is calculated using the full forecast totex (including UMs).

Wales & West	581	137	115	43%	6%	35	14%
NGT-TO	1103	208	115	29%	6%	66	20%
NGT-SO	134	64	22	64%	6%	8	9%
NGET	4551	1453	93	34%	6%	273	18%
SHET	3022	1207	80	43%	6%	181	14%
SPT	1327	500	95	45%	6%	80	13%

11.105 The final column shows an average headroom of 15% for forecasting error in pass-through costs and fast money. We note that 15% headroom is relatively modest and we note the companies' concerns around the non-controllable nature of pass-through costs and increased uncertainty over RIIO-3. While we would not necessarily expect single year changes of this magnitude in each of the individual pass-through cost line items or fast money, alone, the combination of changes across these items could compound to breach the threshold, routinely. We are keen to strike the right balance between penalising poor forecasting within the licensees' control and avoiding the administrative burden of the waiver process where it does not provide additional consumer benefit.

11.106 National Gas-TO and NGET are notable outliers; a 6% threshold indicates a more comfortable headroom of c20% for year-on-year changes to forecasts, in their case. Conversely National Gas-SO has just 9% headroom, given its base revenue consists of a significantly higher proportion of fast money and a reasonably high proportion of pass-through costs, compared to other licensees.

Draft Determination position

11.107 Based on our examination of historical RIIO-2 AIP data and RIIO-3 business plan forecasts, we propose to apply the penalty thresholds set out in column 6 of Table 47, for RIIO-3:

Table 47: Proposed penalty thresholds

Licensee	RIIO-3 Base revenue (BR) (£m)	Fast Money (FM) (£m)	Pass-through (PT) (£m)	FM + PT as % BR	BR Threshold	BR threshold (£m)	6% BR as proportion of FM and PT
East	818	190	162	43%	8%	65	19%
London	581	135	99	40%	8%	46	20%
North West	556	123	107	41%	8%	44	19%
West Midlands	424	98	79	42%	8%	34	19%
Northern	571	132	111	43%	8%	46	19%
Scotland	427	97	77	41%	8%	34	20%
Southern	911	176	175	39%	8%	73	21%
Wales & West	581	137	115	43%	8%	46	18%
NGT-TO	1103	208	115	29%	6%	66	20%
NGT-SO	134	64	22	64%	12%	16	19%
NGET	4551	1453	93	34%	6%	273	18%
SHET	3022	1207	80	43%	8%	242	19%
SPT	1327	500	95	45%	8%	106	18%

11.108 We propose to apply an 8% base revenue forecasting threshold for GD licensees, SHET and SPT as this would provide a headroom of around 20% for year-on-year base revenue forecasting errors, which would be unlikely to be triggered by routine forecasting error but we think would still retain the incentive properties of the penalty.

11.109 We propose to apply a 6% base revenue forecasting threshold for NGET and NGT-TO and a 12% threshold for NGT-SO. This would put all licensees on a level footing and will provide a headroom of around 20% for year-on-year base revenue forecasting errors.

11.110 We propose to also carve out the effects of inflation on base revenue as we agree that this is outside of the licensees' control and we do not want to set a penalty that will result in routine waiver requests.

11.111 While we acknowledge the increased uncertain spend in RIIO-ET3 and the scale of the projects that will be required, we do not think that these will be

unforecastable. As with other UMs such as re-openers, the direction of travel will be reasonably foreseeable by the licensee in the near-term. While more distant future periods may carry greater uncertainty, the penalty mechanism operates on a 12-month basis and we do not expect external cost drivers to be unforeseeable over this period. As such we do not propose to carve out these elements of fast money from the forecasting penalty.

11.112 On pass-through costs we think the headroom that the proposed thresholds indicate should provide licensees with comfort that the penalty would not be triggered routinely. While these costs may be non-controllable, we are satisfied that they should still be forecastable in the short term. We have therefore not proposed to carve these out from the forecasting penalty.

Questions

FQ35. Do you agree with the proposed base revenue forecasting penalty mechanism?

FQ36. Do you agree that the thresholds have been set appropriately?

12. Your response, data and confidentiality

12.1 All proposals published as part of these documents are draft proposals, subject to consultation. We will publish our decisions on the RIIO-3 price controls in our Final Determinations later this year. We will implement our Final Determinations by modifications to the companies' licence conditions, after further consultation on licence drafting.

Consultation stages

12.2 Table 4847 below sets out the key stages for this consultation and how we will progress from Draft Determinations to Final Determinations

Table 48: Consultation Stages

Stage	Date
Consultation Open	01/07/2025
Consultation closes (awaiting decision). Deadline for responses	26/08/2025
Final Determinations (including publication of consultation responses)	Winter 2025

How to respond

12.3 We want to hear from anyone interested in this consultation. Please send your response to RIIO3@ofgem.gov.uk.

12.4 We've asked for your feedback in each of the questions throughout. Please respond to each one as fully as you can.

12.5 We will publish non-confidential responses on our website at www.ofgem.gov.uk/consultations.

Your response, your data and confidentiality

12.6 You can ask us to keep your response, or parts of your response, confidential. We'll respect this, subject to obligations to disclose information, for example, under the Freedom of Information Act 2000, the Environmental Information Regulations 2004, statutory directions, court orders, government regulations or where you give us explicit permission to disclose. If you do want us to keep your response confidential, please clearly mark this on your response and explain why.

12.7 If you wish us to keep part of your response confidential, please clearly mark those parts of your response that you do wish to be kept confidential and those that you do not wish to be kept confidential. Please put the confidential material in a separate appendix to your response. If necessary, we'll get in touch with

you to discuss which parts of the information in your response should be kept confidential, and which can be published. We might ask for reasons why.

12.8 If the information you give in your response contains personal data under the General Data Protection Regulation (Regulation (EU) 2016/679) as retained in domestic law following the UK's withdrawal from the European Union ('UK GDPR'), the Gas and Electricity Markets Authority will be the data controller for the purposes of GDPR. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. Please refer to our Privacy Notice on consultations, see Appendix 3.

12.9 If you wish to respond confidentially, we'll keep your response itself confidential, but we will publish the number (but not the names) of confidential responses we receive. We won't link responses to respondents if we publish a summary of responses, and we will evaluate each response on its own merits without undermining your right to confidentiality.

General feedback

12.10 We believe that consultation is at the heart of good policy development. We welcome any comments about how we've run this consultation. We'd also like to get your answers to these questions:

1. Do you have any comments about the overall process of this consultation?
2. Do you have any comments about its tone and content?
3. Was it easy to read and understand? Or could it have been better written?
4. Were its conclusions balanced?
5. Did it make reasoned recommendations for improvement?
6. Any further comments?

Please send any general feedback comments to stakeholders@ofgem.gov.uk

Appendix 3 – Financial values for the GDNs

Table 49: East of England RAV (£m nominal)

EAST OF ENGLAND	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Opening RAV	4538.1	4608.0	4657.6	4697.4	4726.2	23227.3	4645.5
Inflation	54.7	53.3	54.0	54.5	54.8	271.3	54.3
Net additions (after disposals)	272.0	271.4	279.1	286.8	290.1	1399.3	279.9
Depreciation	-256.8	-275.0	-293.4	-312.5	-332.5	-1470.2	-294.0
Closing RAV	4608.0	4657.6	4697.4	4726.2	4738.6	23427.7	4685.5

Table 50: East of England price control revenue (£m, 23/24 prices)

EAST OF ENGLAND	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Fast money	201.9	192.8	185.9	184.3	178.5	943.4	188.7
Pass-through expenditure	163.7	163.0	162.5	159.7	159.6	808.5	161.7
Depreciation	236.6	248.5	259.8	271.4	283.1	1299.3	259.9
Return	205.6	206.3	206.7	206.5	206.9	1032.0	206.4
Base revenue	807.8	810.6	814.8	821.9	828.0	4083.2	816.6
Return adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equity issuance costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Directly remunerated services adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cross-subsidy adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Business plan incentive	0.1	0.1	0.1	0.1	0.1	0.6	0.1
Output delivery incentives	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue allowance	5.0	5.0	5.0	5.0	5.0	25.0	5.0
Calculated revenue (before tax)	812.9	815.7	819.9	827.0	833.1	4108.7	821.7

EAST OF ENGLAND	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Tax allowance	71.5	77.1	82.9	83.6	86.8	401.9	80.4
Tax allowance adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calculated revenue	884.4	892.8	902.9	910.5	920.0	4510.6	902.1

Table 51: London RAV (£m nominal)

LONDON	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Opening RAV	3300.5	3370.5	3430.0	3486.8	3536.2	17123.9	3424.8
Inflation	39.8	39.0	39.8	40.4	41.0	200.0	40.0
Net additions (after disposals)	215.7	221.0	232.9	241.5	257.8	1168.9	233.8
Depreciation	-185.6	-200.4	-215.9	-232.5	-250.1	-1084.5	-216.9
Closing RAV	3370.5	3430.0	3486.8	3536.2	3585.0	17408.4	3481.7

Table 52: London price control revenue (£m, 23/24 prices)

LONDON	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Fast money	138.8	135.4	133.2	133.0	133.1	673.5	134.7
Pass-through expenditure	99.5	99.3	99.1	97.3	97.3	492.6	98.5
Depreciation	171.0	181.1	191.2	201.9	212.9	958.1	191.6
Return	149.9	151.4	152.8	153.9	155.6	763.6	152.7
Base revenue	559.3	567.3	576.3	586.1	598.9	2887.8	577.6
Return adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equity issuance costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Directly remunerated services adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cross-subsidy adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Business plan incentive	0.1	0.1	0.1	0.1	0.1	0.4	0.1

LONDON	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Output delivery incentives	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue allowance	5.0	5.0	5.0	5.0	5.0	25.0	5.0
Calculated revenue (before tax)	564.3	572.3	581.3	591.2	604.0	2913.1	582.6
Tax allowance	51.9	58.6	63.1	65.0	68.5	307.1	61.4
Tax allowance adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calculated revenue	616.2	631.0	644.4	656.1	672.5	3220.3	644.1

Table 53: North West RAV (£m nominal)

NORTH WEST	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Opening RAV	3182.4	3218.7	3245.1	3264.0	3269.2	16179.4	3235.9
Inflation	38.4	37.2	37.6	37.9	37.9	189.0	37.8
Net additions (after disposals)	178.5	181.5	185.6	184.3	189.2	919.2	183.8
Depreciation	-180.6	-192.3	-204.4	-217.0	-229.4	-1023.7	-204.7
Closing RAV	3218.7	3245.1	3264.0	3269.2	3266.9	16263.9	3252.8

Table 54: North West price control revenue (£m, 23/24 prices)

NORTH WEST	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Fast money	125.1	125.1	127.3	120.7	117.2	615.5	123.1
Pass-through expenditure	107.9	107.1	106.9	105.3	105.3	532.5	106.5
Depreciation	166.4	173.8	181.1	188.4	195.3	904.9	181.0
Return	143.9	144.0	143.8	143.2	142.9	717.7	143.5
Base revenue	543.3	550.0	559.0	557.6	560.7	2770.6	554.1
Return adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equity issuance costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Directly remunerated	0.0	0.0	0.0	0.0	0.0	0.0	0.0

NORTH WEST	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
services adjustment							
Cross-subsidy adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Business plan incentive	0.1	0.1	0.1	0.1	0.1	0.4	0.1
Output delivery incentives	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue allowance	5.0	5.0	5.0	5.0	5.0	25.0	5.0
Calculated revenue (before tax)	548.4	555.0	564.1	562.7	565.8	2795.9	559.2
Tax allowance	52.5	56.8	59.6	60.3	63.2	292.4	58.5
Tax allowance adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calculated revenue	600.9	611.8	623.6	623.0	629.0	3088.3	617.7

Table 55: West Midlands RAV (£m nominal)

WEST MIDLANDS	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Regulatory Asset Value (RAV) - £m nominal							
Opening RAV	2378.4	2417.6	2446.1	2462.4	2471.8	12176.4	2435.3
Inflation	28.7	28.0	28.4	28.6	28.7	142.2	28.4
Net additions (after disposals)	145.7	145.5	142.7	145.4	148.3	727.5	145.5
Depreciation	-135.2	-145.0	-154.8	-164.5	-174.4	-773.8	-154.8
Closing RAV	2417.6	2446.1	2462.4	2471.8	2474.4	12272.3	2454.5

Table 56: West Midlands price control revenue (£m, 23/24 prices)

WEST MIDLANDS	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Fast money	106.1	108.8	92.4	94.0	94.8	496.1	99.2
Pass-through expenditure	80.4	79.9	79.7	78.3	78.3	396.7	79.3

WEST MIDLANDS	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Depreciation	124.5	131.0	137.1	142.8	148.5	683.9	136.8
Return	107.8	108.3	108.4	108.1	108.1	540.8	108.2
Base revenue	418.8	428.0	417.6	423.3	429.7	2117.5	423.5
Return adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equity issuance costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Directly remunerated services adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cross-subsidy adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Business plan incentive	0.1	0.1	0.1	0.1	0.1	0.3	0.1
Output delivery incentives	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue allowance	5.0	5.0	5.0	5.0	5.0	25.0	5.0
Calculated revenue (before tax)	423.8	433.1	422.7	428.4	434.8	2142.7	428.5
Tax allowance	40.0	44.1	45.2	46.9	48.4	224.5	44.9
Tax allowance adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calculated revenue	463.8	477.1	467.9	475.3	483.2	2367.3	473.5

Table 57: Northern RAV (£m nominal)

NORTHERN	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Opening RAV	3150.4	3201.3	3246.7	3297.1	3348.7	16244.1	3248.8
Inflation	38.0	37.0	37.7	38.2	38.8	189.8	38.0
Net additions (after disposals)	189.6	197.9	215.9	231.7	246.6	1081.7	216.3
Depreciation	-176.7	-189.5	-203.1	-218.5	-235.4	-1023.1	-204.6
Closing RAV	3201.3	3246.7	3297.1	3348.7	3398.7	16492.4	3298.5

Table 58: Northern price control revenue (£m, 23/24 prices)

NORTHERN	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Fast money	128.9	128.6	130.1	130.5	128.7	646.7	129.3
Pass-through expenditure	118.4	112.5	108.4	108.1	106.7	554.1	110.8
Depreciation	162.8	171.2	179.9	189.7	200.4	904.0	180.8
Return	142.8	143.6	144.6	145.6	147.4	724.0	144.8
Base revenue	552.8	555.9	562.9	573.9	583.3	2828.8	565.8
Return adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equity issuance costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Directly remunerated services adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cross-subsidy adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Business plan incentive	4.9	4.9	4.8	4.8	4.8	24.2	4.8
Output delivery incentives	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue allowance	5.8	5.8	5.8	5.8	5.8	28.8	5.8
Calculated revenue (before tax)	563.4	566.5	573.5	584.5	593.9	2881.9	576.4
Tax allowance	49.1	54.7	58.0	60.2	62.2	284.3	56.9
Tax allowance adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calculated revenue	612.6	621.3	631.5	644.6	656.2	3166.1	633.2

Table 59: Scotland RAV (£m nominal)

SCOTLAND	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Opening RAV	2464.7	2486.8	2506.5	2520.0	2517.7	12495.7	2499.1
Inflation	29.7	28.8	29.1	29.2	29.2	146.0	29.2
Net additions (after disposals)	132.5	139.6	142.3	135.9	130.5	680.7	136.1
Depreciation	-140.0	-148.6	-157.9	-167.5	-176.5	-790.5	-158.1
Closing RAV	2486.8	2506.5	2520.0	2517.7	2500.9	12531.9	2506.4

Table 60: Scotland price control revenue (£m, 23/24 prices)

SCOTLAND	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Fast money	92.5	96.7	102.8	94.4	85.9	472.3	94.5
Pass-through expenditure	76.7	76.6	76.5	76.5	76.4	382.6	76.5
Depreciation	129.0	134.3	139.9	145.4	150.3	698.8	139.8
Return	111.3	111.2	111.1	110.4	109.7	553.7	110.7
Base revenue	409.5	418.8	430.2	426.7	422.2	2107.4	421.5
Return adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equity issuance costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Directly remunerated services adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cross-subsidy adjustment	8.2	8.6	9.0	9.5	10.0	45.3	9.1
Business plan incentive	-1.1	-1.1	-1.1	-1.1	-1.1	-5.4	-1.1

SCOTLAND	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Output delivery incentives	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue allowance	5.1	5.1	5.1	5.1	5.1	25.5	5.1
Calculated revenue (before tax)	421.7	431.4	443.3	440.2	436.3	2172.8	434.6
Tax allowance	31.8	34.1	36.2	38.3	41.0	181.4	36.3
Tax allowance adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calculated revenue	453.4	465.5	479.5	478.5	477.3	2354.2	470.8

SOUTHERN	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Opening RAV	5337.4	5452.6	5541.6	5616.6	5655.6	27603.8	5520.8
Inflation	64.3	63.1	64.3	65.2	65.6	322.4	64.5
Net additions (after disposals)	353.4	352.7	361.9	350.5	348.2	1766.7	353.3
Depreciation	-302.5	-326.8	-351.2	-376.6	-401.0	-1758.1	-351.6
Closing RAV	5452.6	5541.6	5616.6	5655.6	5668.4	27934.8	5587.0

Table 61: Southern price control revenue (£m, 23/24 prices)

SOUTHERN	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Fast money	186.0	175.4	179.2	159.8	150.3	850.7	170.1
Pass-through expenditure	175.4	175.1	174.8	174.5	174.2	874.1	174.8
Depreciation	278.8	295.2	311.1	327.0	341.4	1553.4	310.7
Return	242.5	244.8	246.5	247.0	247.5	1228.3	245.7
Base revenue	882.7	890.6	911.6	908.3	913.4	4506.6	901.3
Return adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SOUTHERN	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Equity issuance costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Directly remunerated services adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cross-subsidy adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Business plan incentive	-2.4	-2.4	-2.4	-2.4	-2.4	-12.0	-2.4
Output delivery incentives	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue allowance	5.1	5.1	5.1	5.1	5.1	25.5	5.1
Calculated revenue (before tax)	885.4	893.3	914.2	911.0	916.1	4520.0	904.0
Tax allowance	85.9	89.1	96.2	98.7	103.0	473.0	94.6
Tax allowance adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calculated revenue	971.3	982.4	1010.4	1009.8	1019.2	4993.1	998.6

Table 62: Wales and West RAV (£m nominal)

WALES AND WEST	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Opening RAV	3177.1	3223.0	3268.6	3298.6	3317.5	16284.7	3256.9
Inflation	38.3	37.3	37.9	38.3	38.5	190.2	38.0
Net additions (after disposals)	187.1	200.3	197.8	200.1	189.4	974.7	194.9
Depreciation	-179.5	-192.0	-205.8	-219.4	-233.3	-1029.9	-206.0
Closing RAV	3223.0	3268.6	3298.6	3317.5	3312.1	16419.8	3284.0

Table 63: Wales and West price control revenue (£m, 23/24 prices)

WALES AND WEST	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Fast money	139.2	141.6	137.9	132.0	122.2	672.9	134.6
Pass-through expenditure	123.2	112.3	112.8	112.4	112.3	573.0	114.6

WALES AND WEST	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Depreciation	165.4	173.4	182.2	190.5	198.6	910.1	182.0
Return	143.9	144.6	145.1	145.0	144.9	723.4	144.7
Base revenue	571.6	571.9	578.0	579.9	578.0	2879.5	575.9
Return adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equity issuance costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Directly remunerated services adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cross-subsidy adjustment	-0.1	-0.1	-0.1	-0.1	-0.1	-0.6	-0.1
Business plan incentive	-1.2	-1.2	-1.2	-1.2	-1.2	-5.9	-1.2
Output delivery incentives	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue allowance	6.2	6.2	6.2	6.2	6.2	31.0	6.2
Calculated revenue (before tax)	576.5	576.8	582.9	584.8	582.9	2903.9	580.8
Tax allowance	35.0	38.7	42.6	44.4	46.1	206.9	41.4
Tax allowance adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calculated revenue	611.5	615.5	625.5	629.1	629.1	3110.8	622.2

Appendix 4 – Financial values for the TOs and National Gas

Table 64: NGET RAV (£m nominal)

NGET	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Opening RAV	24221.5	28683.0	34032.0	39498.0	45261.7	171696.2	34339.2
Inflation	254.2	288.9	343.7	398.9	457.1	1742.9	348.6
Net additions (after disposals)	5428.5	6366.0	6521.8	6864.8	6597.4	31778.5	6355.7
Depreciation	-1221.2	-1305.9	-1399.6	-1499.9	-1590.9	-7017.5	-1403.5
Closing RAV	28683.0	34032.0	39498.0	45261.7	50725.4	198200.1	39640.0

Table 65: NGET price control revenue (£m, 23/24 prices)

NGET	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Fast money	1347.6	1504.9	1501.7	1507.0	1403.7	7264.8	1453.0
Pass-through expenditure	97.7	89.3	89.4	89.4	99.1	465.0	93.0
Depreciation	1125.2	1179.8	1239.6	1302.4	1354.3	6201.3	1240.3
Return	1248.5	1492.9	1761.9	2030.9	2288.9	8823.1	1764.6
Base revenue	3819.0	4266.9	4592.6	4929.7	5146.0	22754.2	4550.8
Return adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equity issuance costs	91.9	82.8	78.6	78.0	65.7	396.9	79.4
Directly remunerated services adjustment	-205.3	-210.2	-215.2	-218.8	-224.1	-1073.6	-214.7
Business plan incentive	2.9	2.8	2.7	2.6	2.5	13.3	2.7
Output delivery incentives	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue allowance	26.5	26.5	23.4	23.4	23.4	123.1	24.6

NGET	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Calculated revenue (before tax)	3734.9	4168.7	4482.0	4814.9	5013.4	22214.0	4442.8
Tax allowance	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tax allowance adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calculated revenue	3734.9	4168.7	4482.0	4814.9	5013.4	22214.0	4442.8

Table 66: SHET RAV (£m nominal)

SHET	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Opening RAV	8944.0	14304.9	20257.7	26695.5	31877.6	102079.7	20415.9
Inflation	93.8	144.1	204.6	269.6	322.0	1034.1	206.8
Net additions (after disposals)	5653.4	6323.5	6890.9	5726.7	6198.7	30793.1	6158.6
Depreciation	-386.3	-514.8	-657.7	-814.1	-945.8	-3318.8	-663.8
Closing RAV	14304.9	20257.7	26695.5	31877.6	37452.5	130588.2	26117.6

Table 67: SHET price control revenue (£m, 23/24 prices)

SHET	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Fast money	1153.4	1258.4	1367.8	1152.0	1105.2	6036.8	1207.4
Pass-through expenditure	80.0	80.2	80.4	80.6	80.8	402.0	80.4
Depreciation	356.0	465.0	582.5	706.9	805.1	2915.6	583.1
Return	558.5	857.6	1172.6	1459.1	1709.5	5757.4	1151.5
Base revenue	2147.9	2661.3	3203.4	3398.5	3700.7	15111.8	3022.4
Return adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equity issuance costs	148.6	108.4	110.6	78.0	79.5	525.2	105.0
Directly remunerated services adjustment	-21.8	-21.8	-21.8	-21.8	-21.8	-109.0	-21.8

SHET	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Business plan incentive	-0.4	-0.4	-0.4	-0.4	-0.4	-2.0	-0.4
Output delivery incentives	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue allowance	4.5	4.3	4.0	4.0	4.0	20.8	4.2
Calculated revenue (before tax)	2278.8	2751.8	3295.8	3458.4	3762.0	15546.8	3109.4
Tax allowance	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tax allowance adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calculated revenue	2278.8	2751.8	3295.8	3458.4	3762.0	15546.8	3109.4

Table 68: SPT RAV (£ nominal)

SPT	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Opening RAV	5111.6	6527.4	8223.3	10147.9	12307.9	42318.1	8463.6
Inflation	53.6	65.7	83.1	102.5	124.3	429.2	85.8
Net additions (after disposals)	1600.6	1899.2	2148.6	2406.0	2112.1	10166.5	2033.3
Depreciation	-238.4	-269.1	-307.0	-348.6	-397.7	-1560.8	-312.2
Closing RAV	6527.4	8223.3	10147.9	12307.9	14146.6	51353.1	10270.6

Table 69: SPT price control revenue (£m, 23/24 prices)

SPT	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Fast money	489.2	494.5	517.8	535.1	465.5	2502.3	500.5
Pass-through expenditure	88.3	88.3	88.4	104.9	104.9	474.7	94.9
Depreciation	219.7	243.1	271.9	302.7	338.6	1375.9	275.2
Return	279.5	358.7	449.8	550.3	645.2	2283.4	456.7
Base revenue	1076.7	1184.6	1327.9	1492.9	1554.1	6636.3	1327.3
Return adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SPT	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Equity issuance costs	40.5	28.6	31.1	33.4	24.6	158.2	31.6
Directly remunerated services adjustment	-34.4	-37.2	-41.4	-43.9	-47.9	-204.9	-41.0
Business plan incentive	0.9	0.9	0.9	0.9	0.9	4.4	0.9
Output delivery incentives	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue allowance	9.1	4.1	4.1	4.1	4.1	25.6	5.1
Calculated revenue (before tax)	1092.9	1181.0	1322.5	1487.4	1535.9	6619.6	1323.9
Tax allowance	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tax allowance adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calculated revenue	1092.9	1181.0	1322.5	1487.4	1535.9	6619.6	1323.9

Table 70: NGT-TO RAV (£m nominal)

NGT-TO	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Opening RAV	7692.0	7954.3	8239.0	8458.7	8473.1	40817.2	8163.4
Inflation	92.7	92.0	95.6	98.1	98.3	476.7	95.3
Net additions (after disposals)	601.4	645.2	598.8	410.3	371.0	2626.8	525.4
Depreciation	-431.9	-452.5	-474.6	-494.1	-504.8	-2358.0	-471.6
Closing RAV	7954.3	8239.0	8458.7	8473.1	8437.5	41562.7	8312.5

Table 71: NGT-TO price control revenue (£m, 23/24 prices)

NGT-TO	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Fast money	219.1	237.2	209.1	190.1	185.6	1041.2	208.2
Pass-through expenditure	112.5	118.8	117.0	115.4	113.7	577.4	115.5
Depreciation	398.0	408.8	420.3	429.1	429.8	2085.9	417.2

NGT-TO	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Return	351.6	360.5	368.8	371.1	369.7	1821.6	364.3
Base revenue	1081.2	1125.3	1115.3	1105.6	1098.8	5526.1	1105.2
Return adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equity issuance costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Directly remunerated services adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Business plan incentive	1.8	1.7	1.7	1.6	1.6	8.4	1.7
Output delivery incentives	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue allowance	2.2	2.2	2.2	2.2	2.2	11.2	2.2
Calculated revenue (before tax)	1085.2	1129.3	1119.3	1109.4	1102.6	5545.7	1109.1
Tax allowance	21.4	22.1	38.3	80.9	88.8	251.5	50.3
Tax allowance adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calculated revenue	1106.6	1151.3	1157.5	1190.3	1191.4	5797.2	1159.4

Table 72 NGT - SO RAV (£m nominal)

NGT-SO	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Opening RAV	174.3	172.7	185.4	194.8	194.7	921.9	184.4
Inflation	2.1	2.0	2.2	2.3	2.3	10.8	2.2
Net additions (after disposals)	40.6	53.9	51.7	44.6	46.0	236.7	47.3
Depreciation	-44.3	-43.2	-44.3	-47.0	-48.8	-227.6	-45.5
Closing RAV	172.7	185.4	194.8	194.7	194.2	941.8	188.4

Table 73 NGT - SO price control revenue (£m, 23/24 prices)

NGT-SO	31 Mar 2027	31 Mar 2028	31 Mar 2029	31 Mar 2030	31 Mar 2031	RIIO-3 Total	RIIO-3 Average
Fast money	56.6	73.7	69.3	58.6	59.3	317.6	63.5
Pass-through expenditure	18.8	23.1	23.5	22.1	22.7	110.4	22.1
Depreciation	40.8	39.0	39.3	40.8	41.5	201.4	40.3
Return	7.8	8.0	8.4	8.5	8.5	41.2	8.2
Base revenue	124.1	143.8	140.5	130.1	132.1	670.5	134.1
Other revenue allowance	153.1	147.5	143.5	142.5	139.6	726.2	145.2
Calculated revenue (before tax)	277.2	291.3	283.9	272.6	271.7	1396.7	279.3
Tax allowance	3.5	5.2	3.1	1.4	1.7	14.9	3.0
Tax allowance adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calculated revenue	280.7	296.6	287.0	274.0	273.3	1411.6	282.3

Appendix 5 – Privacy notice on consultations

Personal data

The following explains your rights and gives you the information you are entitled to under the General Data Protection Regulation (GDPR).

Note that this section only refers to your personal data (your name address and anything that could be used to identify you personally) not the content of your response to the consultation.

1. **The identity of the controller and contact details of our Data Protection Officer**

The Gas and Electricity Markets Authority is the controller, (for ease of reference, 'Ofgem'). The Data Protection Officer can be contacted at dpo@ofgem.gov.uk

2. **Why we are collecting your personal data**

Your personal data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

3. **Our legal basis for processing your personal data**

As a public authority, the GDPR makes provision for Ofgem to process personal data as necessary for the effective performance of a task carried out in the public interest, ie a consultation.

4. **With whom we will be sharing your personal data**

We will not share your personal data with any other person or organisation.

5. **For how long we will keep your personal data, or criteria used to determine the retention period.**

Your personal data will be held for 12 months after the project is closed.

6. **Your rights**

The data we are collecting is your personal data, and you have considerable say over what happens to it. You have the right to:

- know how we use your personal data
- access your personal data
- have personal data corrected if it is inaccurate or incomplete
- ask us to delete personal data when we no longer need it

- ask us to restrict how we process your data
- get your data from us and re-use it across other services
- object to certain ways we use your data
- be safeguarded against risks where decisions based on your data are taken entirely automatically
- tell us if we can share your information with 3rd parties
- tell us your preferred frequency, content and format of our communications with you
- to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at https://ico.org.uk/, or telephone 0303 123 1113.

7**. Your personal data will not be sent overseas**

8. **Your personal data will not be used for any automated decision making.**

9. **Your personal data will be stored in a secure government IT system**.

10. For more information on how Ofgem processes your data, click on the link to our 'ofgem privacy promise'.